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BIRT iHub Visualization Platform

# Metrics Management



## System Specialist Guide for Metrics Management

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Document No. 131215-2-540301 October 24, 2014

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# About System Specialist Guide for Metrics Management

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*System Specialist Guide for Metrics Management* provides information about configuring, using and maintaining databases in Metrics Management.

*System Specialist Guide for Metrics Management* includes the following chapters:

- *About System Specialist Guide for Metrics Management.* This chapter provides an overview of this guide.
- *Chapter 1. Creating and configuring a database.* This chapter describes how to create and configure a Metrics Management database.
- *Chapter 2. Planning a performance management system.* This chapter explains how to create and work with categories, templates, users and user groups, and locations. This chapter also provides an overview of security administration.
- *Chapter 3. Working with measures.* This chapter describes how to work with and create commentary types and dashboards for measures, and how to create group, data, and formula measures.
- *Chapter 4. Working with measure data and index values.* This chapter explains how to format measure data, create benchmarks, define data collection periods, and customize index values and performance ranges.
- *Chapter 5. Working with views.* This chapter describes exceptions by location, and discusses order of calculation. This chapter also explains how to create and work with views.
- *Chapter 6. Exporting and importing Metrics Management objects.* This chapter discusses how to export Metrics Management objects from Metrics Management to XML and import XML objects into Metrics Management. You can choose to work with individual objects or an entire database.

- *Chapter 7. Creating data imports and exports.* This chapter describes how to get data into Metrics Management—both manually and by importing from other programs and systems. This chapter also explains how to export data.
- *Chapter 8. Publishing data.* This chapter provides information about how to publish data for end users. This chapter describes how to create and use the DataMart, internet publishing, alerts, and links.
- *Chapter 9. Metrics Management data objects reference.* This chapter provides descriptions of data objects used in standard and custom reports.
- *Chapter 10. Administering servers and databases.* This chapter provides an overview of ongoing database management functions of the system specialist. This chapter describes how to install additional workstations and perform database functions, such as backing up, verifying, compacting, deleting, and upgrading databases.
- *Chapter 11. Using pbvcon to schedule Metrics Management.* This chapter describes how to schedule pbvcon and provides the syntax for pbvcon commands.

# 1

## Creating and configuring a database

This chapter discusses the following topics:

- About Metrics Management databases
- Planning your database setup
- Creating a Metrics Management database
- Configuring a database

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## About Metrics Management databases

A Metrics Management database is a required repository for the data that provides performance management information to users. The database stores:

- User-entered data
- Imported data
- Calculated data
- Audit data
- User commentary

The database supports structuring the data as Metrics Management objects, such as measures and briefing books.

The Metrics Management Standard and Smart clients support creating and administering databases. Metrics Manager Web does not support these tasks.

The first task in implementing a performance measurement system is to create a database on a server machine. Actuate recommends maintaining only one production database. Additional databases are useful to perform testing, such as for a different view structure, a new set of performance measures, updates to third-party software, or to prepare for an off-site presentation.

Metrics Management supports three database types: Standard, Microsoft SQL Server, and Oracle. The Standard database is royalty free and simple to maintain. A SQL Server or Oracle database is suitable for an organization with a dedicated database environment and database administrator.

Metrics Management controls access to the data in the database by user authentication. All database types support importing users into a Metrics Management database from your existing authentication scheme.

Metrics Management supports various storage periods for data and formula measures. For example, a data measure can track the percentage of projects that are completed for this quarter on budget and on time. Consider how frequently you collect data and which period type to enable before creating the database. Most organizations choose to store data in monthly, quarterly, and yearly periods.

---

## Planning your database setup

Before creating a new database, you must consider the following options:

- The database type
- The period type frequency



- The date range
- The number of Metrics Management servers
- Read and write access

## Choosing a database type

Metrics Management installs, maintains, and backs up a SQL Server Express database called the Standard database. The Standard database does not require a database administrator or additional software.

Metrics Management supports two additional database types, SQL Server and Oracle. Consider using a SQL Server or Oracle database if:

- You already use a SQL Server or Oracle database in your organization.
- Your company policy requires one of the database types.
- You require enterprise scale deployment with a high level of availability, backup capability, and scalability.

Metrics Management provides tools to export a Standard database to these other database types. These tools support deploying a Standard database structure into one of the other available database types. Actuate recommends that you design and test your database structure in a Standard database before deploying to your production environment.

## About creating a SQL Server or Oracle database

The system specialist creates a SQL Server or Oracle database in Metrics Management using one of two options in Servers and Databases: Create database or Create database from a SQL script. Consult with your SQL Server or Oracle database administrator to decide which method is appropriate:

- Create database. In Metrics Management, the system specialist specifies settings to connect to the SQL Server or Oracle database server. This method requires creating a master user in SQL Server or Oracle. Metrics Management uses the master user to connect to the SQL Server or Oracle database when creating the database.

For more information about how to create the database, see “Creating a Metrics Management database,” later in this chapter.

For more information about SQL Server master user requirements, see “Creating a Metrics Management master user in SQL Server,” later in this chapter.

For more information about Oracle master user requirements, see “Creating a Metrics Management master user in Oracle,” later in this chapter.

- Create database from a SQL Script. The system specialist creates the SQL Server or Oracle database by importing a SQL script into Metrics Management. This method is suitable for enterprise organizations whose corporate policies prevent sharing master user privileges with the Metrics Management system specialist.

For more information about creating a database from a SQL script, see Chapter 10, “Administering servers and databases.”

Before creating a SQL Server or Oracle database in Metrics Management, ensure that you meet the appropriate requirements in the sections below.

### **About SQL Server database requirements**

Before creating the SQL Server database, ensure that you have the latest version of Microsoft Data Access Components (MDAC) installed. Also ensure that SQL Server has sufficient licenses for the number of connections from the Metrics Management server.

### **About Oracle database requirements**

Connecting the Metrics Management Server to an Oracle database requires installing the appropriate Oracle Data Access Components (ODAC). The machine running the Metrics Management Server requires the Oracle OLE DB provider and Oracle Data Provider for .NET (ODP.NET) framework. To install the ODACs, Actuate recommends using the Oracle Universal Installer for ODAC. Alternatively, use either of the following installers:

- Oracle Database Client installer for Windows.
- Oracle Database Server installer for Windows. Perform a custom installation and select Oracle provider for OLEDB.

To operate Metrics Management on a 64-bit system, you must use the following ODACs:

- To run the 32-bit version of Metrics Management, Metrics Management requires the 32-bit Oracle OLE DB provider and 32-bit ODP.NET provider.
- To run the 64-bit version of Metrics Management, Metrics Management requires the 32-bit Oracle OLE DB provider and 64-bit ODP.NET provider.

### **Creating a Metrics Management master user in SQL Server**

Creating a connection from Metrics Management to a SQL Server database requires creating two users in the SQL Server database. Metrics Management requires a Metrics Management master user and a regular Metrics Management user with reduced rights. To create the users, consult your SQL Server database administrator.

Metrics Management requires the master user to create the database in SQL Server and to delete the database from SQL Server. After the database is created,

Metrics Management no longer requires the Metrics Management master user account. For security purposes, Metrics Management discards the password associated with this account. Record the master user credentials for future use in the event that you decide to delete the database. To delete the database, you must provide the Metrics Management master user account credentials.

The Metrics Management master user requires rights to create and delete tables and records for Metrics Management's use on SQL Server. The Metrics Management master user must have write access to the master database and have the role of database creator. The default database must be the master database.

Metrics Management supports using Windows integrated security when creating a database. Ensure the database administrator creates the SQL Server login in the following format for the Windows user:

```
domain\username
```

Metrics Management uses the regular Metrics Management user's account to connect to the SQL Server database after the database is created.

## **Creating a Metrics Management master user in Oracle**

To create an Oracle database in Servers and Databases using Create database, your Oracle database administrator must create a Metrics Management master user. The Metrics Management master user requires rights to create the Metrics Management user in Oracle. The Metrics Management master user requires the following rights:

- Create user
- Drop user
- Unlimited tablespace with admin option
- Connect with admin option
- Resource with admin option
- Create procedure with admin option
- Create trigger with admin option
- Create view with admin option

The following sample SQL code illustrates how to create the Metrics Management master user in Oracle with sufficient rights to create the Oracle database:

```
create user scmaster identified by scmaster
  default tablespace system
  account unlock;
grant create user to scmaster;
grant drop user to scmaster;
grant unlimited tablespace to scmaster with admin option;
grant connect to scmaster with admin option;
grant resource to scmaster with admin option;
grant create procedure to scmaster with admin option;
grant create trigger to scmaster with admin option;
grant create view to scmaster with admin option;
```

After the database is created, Metrics Management no longer uses the Metrics Management master user account. Metrics Management creates another user with limited rights to the Oracle server. The new user performs data transactions only.

## Planning period types

A Metrics Management database stores measure data for multiple types of periods. A period is the unit to use for storing data and formula measures. When you create a database, you choose the period types to create in the database. The database must include period types for which you collect data and the reporting periods for which users need performance information.

Yearly is a mandatory period type. Additional supported period types are quarterly, monthly, and daily. Typically, a database contains monthly, quarterly, and yearly period types. For example, if you collect data only on a quarterly basis, choose quarter as a period type for the database. If users view quarterly reports, choose quarter as a period type even if you collect data monthly only. A database with daily periods requires considerably more storage space and data input.

Metrics Management can support defining a period structure that does not appear by default, such as a weekly period. To define additional periods, consult with Actuate Professional Services.

## Planning the database date range

The database stores data for a fixed date range. The database creates periods for the enabled period types for this date range. For example, if the Month period type is enabled, the database contains monthly periods for each year in the date range. The date range is non-editable after the database is created.

The default database date range is 2009 to 2016. The maximum range is a thirty-year period, from 1990 to 2020. You set the database date range depending on your needs, for example, to enter historical data prior to 2009, or budget or forecast data beyond 2016.

The database stores complete fiscal years. The default fiscal year begins on the first day of January. Set the start month to align with your company's fiscal year.

## About Metrics Management Server

Metrics Management Server is a required component that installs with Metrics Management. Metrics Management Server provides back-end database access services to Metrics Management clients and the Metrics Management Reporting Services. The server provides database management functionality to a Metrics Management administrator. The server supports the storage of Metrics Management data and performs data calculations. Metrics Management Server also provides auditing, authentication, and licensing functionality.

Typically, you use a single server for all Metrics Management databases. For an advanced configuration, consider using one Metrics Management Server for production purposes on one machine and a second Metrics Management Server for testing purposes on another machine.

## Planning read and write access to a database

Typically, a Metrics Management database supports both read and write access. You can create a read-only version of your production database. The read-only database enforces full security to prevent unauthorized access to sensitive information.

Consider creating a read-only version of your production database to make a snapshot of the database available to users on a read-only basis. For example, create a copy of your database after reporting year-end financial data. Then, make the database copy available to users on a read-only basis.

---

## Creating a Metrics Management database

The tasks for creating a Metrics Management database include:

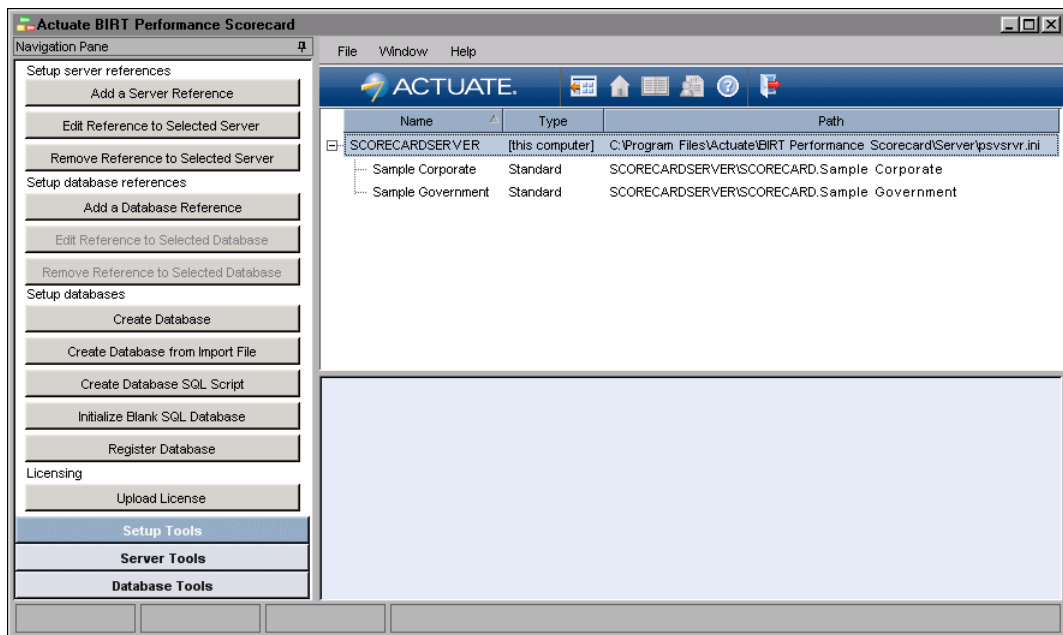
- Naming the database
- Creating an administrator password
- If necessary, providing a database license file
- Defining the database start and end years, and fiscal year start month
- Choosing which period types to make available
- Specifying the database type

You can rename the database or change the administrator password after creating the database. You cannot change the database start and end years, fiscal year start month, and available period types after database creation.

Metrics Management creates a database administrator user named Administrator. Security settings allow the Administrator to perform any action on any Metrics Management object. These security settings are non-editable. The volume administrator name in iHub is Administrator. Logging in to Information Console, Management Console, or Metrics Management using Metrics Management authentication requires having the same user name for the iHub administrator and Metrics Management administrator. For this reason, do not change the Administrator name in Metrics Management.

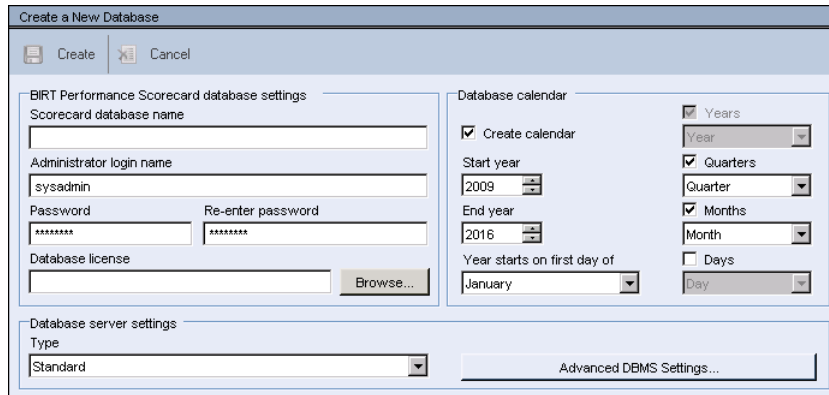
### How to create the new database

- 1 In Metrics Management, choose File → Open Servers and Databases. If prompted, choose Yes to close the database that is open. Servers and Databases opens.
- 2 From the list of servers in the main window, select the server on which to create the database, as shown in Figure 1-1.



**Figure 1-1** Servers and Databases

- 3 In the Navigation Pane, choose Setup Tools.
- 4 In Setup databases, choose Create Database. Create a New Database appears, as shown in Figure 1-2.



**Figure 1-2** Creating a new Metrics Management database

### How to create an administrator password

Using a Standard database, a new administrator password must be at least eight characters, is case-sensitive, and can contain special characters. In Metrics Management database settings, name the Metrics Management database, and change the administrator password.

- 1 In Metrics Management database name, type a name for the database.
- 2 In Administrator login name, leave Administrator unchanged. The name for the Metrics Management database administrator is Administrator.
- 3 In Password and Reenter password, type a password for the Administrator user.

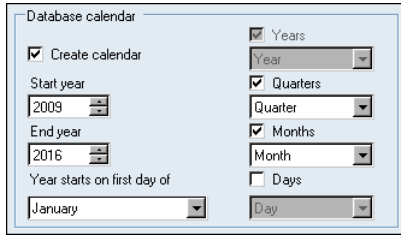
### How to provide a database license file

If your organization purchased the database license model, provide the database license file. Otherwise, Database license appears unavailable.

- 1 To provide the license, in Database license, choose Browse.
- 2 In Upload new license to Metrics Management, locate and select the database license file. Then, choose Open.

### How to specify calendar settings

In Database Calendar, shown in Figure 1-3, you can specify calendar settings.



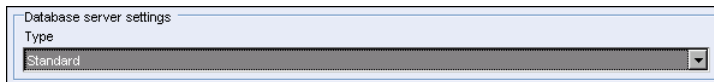
**Figure 1-3** Defining database calendar settings

Ensure that Create calendar is selected and perform any of the following tasks:

- To define start and end dates for the database, select a year in Start year and a year in End year.
- To create a fiscal year that begins in a month other than January, in Year starts on the first day of, select a start month.
- To make a period type available in the database, select Quarters, Months, or Days. You cannot deselect the Years period type.

#### How to specify the Standard database type

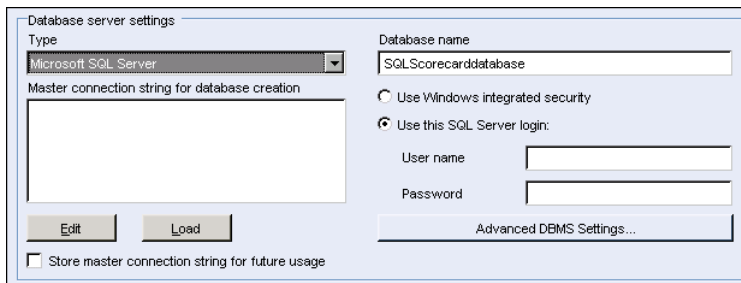
To specify a Standard database, in Database server settings, in Type, select Standard, as shown in Figure 1-4.



**Figure 1-4** Selecting the Standard database type

#### How to specify SQL Server database settings

- 1 In Database server settings, in Type, select Microsoft SQL Server as the database type.
- 2 In Database name, enter the name of the database to create in SQL Server, as shown in Figure 1-5.



**Figure 1-5** Specifying the type and name of a SQL Server database



Provide credentials by performing one of the following tasks:

- To log on using Windows credentials, select Use Windows integrated security. The account running the Metrics Management Server as a Windows service must have the appropriate rights to SQL Server.
  - To log on using SQL Server user credentials, select Use this SQL Server login. Then, provide the appropriate user name and password.
- 3 To create a connection to the SQL Server database, in Master connection string for database creation, choose Edit. SQL Server Database Connection Properties appears, as shown in Figure 1-6.

Perform the following tasks. Then, choose OK.

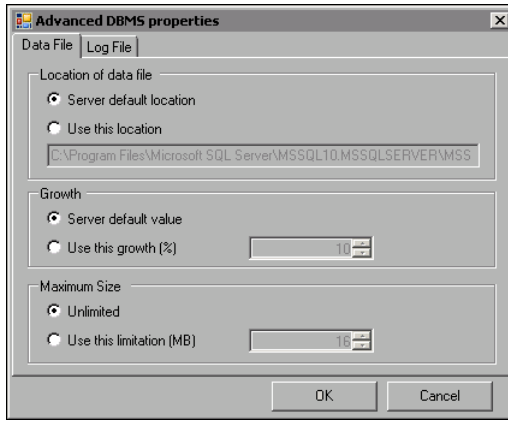
- 1 In Connection, from Server name, select the SQL Server name.
- 2 In Master user credentials, provide credentials to log on to SQL Server by performing one of the following tasks:
  - To log on using Windows credentials, select Use Windows integrated security. The account running the Metrics Management Server as a Windows service must have the appropriate rights to SQL Server.
  - To log on using SQL Server user credentials, select Use this SQL Server login. Then, provide the appropriate user name and password.
- 3 Choose Test Connection. In the confirmation message, choose OK.



**Figure 1-6** Specifying SQL Server connection settings

- 4 To save the connection string, choose Store master connection string for future usage. The string saves in the psvsrvrprivate.ini configuration file, which is located by default in C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server\Resources on a 32-bit machine and C:\Program Files(x86)\Actuate\iHub3\modules\Metrics Management\Server\Resources on a 64-bit machine.

- To change default database settings, choose Advanced DBMS Settings. Advanced DBMS properties appears, as shown in Figure 1-7.



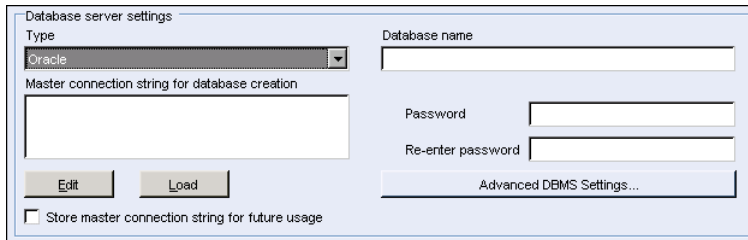
**Figure 1-7** Specifying advanced SQL Server database settings

Perform any of the following optional steps:

- To specify a location for the database .mdf file, in Location of data file, choose Use this location. Then, provide a path.
- To specify the maximum percentage size to permit the database to increase, in Growth, choose Use this growth (%). Then, provide a percentage value.
- To specify the maximum size for the database, in Maximum Size, choose Use this limitation (MB). Then, provide a value.
- To specify a location for the database log file, choose Log File. In Location of log file, choose Use this location. Then, provide a path.

### How to specify Oracle database settings

- In Database server settings, in Type, select Oracle as the database type, as shown in Figure 1-8.

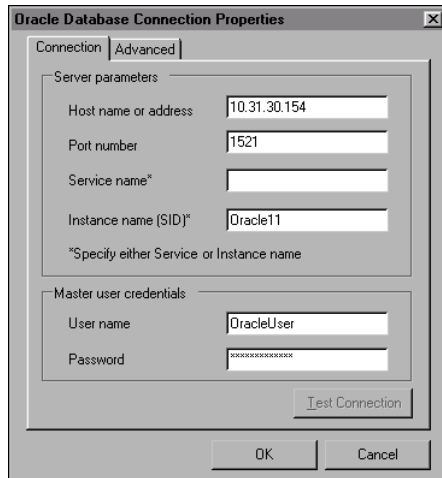


**Figure 1-8** Selecting the Oracle database type

- In Database server settings, perform the following tasks:

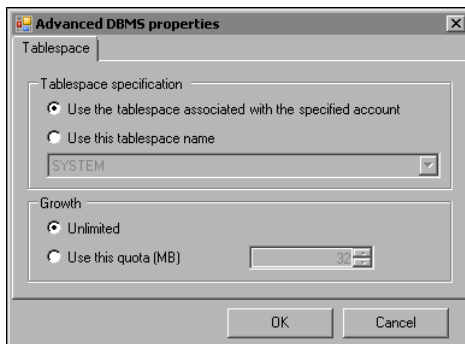
- 1 In Database name, enter the name of the database to create in Oracle. The database name cannot contain spaces.  
  
During database creation, the Metrics Management master user creates an Oracle user to perform data transactions between Metrics Management and the Oracle database. The new user is named based on the value provided in Database name.
- 2 In Password, enter the password for this user. Then, reenter the password.
- 3 In Master connection string for database creation, choose Edit.
- 4 In Oracle Database Connection Properties, shown in Figure 1-9, create a connection to the Oracle database. Then, choose OK.
- 5 In Server parameters, perform the following tasks:
  - 1 In Host name or address, provide the name or IP address of the Oracle database server machine.
  - 2 In Port number, provide the port number for Metrics Management to communicate with the Oracle database server.
  - 3 Perform one of the following tasks:
    - In Service name, provide the Oracle service name. The service name is the name of the Oracle service on the Oracle database server.
    - In Instance name (SID), provide the instance name or system ID of the Oracle database.

If both service name and instance name are provided, Metrics Management connects using the Oracle service name.
  - 4 In Master user credentials, provide the Metrics Management master user name and password.
  - 5 Choose Test Connection. Then, choose OK.



**Figure 1-9** Specifying Oracle database connection properties

- 6 To save the connection string, choose Store master connection string for future usage. The string saves in the psvsrvrprivate.ini configuration file, which is located by default in C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server\Resources.
- 7 In Advanced DBMS properties, shown in Figure 1-10, provide tablespace specifications or specify the growth limits for the database as necessary.



**Figure 1-10** Specifying advanced Oracle database properties

Perform either of the following steps, if necessary:

- To define a tablespace, in Tablespace specification, choose Use this tablespace name. Then, provide a name.
- To specify the maximum size for the database, in Growth, choose Use this quota (MB). Then, provide a value.



- 8 To create the database, choose Create in Create a New Database. Metrics Management creates the database. Choose OK to accept the confirmation message. In the main window, the new database appears under the server on which the database was created.

---

## Configuring a database

After you create a database, the next task is to define database settings and user preferences. Only an administrative user can modify database settings. Non-administrative users can modify their own user preferences. Table 1-1 shows the database configuration tasks.

**Table 1-1** Database settings and user preferences

Database configuration task	Database setting	User preference
Providing a database name, description, and category	✓	
Configuring and enabling an authentication method	✓	
Defining calendar settings for period types	✓	
Defining performance range settings for measures		✓
Defining auditing and synchronization settings	✓	
Choosing a home page image	✓	
Choosing an image for data presentation in book format		✓
Providing text for book title pages	✓	
Defining a default location and period type		✓
Choosing the default database book	✓	
Setting up a user to support publishing a book, map, or view as a web page	✓	
Setting up the web site for shared performance management content	✓	
Creating shortcuts to directories or web pages as named paths or URLs	✓	
Creating an information or e-mail link	✓	
Creating a database link tag	✓	
Defining unit type and performance range settings for initiatives	✓	

The following sections describe in detail how to configure a database.

## Naming and describing a database

The database name appears in the login dialog box and taskbar in Metrics Management. The name should be brief but sufficiently descriptive to enable users to distinguish the database on login. The database description provides further information about the database. The category is useful to search if you have multiple databases. The database description and category appear in the administrator interface only.

### How to name and describe a database

- 1 In the Navigation Pane, choose Setup → Configure. Configure appears.
- 2 In Name, the name of the database appears. Perform any of the following tasks:
  - To change the name of the database, type a name.
  - For Description, choose Edit and type a description.
  - For Categories, choose Edit and select or create categories.



- 3 Choose Save.

## About authentication methods

An authentication method validates user credentials when he logs in. Metrics Management supports Metrics Management, Standard, and Windows authentication, and the enterprise-level authentication schemes, Active Directory and LDAP. Metrics Management authentication is the default authentication method.

Windows, Active Directory, and LDAP authentication support using single sign-on to authenticate to Metrics Management. Single sign-on employs the user's system login information, either Windows domain or LDAP, to authenticate the user to Metrics Management. Metrics Management supports enabling Active Directory or LDAP over Secure Sockets Layer (SSL).

If your organization uses a custom authentication scheme, Actuate can create a custom plug-in to integrate that scheme with Metrics Management. Consult your implementation team for more information.

Metrics Management supports enabling multiple authentication methods within one database. The user chooses an authentication method from the list of available methods when they log in.

Actuate recommends enabling Standard authentication. The Standard authentication method supports:

- Creating users and controlling passwords from within Metrics Management

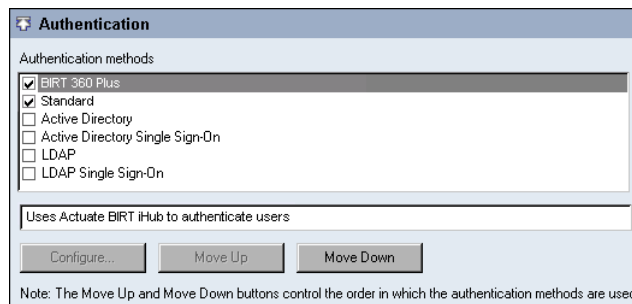
- Testing functionality available to different user profiles
- Ensuring access to the Metrics Management database, regardless of the availability of the Active Directory or LDAP servers
- Providing access to Metrics Management users who are not registered in the Active Directory or LDAP repositories

## Enabling an authentication method

The system specialist chooses an authentication method to make available to users. Each single sign-on method requires configuring the related authentication method. For example, the Active Directory method provides configuration information to the Active Directory Single Sign-On method. Once enabled, the Metrics Management authentication method does not require configuration.

### How to enable an authentication method

- 1 Choose Setup→Configure.
- 2 In Authentication, select the check box beside an authentication method to enable it. Figure 1-11 shows Metrics Management and Standard enabled.



**Figure 1-11** Enabling authentication methods

- 3 To change the order in which authentication methods appear to a user when logging in, select a method. Then, choose Move Up or Move Down.



- 4 Choose Save.

## Configuring the Standard authentication method

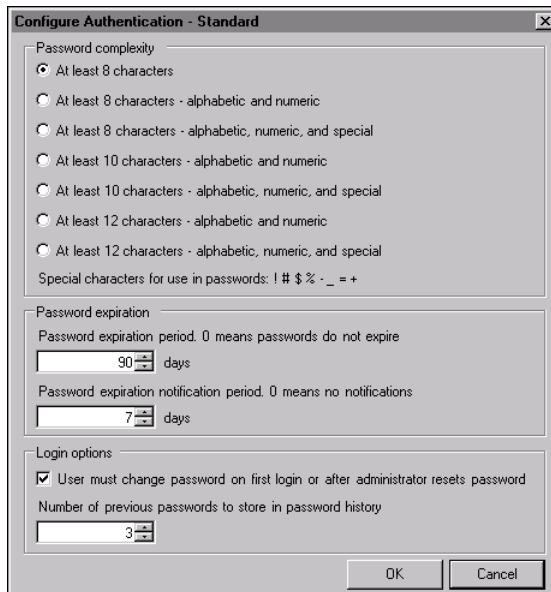
A system specialist configures the Standard authentication method by defining Metrics Management password rules. A Standard authentication password must be at least eight characters. Metrics Management supports defining increased password complexity rules. The system specialist can specify a minimum password length of 8, 10, or 12 characters, and require using alphanumeric characters, or alphanumeric and special characters. The supported set special characters is: ! # \$ % - \_ = +.

The system specialist can specify the number of days after which a user password expires. After specifying a password expiration period, also specify the number of days in which to notify a user in advance of password expiry. For example, specify a password expiration date of 90 days, and a notification period of 7 days.

Metrics Management supports requiring a user to change their password after an administrator creates an initial password or resets a password, and defining the number of passwords stored in password history. A user may not reuse a password stored in password history. Specify up to a maximum of 10 stored passwords per user.

### How to configure the Standard authentication method

- 1 Choose Setup→Configure.
- 2 In Properties→Authentication—Authentication methods, select Standard.
- 3 Choose Configure. Configuration Authentication - Standard appears. Figure 1-12 shows Configuration Authentication for Standard authentication.



**Figure 1-12** Configuring the Standard authentication method

- 4 To configure password complexity rules, in Password complexity, make a selection to specify the minimum user password length, and whether to require alphanumeric characters, or alphanumeric and special characters.
- 5 To define password expiration rules, in Password expiration, perform the following tasks:



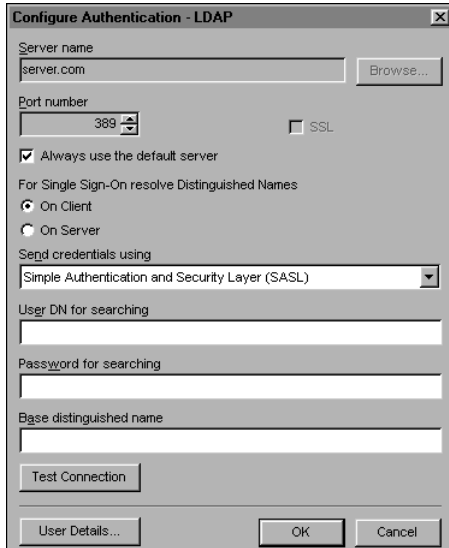
- In Password expiration period, specify the number of days after which a user password expires.
  - In Password expiration notification, specify the number of days before the password expiration date that a user receives an expiration message during log in.
- 6 To specify that a user must change their password after logging in for the first time or after a password reset, in Login options, select User must change password on first login or after administrator resets password.
  - 7 To specify the number of previous passwords that Metrics Management stores for a user, in Login options, specify a value in Number of previous passwords to store in password history.
  - 8 Choose OK.

## **Configuring the Active Directory or LDAP authentication method**

To configure the Active Directory or LDAP authentication method, provide the server name and port number of the Active Directory or LDAP server. You can enable Active Directory or LDAP over Secure Socket Layers (SSL) to encrypt user IDs and passwords that travel on the network. If you provide the standard port number of 636 that LDAP uses for SSL, Metrics Management always connects over SSL.

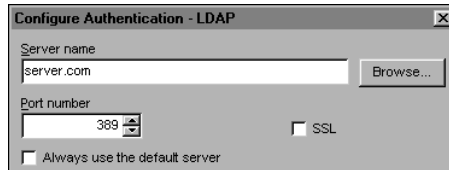
### **How to configure the Active Directory or LDAP authentication method**

- 1 Choose Setup→Configure.
- 2 In Properties→Authentication—Authentication methods, select Active Directory or LDAP.
- 3 Choose Configure. Configuration Authentication appears. Figure 1-13 shows Configuration Authentication for LDAP.



**Figure 1-13** Configuring the LDAP authentication method

- 4 To provide a server name and port number for Active Directory or LDAP:
  - 1 Deselect Always use the default server, as shown in Figure 1-14.



**Figure 1-14** Changing the default server for LDAP

- 2 Provide a server name and port number.
- 5 To configure Active Directory or LDAP to use SSL, select SSL.
- 6 Choose Test Connection to verify that the settings are correct.
- 7 Choose Save.



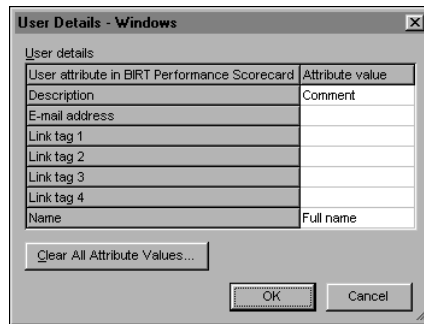
## Configuring external user definitions

Metrics Management has a user record for every user that logs in using external authentication. Metrics Management supports importing the list of users from the external authentication pool to create the Metrics Management users. Before performing the import, you map key information from the external authentication pool to Metrics Management's user attributes. For example, you can map the LDAP distinguished name attribute to the Metrics Management user name attribute, then import users from LDAP.

When you map user attributes, Metrics Management contacts your Active Directory or LDAP server and finds all the available attributes that are stored on the server. The Metrics Management name attribute defines how a user appears in Metrics Management. If an attribute does not appear in the list, you can provide one by contacting your network administrator for assistance.

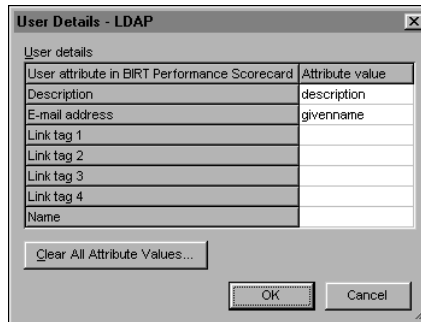
### How to map a Windows, LDAP, or AD attribute to a Metrics Management user attribute

- 1 Choose Setup→Configure.
- 2 Choose Properties→Authentication, to open User Details for Windows authentication, perform the following tasks:
  - 1 In Authentication methods, select Windows.
  - 2 Choose Configure. User Details appears. Figure 1-15 shows User Details—Windows.





**Figure 1-15** Opening User Details—Windows

- 3 To open User Details for LDAP or Active Directory authentication, perform the following tasks:
  - 1 In Authentication methods, select LDAP or Active Directory.
  - 2 Choose Configure. Configuration Authentication appears. Figure 1-13 shows Configuration Authentication for LDAP.
  - 3 Select User Details. User Details appears. Figure 1-16 shows User Details—LDAP.



**Figure 1-16** Configuring LDAP authentication

- 4 In User details, to associate a user attribute with a Metrics Management user attribute:
  - 1 Select a cell in the Attribute value column.
  - 2  Choose the drop-down arrow. Then, select an attribute from the list of available user attributes.
  - 3 Choose OK.
- 5  Choose Save.

## Managing period settings for the database calendar

The Metrics Management calendar contains period settings for each period type in the database. Period settings define which periods are available for user data entry, and the default data that displays in Metrics Management.

Period settings include locked, completed, and current periods, and the dashboard period range. The following list describes these settings:

- The locked period indicates that users cannot enter data prior to and including this period. Locking a period ensures data integrity.
- The completed period indicates that data is complete for this period and prior periods. By default, books, maps, and views display the completed period. The completed period contains completed data and is most suitable for data display.
- The current period indicates the period for which data is entered. Measures data can appear incomplete for the current period, depending on when individual departments or locations enter or import data into Metrics Management.
- The dashboard period range defines the range of data available for data entry in the dashboard.

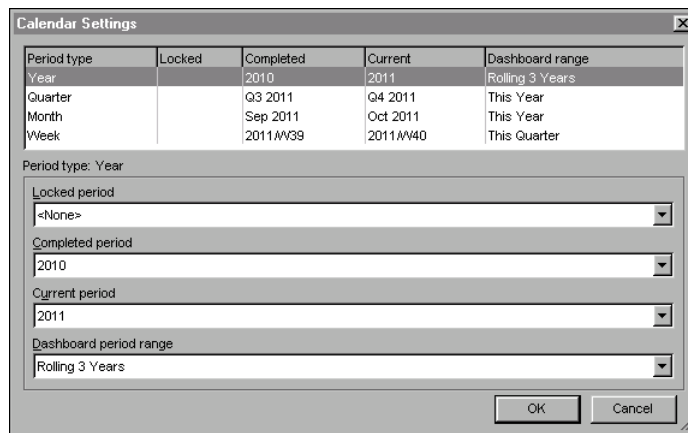
Before deploying a database to a production environment, define initial settings for the locked and completed periods. After the database is in production, the system specialist manually updates period settings as users complete period data entry. Actuate recommends that you pick a specific date after the end of each period to change the period settings.

Settings for each period type are independent of each other. For example, locking the last month in a quarter does not lock that quarter.

Calendar Settings also supports defining how estimated or partial data appears for dates beyond the completed period. Metrics Management data charts display a vertical, dashed line to mark the end of the completed period. You can choose to use an asterisk to mark the end of the completed period in data tables. You can also provide text that explains the purpose of the asterisk. Metrics Management dashboards display the asterisk and text as a footnote.

### How to manage period settings for the database calendar

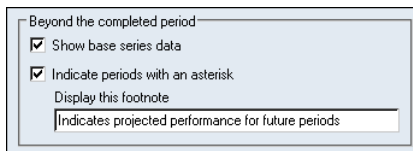
- 1 Choose Setup → Configure.
- 2 In Calendar Settings, choose Edit. Calendar Settings appears, as shown in Figure 1-17.



**Figure 1-17** Configuring calendar settings for a database

- 3 From the Period type column, select a period type to edit. For example, select Years. Select a locked, completed, and current period. Then, in Dashboard period range, perform one of the following tasks:
  - To specify a date range for data entry in the dashboard, select a period range value. For example, select This Year to Date.
  - To allow data entry for only the completed period, select Default.
  - To make Direct Data Entry unavailable to the dashboard, select <None>.

- 4 Define period settings for the remainder of the period types. For example, define period settings for Quarters, then Months. Then, choose OK.
- 5 In Beyond the completed period, shown in Figure 1-18, perform any of the following tasks:
  - To show the base comparison series for beyond completed data, choose Show base series data.
  - To show an asterisk beside beyond completed data, choose Indicate periods with an asterisk. In Display this footnote, provide text explaining the meaning of the asterisk.



**Figure 1-18** Configuring beyond completed period settings



- 6 Choose Save.

## Defining database performance ranges for measures

A performance range is a set of five index ranges, each of which uses a color and a label to characterize performance. An index is a percentage value that compares a measure's actual performance against a comparative value, such as a target or budget. The default label for an index range of 160–200% is very good, for 105–160% is good, for 95–105% is caution, for 50–95% is poor, and for 0–50% is very poor. Ranges cannot overlap.

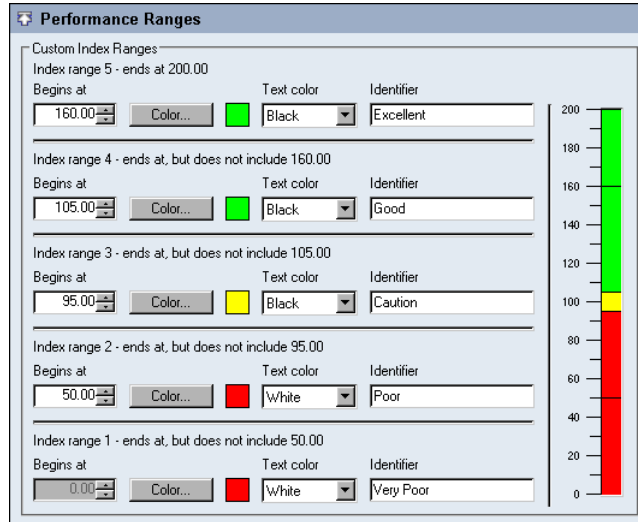
The performance range specifies the color of measures and locations in books, maps, and views. For this reason, color choices must be readily distinguishable. For example, two shades of the same color can be difficult to tell apart. You can use either the web-safe or standard Windows color palette. For consistency of display across Metrics Management clients, choose colors from the web-safe color palette.

Metrics Management supports customizing the performance range settings for the database. These customized settings apply to all new measures. These settings also apply to existing measures for which a user has not modified the performance ranges. Users can define index ranges that differ from the database settings, on a measure-by-measure basis.

### How to define database performance ranges

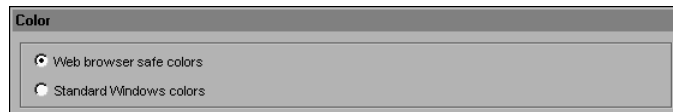
- 1 Choose Setup→Configure.
- 2 In Performance Ranges, shown in Figure 1-19, perform any of the following tasks:

- To define the lower limit of an index range, in Begins at, type or select a value. To define the upper limit of the index range, in the range immediately above, in Begins at, type or select a value. That value is both the upper limit of the first range and the lower limit of the next range. In the example shown in Figure 1-19, the upper limit of index range 3 is the lower limit of index range 4.



**Figure 1-19** Defining index values for a database

- To define the color of an index range:
  - 1 Choose Color beside the range.
  - 2 In Color, to define a palette, select Web browser safe colors, as shown in Figure 1-20. Alternatively, you can use Standard Windows colors, but some colors appear differently in Metrics Management clients.



**Figure 1-20** Choosing the web browser safe palette

- 3 Select a color from one of the palettes. Then, choose OK.
- To change a label's text color, from Text color, select a color.
  - To change a label's name, in Identifier, type a label.



- 3 Choose Save.

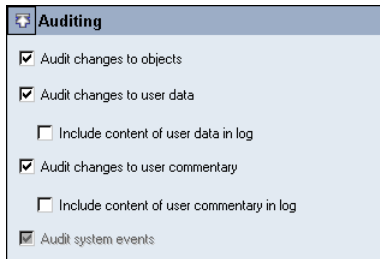
## Defining database audit settings

Metrics Management supports logging changes that users make to objects, data, and commentary in the database. Metrics Management records the user name and time of the change. Optionally, Metrics Management can record the changed values of data and commentary, but including the changed values causes your audit log to grow dramatically. Best practice is to log the user name and time only. The system specialist can choose to log changes to any of the following items:

- Metrics Management objects  
A Metrics Management object is an item that has a defined set of properties. For example, briefing books, filters, locations, maps, and users are all objects.
- User data  
User data is numerical database content that a user types or imports into the database.
- User commentary  
User commentary is an explanation of the performance of a measure.

### How to define database audit settings

- 1 Choose Setup→Configure.
- 2 In Auditing, as shown in Figure 1-21, select the items to log.



**Figure 1-21** Defining database audit settings



- 3 Choose Save.

## Defining database synchronization settings

Unsynchronized data can slow the performance of books and views. Data is unsynchronized when stored user or calculated data values do not match the values that display in Metrics Management. User data is the raw data presented in data measures. Calculated data is the result of calculations on user data presented in group and formula measures. Data becomes unsynchronized when changes are made to:

- User data, for example, when users input or import data.



- View hierarchies, for example, when a parent measure definition changes when a new measure is added to a view.
- Calendar settings, for example, when the system specialist moves calendar settings forward.

When a user selects an unsynchronized measure, Metrics Management synchronizes before displaying the measure. Metrics Management either retrieves the latest user data value, or produces a new calculated data value. The database stores changed data values in synchronized user and calculated data. For this reason, synchronized values in a book or view display more quickly than unsynchronized values.

The Enable pending user data entry setting determines when Metrics Management calculates and displays the results of changes to user data, view hierarchies, and calendar settings. If pending user data entry is disabled, Metrics Management performs calculations dynamically using changed data when users open measures. If pending user data is enabled, Metrics Management displays only synchronized data. In this case, changes to user data, hierarchies, and calendar settings are pending until synchronization takes place. The system specialist performs synchronization manually or by using pbvcon. The length of time this process takes depends on the size and complexity of the database. For this reason, perform synchronization at the end of the day or overnight. Enable pending user data if the database is very large or if users change data frequently.

Synchronization, as shown in Figure 1-22, displays the synchronization status of user data, hierarchies, and calculated data. The status includes the last time data was synchronized, and how long data has been unsynchronized. When synchronization is performed manually, the system specialist can enable notification that user data, hierarchies, and calculated data are unsynchronized. With this setting enabled, the system specialist receives notifications on log out. Only administrative users have the appropriate privileges to receive notifications.

Type	Process status	Last synchronized	Unsynchronized since
User data	Synchronized	--	--
Hierarchies	Synchronized	7/11/2011 1:28:12 PM	--
Calculated data	Synchronized	7/11/2011 10:42:41 PM	--

Pending user data is not activated.

Enable pending user data entry

Notify on logout if user data needs to be synchronized


Notify on logout if hierarchies need to be synchronized

Notify on logout if calculated data needs to be synchronized

**Figure 1-22** Database synchronization status

### How to define database synchronization settings

- 1 Choose Setup→Configure.

- 2 In Synchronization, perform any of the following tasks:
  - To enable pending user data, choose Enable pending user data entry. Choose whether to be reminded on logout when user data is unsynchronized.
  - Choose whether to be reminded on log out if location and measure hierarchies or calculated data are unsynchronized.
-  3 Choose Save.

## Defining database preferences

Metrics Management supports three types of database preferences. User-interface preferences define the corporate appearance of Metrics Management. Personalizable preferences define default view and measure display settings that users can change. System-level preferences define settings that enable functionality available to users. The system specialist can define all database preferences. Non-administrative users can only modify personalizable preferences settings, and, if permitted by the system specialist, book images.

User-interface preferences include:

- Specifying an image for the home page  
The home page image, typically a corporate logo, displays at the top of the home page.
- Specifying an image for books  
The book image, typically a corporate logo, displays on all book cover pages. The system specialist can choose whether to allow users to change this image.
- Providing contact information for the book cover page  
Contact information is typically the organization's mission statement and the system specialist's e-mail address. Metrics Management copyright information always appears on the book cover page.



- Defining the book for My Book  
My Book is a briefing book that is available to all users by choosing My Book from the toolbar. The book typically contains one section that tracks the organization's strategic objectives. Additional sections use filters to provide performance information specific to the current user, such as measures that are performing well. When creating the filters for My Book, specify the owner as <Current User>, and ensure that the Everyone group can view the filters.

Personalizable preferences include:

- Defining the default location for new views  
Typically, the default location is the top location in the location structure. If the database contains more than one location structure, choose the most

commonly used location in the database. This setting defines the initial location that a view displays. Users can personalize this setting when creating a new view.

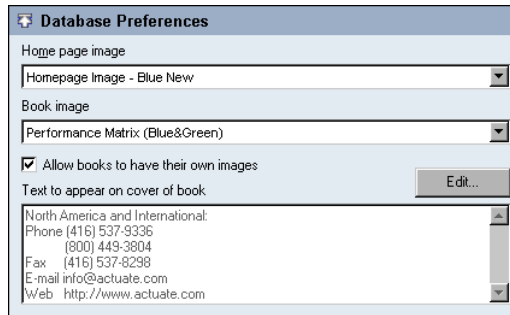
- Defining the default period type for new measures, and for data entry  
Typically, the system specialist defines the default period type based on when users report measure data. For example, if users provide measure data on a monthly basis, then define Month as the default period type. Users can personalize this setting when creating a new measure.

System-level preferences include:

- Specifying the user for active web publishing  
The active web publishing user has restricted privileges that enable secure publishing of books, dashboards, maps, or views on an internal web site or personalized web page. For more information about configuring active web publishing, see Chapter 8, “Publishing data.”
- Setting up the Performance Management page in Share  
Share is a repository for links and performance management content. The system specialist can rename the button and web page for the Performance Management page. In the Windows Client, defining an active web publishing link as the web page requires adding the Metrics Management Classic Web Client as a trusted site in IE with custom level security set to low. By default, the Performance Management page links to performance management content on the Actuate web site.

#### **How to define database preferences**

- 1 Choose Setup→Configure→Options.
- 2 In Database Preferences, to define user-interface preferences, perform any of the following tasks:
  - Choose the home page image and default book image, as shown in Figure 1-23. To allow users to change the default book image, select Allow books to have their own images.



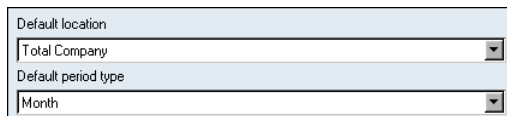
**Figure 1-23** Defining home page and book database preferences

- Choose the book for My Book, as shown in Figure 1-24.



**Figure 1-24** Specifying the database book

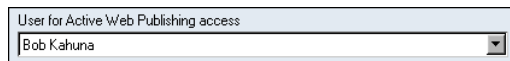
- 3 To define user-level preferences, choose a default location and period type, as shown in Figure 1-25.



**Figure 1-25** Defining the default location and period type

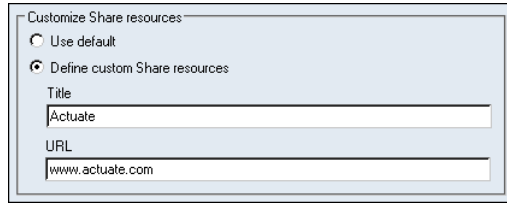
- 4 To define system-level preferences, perform any of the following tasks:

- Choose an active web publishing user, as shown in Figure 1-26.



**Figure 1-26** Defining the active web publishing user

- To change the Performance Management web page for Share, as shown in Figure 1-27, perform the following tasks:
  - 1 In Customize Share resources, select Define custom Share resources.
  - 2 In Title, provide a new name for the Performance Management button.
  - 3 In URL, type the URL of the new web page.



**Figure 1-27** Configuring Share



5 Choose Save.

## Defining named paths and named URLs

A named path is a variable that defines the location of a frequently used file or folder. A user provides a named path when specifying a file path in Metrics Management. For example, when creating a data export, a user provides a named path to specify the destination for the XML data export file, instead of manually browsing to the location. A link can use a named path to locate a document, application, or web site.

A named URL is a variable that defines part or all of a web address. To create a URL link to a document, a user provides the named URL and linked document name.

By default, a Metrics Management database contains the system named paths and editable named URLs described in Table 1-2. A system named path can be renamed, but its path definition cannot be edited. System named paths cannot be deleted.

**Table 1-2** System named paths and editable named URLs

Named path	Description
Application Path	Path to the Metrics Management Client folder
My Documents	Path to the user's My Documents folder
Program Files	Path to the Program Files folder
TempPath	Path to the user's Temp folder

When you create a named path or URL, note the following restrictions:

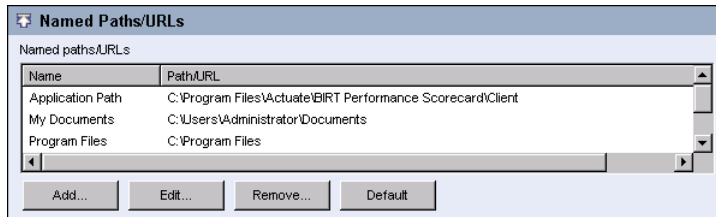
- The name of a named path cannot contain the percent sign (%).
- Metrics Management does not validate the path or URL that you provide. If you provide an invalid path or URL, a user receives an error message on attempting to open the named path.

As a best practice, consider using a named path to a central repository for linked documents. Create one named path to a main directory and separate named paths to its subfolders. Store linked documents in the subfolders and use both

named paths definitions to create links. Using this approach, if you move the main directory, you only change the main directory named path definition, instead of changing paths for each link.

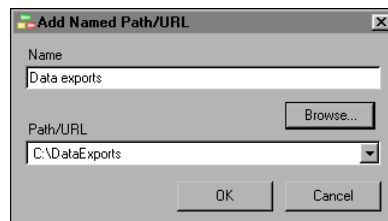
### How to define a named path

- 1 Choose Setup→Configure→Options.
- 2 In Named Paths and URLs, as shown in Figure 1-28, perform any of the following tasks:



**Figure 1-28** Specifying named paths and URLs

- To create a named path:
  - 1 Choose Add. Add Named Path or URL appears.
  - 2 In Name, type a path name.
  - 3 In Path or URL, choose Browse to navigate to a file location or folder, as shown in Figure 1-29. Then, choose OK.



**Figure 1-29** Adding a named path

- To create a named URL, choose Add. In Path or URL, provide the URL, for example, <http://www.mycompany.com/sales/reports/>.
- To edit a named path or URL, select the path and choose Edit. In Name, provide a new name and edit the path or URL.
- To delete a named path, select the path and choose Remove.
- To restore the name of a system named path, choose Default.



- 3 Choose Save.

## Creating database links and link tags



The system specialist can create information links, e-mail links, and link tags for the database. An information link is a link to a file, or to a URL. An information link appears in Information Links on the home page, in Links→Database Info Links in books, maps, and views, and from the Links menu in measure and location boxes in a view. Only the system specialist can add and remove information links.

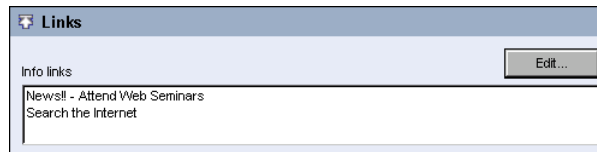


An e-mail link is a link that launches an e-mail to the address specified in the link. An e-mail link appears in the E-mail menu in books, maps, and views. An e-mail link becomes active when a measure and location pair is selected.

A link tag is a user-defined variable that passes information to a link when the link is opened. A link tag is specified in a book, database, location, measure, or user. For more information about the syntax of link tags, see Chapter 8, “Publishing data.”

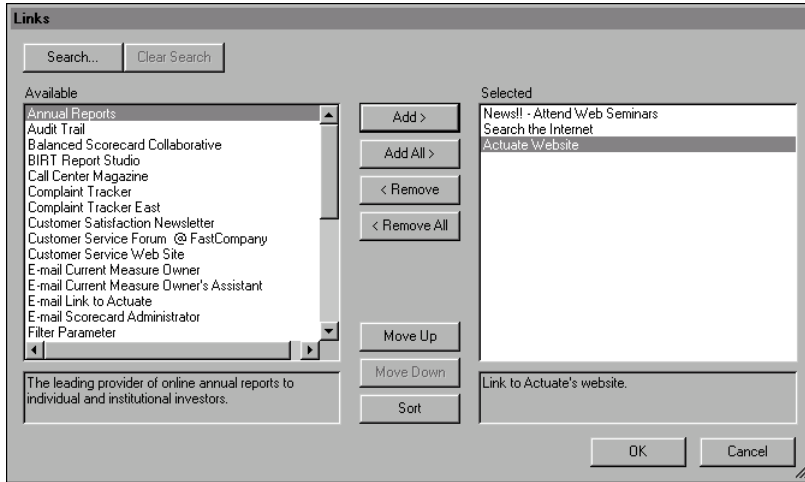
### How to choose information and e-mail links

- 1 Choose Setup→Configure→Options.
- 2 In Links, and in Info Links or E-mail Links, as shown in Figure 1-30, choose Edit. Links appears.



**Figure 1-30** Displaying information links

- 3 In Available, select a link. To move the link to the Selected list, choose Add, as shown in Figure 1-31.



**Figure 1-31** Specifying information links

- 4 To change the display order of links, either:
  - Select a link and choose Move Up or Move Down.
  - Choose Sort to arrange the links in alphabetical order.



- 5 Choose OK. Then, choose Save.

#### How to create link tags

- 1 Choose Setup→Configure→Options.
- 2 In Link Tags, in Link tag 1, type a link tag name.
- 3 Type additional link tag names in the remaining link tag boxes if desired.



- 4 Choose Save.

## Defining the unit type for initiatives

The budget unit type applies formatting to the budget value for initiatives. Select an existing unit type for budget values, or create a new unit type. The default budget unit type, Initiative Budget, formats the numbers as currency, applying a dollar sign prefix and two decimal places to budget values.

#### How to define the unit type for initiatives

- 1 Choose Setup→Configure→Initiatives.
- 2 In Initiative Options, in Budget Options, in Budget unit type, select a unit type.



- 3 Optionally, to create a unit type, choose New to open Setup Unit Type. On Setup Unit Type, you can specify the unit type to create.



- 4 Choose Save.

## About performance range settings for initiatives

A performance range is a set of five numeric ranges, each of which uses a color and a label to characterize performance. There are seven configurable initiative performance ranges, including five date ranges, and a budget and rating range. The system specialist defines the performance colors and labels for each range and the range limits for date and budget ranges. Customized performance range settings apply to all new and existing initiatives in the database.

The date performance ranges specify the colors of the start date and end date performance indicators in the dashboard. The budget performance range specifies the color of the budget performance indicator. The rating performance range specifies the color of the rating performance indicator. Color choices must be readily distinguishable. For example, two shades of the same color can be difficult to tell apart. You can use either the web-safe or standard Windows color palette. For consistency of display across Metrics Management clients, choose colors from the web-safe color palette.

## Configuring an initiative performance range

Specify ranges for the week, two-week, month, quarter, long term, budget, or rating performance ranges. Changing a performance color or label in one date range changes the setting in all date ranges. For example, changing the top label range in the week range also changes the top label in the two week, month, quarter, and long term ranges.

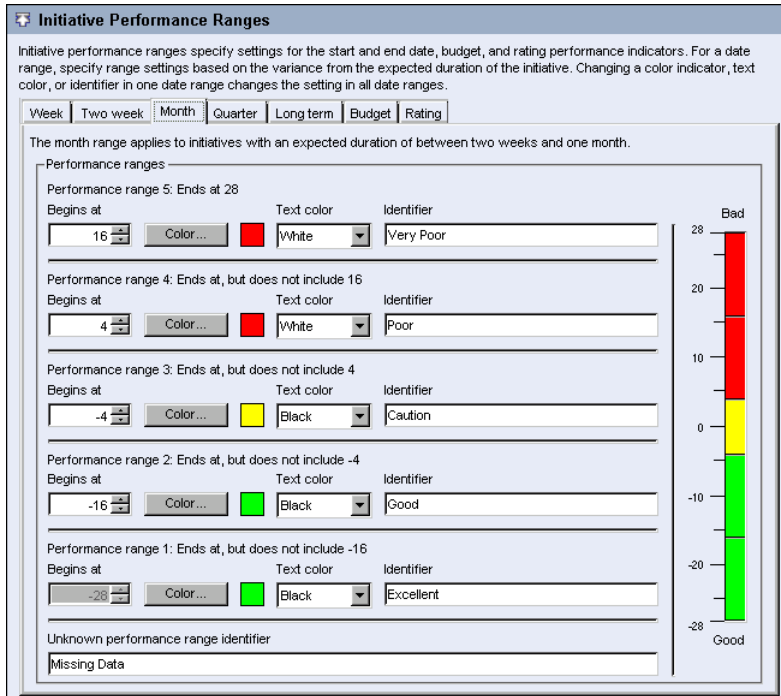
Configure the following ranges:

- Date performance ranges specify the colors and labels for the start and end date performance indicators.
- The budget performance range specifies the colors and labels for the budget performance indicator.
- The rating performance range specifies the colors and labels for the rating performance indicator.

### How to define an initiative performance range

- 1 Choose Setup→Configure→Initiatives.
- 2 In Initiative Performance Ranges, to select a range to edit, perform one of the following tasks:
  - To define settings for a date range, choose Week, Two week, Month, Quarter, or Long term.

- To define settings for the budget range, choose Budget.
  - To define settings for the rating range, choose Rating.
- 3 In the selected range, as shown in the example in Figure 1-32, perform any of the following tasks:



**Figure 1-32** Defining initiative range values for a database

- To define the lower limit of a performance range, in Begins at, type or select a value. To define the upper limit of the range, in the range immediately above, in Begins at, type or select a value. That value is both the upper limit of the first range and the lower limit of the next range. In the example shown in Figure 1-32, the upper limit of range 3 is the lower limit of index range 4. Defining range limits is not available for the rating range.
- To define the color of a performance range:
  - 1 Choose Color beside the range.
  - 2 In Color, to define a palette, select Web browser safe colors. Alternatively, you can use Standard Windows colors, but some colors display differently in Metrics Management clients.
  - 3 Select a color from one of the palettes. Then choose OK.
- To change a label's text color, from Text color, select a color.

- To change a label's name, in Identifier, type a label.



**4** Choose Save.



# Planning a performance management system

This chapter discusses the following topics:

- About starting to build the performance management system
- Working with categories
- Working with templates
- About Metrics Management security
- Configuring user properties
- Working with user groups
- Working with locations

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## About starting to build the performance management system

Metrics Management uses measures to store, calculate, and display performance management data. Measure data captures the performance information for an organization. Measures are the primary building blocks with which to expose and analyze performance issues in books, maps, and views. Before creating measures, the system specialist creates the infrastructure that supports measures. The primary supporting objects are categories, templates, users, user groups, and locations.

Categories are labels that group other objects. Best practice is to decide the category types for an object before creating multiple objects. For example, before setting up users the system specialist decides that Asia, Europe, and North America categories are required. When creating the first North American user, the system specialist creates the North America category.

Templates define standard values for properties of an object type, such as users or measures. Templates save significant time for the system specialist when creating multiple objects. For example, the View Only User template defines privileges as view only for Metrics Management objects.

Users identify individuals who use Metrics Management. Locations and measures require a user as an object owner. For this reason, the system specialist creates users before creating locations and measures. For example, the European CFO user can be defined as the owner of the European location. Users can be grouped. User groups support defining privileges for multiple users. For example, the executive user group can view and open a book, but not edit or delete the book.

Locations define the organizational or geographical dimension of measures. For this reason, locations are created before measures. A measure has one or more locations. In many cases, organizations track performance of a measure at multiple locations. For example, the Overall Performance measure tracks performance at multiple locations, including AsiaPac and Call Center.

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## Working with categories

A category is a label applied to a Metrics Management object. Users filter and search for objects by using categories. For example, a user filters by category to create a book section that shows all red measures owned by the current user. The system specialist creates an initial set of categories. The system specialist uses those categories when creating objects in the system. The system specialist creates a category for a specific object type, such as a measure, and applies the category

to multiple objects of the same type. For example, a category called Finance applies to all financial measures.

An object can have multiple categories. A category does not exist independently of an object type. A category deletes from the system when removed from the last object to which it applies.

Users are also able to create categories if they have edit privilege on that object type. A category is visible to all users, not only to the user who creates the category.

Metrics Management supports users searching for objects by category. Searching by category makes working with large numbers of objects more manageable. For example, users can search on category to refine the list of measures that displays in the main window in Setup→Measures.

## Creating a category

When creating a category, the following rules apply:

- A category applies only to the object type for which the category is created. For example, a category created for a book can apply only to other books.
- A category is not case-sensitive. You cannot create two categories named, for example, Finance and finance.

### How to create a category

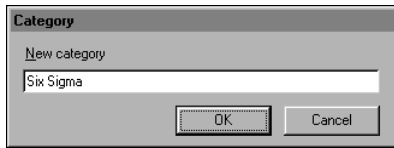
- 1 In the Navigation Pane, choose Setup. Then, expand an object type folder. For example, expand the Measures folder.
- 2 Select the object for which to create a category. Setup opens for the selected object.
- 3 In Name, choose Categories→Edit. Categories appears, as shown in Figure 2-1.



**Figure 2-1** Creating a category

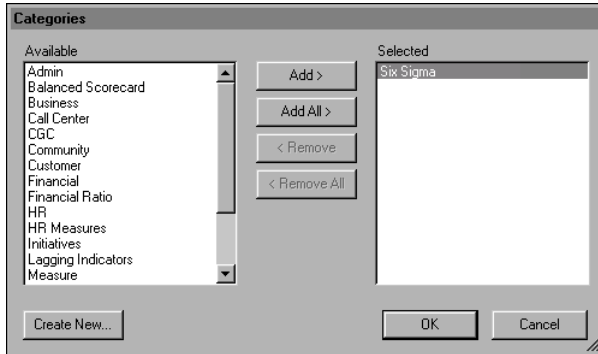
- 4 Choose Create New. Category appears.

- 5 In New category, type a name, as shown in Figure 2-2. Then, choose OK.



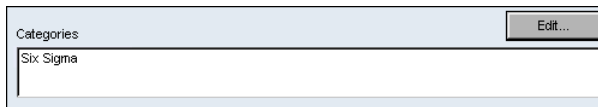
**Figure 2-2** Naming a category

The category appears in the Selected list, as shown in Figure 2-3.



**Figure 2-3** A new category appearing in the Selected list

- 6 Choose OK. The new category appears in Categories, as shown in Figure 2-4.



**Figure 2-4** The Leading indicator category displaying in Categories



- 7 Choose Save. Users can now apply the category to other objects of that type.

## Assigning a category to an object

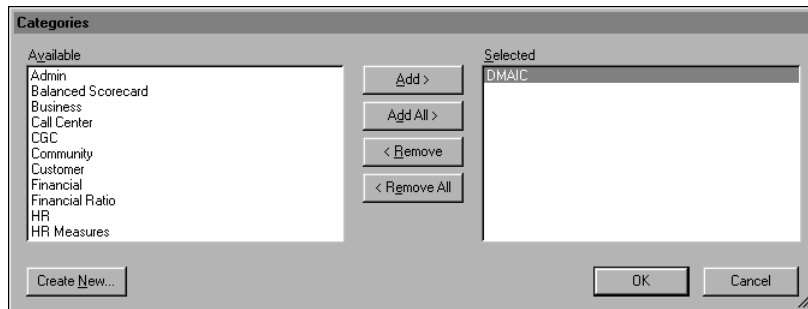
To enhance filtering and searching, assign multiple categories to an object. For example, the Profit measure is assigned both the Financial and Lagging indicators categories.

### How to assign a category to an object

- 1 In the Navigation Pane, choose Setup. Then, expand an object type folder. For example, expand Measures.
- 2 Select a specific object. Setup opens for the selected object type.
- 3 In Name, choose Categories → Edit. Categories appears.



- 4 Select an available category. Choose Add to move the category to the Selected list. Figure 2-5 shows the DMAIC category in the Selected list.



**Figure 2-5** Selecting a category



- 5 Choose OK. Then, choose Save.

## Removing a category

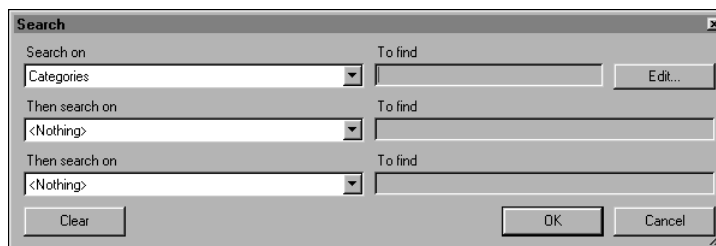
A category can not be deleted directly. A category disappears when it is no longer associated with any objects. First determine which objects contain a category. Then remove the category from each individual object. Using the search feature makes this task easier to perform.

### How to search for all objects containing a specific category

- 1 In the Navigation Pane, choose Setup, and choose an object type. For example, choose Measures.

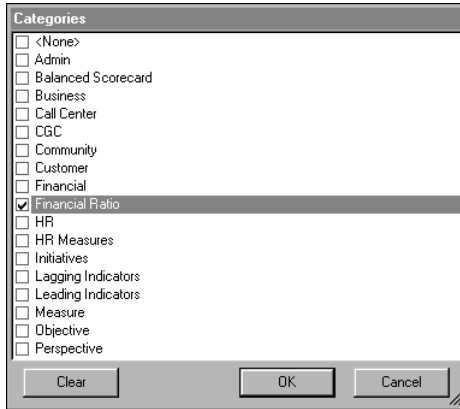


- 2 Choose Search.
- 3 In Search on, select Categories, as shown in Figure 2-6.



**Figure 2-6** Searching on categories

- 4 Choose Edit. In Categories, select a category name. Then, choose OK. Figure 2-7 shows the Financial Ratio category selected.
- 5 Choose OK.



**Figure 2-7** Selecting the Financial Ratio category

#### How to remove a category

- 1 Open each object containing the category.
- 2 In Name, choose Categories→Edit. Categories appears.
- 3 In the Selected list, select the category to remove. Then, choose Remove.



- 4 Choose OK. Then, choose Save.

---

## Working with templates

A template is a model that defines common settings for a Metrics Management object type. Templates save time as users do not need to define those settings when creating objects. For example, a group measure template can contain settings such as the measure type, polarity type, and storage period.

Using templates ensures consistent object design. For example, a user template standardizes user profiles by predefining user privileges for administrators and executive users. The system specialist sets security on a template to prevent non-administrative users from changing the template.

A database can contain templates created by the system specialist or another user. A new database contains user templates that define privileges for several user types. User templates include Administrator, Location Administrator, Regular User or Measure Owner, Restricted Administrator, Restricted Location Administrator, and View Only User.

### Creating a template



Before creating a template, consider which settings to define as common. For example, in a group measure template, two common settings are measure type

and the dashboard type. In this case, you can define Group as a measure type, and Group Dashboard as the dashboard type.


To create a template, there are two methods:

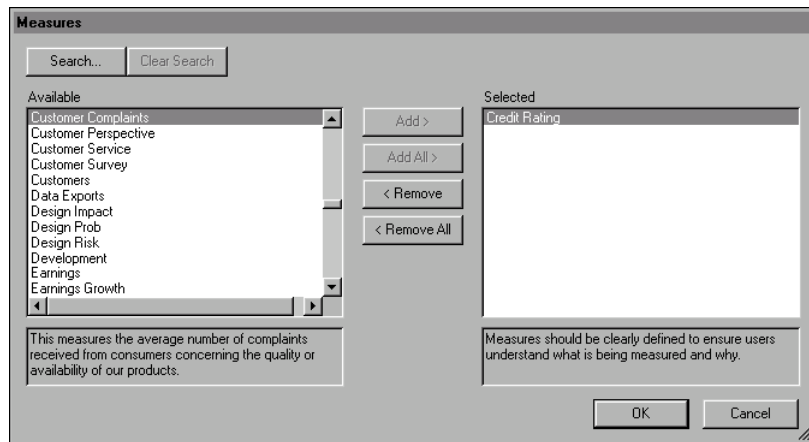
- Defining properties in a new template.
- Creating a template from an existing object.

#### How to create a new template

- 1 In the Navigation Pane, choose Setup, and expand an object type. For example, expand Locations.
-  2 Choose Templates. Then, choose Create. Setup opens for the selected object type.
- 3 In Name, type a name for the template. Optionally, define other object settings.
-  4 Choose Save and Close. The new template appears in Templates.

#### How to create a template from an existing object

- 1 In the Navigation Pane, choose Setup. Then, expand an object type folder. For example, expand Measures.
-  2 Choose Templates. Then, choose Create Template From.
- 3 Select an available object. To move the object to Selected, choose Add. For example, Figure 2-8 shows the Credit Rating measure in Selected.



**Figure 2-8** Choosing to create a template from the Credit Rating measure  
Choose OK. Setup opens for the object.

- 4 In Name, type a name for the template. Optionally, define or clear other object settings.



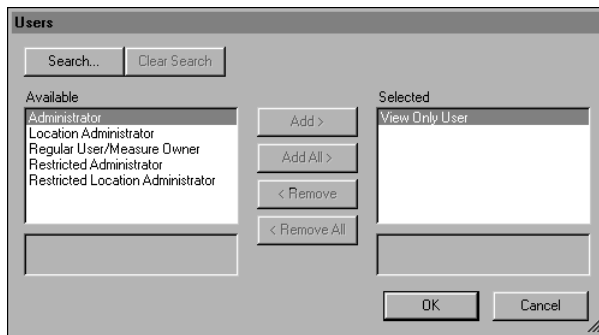
- 5 Choose Save and Close. The new template appears in Templates.

## Creating an object using a template

Creating an object using a template includes the common properties defined by the system specialist or another user. Override or accept these properties in the new object.

### How to create an object using a template

- 1 In the Navigation Pane, choose Setup. Then, expand an object type. For example, expand Users.
- 2 Choose Create From Template. The list of available templates appears.
- 3 Select an available template. To move the template to the Selected list, choose Add. For example, Figure 2-9 shows the View Only User template in the Selected list.



**Figure 2-9** Adding the View Only User template to the Selected list  
Choose OK. Setup opens for the new object.

- 4 In Name, type a name for the new object.
- 5 Optionally, define other object settings.



- 6 Choose Save.

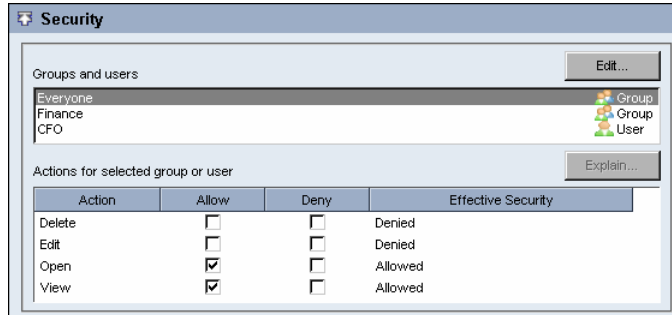
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## About Metrics Management security

Metrics Management supports setting security on objects, and assigning privileges to users. A user's ability to perform actions on an object depends on the object's security settings, the user's privileges, membership in a group, and the user hierarchy.

## About object security

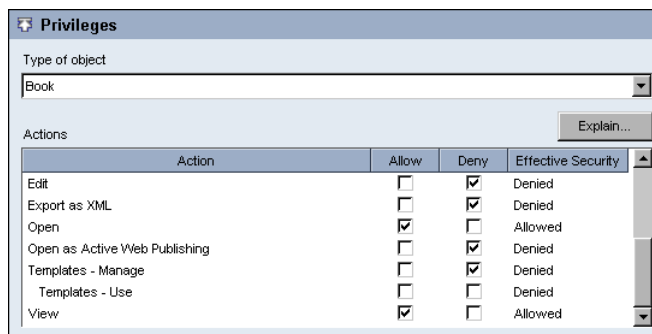
Object security defines the actions that users can perform on a specific object. Object security allows or denies the actions that certain users can perform on the object. Object security can apply to individual users, groups of users, or all users. For example, object security settings can allow all users to view a specific book. In Figure 2-10, the Balanced Metrics Management book's object security settings allow the Everyone group to open and view the book. Typically, object security defines delete, edit, open, and view actions on an object. Some object types support additional actions.



**Figure 2-10** Object security settings for the Balanced Metrics Management book

## About user privileges

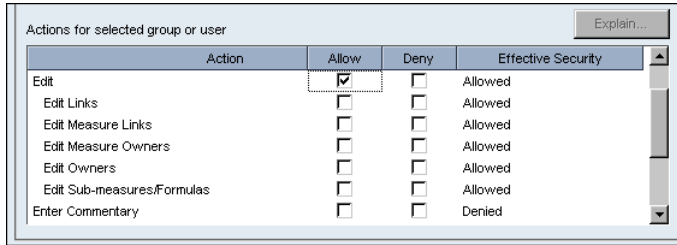
A user privilege defines the actions that a specific user can perform on an object type. The system specialist assigns privileges that reflect a user's role in the organization. Typical actions include create, edit, delete, and view. Other available actions are specific to an object type. User privileges can allow or deny an action on an object type. For example, privileges can allow a user to view books, and deny that user the ability to create or edit books. Figure 2-11 shows book privileges for the CFO user. The CFO user is allowed to view books, but cannot edit books.



**Figure 2-11** Book privileges for the CFO user

## About related actions

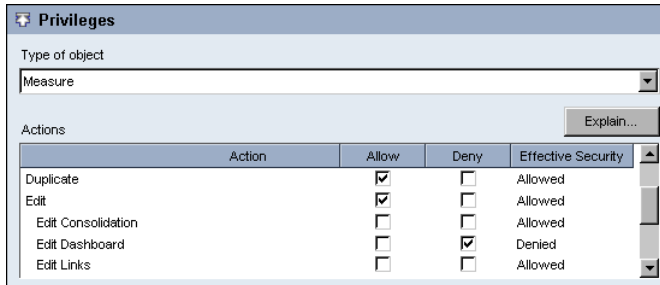
A related action is the parent or child of another action. A related action is specified in object security or user privileges. Specifying a parent action affects unspecified child actions. For example, in Setup Location—Security, allowing Edit also allows Edit Links, Edit Measure Links, Edit Measure Owners, Edit Owners, and Edit Sub-measures:Formulas, as shown in Figure 2-12.



Action	Allow	Deny	Effective Security
Edit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Links	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Measure Links	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Measure Owners	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Owners	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Sub-measures:Formulas	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Enter Commentary	<input type="checkbox"/>	<input type="checkbox"/>	Denied

**Figure 2-12** Allowing the Edit parent action

Setting a child action overrides the parent action. For example, in Setup User—Privileges, shown in Figure 2-13, denying the Edit Dashboard privilege overrides allowing Edit for the measure. Selecting deny for any action overrides the allow setting for a related action.



Action	Allow	Deny	Effective Security
Duplicate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Consolidation	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Dashboard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Denied
Edit Links	<input type="checkbox"/>	<input type="checkbox"/>	Allowed

**Figure 2-13** Denying Edit Dashboard privilege overrides Edit privilege

## About effective security

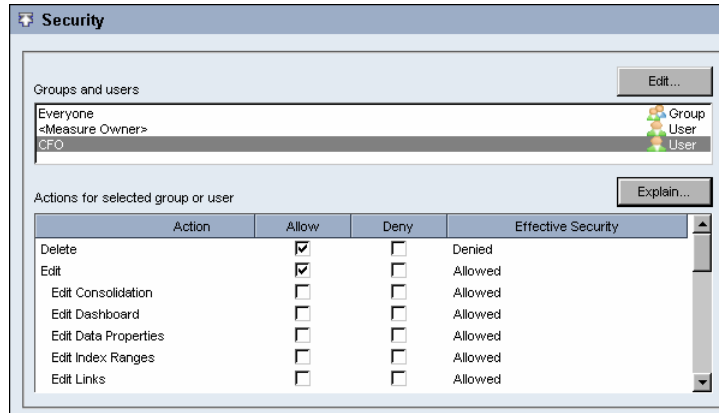
Effective security represents the actions that a user can perform on a specific object after considering the following factors:

- Group membership
- Object security
- Parent or child action settings
- Publisher hierarchy
- User privileges

Effective security settings appear in Setup—Security for an object, Setup User—Security for a user, or Setup Group—Security for a group.

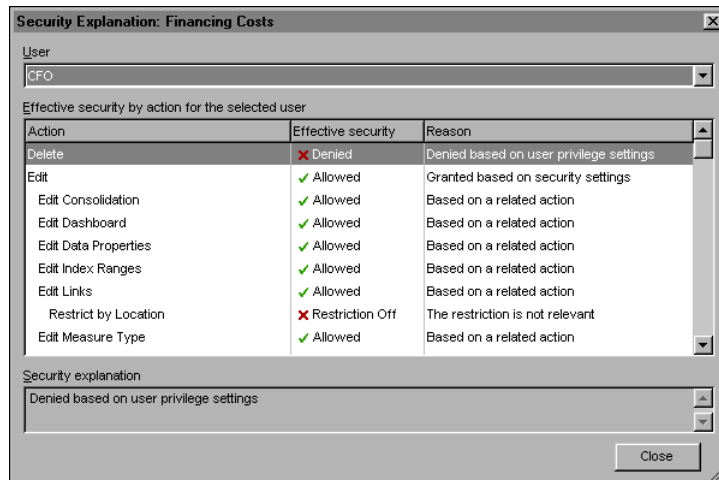
### How to display the effective security settings

- 1 To view effective security, navigate to Setup—Security for an object or to Setup User—Security for a user. The example in Figure 2-14 shows the CFO's effective security settings for the Financing Costs measure.



**Figure 2-14** Viewing security settings

- 2 To see why an action is allowed or denied, in Actions for selected group or user, choose Explain. For example, Figure 2-15 shows that the CFO user cannot delete the Financing Costs measure due to user privilege settings.



**Figure 2-15** Viewing an explanation of security settings

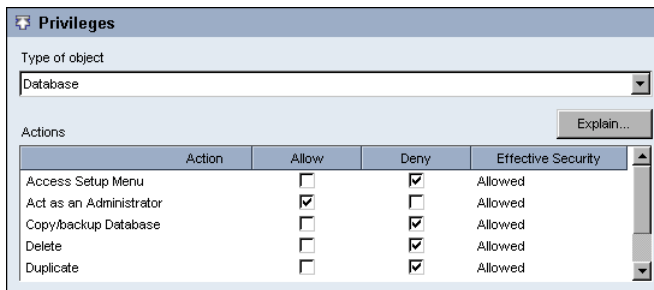
## Creating an administrator user

The Administrator creates an administrator user by allowing a user the Act as an Administrator privilege. The Act as an Administrator privilege requires the appropriate user license. The Act as an Administrator privilege overrides other privilege and object security settings, including settings where privileges and object security are denied. An administrator who has been granted the Act as Administrator privilege cannot modify his own privileges or security settings. An administrator can modify the security settings of all objects in the system, including privileges and security settings of all non-administrative users, except the Administrator user.

The Administrator is a special type of user who always has administrator privileges and who does not apply to the Act as Administrator license count. The number of users permitted to act as administrators applies to each server, regardless of the number of databases on the server. For example, a license for one act as administrator user allows granting the Act as an Administrator privilege to one user on one of the server's databases.

### How to allow the Act as an Administrator privilege

- 1 In the Navigation Pane, choose Setup>Users.
- 2 In Setup Users, choose a user name.
- 3 In Setup User—Security, in Type of object, select Database.
- 4 In Actions, in Act as an Administrator, select Allow, as shown in Figure 2-16.



**Figure 2-16** Allowing administrative privileges to a user



- 5 Choose Save.

## Understanding the application of privileges and security

To perform an action on an object, a user must have the privilege to perform the action, and the object must permit the action to be performed. Metrics Management performs a check on user privileges first, and then on object security. For example, if the CFO user attempts to edit the Financial measure,



Metrics Management confirms that the CFO has the privilege to edit measures. Then, Metrics Management confirms that the Financial measure permits editing. If both conditions are met, Metrics Management permits the CFO to edit the Financial measure.

## **About data and commentary entry privileges for initiatives**

A user is permitted to enter data or commentary for an initiative depending on the type of measure and security settings to which the initiative belongs, and the user who accesses the initiative.

For a data, formula, or group measure, an administrator, measure owner, or measure owner assistant always has the right to perform any action on an initiative belonging to the measure, including entering data or commentary. For a group measure, no other user may enter initiative data.

For a data measure, a location data entry user for the measure can view an initiative and enter data. A commentary entry user for the measure can view an initiative, create commentary, and edit and delete his own commentary.

For a formula measure, a user who is allowed direct data entry to the measure can enter data for initiatives belonging to the measure.

## **About Metrics Management security rules**

If user privileges and object security settings differ, the following rules apply:

- Object security settings that deny a user action always override individual user privileges that allow the action. For example, a book that denies the Edit action cannot be edited by a user who is allowed to edit books.
- Individual user privileges that deny an action always override object security settings that allow the action. For example, a user privilege that denies editing a book always denies the user to edit any book, regardless of the book's object security settings.

An object's security settings for a user override the object's security settings for a group. If the security settings allow a user to perform an action, and the security settings for the group deny the action, the user can perform the action. For example, the CFO user is allowed to edit the Cash flow measure, and is also a member of the Executive group. The CFO can edit the measure, regardless of the measure's security setting for the Executive group. Similarly, if the security settings deny a user from performing an action, and the security settings for the group allow the action, the user cannot perform the action.

If an object does not define security settings for a user, security settings for groups apply. If security settings are defined for multiple groups to which the user belongs, the following rules apply:

- If any group denies an action, Metrics Management denies the user from performing the action.
- If one group allows the action, and no other group specifically denies the action, Metrics Management allows the user to perform the action.

## About publisher security

A publisher is a user who makes an object available to the system. A publisher can define the object's security settings. Every Metrics Management object has a publisher. Typically, the publisher is the user who creates the object. In some cases, a user creates an object and assigns another user as the publisher.

A user is the object's direct publisher when the security settings define that user as the publisher. For example, Figure 2-17 shows publisher settings for the CEO's book. The Bob Kahuna user is the book's direct publisher. If the Published check box is cleared, then the book is only available to the publisher.

**Security**

Groups and users Edit...

Executive Group

Actions for selected group or user Explain...

Action	Allow	Deny	Effective Security
Delete	<input type="checkbox"/>	<input type="checkbox"/>	Denied
Edit	<input type="checkbox"/>	<input type="checkbox"/>	Denied
Open	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
View	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed

Publisher

Bob Kahuna

Published

**Figure 2-17** Publisher settings for the CEO's book

A user who publishes another user is an indirect publisher of that user's published objects. For example, if the President user publishes the Bob Kahuna user, the President user is the direct publisher of the Bob Kahuna user and an indirect publisher of the CEO's book shown in Figure 2-17.

Generally, user privileges determine which actions a publisher can perform on the object. Group membership or the published object's security settings can override user privileges to deny actions to the publisher.

The following rules apply to the publisher of an object:

- If the publisher has the privilege to perform an action and if no object security settings prevent the action, Metrics Management allows the action.

- If the publisher does not have the privileges to perform an action or if the object's security settings prevent the action, Metrics Management denies the action.

## Understanding the user hierarchy

The user hierarchy is a structure in the database that supports inheritance of user privileges. The act of publishing a user creates his position and relationships within the hierarchical structure. For example, the system specialist publishes the administrators, administrators publish location administrators, location administrators publish regional administrators, and regional administrators publish data entry users.

A user inherits privileges from the user who publishes or creates him. Privilege inheritance enables a user to publish other users without redefining common privileges. A publisher can deny privileges to users lower in the hierarchy. A publisher cannot allow privileges that he does not have. Users can view objects published by users lower in the hierarchy and modify security settings of those objects. A publisher can only assign a user lower in the hierarchy as a publisher of another object.

## Understanding the corporate hierarchy

The user hierarchy differs from a corporate hierarchy. In a corporate hierarchy, the president is at the top, followed by vice presidents, directors, managers, and general employees. In an administrative user hierarchy, the system specialist is at the top, followed by administrators, location administrators, and data entry users.

The publisher of a user is generally responsible for the administrative actions of that user and every user below in the administrative hierarchy. In the hierarchy, top-level users are generally not concerned with the performance of the measures that lower-level users own. They are responsible for ensuring that lower-level users are performing their administrative tasks appropriately, for example, creating objects correctly or distributing administrative roles properly to users below them.

## About inheritance for groups

Metrics Management does not support inheritance through groups. If an action on a object is undefined for a group, the group does not inherit security settings from the user that published the group. An undefined action is denied. To temporarily deny an action for a group, make the action undefined, and then define the setting later.

## About inheritance for users

Undefined actions are only of value for users in the administrative hierarchy. Assuming that users have the appropriate user privileges to perform a given action, actions that an object's security explicitly denies or allows are enforced. If an action is undefined for a user, and that user is in the administrative hierarchy for the object, the user is allowed or denied the ability to perform that action based on their individual user privileges. All general users that are not in the administrative hierarchy for the object are denied the ability to perform that action.

In summary, Metrics Management checks action requests in the following order:

- User privileges
- Object security settings (user and group)
- Publisher rights

---

## Configuring user properties

User properties define a person's access to Metrics Management. The system specialist creates a user that defines a person's login name and authentication method. For each user, the system specialist typically enables and configures Standard authentication and, optionally, an additional authentication method. Standard authentication requires a unique login name for each user.

Setting up a user includes configuring user preferences, privileges, and security settings. The system specialist sets up a user first when creating the user. Later, he reconfigures the user's setup if necessary.

After setting up a user, the system specialist uses impersonation to test the user's privileges and security settings.

## Understanding naming conventions

Metrics Management requires two types of names to identify a user. A user name uniquely identifies the user and typically reflects the person's organizational role. A login name is a credential to access Metrics Management. The user and login names can be the same or different.

### Standardizing user names

A naming convention simplifies finding, selecting, and grouping users. Employing a standard convention for user names ensures that the user list is simple to navigate. Metrics Management displays user lists alphabetically. Consistently following a standard for abbreviations helps to group users by title.

Consider creating user names based either on individuals, for example msmith, or on job titles, for example VicePresident. Although either choice is acceptable, basing a naming convention on titles presents fewer maintenance issues.

## **Standardizing login names**

When assigning a login name, Actuate recommends that it match the login name for the user's network. Using this convention simplifies user authentication.

## **Addressing organizational changes**

When an individual moves to a new position, the system specialist's tasks depend on the naming convention. Deleting a user also deletes ownership of items, such as books and measures. Changing the user name preserves ownership of items.

Using a convention based on titles, the system specialist needs to change only the login name. Using a convention based on people's names, the system specialist must change both the user name and login name to the new person responsible.

## **Creating a user**

Metrics Management supports the following methods for creating users:

- Creating a single user
- Duplicating a user
- Using a template
- Importing user credentials from an external user directory

## **Creating a single user**

The tasks for creating a user include naming a user and configuring user authentication methods. Authentication methods include Active Directory and Active Directory Single-Sign On, Metrics Management, LDAP and LDAP Single-Sign On, Metrics Management Standard, and Windows authentication. The system specialist can configure the methods which are enabled for the database.

You cannot save the user if the distinguished name is already assigned. An error message indicates to which user the distinguished name is assigned.

The Active Directory method provides configuration information to the Active Directory Single Sign-on method when the single sign-on method is enabled at the database level. Similarly, the LDAP method provides configuration information to the LDAP Single Sign-on method.

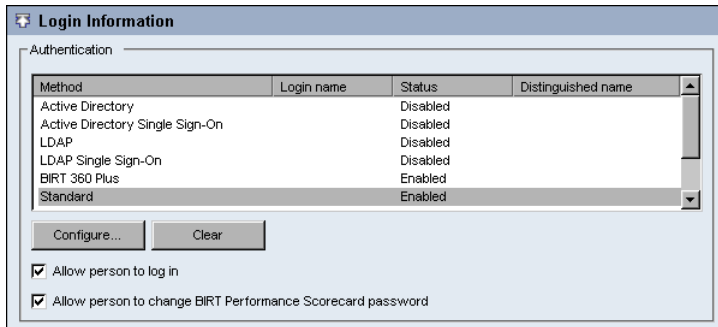
Actuate recommends always configuring the Standard authentication method. The Standard authentication method defines a user's native Metrics Management login name and password.

To enable Metrics Management authentication for a user, first ensure that the user resides in both Metrics Management and iHub. Then, enable Metrics Management authentication for the user in Metrics Management, and provide credentials for the user in iHub.

After configuring authentication, the system specialist can allow or deny a user access to the database. If a person leaves the organization, deny that user access to the database instead of deleting the user.

### How to create a single user

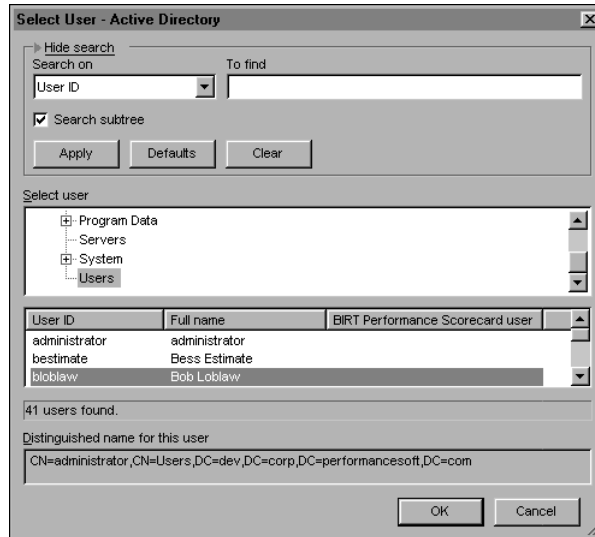
- 1 In the Navigation Pane, choose Setup➤Users.
- 2 Choose Create.
- 3 In Setup User: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the user.
  - In Description, choose Edit. Provide a description. Then, choose OK.
- 4 In Categories, choose Edit. Select or create categories. Then, choose OK.
- 5 In Login Information, shown in Figure 2-18, configure any of the following enabled authentication methods.



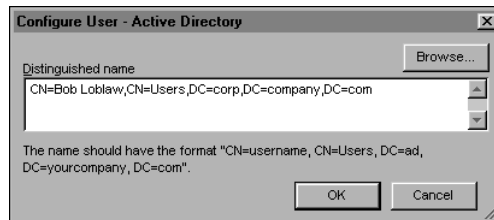
**Figure 2-18** Selecting the Standard authentication method

- 6 To configure the Active Directory authentication method, in Method, select Active Directory, and choose Configure.
  - 1 In Configure User, choose Browse.
  - 2 In Select User, browse to the directory server. Then, locate and select the user in the tree, as shown in Figure 2-19. Choose OK.
  - 3 In Configure User, the user's distinguished name appears, as shown in Figure 2-20. Choose OK.
- 7 To configure the LDAP authentication method:
  - 1 In Method, select LDAP, and choose Configure.

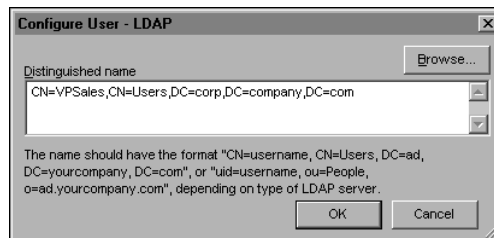
- 2 In Configure User, choose Browse.
- 3 In Select User, browse to the directory server. Then, locate and select the user in the tree. Choose OK. In Configure User, the user's distinguished name appears, as shown in Figure 2-21.



**Figure 2-19** Selecting an Active Directory user



**Figure 2-20** Configuring Active Directory authentication



**Figure 2-21** Configuring LDAP authentication

- 4 Choose OK. You cannot save the user if the distinguished name is already assigned. An error message indicates to which user the distinguished name is assigned.

The LDAP method provides configuration information to the LDAP Single Sign-on method when the single sign-on method is enabled at the database level.

- 8 To configure the Standard authentication method:
  - 1 In Method, select Standard method and choose Configure.
  - 2 Provide a Metrics Management login name. The login name is not case-sensitive.
  - 3 Select the Change Password check box. Provide a password under New password and enter it again under Confirm new password.
  - 4 Choose OK.
- 9 To configure the Windows authentication method:
  - 1 In Method, select Windows, and choose Configure.
  - 2 In Configure User, select the appropriate domain from the Windows domain list.
  - 3 From the Windows user list, select the user's Windows login name from the available login names.
- 10 To make a user active, select Allow person to log in. To make a user inactive, deselect Allow person to log in.
- 11 To restrict this user from altering their password, deselect Allow person to change Metrics Management password. This option is only available with Standard authentication.



- 12 Choose Save.

## Defining a user's database access and type

Depending on license file settings, the system specialist defines read-write access for users, and specifies the user's license type. The system specialist defines a user as a concurrent user, named user and data access only user.

If your organization purchased Named User licenses, the system specialist permits a user access to Metrics Management by defining him as a named user. A named user always has access to Metrics Management. If a user is not registered as a named user, when the user attempts to log in an error message indicates that the number of concurrent user licenses is exceeded.

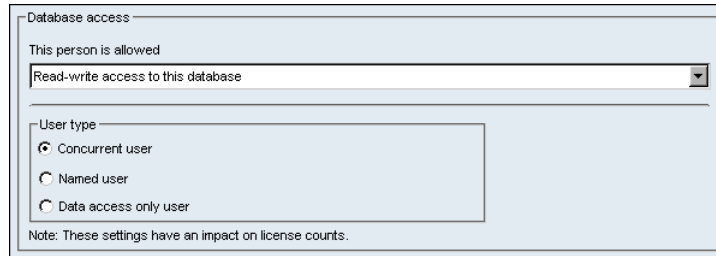
If your organization purchased a server license, the system specialist maintains the named user and data access only user lists for the database using Server Tools. For more information about configuring the user lists, see "Configuring named



users” and “Configuring data access only users” in Chapter 10, “Administering servers and databases.”

### How to define database access settings

- 1 In Database access, to define read-write access, in This person is allowed, either select Read-write access to this database, or Read-only access to this database, as shown in Figure 2-22.



Database access

This person is allowed

Read-write access to this database

User type

Concurrent user

Named user

Data access only user

Note: These settings have an impact on license counts.

**Figure 2-22** Defining database access settings

- 2 To restrict a user’s read-write database permission, select Read-only access to database. If your license permits, you can also change this setting to Read-write access to database.
- 3 In User type, specify the user type to allow a user to access the database. Define the user as a concurrent, named, or data access only user.



- 4 Choose Save.

### Duplicating a user

Instead of creating a user from a template, consider duplicating an existing user, and editing the copy to make changes to the new user. This process makes creating similar users faster and easier. You cannot have multiple users with the same login name. If you have entered a login name that is already in use, you receive an error message.

#### How to duplicate a user

- 1 In the Navigation Pane, choose Setup ► Users.
- 2 In Setup Users—Users, select a user name.
- 3 Choose Duplicate.
- 4 In Setup User: <Copy of User name>, type a user name in Name.
- 5 In Authentication, type a Metrics Management login name. Choose OK. Then, type a new login name, and choose Save.
- 6 Edit other user settings as desired.



- 7 Choose Save.

## Using a template to create a user

Create a user template, either by defining user properties in a new user object, or by creating a template from an existing object. Then, create new users from the template.

### How to create a user template

For more information about creating a user template, see “Creating a template,” earlier in this chapter.

### How to create a user from a user template

For more information about creating a user from a template, see “Creating an object using a template,” earlier in this chapter.

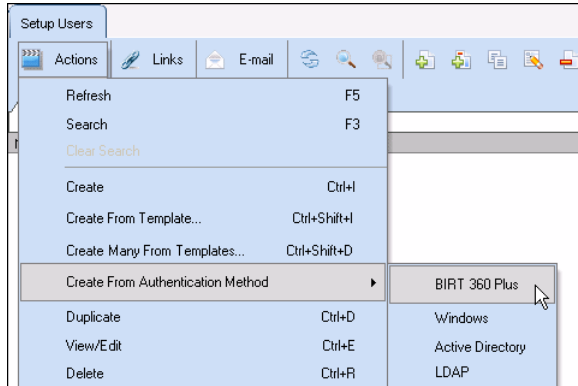
## Importing users from an external user directory

Metrics Management supports creating users from the Active Directory, Metrics Management, LDAP, or Windows authentication methods, if the method is configured for the database. Metrics Management creates users by importing the selected users’ names and authentication settings. To enable importing Metrics Management users from iHub, you must log in to Metrics Management using Metrics Management authentication.

Metrics Management supports using a template to define all users’ preferences, favorites, and privilege and security settings. Otherwise, define settings individually after creating users.

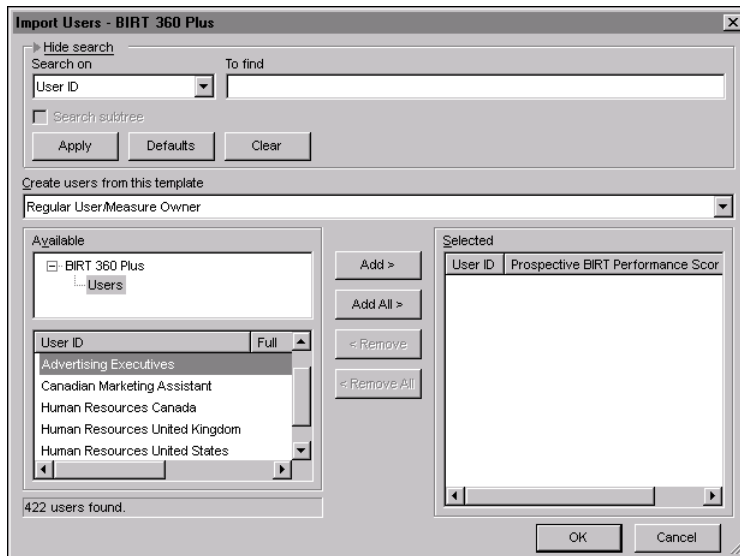
### How to create users from an authentication method

- 1 In the Navigation Pane, choose Setup ➤ Users.
- 2 In the main window, choose Actions ➤ Create From Authentication Method, and select the appropriate authentication method. In the example in Figure 2-23, Metrics Management authentication is chosen.



**Figure 2-23** Creating users from the Metrics Management authentication method

- 3 In Import Users, in Available, select the appropriate directory to specify users that are available for import. Users appear in Available, as shown in Figure 2-24.



**Figure 2-24** Selecting the User directory in Available

- 4 Select an available user. Choose Add to move the user to Selected. To move all available users to Selected, choose Add All.

Prospective Metrics Management user displays the values from which Metrics Management creates user names. If no name appears, Metrics Management names users based on user IDs.

- 5 To apply a user template to all new users, in Create users from this template, select a template.
- 6 To import users, choose OK. Imported users appear in Setup Users.

## Setting up a user

The tasks for creating a user include defining a user's preferences, user privileges, and security settings.


### Defining a user's preferences

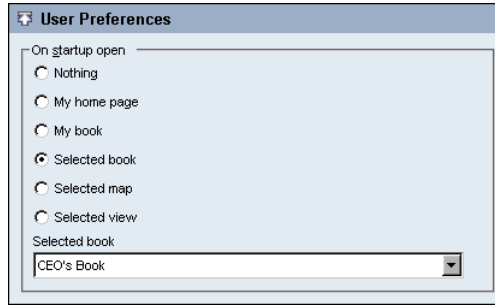
One of the tasks of the system specialist is to define various preferences for a new user. Tasks include defining a user's default landing page, preferred location, e-mail address, PDF saving options, and dashboard display and home page preferences.

### Defining a user's landing page, e-mail address, and PDF settings

The system specialist defines a user's default landing page, e-mail address, PDF saving options, and the home page alert that displays on a user's home page. A home page alert is a book section that typically contains measures that a user frequently monitors.

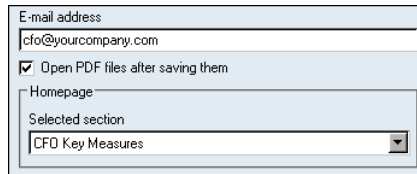
#### How to define a user's landing page, e-mail address, and PDF settings

- 1 In the Navigation Pane, choose Setup > Users.
- 2  Double-click a user or choose Create. Setup User appears.
- 3 To set the page that opens when the user logs in, perform one of the following tasks in User Preferences, in On startup option, shown in Figure 2-25:
  - To open the database home page, select My home page.
  - To open the user's book, select My book.
  - To open a specific briefing book, select Selected book. Then, select a book from the available list.
  - To open a specific map, select Selected map. Then, select a map from the available list.
  - To open a specific view, select Selected view. Then, select a view from the available list.
  - To open to a blank page, select Nothing.




**Figure 2-25** Setting a user's startup open options

- 4 To define the user's e-mail address, in User Preferences, in E-mail address, shown in Figure 2-26, type an e-mail address.



**Figure 2-26** Setting user preferences for an e-mail address

- 5 To open PDFs that a user saves, select Open PDF files after saving them.
  - 6 To add a home page alert to the home page, in Selected section, select a section.
-  7 Choose Save.

## Defining a user's preferred location

The preferred location defines the location that views and books open to for a user. You typically define the preferred location as the location where a user is working, responsible for, or concerned about.

To select a preferred location, you must have created a location structure.

The top location in a view or book section can be defined as the preferred location to open a view or section to the user's preferred location. The top location is the default location that a view or book section opens to. Defining the top location as the preferred location restricts the locations that a user can see. A user can:

- View the preferred location in views or briefing book sections.
- Enter data for the preferred location in Data➤Data Entry.

### How to define a user's preferred location

- 1 In the Navigation Pane, choose Setup➤Users.



- 2 Double-click a user or choose Create. Setup User appears.
- 3 In User Preferences, and in Preferred location, shown in Figure 2-27, select a preferred location from the list.



Preferred location  
Total Company

**Figure 2-27** Setting user preferences for a preferred location



- 4 Choose Save.

## Defining dashboard display preferences

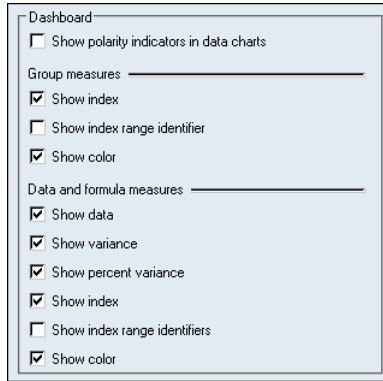
Metrics Management supports defining dashboard display setting for a user. Settings can be defined for index range identifiers in tables and polarity indicators in data charts in the dashboard. The polarity indicator is an arrow that points toward the direction that is good along the axis. The arrow shows the performance colors associated with the measure. The axis has text labels for Good and Bad.

### How to define dashboard display settings

- 1 In the Navigation Pane, choose Setup → Users.



- 2 Double-click a user or choose Create. Setup User appears.
- 3 In Dashboard, shown in Figure 2-28, complete the following tasks:
  - To show polarity indicator arrows in data charts, select Show polarity indicators in data charts.
  - To show indexes, index range identifiers, and color in dashboard data tables, in Group measures, select the appropriate option.
  - To show data, variances and percent variances, indexes and index range identifiers, and color in dashboard data tables, in Data and formula measures, select the appropriate option.



**Figure 2-28** Setting dashboard preferences



- 4 Choose Save.

## Defining home page favorites

You also can set up a user's home page by defining favorites for the user. The home page provides a quick way for a user to navigate to their favorite books, links, maps, and views. You can also define the user's favorites books, links, maps, and views.

### How to define home page favorites



- 1 In the Navigation Pane, choose Setup > Users.
- 2 Double-click a user or choose Create. Setup User appears.
- 3 In Options, and in Favorites, choose Edit.
- 4 Add the objects to define as favorites to the Selected list.
- 5 To display objects in a particular order in the favorites list, rearrange them in the Selected list by choosing Move Up or Move Down, or choose Sort to arrange the sections in alphabetical order.
- 6 Choose OK.
- 7 Repeat, as necessary, for books, links, and maps.



- 8 Choose Save.

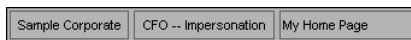
## Setting up user impersonation

Metrics Management provides a separately purchased Advanced Security module. This module includes impersonation. Using impersonation, a user assumes the security rights of another user and can access that user's objects. Use impersonation to:

- Test a user’s profile. An administrator or publishers of a user can use impersonation to test a user’s profile and security settings without obtaining the user’s password and logging in as the user.
- Temporarily perform another employee’s role. One user can impersonate another user that is on vacation or on a leave of absence. Password sharing is not required.

To set up user impersonation you must be a system specialist or the publisher of the user to set up for impersonation.

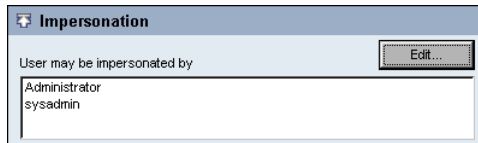
When impersonating another user, the bottom toolbar displays the user name of the person that you are impersonating followed by “Impersonation”. The example in Figure 2-29 shows impersonation of the CFO user.



**Figure 2-29** Viewing the toolbar when impersonating the CFO user

### How to set up user impersonation

- 1 In the Navigation Pane, choose Setup➤Users.
- 2 Double-click a user or choose Create. Setup User appears.
- 3 In Options, and in Impersonation, shown in Figure 2-30, choose Edit.



**Figure 2-30** Impersonating the CFO user

- 4 Add the users who can impersonate this user to the Selected list.
- 5 Choose OK.
- 6 Choose Save.



### Creating a link tag for a user

A link tag supports user access to another object, such as a book, location, or measure. For information about using link tags, see Chapter 8, “Publishing data.”

#### How to create a link tag for a user

- 1 In the Navigation Pane, choose Setup➤Users.
- 2 Double-click a user or choose Create. Setup User appears.
- 3 In Link Tags, type up to four link tags.
- 4 Choose Save.





## Defining user privileges and security

A user privilege is a security permission that defines which actions a user can perform on a object type. By default, a new user has general user privileges. General privileges allow a user to create books, links, and filters, and to enter data and commentary. You choose to allow or deny the create, edit, open, and view privileges on Metrics Management objects. The set of available privileges varies for different objects. For more information about security and users, see “About Metrics Management security,” earlier in this chapter.

### How to define user privileges and security

- 1 In the Navigation Pane, choose Setup→Users.
- 2 Double-click a user or choose Create. Setup User appears.
- 3 Choose Security.
- 4 Choose Privileges. Figure 2-31 shows the privilege settings for the measure object type.



Action	Allow	Deny	Effective Security
Access Setup Menu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Create	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Denied
Delete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Duplicate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Consolidation	<input type="checkbox"/>	<input type="checkbox"/>	Allowed
Edit Dashboard	<input type="checkbox"/>	<input type="checkbox"/>	Allowed

**Figure 2-31** Privilege settings for measures

- 5 To select which object to define privileges for, in Type of object, select an object type.
- 6 To allow or deny a privilege, in Actions, select Allow or Deny for an action.
- 7 Under Security, assign access rights to groups and users.



- 8 Choose Save.

## Impersonating a user

Metrics Management provides a separately purchased Advanced Security module. This module includes impersonation. Impersonation supports accessing Metrics Management on behalf of another user.

If Impersonate User does not appear in the File menu, you are not configured to impersonate any users. To set up user impersonation, see “Setting up user impersonation,” earlier in this chapter.



### How to impersonate a user

- 1 Choose File→Impersonate User. Then, select a user to impersonate. Any open tabs close so that Metrics Management can update rights based on the user you selected.
- 2 To stop impersonating a user, choose File→Impersonate User. Then, select yourself. Any tabs you had open as the other user close so that Metrics Management can revert back to your rights.

## Editing a user

Use the following procedure to make changes to a user.


### How to edit a user

- 1 In the Navigation Pane, choose Setup→Users.
- 2 In Setup User—Users, select a user name.
-  3 Choose View or Edit.
- 4 In Setup User—Properties, select alternative properties.
-  5 Choose Save.

## Deleting a user

If you delete a user, any measures, briefing books, or other objects associated with that user lose their owner. Before you delete a user, you must edit all of the associated objects to assign a new owner.

### How to delete a user

- 1 In the Navigation Pane, choose Setup→Users
- 2 In Setup User—Users, select a user name.
-  3 Choose Delete.
- 4 Choose Yes to confirm.

---

## Working with user groups

A user group is a collection of users. The system specialist saves time by applying object security for a group, rather than for individual users. Metrics Management considers user ID and user groups to determine access rights.

Every user in the system belongs to the Everyone group. The Everyone group is a system group. The Everyone group is non-editable and has no publisher. By

default, members of the Everyone group can view new objects. Specify object security settings for the Everyone group in Setup→Security for individual objects.

## Creating a user group

Create user groups to grant or restrict access rights to Metrics Management objects such as briefing books, measures, and views. There is no limit to the number of user groups that can be created. For example, you can create user groups with categories such as departments, teams, and job levels.

### How to create a user group



- 1 In the Navigation Pane, choose Setup→Groups→Create.
- 2 In Setup Group: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the user group.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 To add a user to the user group:
  - 1 In Users, choose Edit.
  - 2 Add the user to the Selected list.
  - 3 Choose OK.
- 4 If necessary, choose Security. Then, assign access rights for the group to groups and users.



- 5 Choose Save.

## Editing a user group

Edit a user group to add or delete users or change security rights for a user group.

### How to edit a user group



- 1 In the Navigation Pane, choose Setup→Groups.
- 2 In Setup Groups—Groups, select a group name.
- 3 Choose View or Edit.
- 4 In Setup Group—Properties, select alternative properties.



- 5 Choose Save.

## Deleting a user group

Use the following procedure to delete a user group.

### How to delete a user group

- 1 In the Navigation Pane, choose Setup➤Groups.
- 2 In Setup Groups—Groups, select a group name.
- 3 Choose Delete.
- 4 Choose Yes to confirm.

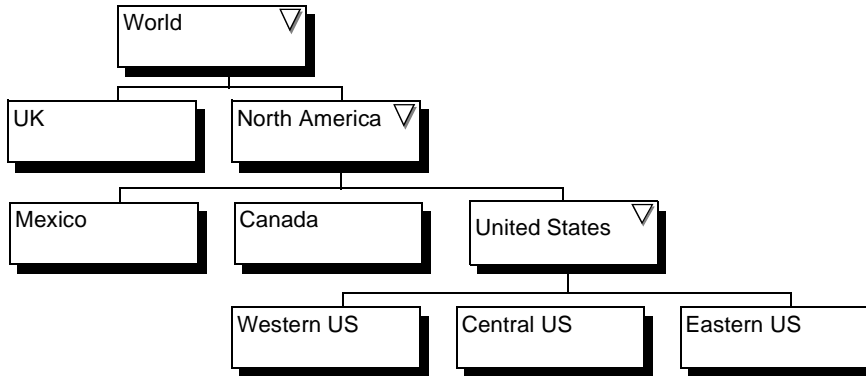


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## Working with locations

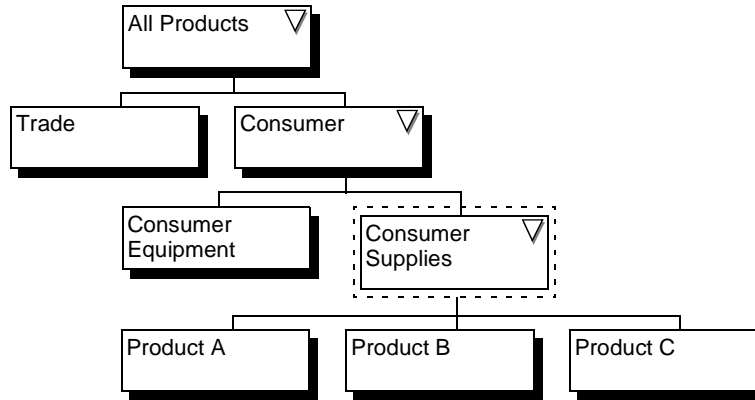
A location is the geographical or organizational dimension of a measure. Each measure contains one or more locations. For example, the Cost of Goods measure tracks costs at several geographical locations, including North America, the UK, EMEA, and Asia-Pacific. You use locations to apply a measure hierarchy to the geographical or other location structure defined for your organization.

Using locations, you can view a measure’s performance at a single location and compare it to other locations. Locations can reflect the structure of your organization, for example, operational units, geographical areas, or any other elements that are meaningful. Figure 2-32 shows a simple geographic location structure.



**Figure 2-32** Simple geographic location structure

Figure 2-33 shows locations having a simple product line structure.



**Figure 2-33** Simple product line structure

You can create multiple location hierarchies. An additional location hierarchy can use entirely different locations, or can use one or more locations from other hierarchies.

## Creating a location

Actuate recommends that you build location structures from the bottom up.

### Defining the location owner

A location owner is typically the user responsible for the majority of the measures at that location. Metrics Management supports defining the location owner in two ways:

- You can define the location owner for a location.
- A measure can define <Location Owner> as the owner. Specifying <Location Owner> for the majority of measures means that you do not need to create individual owners for each location.

For example, the Eastern US location defines the VP Eastern US user as its owner. When a measure defines <Location Owner> as its owner, the Eastern Regional Manager owns that measure at the Eastern location. You can define a location owner assistant, data-entry user, and commentary-entry user in the same way. You can further refine these specifications in Setup>Measure>Owners.

### About creating exceptions by location

In some instances, you may want to create exceptions to your measure structure for a specific location. This is accomplished in the measure structure rather than the location structure. For more detailed information about exceptions by location, see “About exceptions by location” in Chapter 5, “Working with views.”

## About providing additional security

To provide additional security, you can restrict access to a specific location by publishing the location only to specific users or user groups. Other users cannot view the location's data or display the location in views or briefing books.

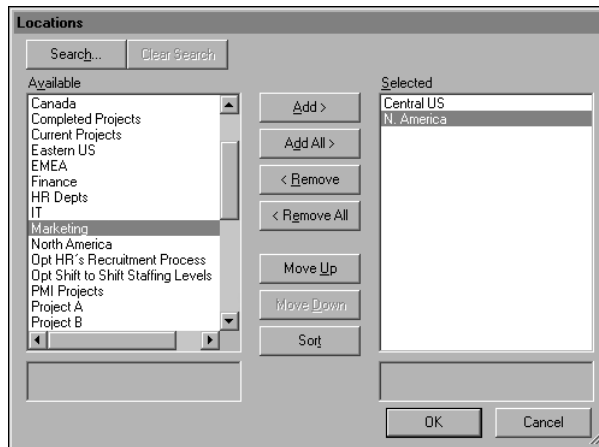
### How to create a location



- 1 In the Navigation Pane, choose Setup ► Locations ► Create.
- 2 In Setup Location: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the location.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.


Parent Locations remains empty until this location is linked into the location structure. At that point it displays the parent location to this location.

- 3 To add a sublocation for this location:
  - 1 In Sublocations, choose Edit.
  - 2 Add a location to the Selected list, as shown in Figure 2-34.



**Figure 2-34** Choosing sublocations



- 3 To change the order that locations appear in a view:
  - Choose Move Up or Move Down to move locations in Selected.
  - Choose Sort to arrange the locations in alphabetical order.
- 4 Choose OK.
- 4 To define an owner for the location, in Owners, select a user from the Location owner list. To open Setup User to create a new user, choose New.

- 5 To define an owner's assistant, in Owners, select a user from the Location owner assistant list. To open Setup User to create a new user, choose New.
- 6 To define information links for the location:
  - 1 In Options, and in Links, choose Edit.
  - 2 In Links, add links to the Selected list.
  - 3 To change the order that locations appear in the home page:
    - Choose Move Up or Move Down to move locations in Selected.
    - Choose Sort to arrange the locations in alphabetical order.
  - 4 Choose OK.
- 7 To create a link tag, in Link Tags, specify up to four link tags. For information about link tags, see Chapter 8, "Publishing data."
- 8 Choose the Security tab and assign access rights to groups and users.
-  9 Choose Save.

## Editing a location

Before you edit a location, understand how changing a location can invalidate data, submeasures, hierarchical and location definitions. This can affect the overall structure of your database. The list of parent locations can help you predict the implications of changing a location.

### How to edit a location

- 1 In the Navigation Pane, choose Setup → Locations.
- 2 In Setup Location—Locations, select a location name.
-  3 Choose View or Edit.
- 4 In Setup Location—Properties, the parent location of the selected location appear in Parent Locations. Choose Refresh to updates changes to the database. To change this part of the location structure, choose Edit Selected.
- 5 Edit properties for selected locations.
-  6 Choose Save.



## Deleting a location

Deleting a location can impact measure data and view structures. Deleting a location removes all measure data associated with the location from the database. Deleting a location invalidates data, and submeasure, hierarchical, and location definitions. Invalid data and definitions affect the overall structure of your database.

The list of parent locations can help you predict the implications of deleting a location. To preserve a location structure, reassign the parent locations and sublocations of the location which you plan to delete.

A location with initiatives cannot be deleted. First, remove initiatives from the measure at the location to delete, or move the initiatives to another measure.

#### **How to delete a location**

- 1** In the Navigation Pane, choose Setup ► Locations.
- 2** In Setup Location—Locations, select a location name.
-  **3** Choose View or Edit.
- 4** In Setup Location—Properties, and in Parent Locations, perform the following tasks:
  - 1** Choose Refresh to update any changes to the database. New information appears in Parent Locations.
  - 2** To assign a new sublocation to a parent location, choose Edit Selected. Then, in Setup Location for the parent location, in Sublocations, remove the location that you plan to delete and assign another sublocation.
- 5** In Sublocations, if any sublocations appear, assign a new parent location to a sublocations for the sublocation to remain in the view.
-  **6** Choose Delete.
- 7** In the confirmation message, choose Yes.



# Working with measures

This chapter discusses the following topics:

- Working with commentary types
- Working with dashboards
- Working with measures

---

## Working with commentary types

Commentary is a written performance evaluation of a measure that is entered at a specific period. You can enter commentary for measures that you own, or have rights to enter commentary for.

Commentary entry is typically performed when data is collected and reported. For example, if measure data is collected monthly, a measure owner usually enters commentary on a monthly basis as well.

Metrics Management supports creating more than one type of commentary. For example, an organization can use the Owner's Commentary type to explain performance, and the Action Plan type to capture details of review meetings. Both Commentary and Action Plan are default commentary types. You can change these names or create new commentary types.

### Creating a commentary type

After choosing and creating a commentary type, add the commentary type to dashboard templates to make it available to users.

#### How to create a commentary type

- 1 In the Navigation Pane, choose Setup>Commentary Types>Create.
- 2 In Setup Commentary Types: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the commentary type.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 If necessary, choose Security. Then, assign access rights for the commentary type to groups and users.



- 4 Choose Save.

### Editing a commentary type

Use the following procedure to make changes to a commentary type.

#### How to edit a commentary type

- 1 In the Navigation Pane, choose Setup>Commentary Types.
- 2 In Setup Commentary Types—Commentary Types, select a commentary type name.



- 3 Choose View or Edit.

- 4 In Setup Commentary Types—Properties, make the following changes:
  - In Name, type characters that appear as the commentary name.
  - In Description, choose Edit. Type content that describes the commentary type.
  - In Categories, choose Edit. Add category names from Available to Selected. To associate this commentary with the selected categories, choose OK.



- 5 Choose Save.

## Deleting a commentary type

Use the following procedure to delete a commentary type.

### How to delete a commentary type

- 1 In the Navigation Pane, choose Setup➤Commentary Types.
- 2 In Setup Commentary Types—Commentary Types, select a commentary type name.



- 3 Choose Delete.
- 4 Choose Yes to confirm.

---

## Working with dashboards

The dashboard provides a medium for displaying a graphical representation of measure and initiative performance, and additional measure information. The dashboard is available in books, maps, and views. The dashboard always appears in a book and can be hidden in a map or view.

A new Metrics Management database includes four default dashboards. The monthly, quarterly, and yearly Formula and Data dashboards are suitable for use with monthly, quarterly, and yearly data or formula measures. The Grouping dashboard is suitable for use with any group measure.

### About dashboard tabs

The dashboard contains up to nine tabs, Summary, Initiatives, Index Chart, Data Chart, Data Table, Direct Data Entry, Commentary, Info, and a personalizable web content tab. The dashboard opens to Summary. Direct Data Entry only appears for data measures and formula measures which permit data entry.

## About the Summary tab display options

You personalize the content in Summary by specifying the number, layout, and content of dashboard cells. Summary can contain up to four dashboard cells.

Table 3-1 describes the content that a dashboard cell can contain.

**Table 3-1** Dashboard display options

Dashboard option	What is displayed
<None>	A blank area in the summary dashboard.
Data Chart	Actual data for the measure.
Data Table	Actual data for the measure.
Index Chart	Actual vs. comparative data as a percentage for the selected measure.
Measure Commentary	Commentary that has been entered for the measure for the selected period. Four commentary types can appear in the dashboard at any given time.
Measure Description	Description of the selected measure.
Measure Information	Measure properties (including owner, polarity, consolidation, and storage period).
Measure Notes	Any notes that were entered for the selected measure.
Sublocations Data Charts	Actual data for sublocations of the measure's selected location.
Sublocations Index Charts	Actual versus comparative data as a percentage for sublocations of the measure's selected location.
Submeasures Data Charts	Actual data for submeasures of the selected grouping or formula.
Submeasures Index Charts	Actual vs. comparative data as a percentage for submeasures of the selected grouping or formula.
Submeasures Data Tables	Actual data for submeasures of the selected measure.
Sublocations Data Tables	Actual data for sublocations of the measure's selected location.
User Data Table	Raw data that was entered for the measure, both actual and target.

The system specialist defines the display of cell contents in Summary in the dashboard for any particular type of measure. A suite of dashboard layout options is available for you to design the layout to best meet your needs. Choose

from a one-, two-, three-, or four-pane layout and from a variety of size and shape options for each of the multi-pane layout choices.

Choose cell contents based on the kind of measures associated with a dashboard. For example, a data chart is not suitable in a group measure dashboard, because groupings do not have any data associated with them and because monthly measures are not accurately represented in a quarterly dashboard.

## About the web content dashboard tab

Metrics Management supports creating a personalized dashboard tab which displays web content, such as an internal blog or external web site. The system specialist specifies a URL link and the web content dashboard tab name. The web content tab appears in the dashboard between the Commentary and Info tabs. The web content tab does not appear if the web content link is not defined.

For security reasons, certain external web sites do not permit opening in the dashboard in Metrics Management. Test a link to an external web site in the dashboard before deploying the link in your production environment.

## About setting period ranges in a dashboard

You specify the period range for tables and charts in the dashboard. In Dashboard Period Ranges, in First period range, settings apply to the top table or chart in Index Chart, Data Chart, and Data Table. Second period range settings apply to the bottom table or chart in Index Chart, Data Chart, and Data Table. For Summary, a user can choose to apply First period range or Second period range to data tables and data and index charts.

## Creating a dashboard

When creating a dashboard, you have the option of choosing four different commentary types. It is recommended that one type be left as <Default>. This inserts the commentary type specified in the view as an element in the dashboard. For more information, see “Creating a view” in Chapter 5, “Working with views.”

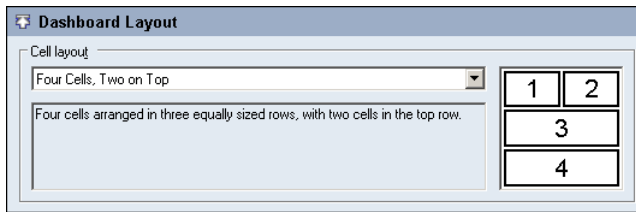
To see a dashboard, you must specify a dashboard when you set up each measure. For more information, see “Selecting a dashboard for a measure type,” later in this chapter.

### How to create a dashboard



- 1 In the Navigation Pane, choose Setup➤Dashboards➤Create.
- 2 In Setup Dashboard: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the dashboard.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.

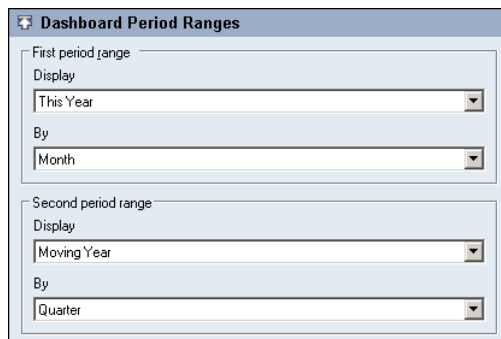
- 3 In Dashboard Layout, select an option from the list in Cell Layout. An example and description appear for each selected option, as shown in Figure 3-1.



**Figure 3-1** Selecting a cell layout for a dashboard

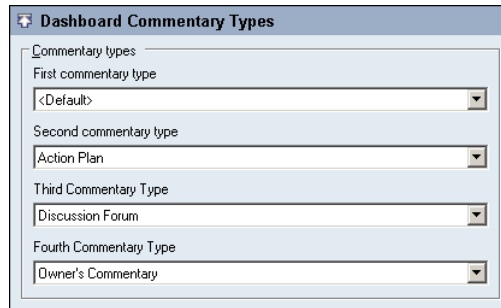
- 4 In Cell contents, from each of the Cell contents lists, select an element to appear in each dashboard cell.
- 5 In Dashboard Period Ranges, specify period ranges for First period range and Second period range. For both period ranges, perform the following tasks:
  - 1 In Display, select a period range.
    - To specify the range for charts and tables, select a period range value. For example, select This Year.
    - To show data for the selected period only, select Default.
    - To make charts and tables unavailable to the dashboard, select <None>.
  - 2 In By, select a period type.
    - To specify the storage period type for charts and tables, select a storage period value. For example, select Month.
    - To specify the storage period type defined in the measure, select Default.

In Figure 3-2, the First period range displays data for This Year by Month. The Second period range displays data for a Moving Year by Quarter.



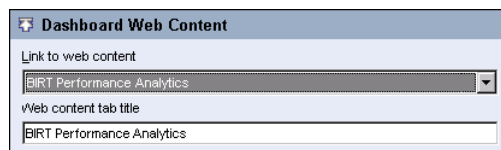
**Figure 3-2** Defining period ranges for dashboard graphs and charts

- 6 In Dashboard Commentary Types, select up to four commentary types. Each list contains all available commentary types.
  - 1 In First commentary type, select a commentary type. Actuate recommends setting one commentary type to <Default>, as shown in Figure 3-3. Each view defines a default commentary type that appears in a dashboard for the Owner's Commentary type selection <default>.



**Figure 3-3** Defining a dashboard's commentary types

- 2 In Second, Third, and Fourth Commentary Type, select a second, third, and fourth commentary type, if necessary.
- 7 In Dashboard Web Content, to enable the web content tab, perform the following tasks:
  - 1 In Link to web content, select a link to the web content to display.
  - 2 In Web content tab title, type a name for the dashboard tab. The example in Figure 3-4 shows a link to the BIRT Performance Analytics site.



**Figure 3-4** Specifying a link to web content

- 8 If necessary, choose Security. Then, assign access rights for the dashboard to groups and users.





- 9 Choose Save.

## Duplicating a dashboard

Instead of creating a dashboard from a template, consider duplicating an existing measure and editing the copy to make any necessary changes. This makes creation of similar dashboards faster and easier.



### How to duplicate a dashboard

- 1 In the Navigation Pane, choose Setup➤Dashboards.
-  2 In Setup Dashboards—Dashboards, select a dashboard name. Then, choose Duplicate.
- 3 A new dashboard named <Copy of Dashboard name> opens in a new tab.
- 4 Highlight the current name. Then, type a new name. Make any other changes.
-  5 Choose Save.

## Editing a dashboard

Use the following procedure to make changes to a dashboard.


### How to edit a dashboard

- 1 In the Navigation Pane, choose Setup➤Dashboards.
- 2 In Setup Dashboards—Dashboards, select a dashboard name.
-  3 Choose View or Edit.
- 4 In Setup Dashboards—Properties, make the following changes:
  - In Name, type a name for the dashboard.
  - In Description, choose Edit. Type a description of the dashboard.
  - In Categories, choose Edit. Add category names from Available to Selected. To associate this dashboard with the selected categories, choose OK.
-  5 Choose Save.

## Deleting a dashboard

Before deleting a dashboard, you must specify a new dashboard for each measure that previously used the dashboard.

### How to delete a dashboard

- 1 In the Navigation Pane, choose Setup➤Dashboards.
- 2 In Setup Dashboards—Dashboards, select a dashboard name.
-  3 Choose Delete.
- 4 Choose Yes to confirm.

## Displaying variance in a data table

Choose to display variance and percentage variance in data tables in dashboards, and in measure and location boxes in a view. Variance is the difference between



the actual and the comparative values for a data or formula measure. The percentage variance is the variance as a percentage of the comparative.

The formula for variance is:

Actual-Comparative

The formula for percentage variance is:

$(100/\text{Comparative}) * \text{Variance}$

Variance appears for data and formula measures but not for group measures. A positive variance is always good, and a negative variance is always bad, except with bipolar measures. Negative variances always appear in brackets.

#### **How to enable variance for dashboards**



On the toolbar, choose Preferences, and select Show variance and Show percent variances.

#### **How to enable variance in measure and location boxes in a view**



In a view, choose Configure View Tree Display, and select Show variance and Show percent variances.

---

## **Working with measures**

Measures contain quantifiable performance information. Each measure compares an actual value against a target value to indicate performance. Individual measures are color-coded to indicate measure performance to users.

When you create measures, you assign relationship between measures to create a measure structure. To display the structure, you create a view. You can display measures from different measure structures in a briefing book section. You can also add individual measures to maps. Users can select a measure in a book to drill down into the measure structure and select a measure in a map to open a customized view.

### **About creating measures**

To create a measure, first determine the measure type that best reflects each type of performance. You can create data, formula, and group measures. When you create a measure structure, you create a data measure first. You continue building measures from the bottom up.

- Data measures contain data. Data measures provide the base for a measure structure. Data is collected and entered into Metrics Management at this level. For example, use a data measure to measure the number of units sold.

- Formula measures are parent measures that apply a formula to other data or formula measures to produce an index value. For example, to measure gross margin, create a formula measure that subtracts the Cost of Goods measure from the Sales measure.
- Group measures are parent measures that weight the index values of submeasures according to their importance. Use a group measure when a formula measure cannot be created. For example, use a group measure to associate a Net Profit measure with a Customer Survey measure.

Measure properties depend on measure type. For example, you define a formula for a formula measure. All measure types support the following tasks:

- Defining a measure name and description
- Choosing a dashboard type
- Assigning a measure owner
- Hiding a comparison series or setting a fixed scale for dashboard charts
- Customizing a performance range
- Attaching notes, links, and link tags
- Defining commentary and data entry rights using a context sensitive variable
- Setting restrictions on editing of measures by commentary type, comparative, or location

## Defining a measure name and description

Measure names appear in multiple sections and views. Define measure names that distinguish each measure within the limits of the Metrics Management user interface.

A measure description appears in the dashboard in a section or view. Use clear, concise descriptions that help Metrics Management users understand the qualities of a measure.

### How to create and name a measure



- 1 In the Navigation Pane, choose Setup>Measures>Create.
- 2 In Setup Measure: <New>—Properties, complete the following tasks:
  - In Name, provide a name for the measure.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.



- 3 Choose Save.

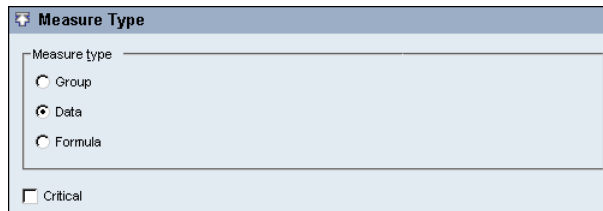
## Choosing a measure type

Depending on the type of measure you create, you must perform the following additional tasks:

- For group measures, choose submeasures and assign a weight to each.
- For data and formula measures, choose the data's properties and period consolidation method.
- For formula measures, define the formula that is performed on other measures.

### How to choose a measure type

- 1 In Measure Type, as shown in Figure 3-5, select Group, Data, or Formula.



**Figure 3-5** Selecting the Data measure type

- 2 If the measure is critical to your organization's performance, select Critical. Metrics Management supports filtering critical measures.



- 3 Choose Save.

## Choosing submeasures for group measures

A group measure weighs the index values from its submeasures to produce a performance color. The weights of the submeasures must total 100% to enable Metrics Management to calculate their respective contributions to a group measure. Submeasures of a group measure can be data, formula, and other group measures.

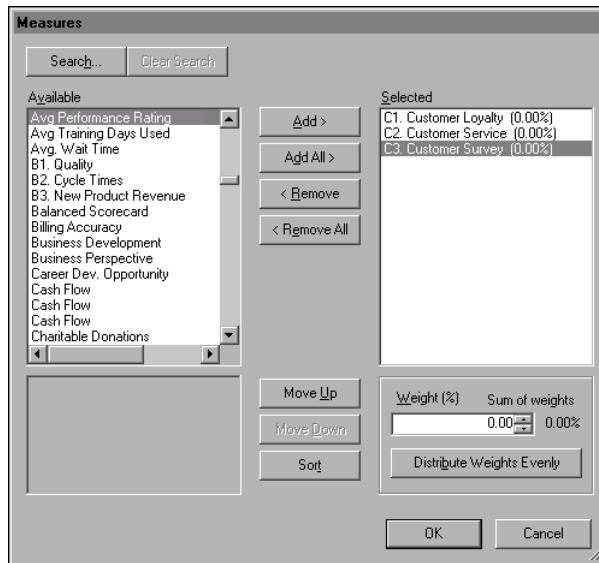
An exception by location excludes a measure from a measure structure at a specific location. The locations at which the measure is excluded appears in Locations. For more information about exceptions by location, see "About exceptions by location" in Chapter 5, "Working with views."

### How to define a submeasure for a group measure

In Submeasures, add each submeasure to the group measure, assign a weight to each submeasure, and define submeasures which are valid for specific locations.

- 1 To add a submeasure:
  - 1 In Submeasures, choose Edit.

- 2 In Measures, add a measure from Available to Selected, as shown in Figure 3-6.



**Figure 3-6** Adding submeasures to a group measure

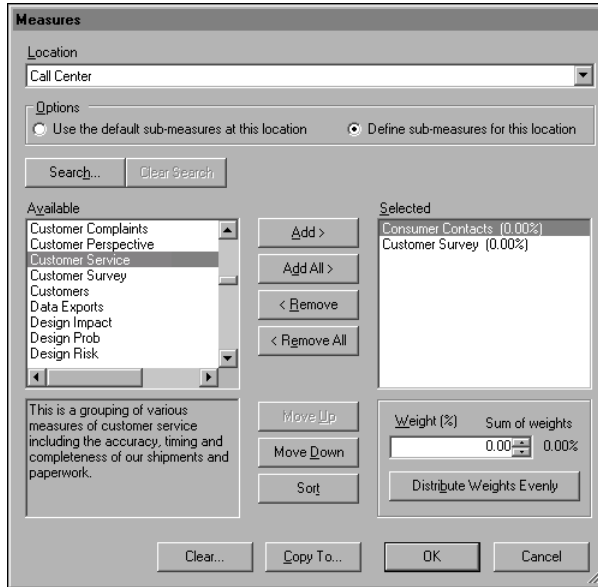
- 2 In Weight (%), assign a weight value to each submeasure until Sum of total weight shows 100% in one of the following ways:
  - To assign each submeasure equal weight, choose Distribute Weights Evenly.
  - To assign a weight value to an individual submeasure, select a submeasure, and adjust the value that appears in Weight (%).
- 3 To display measures in a particular order, select a measure in Selected and choose Move Up or Move Down to arrange the measures. Alternatively, choose Sort to arrange measures alphabetically.



- 4 Choose OK. Then, choose Save.

**How to define submeasures for specific locations**

- 1 In Sub-measures by location, choose Edit.
- 2 In Measures, in Location, select a location.
- 3 Select Define submeasures for this location.
- 4 Add each measure from Available to Selected, as shown in Figure 3-7.



**Figure 3-7** Adding submeasures for a specific location

- 5 In Weight (%), assign a weight value to each submeasure until Sum of total weight shows 100%, in one of the following ways:
  - To assign each submeasure equal weight, choose Distribute Weights Evenly.
  - To assign a weight value to an individual submeasure, select a submeasure in Selected, and adjust the value that appears in Weight (%).
- 6 To filter and reduce the list of measures in Available, choose Search.
- 7 To display submeasures in a particular order, arrange submeasures in Selected by selecting a measure and using Move Up or Move Down to reposition it. Alternatively, choose Sort to arrange measures alphabetically.
- 8 To apply a set of submeasures to multiple locations, choose Copy To. In Measures, select a location in Available. Choose Add. Choose OK.  
A message confirms copying the submeasures to the selected location.
- 9 Choose OK. Then, choose Save.

## Viewing parent measures

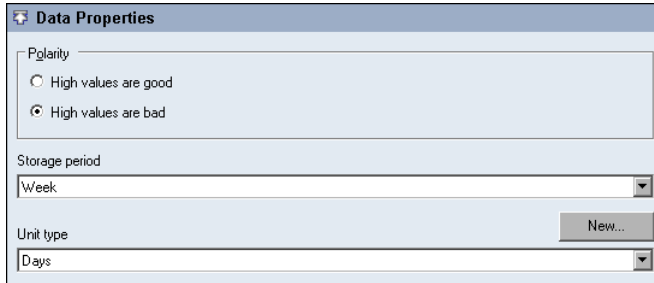
For any measure, other measures that relate to the measure as parent measures appear in Parent Measures. To edit a parent measure in Parent Measure, select the measure, then choose Edit Selected. Make appropriate changes to the parent measure using Setup Measure—Properties, as described in this chapter.

## Choosing data properties for data and formula measures

Decide whether high values for a measure are good or bad by determining how the actual data should perform against its target. For example, when measuring sales, choose high values are good. When measuring expenses, choose high values are bad.

### How to define polarity for a data or formula measure

- 1 In Data Properties, in Polarity, select High values are good or High values are bad, as shown in Figure 3-8.



The screenshot shows a dialog box titled "Data Properties". It has three main sections: "Polarity", "Storage period", and "Unit type". In the "Polarity" section, there are two radio buttons: "High values are good" (which is unselected) and "High values are bad" (which is selected). The "Storage period" section has a dropdown menu currently showing "Week". The "Unit type" section has a dropdown menu currently showing "Days" and a "New..." button to its right.

**Figure 3-8** Selecting polarity for a measure

- 2 In Storage period, select a period that represents how often to collect data for a measure.
- 3 In Unit type, select a unit type that best describes the measure. This label appears in data entry tables and graphs. If necessary, to create a new unit type, choose New. Then, make selections in Setup Unit Types: <New>.



- 4 Choose Save.

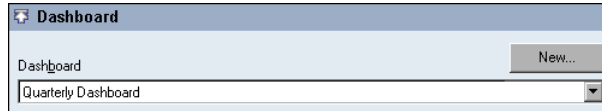
## Selecting a dashboard for a measure type

To show measure performance as a graphic image, select a dashboard for each measure. Before selecting a dashboard, consider the storage period for data and formula measures. The selected dashboard should match the storage period of the measure. Metrics Management supports one choice for group measures, the Group Dashboard.

### How to select a dashboard for a measure



In Setup Measure—Properties, in Dashboard, select a dashboard name from the Dashboard list, as shown in Figure 3-9. If necessary, to create a new dashboard, choose New. In Setup Dashboard: <New>, make appropriate selections. Then, choose Save.



**Figure 3-9** Selecting a dashboard for a measure

## Choosing a consolidation method for data and formula measures

The period consolidation method uses selected functions and a range to define how data appears in briefing books and views. Metrics Management supports the following period consolidation functions:

- **Average**  
Choose Average to display average data values in a selected range. For example, select average to show percentages and ratios.
- **Sum**  
Choose Sum to display data as a running total for the selected range. For example, Sales and Expenses values typically appear as sums.
- **Take last known value**  
Choose Take last known value for measures that require no consolidation. This function applies to measures such as inventory, for which a point-in-time value provides clear information.

Metrics Management supports the following location consolidation functions. Location consolidation defines the way data aggregates across sublocations.

- **Average**  
Choose Average to display average data values for the location.
- **Sum**  
Choose Sum to display data as a total for the location.

Metrics Management supports the following consolidation range functions. The most common consolidation ranges are Moving Year and This Year to Date.

- **Moving Year**  
Choose Moving Year to consolidate data for the selected month and the previous 11 months.
- **This Year to Date**  
Choose This Year to Date to display consolidated information from the beginning of the selected year to the completed period.
- **This Year**  
Choose This Year to consolidate for the past year. This Year requires a full 12 months of data. Information does not appear until the end of the year.

## How to define a consolidation method for a data or formula measure

In Consolidation Functions, choose period and function settings for the consolidation method. Figure 3-10 shows an example of settings in Consolidation Functions.

The screenshot shows the 'Consolidation Functions' dialog box. It is divided into several sections. The first section, 'Period consolidation functions', has three radio button options: 'Sum', 'Average' (which is selected), and 'Take last known value'. Below this is a checked checkbox labeled 'Ignore blanks in period consolidation functions'. The next section, 'Location consolidation functions', has two radio button options: 'Sum' and 'Average' (which is selected). Below this is an unchecked checkbox labeled 'Ignore blanks in location consolidation functions'. At the bottom, there are two dropdown menus: 'Consolidation range' is set to 'This Year to Date', and 'Order of calculation' is set to 'Measure, Location, Period'.

**Figure 3-10** Selecting Consolidation Functions settings

- 1 Select one of the following Period consolidation functions for the measure:
  - Sum
  - Average
  - Take last known value
- 2 Select Ignore blanks in period consolidation functions if necessary. If the option is selected, Metrics Management performs period consolidation calculation when period data is missing. Only select this option if measures are reported irregularly, for example, a monthly measure where data is not available every month. Otherwise, Metrics Management performs no calculation when data is missing.
- 3 Choose one of the following location consolidation functions:
  - Select Sum to display data as a total for the sublocations.
  - Select Average to display the average data value for the sublocations.
- 4 Deselect Ignore blanks in location consolidation functions, if necessary.
- 5 In Consolidation Range, to define the consolidation range for charts and tables in the dashboard, perform one of the following tasks:
  - To define a unique consolidation range for this measure, select a consolidation range value. For example, select This Year.



If a view specifies Default for the consolidation range, this setting also applies to the calculation of the measure in a view.

- To use the consolidation range defined for the view, select Default.
- To display unconsolidated data, choose <None>.

Data is unconsolidated if a view and measure both define consolidation range as Default.

- 6 From the Order of Calculation list, select the order of calculation for the measure. If the measure is a formula using \*, /, or %, or is a data or formula measure that has data entered at an upper-level location, see “About the order of calculation” in Chapter 5, “Working with views.” In all other cases, this setting can be left at the default setting of Measure, Location, Period, because there is no impact on the calculation.



- 7 Choose OK, and choose Save.

## Creating formulas for formula measures

Formula measures calculate their performance values from other data and formula measures in the system. Create formulas rather than group measures when measures can be mathematically associated in a meaningful way. You can create the following types of formulas:

- Basic formulas that are purely additive and do not reference other formulas. For example:

```
Total Sales = Sales Product A + Sales Product B +  
Sales Product C
```

and

```
Profit = Revenue - Costs
```

- Formulas that include division, ratios or percentages. For example:

```
Invoicing Error Rate = # of Invoicing Errors % # of Invoices
```

and

```
Sales per Employee = Sales/# of Employees
```

For these formulas especially, consider the order of calculation. For more information, see “About the order of calculation” in Chapter 5, “Working with views.”

- Formulas that include a relative reference to refer to a previous period. For example:

```
% Inventory Change = ((Inventory (this month)% Inventory (last  
month) ) -100)
```

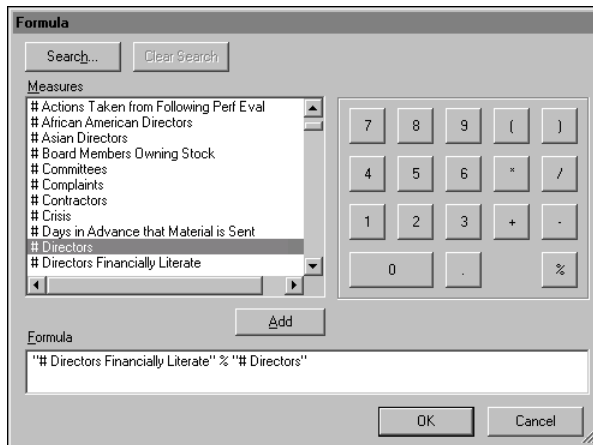
The syntax for this formula is

```
( ("Inventory"%@relative("Inventory", "Previous Month")) -100)
```

You can either create a default formula, which applies to all locations, or define a different formula for each location. When you create an exception by location, you exclude certain submeasures from the measure structure at that location. Locations for those submeasures shows the locations where they are excepted. For more information about exceptions by location, see “About exceptions by location” in Chapter 5, “Working with views.”

### How to create a default formula for a formula measure

- 1 In Formula, choose Edit. Build the formula by adding measures and mathematical operators.
- 2 To add a measure to a formula definition, select a measure from the Measures list. Then, choose Add.
- 3 To add an operator, for example + or -, choose an operator from the calculator. The % operator divides one measure by another and multiplies the quotient by 100.
- 4 Repeat as required until your formula is built, as shown in Figure 3-11.



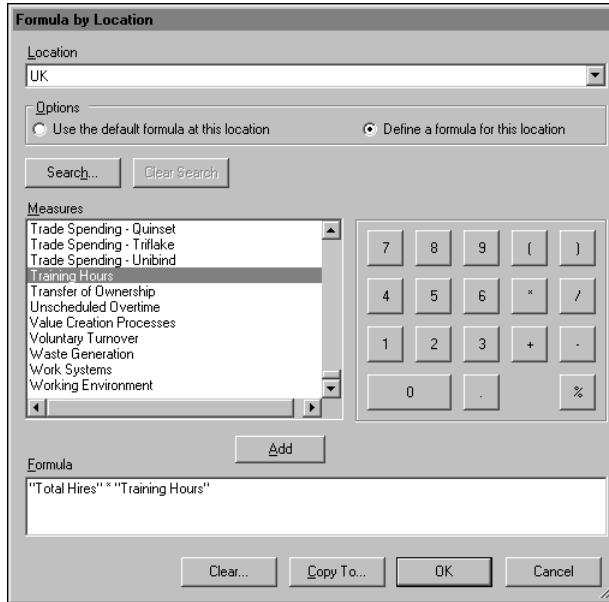
**Figure 3-11** Creating a default formula for a formula measure



- 5 Choose OK. Then, choose Save.

### How to create a formula by location

- 1 To define a formula by location, choose Edit.
- 2 From the Location list, select a location, and choose Define a formula for this location, as shown in Figure 3-12.



**Figure 3-12** Creating a formula for a specific location

- 3 Select a measure from the Measures list, and choose Add to include it in the formula.
- 4 Choose an operator from the calculator to include it in the formula. Repeat as required until the formula is built.
- 5 To apply this formula to multiple locations, choose Copy To. In Locations, select the locations to which to apply this formula in Available. Choose Add to add them to Selected. Choose OK. A confirmation message indicates that the formula has been applied to the selected locations.
- 6 Choose OK. Then, choose Save.



#### How to allow direct data entry for a formula

For certain formulas, it does not make sense to calculate the comparative using the formula. By allowing direct data entry, you enable a user to enter the target at the formula level and override any calculation. For example, if you have a measure like:

$\% \text{ of Invoice Errors} = (\# \text{ of Invoice Errors}) \% (\# \text{ of Invoices})$

you may only have targets for:

$\% \text{ of Invoice Errors}$

In this instance, you might prefer to set a target at the formula level.

- 1 In Allow direct data entry for, choose Edit.

- 2 Select a comparative in Available, and choose Add to add this to the Selected list.



- 3 Choose OK, then choose Save.

## Assigning a measure owner

The system specialist typically assigns the measure owners, assistant owners, and data entry owners. The system specialist should delegate these tasks, so he can retain an overview of the system as a whole. Measure owners are typically users directly responsible for measure performance. If you assign ownership at too high a level, an individual user can become responsible for far too many measures. For example, even though the CFO is ultimately responsible for a company's financial performance, the CFO should not be the Accounts Receivable measure owner.

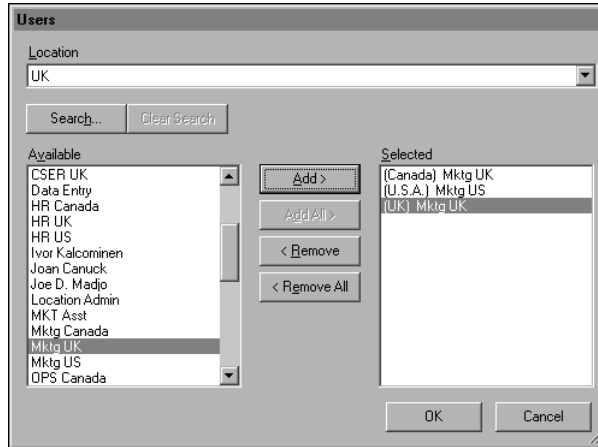
In a multi-location database, one owner is typically not responsible for the measure across all locations, and you must assign ownership by location. If one individual is responsible for the performance of the majority of a location's measures, you can select <Location Owner> as the measure owner. Choosing <Location Owner> assigns ownership of the measure to the owner of each location.

You can also set up measure assistants and assign data and commentary entry users for each measure.

### How to choose a measure owner

You can choose measure owners for specific locations. This is only necessary for owners who are different from the default location owner.

- 1 Choose Owners.
- 2 From the Default Owner list, select a default owner from the list, or choose New to open the Users tab and create a new user.
- 3 To select measure owners for specific locations:
  - 1 Choose Edit.
  - 2 From the Location list, select a location.
  - 3 Add the users to the Selected list, as shown in Figure 3-13.



**Figure 3-13** Choosing owners for a specific location

- 4 Choose OK.
- 4 From the Default owner's assistant list, select a default owner's assistant, or choose New to open Users and create a new user. This user becomes the measure's assistant for all locations which do not have a specific assistant selected.
- 5 To select owner's assistants for specific locations, choose Edit.
- 6 In Location, select a location. In Available, select a user, and choose Add to add this location to Selected. Repeat this step for each location that has an owner's assistant that differs from the default.
- 7 Choose OK.

## Hiding a comparison series in dashboard charts

You can hide a comparison or base series, such as the target, in dashboard data and index charts. You specify which comparatives to hide for each measure. By hiding comparatives, you prevent any series based on that comparative from appearing for the measure's dashboard charts. The chart does not display a series if you specify that its comparison series is hidden. Although you also can hide the base series, doing so causes charts to be empty. Hide only the comparison series.

In a data chart based on a single measure, the comparison series appears as a line. For a data chart based on multiple measures or locations, the comparison series appears as a bar. When hiding a comparison series, you do not see the comparison bar when you view a data chart based upon multiple measures.

Before you hide a comparison series, note that:

- A measure can appear in more than one view. You might open a dashboard and find that a given comparison series does not appear, because you have hidden it.
- Series are based on comparatives. You can have two different series that are based on the same comparative. For example, if you hide the Actual comparative, both Actual and Last Year do not appear on the charts, because both Actual and Last Year derive from the Actual comparative. This is true for the sample database, because Last Year is configured as a relative period.
- By hiding a comparison series, you simply prevent it from appearing in dashboard charts. The comparison series appears in places such as Data Import and Data Export dialog boxes and Data Entry dialog boxes.

Decide whether to hide the comparison series for data and index charts or both.

#### **How to hide the comparison series for data charts or index charts**

- 1 Choose the Options tab.
- 2 Under Comparison series—data charts or Comparison series—index charts, select Hide comparison series for these comparatives.
- 3 To select the comparatives you want to hide:
  - 1 Choose Edit.
  - 2 Add the comparatives to the Selected list.
  - 3 Choose OK.



- 4 Choose Save.

#### **Setting a fixed scale for a dashboard chart**

If you always track your measures on a fixed scale, display all your dashboard charts measures on the same scale to quickly compare the results from several different charts. By default, Metrics Management calculates the scale of a chart axis when it creates the chart. Metrics Management tries to find the best fit for the measure's data values.

#### **How to set a fixed scale for a dashboard chart**

- 1 Choose the Options tab.
- 2 Under Chart axis, select Custom range from Chart axis - data charts.
- 3 Use From and To to set the parameters of your data chart range.



- 4 Choose Save.

Dashboard charts for the selected measure display the range you defined.

If a chart is based on multiple measures, all measures use the same definition for scale.

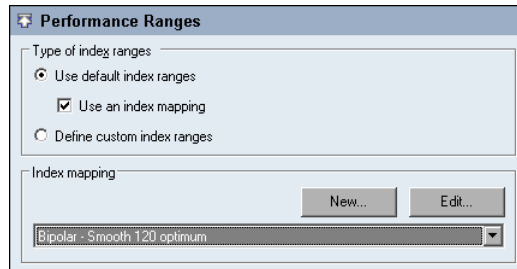
## Creating custom performance ranges

You can override the default performance ranges that are set up for the database or for individual measures, either using index mapping or by creating a custom index range. Use index mapping for measures where a range of values are acceptable or where you might want to change the performance range for an individual measure. For example, define a custom index range that shows a red performance color when a measure's index value is less than 100%. For more information, see "Working with index mappings" in Chapter 4, "Working with measure data and index values." Be aware that if you use too many exceptions, users might not be able to correctly interpret the color-coded results.

In practice, it should not be necessary to make performance range changes to many measures. If many changes are required, this probably indicates that measures are not being correctly defined, and you should consider increasing or decreasing comparative values.

### How to apply an index mapping

- 1 Select Use an index mapping, as shown in Figure 3-14.



**Figure 3-14** Choosing an index mapping

- 2 Do one of the following:
  - From the Index mapping list, select a predefined index mapping.
  - To edit an index mapping, choose Edit.
  - To create a new index mapping, choose New to open Setup Index Mappings and create the index mapping.



- 3 Choose Save.

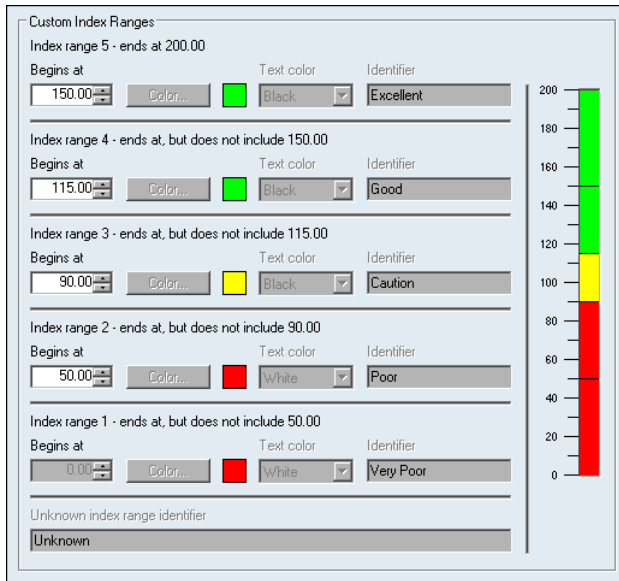
### How to define a custom index range

- 1 Select Define custom index ranges, as shown in Figure 3-15.



**Figure 3-15** Choosing to create custom index range values

- 2 Choose the index value you want to change and provide a new index value, as shown in Figure 3-16.



**Figure 3-16** Defining custom index range values



- 3 Choose Save.

## Attaching notes, links, and link tags

You can attach a note, information link, dashboard link, and link by location to a measure. You can link to any file that can be launched by a program and to web pages, e-mail addresses (in the format <mailto:john.doe@abc.com>), and help files. Store files at the same location as the database, so those who need to have access to the file can access it. You also can attach link tags to a measure. For more information about linking, see Chapter 8, “Publishing data.”

### How to create notes and links

- 1 In Notes, add information about the measure that is not in the description. This information can include where the data is located, the date when a calculation was changed, or any other pertinent information.



- 2 To add information links to the measure:
  - 1 In Links, choose Edit.
  - 2 Add the links to Selected.
  - 3 To have links appear in a particular order, rearrange them in Selected by selecting a link and choosing Move Up or Move Down. Alternatively, choose Sort to arrange the links in alphabetical order.
  - 4 Choose OK.
- 3 To add a link to the dashboard, select a link in Dashboard Link. You also can choose New to open Links and create a new link. This link applies for all locations unless you choose a linked document by location.
- 4 To add links by location:
  - 1 In Links by location, choose Edit.
  - 2 In Location, select a location.
  - 3 Add the links to Selected.
  - 4 To have the links appear in a particular order, rearrange them in the Selected list by choosing Move Up or Move Down, or choose Sort to arrange the links in alphabetical order.
  - 5 Choose OK.
- 5 In Link Tags, create up to four link tags. For information about link tags, see Chapter 8, "Publishing data."

#### **How to define security**

- 1 Choose Security and assign access rights to groups and users.
- 2 Choose Save.



### **Defining commentary and data entry rights using a variable**

Metrics Management supports using context-variables to define commentary and data entry security settings for a measure. Using a context-sensitive variable saves administrative time when allowing access to multiple users or groups. A variable enables editing specific actions only. Metrics Management supports the following variables:

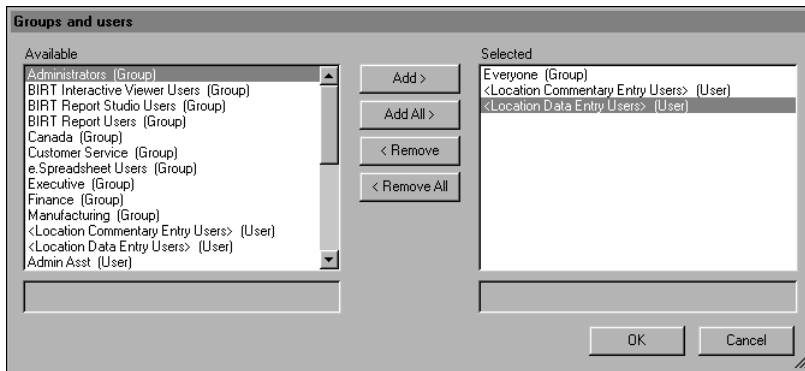
- <Location Commentary Entry Users>. This variable references users who have commentary entry rights at a specific location. The system specialist defines the Enter Commentary setting for this variable.
- <Location Data Entry Users>. This variable references users who have data entry rights at a specific location. The system specialist defines the Enter Data setting for the variable.

- <Measure Owner>. The variable references users who are the measure owner, measure owner by location, owner’s assistant, or owner’s assistant by location. The system specialist defines the Enter Commentary, Enter Data, and View settings for this variable.

For example, instead of defining security for each of a measure’s owners by location, specify security settings for the <Measure Owner> variable.

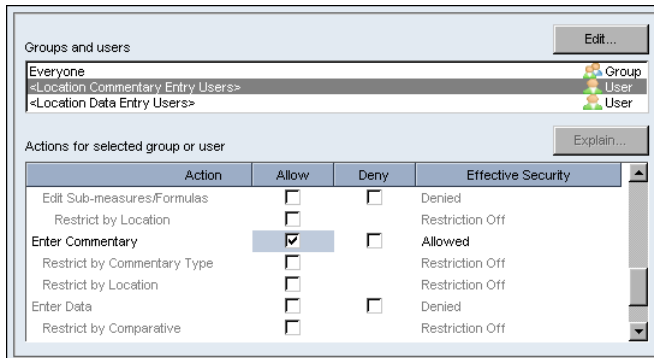
**How to allow commentary and data entry rights to users for a specific location**

- 1 In Setup Measure—Security, and in Groups and users, choose Edit. In Groups and users, add the <Location Commentary Entry Users> and <Location Data Entry Users> variable to Selected, as shown in Figure 3-17. Then, choose OK.



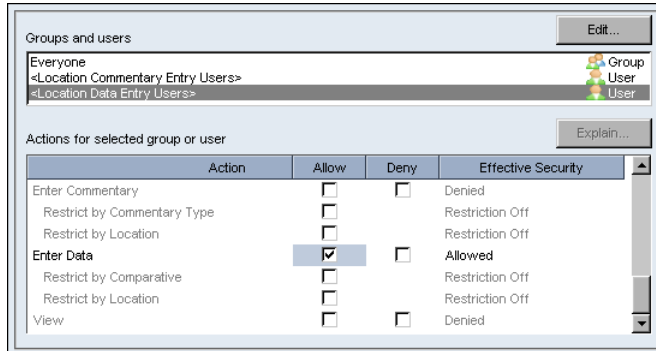
**Figure 3-17** Adding the <Location Commentary Entry Users> and <Location Data Entry Users> to Selected

- 2 In Actions for the selected group or user, allow the Enter Commentary action for <Location Commentary Entry Users>, as shown in Figure 3-18.



**Figure 3-18** Defining permissions for <Location Commentary Entry Users>

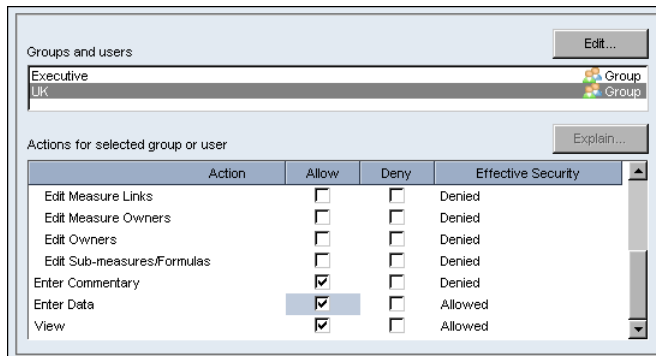
- 3 Allow the Enter Data action for <Location Data Entry Users>, as shown in Figure 3-19.



**Figure 3-19** Defining permissions for <Location Data Entry Users>



- 4 Choose Save.
- 5 In the Navigation Pane, choose Setup and open a location.
- 6 In Setup Location—Security, and in Groups and users, choose Edit. In Groups and users, add a user or group to Selected. Then, choose OK.
- 7 In Actions for selected group or user, allow the Enter Commentary and Enter Data actions for the user or group. In the example in Figure 3-20, the UK group is allowed to enter commentary and data.



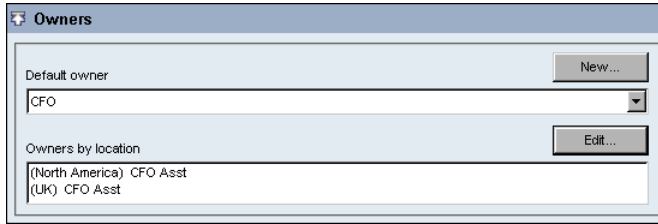
**Figure 3-20** Allowing data entry for the UK group



- 8 Choose Save. Members of the UK group can enter commentary and data at this location for the measure.

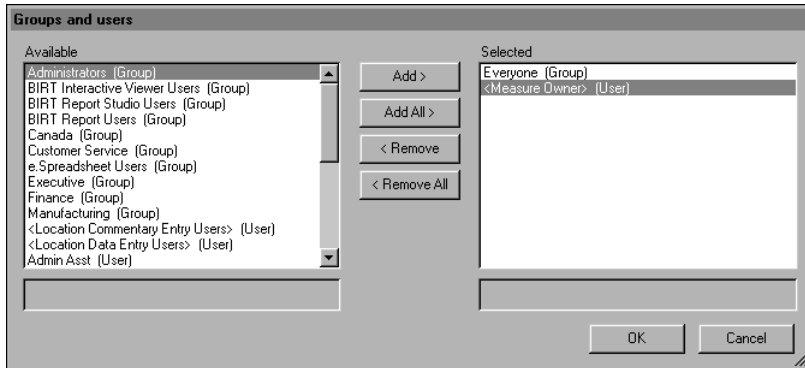
### How to allow commentary and data entry rights for measure owners

- 1 In Setup Measure—Properties, in Owners, choose Edit. In Users, add one or more users as owners by location. In the example in Figure 3-21, the CFO Asst is added as an owner of the Receivables measure at the North America and UK locations.



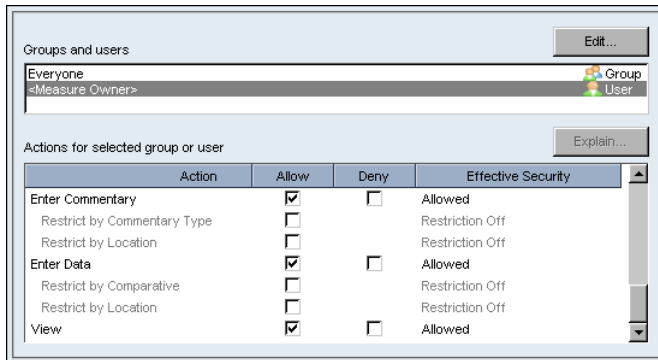
**Figure 3-21** Adding the CFO Asst as a measure owner by location

- 2 Choose Setup Measure—Security. In Groups and users, choose Edit. In Groups and Users, add the <Measure Owner> variable to Selected, as shown in Figure 3-22. Then, choose OK.



**Figure 3-22** Adding the <Measure Owner> to Selected

- 3 Ensure the <Measure Owner> is allowed the Enter Data, Enter Commentary, and View actions, as shown in Figure 3-23.



**Figure 3-23** Defining permissions for the <Measure Owner> variable



- 4 Choose Save. The CFO Asst user can enter data and commentary at the entry at the North America and UK locations for this measure. The CFO user can enter can and commentary at all locations.

### **Restricting actions on a measure by commentary type, comparative, or location**

Metrics Management allows setting security to restrict a user from performing an action on a measure to a specific location, commentary type, or comparative. Metrics Management supports creating a restriction for a group or user. Table 3-2 lists available restrictions.

**Table 3-2** Measure security restrictions

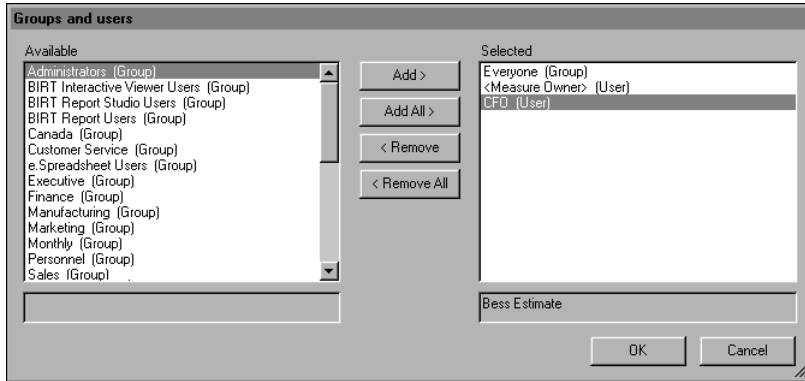
<b>Action</b>	<b>Restriction option</b>
Enter Commentary	Restrict by Commentary Type
Enter Commentary	Restrict by Location
Enter Data	Restrict by Comparative
Enter Data	Restrict by Location
Edit Links	Restrict by Location
Edit Owners	Restrict by Location
Edit Submeasure or Formulas	Restrict by Location

To create a restriction for a user, first restrict the user from performing the action for a measure. Restrict the action by commentary type, comparative, or location. Then, allow the user to perform the action in the commentary type, comparative, or location. For example, to restrict commentary entry to a location, first deny a user from entering commentary at all of a measure’s location by allowing Restrict by Location in a measure. Then, in the location, allow the user the right to enter commentary.

In the example in the following procedure, the CFO user is restricted to entering data for the COGS - Direct Costs measure at the UK location only.

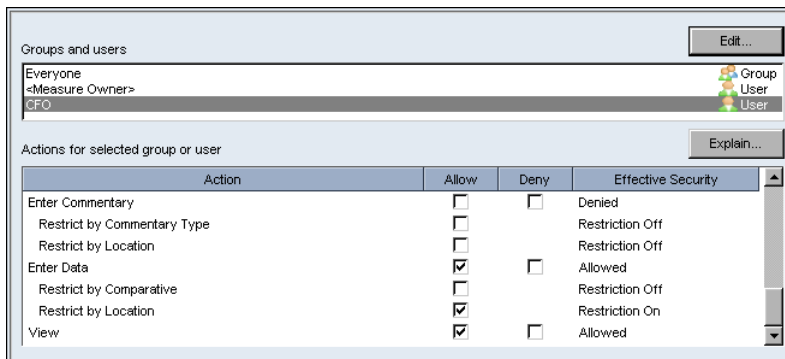
#### **How to restrict data entry by location**

- 1 In Navigation Pane, choose Setup>Measures and open a measure.
- 2 In Setup Measure—Security, in Groups and users, choose Edit.
- 3 In Groups and users, in Available, select the group or user to restrict. Move the group or user to Selected. Then, choose OK. In the example in Figure 3-24, in the COG - Direct Costs measure, the CFO user is selected.



**Figure 3-24** Adding the CFO user to Selected

- 4 In Groups and users, select the group or user. In Actions for selected group or user, select the action to restrict. In the example in Figure 3-25, Enter Data and Restriction by Location is allowed for the CFO user.



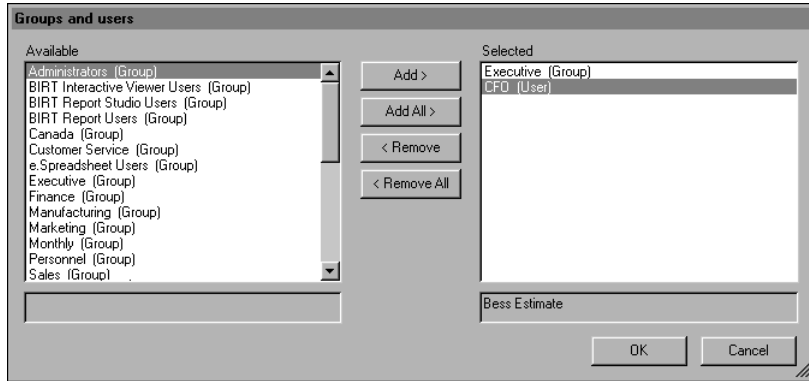
**Figure 3-25** Allowing the Enter Data and Restrict by Location actions



- 5 Choose Save. The user is denied data entry at all locations for this measure.
- 6 In Navigation Pane, choose Setup ► Location and open the location in which to allow data entry.
- 7 In Setup Location—Security, in Groups and users, choose Edit. Then, choose OK. In the example in Figure 3-26, in the UK location, the CFO user is selected.
- 8 In Groups and users, select a group or user. In Actions for selected group or user, select the actions to allow at this location for that user or group. In the example in Figure 3-27, the CFO user is allowed to Enter Data.

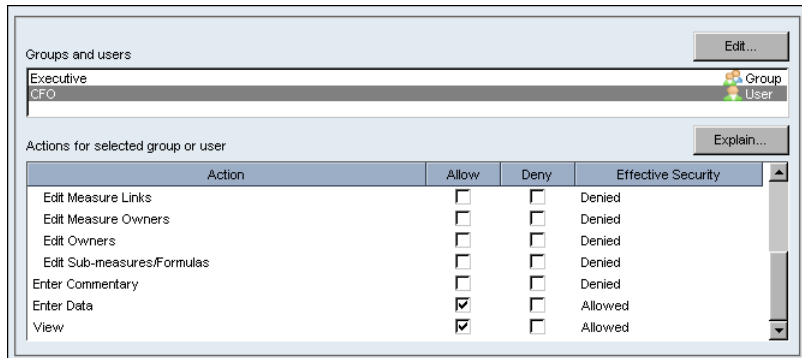


- 9 Choose Save.



**Figure 3-26** Selecting to apply a restriction to the CFO user

**10** To allow data entry at additional locations, repeat steps 6 through 9.





**Figure 3-27** Selecting to apply a restriction to the CFO user

## Duplicating a measure

Instead of creating measures from a template, consider duplicating an existing measure and editing the copy to make any necessary changes. This makes creation of similar measures faster and easier.

### How to duplicate a measure

- 1 In the Navigation Pane, choose Setup > Measures.
-  2 In Setup Measures—Measures, select a measure name.
- 3 Choose Duplicate. A new measure named <copy of Measure Name> opens in Setup Measure.
- 4 Make your changes.
-  5 Choose Save.

## Editing a measure

Before you edit a measure, note that once you have created and saved a measure as a group, data or formula measure, changing the measure type can have a serious impact on your database. For example, the database can contain white or gray measures in books and views, and data measure names and values may not appear in data entry forms. White measures are measures with calculation errors, and gray measures are measures with missing data. Also consider the following points:

- Changing a group measure can leave you with orphan submeasures.
- Changing a formula measure orphans all the measures that are linked to that formula.
- Changing a data measure invalidates measures that use this data either in a group or formula measure. The list of Parent Measures can help you predict the implications of changing a measure type.
- Changing the storage period for a measure makes the data from the former storage period no longer visible because the data is no longer used.

### How to edit a measure

- 1 In the Navigation Pane, choose Setup>Measures.
- 2 In Setup Measures—Measures, select a measure name.



- 3 Choose View or Edit.
- 4 Choose Setup Measure—Properties.

Parent Measures displays a list of measures that are linked to the selected measure. Use the list to consider the implications of changing a measure type.

- 5 Choose Refresh to update potential changes in the database. Updated information appears in Parent Measures.
- 6 To make amendments, select the measure and choose Edit Selected for a parent measure.
- 7 Then, remove the selected measure from the group or formula.
- 8 Make your changes.



- 9 Choose Save.

## Deleting a measure



Deleting a measure can affect other measures in the database. Deleting a data or formula measure also deletes all of the measure's data. Deleting a measure with a parent formula or group measure invalidates performance calculations for the parent measure. Before deleting the child measure, remove references to the



measure from any parent measures. Use the list of Parent Measures to perform this task more efficiently.

A measure with initiatives cannot be deleted. First, delete the measure's initiatives or move the initiatives to another measure.

#### **How to delete a measure**

- 1 In the Navigation Pane, choose Setup ► Measures.
- 2 In Setup Measures—Measures, select a measure name.
-  3 Choose View or Edit.
- 4 In Setup Measure—Properties, and in Parent Measures, perform the following tasks:
  - 1 Choose Refresh to update any changes to other measures in the database. Updated information appears in Measures that refer to this measure.
  - 2 For each parent measure in the list, evaluate the implications of deleting the child measure.
  - 3 To edit a parent measure, select the measure and choose Edit Selected. Then, in Setup Measure for the parent measure, remove the child measure that you plan to delete from the group or formula definition. Choose Save and Close.
-  5 Choose Delete.
- 6 In the confirmation message, choose Yes.



# 4

## Working with measure data and index values

This chapter discusses the following topics:

- Working with unit types
- Working with comparatives
- Working with series
- Working with periods
- Working with index mappings

---

## Working with unit types

Unit types are used in two ways. Firstly, unit types appear as headings in data entry tables. Secondly, unit types format numerical data. For example, the dollar currency unit type defines the prefix as \$, and decimal places as two. There is no limit to the number of unit types that you can create.

Unit types that format data are purely descriptive and do not indicate that any calculations are performed on the data. For example, if the unit type is Percentage and 0.1 is entered in the Data Entry dialog box, it appears as 0.1%.

When performance ranges and unit types use a different number of decimal places, performance colors might appear to be incorrect. Performance colors are based on stored values, or the data that is input or imported into Metrics Management. Metrics Management performs calculations on stored values to produce the index values used with performance ranges. If a measure or location's index value is formatted by a unit type that uses fewer decimal places than the performance range, the display value might be rounded and the performance color might appear incorrect.

For example, a performance range displays red for values equal to and greater than 100 and yellow for values below 100. The performance range uses two decimal places and a measure uses a unit type that has one decimal place. If the measure contains a stored value of 99.99, the display value is rounded to 100. However, the performance range uses the stored value of 99.99 to determine the appropriate performance color of yellow.

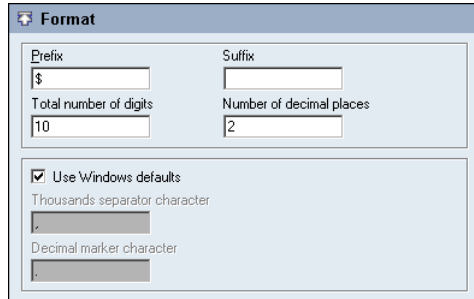
## Creating a unit type

When you create a database, four default unit types are created. These are \$000, Dollars, Number, and Percentage, and they can be modified or removed. Create new unit types to explicitly describe what data is being entered or displayed. For example, create unit types for reporting non-financial information, such as Days or Hours.

### How to create a unit type




- 1 In the Navigation Pane, choose Setup>Unit Types>Create.
- 2 In Setup Unit Type: <New>—Properties:
  - In Name, provide a name for the unit type.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Format, type a prefix or suffix, if required. Figure 4-1 shows a unit type prefixed by \$.



**Figure 4-1** Choosing a prefix for a unit type



Use unit types to format numbers. Use \$ as a prefix for unit types, such as dollars and thousands of dollars. % appears as a suffix for a unit expressed as a percentage. The suffix and prefix appears in data entry, as well as on charts and graphs.

- 4 Type a value that sets the number of digits to display. If a value exceeds this number of digits, the value appears in scientific notation.
- 5 Type a value that sets the number of decimal places defined to display. Metrics Management stores the number of decimal places defined in the system, but only displays the number of decimal places specified here.
- 6 Choose to accept the Windows-default thousand separator and decimal-place marker. These defaults are a comma and a period respectively, in North America. To change these if necessary, clear the Use Windows defaults check box, and type the required characters.
- 7 Choose the Security tab and assign access rights for the unit type to groups and users.
- 8  Choose Save.

## Editing a unit type

Use the following procedure to make changes to a unit type.


### How to edit a unit type

- 1 In the Navigation Pane, choose Setup ► Unit Types.
- 2 In Setup Unit Types—Unit Types, select a unit type name.
- 3  Choose View or Edit.
- 4 In Setup Unit Types—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the unit type.
- 6  Choose Save.

## Deleting a unit type

Use the following procedure to delete a unit type.

### How to delete a unit type

- 1 In the Navigation Pane, choose Setup>Unit Types.
- 2 In Setup Unit Types—Unit Types, select a unit type name.
-  3 Choose Delete.
- 4 Choose Yes to confirm.

---

## Working with comparatives

To show data in context, compare it to a reference point or benchmark comparative. Metrics Management uses two default comparatives, actual and budget. Actual refers to the data that you collect, and budget refers to the goal you set.

## Creating a comparative

Create comparatives that reflect your organization. Examples of internal comparatives include company, divisional or regional averages, and targets. Examples of competitive, or external, benchmarks, include best-in-class, industry averages, and world-class.

If necessary, assign security rights that restrict access to sensitive data used for comparatives to only appropriate user groups.

### How to create a comparative



- 1 In the Navigation Pane, choose Setup>Comparatives>Create.
- 2 In Setup Comparatives: <New>—Properties:
  - In Name, provide a name for the comparative.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 If necessary, choose Security. Then, assign access rights for the comparative to groups and users.



- 4 Choose Save.
- 5 Create the accompanying series. Remember to:
  - Name the series with the same name that you used for the comparative.

- Choose Comparative as the series type, and select the comparative that you just created from the Comparative list.

For more information, see “Creating a series,” later in this chapter.

## Editing a comparative

Use the following procedure to make changes to a comparative.

### How to edit a comparative

- 1 In the Navigation Pane, choose Setup➤Comparatives.
- 2 In Setup Comparatives—Comparatives, select a comparative name.
- 3 Choose View or Edit.
- 4 In Setup Comparatives—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the comparative.



- 6 Choose Save.

## Deleting a comparative

Before you delete a comparative, note that you delete all of a comparative’s data when you delete the comparative.

### How to delete a comparative

- 1 In the Navigation Pane, choose Setup➤Comparatives.
- 2 In Setup Comparatives—Comparatives, select a comparative name.
- 3 Choose Delete.
- 4 Choose Yes to confirm.
- 5 Delete the corresponding series.



---

## Working with series

To calculate the index for each measure, Metrics Management compares a base series to a comparison series. Three default series, Actual, Budget, and Previous Year, exist in Metrics Management. Actual and Budget are linked to default comparatives Actual and Budget. Previous Year is linked to default relative period Previous Year. To meet organizational requirements, edit or remove these default series.

Typically, you compare data for the current year to an internal or external comparative. Optionally, compare current performance to performance in prior time periods.

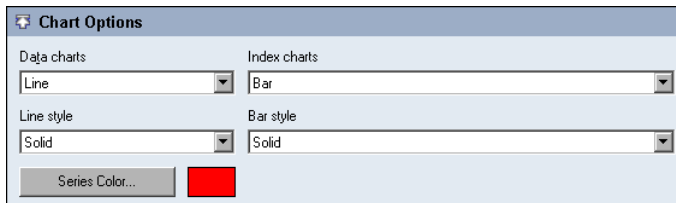
## Creating a series

You can create any number of data series.

### How to create a series



- 1 In the Navigation Pane, choose Setup → Series → Create.
- 2 In Setup Series: <New>—Properties:
  - In Name, provide a name for the series. Typically, this name matches that of the accompanying comparative or relative period.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 Complete one of the following tasks:
  - To create a comparative series, in Series Type, choose Comparative. Then, select a comparative.
  - To create a relative period series, in Series Type, choose Relative period. Then, select a relative period. For more information, see “Creating a relative period,” later in this chapter.
- 4 Select options that set how series appear in a chart. In Chart Options, select line or bar chart for each of the data and index charts, as shown in Figure 4-2. If printed charts appear in black and white, choose a different line and bar style for each series. If printed charts appear in color, choose a different color for each series.



**Figure 4-2** Changing chart options for a series

- 5 If necessary, choose Security. Then assign access rights for the series to groups and users.




- 6 Choose Save.



## Editing a series

Use the following procedure to make changes to a series.

### How to edit a series

- 1 In the Navigation Pane, choose Setup➤Series.
- 2 In Setup Series—Series, select a series name.
-  3 Choose View or Edit.
- 4 In Setup Series—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the series.



- 6 Choose Save.

## Deleting a series

Use the following procedure to delete a series.

### How to delete a series

- 1 In the Navigation Pane, choose Setup➤Series.
- 2 In Setup Series—Series, select a series name.



- 3 Choose Delete.
- 4 Choose Yes to confirm.

---

## Working with periods

When you create a new database, you choose to create period types, such as years, quarters, months, or days. If you collect data on a weekly, semi-annual, or other basis, please contact Actuate Performance Management Customer Support to have these structures created. You can create period ranges, relative periods, and special periods.

### Working with special periods

When you create your database, Metrics Management creates all the periods required for use in period ranges. Special periods refer to the period settings in the system configuration, including completed, current period, and locked settings, and selected period refers to the period the user has selected in the view or briefing book.

If you have requested that additional period types be added to your database, you have to create the corresponding completed, current period, locked, and selected special periods.

### How to create a special period



- 1 In the Navigation Pane, choose Setup➤Special Periods➤Create.
- 2 In Setup Special Period: <New>—Properties:
  - In Name, type one of the following names: Completed, Current, Locked, or Selected, followed by the name of the new period type. For example, to create a locked semi-annual period, type Locked semi-annual.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Type of special period, select a special period type.
- 4 In Period type, select a period type.
- 5 Choose Security. In Security, assign access rights for the special period to groups and users.



- 6 Choose Save.

## Working with relative periods

A relative period is a time period related to the selected period. For example, previous year is a relative period that refers to a period one year before the selected year. A new database contains a number of default relative periods. Create additional periods or edit existing ones to best meet your organizational needs.

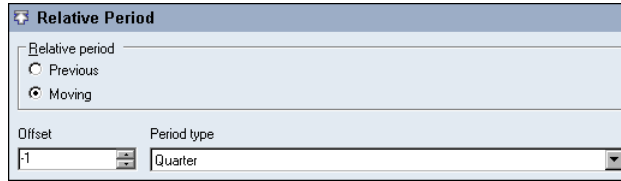
### Creating a relative period

Create relative periods to use in Metrics Management.

#### How to create a relative period



- 1 In the Navigation Pane, choose Setup➤Relative Periods➤Create.
- 2 In Setup Relative Period: <New>—Properties:
  - In Name, provide a name for the relative period.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Relative Period, select either Previous or Moving, as shown in Figure 4-3.



**Figure 4-3** Choosing moving relative period

- 4 In Offset, type a number. For example, to create a moving relative period, offset to last year, type  $-1$ .
- 5 In Period type, select a period type.
- 6 If necessary, choose Security. Then, assign access rights for the relative period to groups and users.
- 7 Choose Save.



## Editing a relative period

Use the following procedure to make changes to a relative period.

### How to edit a relative period

- 1 In the Navigation Pane, choose Setup  $\rightarrow$  Relative Periods.
- 2 In Setup Relative Periods—Relative Periods, select a relative period.
- 3 Choose View or Edit.
- 4 In Setup Relative Period—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the relative period.



- 6 Choose Save.

## Deleting a relative period

Use the following procedure to delete a relative period.

### How to delete a relative period

- 1 In the Navigation Pane, choose Setup  $\rightarrow$  Relative Periods.
- 2 In Setup Relative Periods—Relative Periods, select a relative period.
- 3 Choose Delete.
- 4 Choose Yes to confirm.



## Working with period ranges

Period ranges are used for consolidation and views.

Start and end periods can be relative, special, or specific. Create start and end periods in the following ways:

- To create a range that moves with the selected period of time, use a relative period. For example, to create a moving quarterly average, choose a relative period, such as Moving Quarter, as the period start range, and a special period, such as Selected Period, as the period end range.
- To create a range that starts at a completed, current, locked, or selected date, use a special period. For example, to create a range starting in the last completed year, choose Special Period as the period start type, and Completed Year as the period start range.
- To create a range that starts at a specific date, choose a period. For example, to create a range that starts in July 2011, choose Period as the period start type, and 2011/07 as the period start range.

## Creating a period range


When creating a period range, specify a start and end for the range based on the system period classes, which are period, relative period, or special period.

### How to create a period range



- 1 In the Navigation Pane, choose Setup>Period Ranges>Create.
- 2 In Setup Period Range: <New>—Properties:
  - In Name, provide a name for the period range.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Period Range, select a period range. Figure 4-4 shows Range selected as the period range.

**Figure 4-4** Selecting a period range

- 4 In Type of period start, select a type.
- 5 In Period start range, select a range.
- 6 In Type of period end, select a type.
- 7 In Period end range, select a range.
- 8 If necessary, choose Security. Then, assign access rights for the period to groups and users.
- 9  Choose Save.

## Editing a period range

Use the following procedure to make changes to a period range.

### How to edit a period range

- 1 In the Navigation Pane, choose Setup>Period Ranges.
- 2 In Setup Period Ranges—Period Ranges, select a period range name.
- 3 Choose View or Edit.
- 4 In Setup Period Ranges—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the period.




- 6 Choose Save.

## Deleting a period range

Use the following procedure to delete a period range.

### How to delete a period range

- 1 In the Navigation Pane, choose Setup►Period Ranges.
- 2 In Setup Period Ranges—Period Ranges, select a period range name.
- 3  Choose Delete.
- 4 Choose Yes to confirm.

---

## Working with index mappings

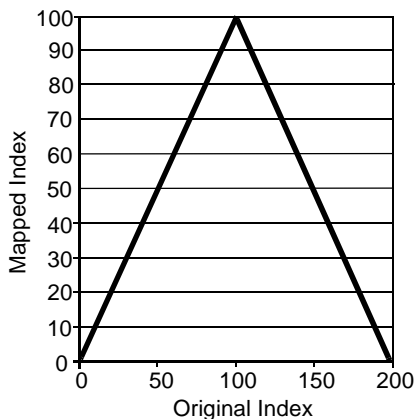
Use custom index mappings when the standard polarity choices of high values are good or high values are bad are insufficient for a particular measure. For example, use index mappings for measures where a range of values around a target is desired and deviation in either direction from that range is undesirable.

To use index mappings, take the initial calculated index (0–200) based on measure polarity and map it to a new index value. Choose to create index mappings that are valid beyond the 0–200 range, to a maximum range of 9899–9999.

The index ranges are always determined by the database configuration settings. By mapping the default settings, you can generate the correct index values and colors for measures where high values are bad and low values are bad.

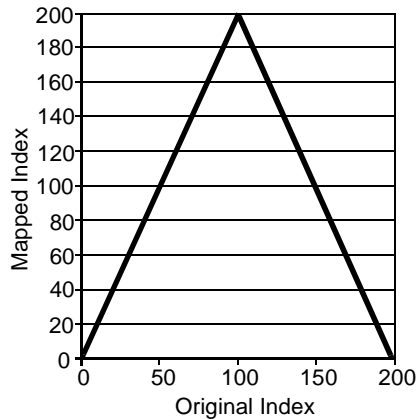
A number of default index mappings are available. All default mappings assume the polarity High Values are Good to work as described:

- Bipolar Smooth–100 optimum: Original index values from 0 to 200 are mapped from 100 down to 0 in both directions from an optimal value of 100. The mapped index value of 100 occurs at the original index value of 100%, as shown in Figure 4-5. Mapped index values are continuous.



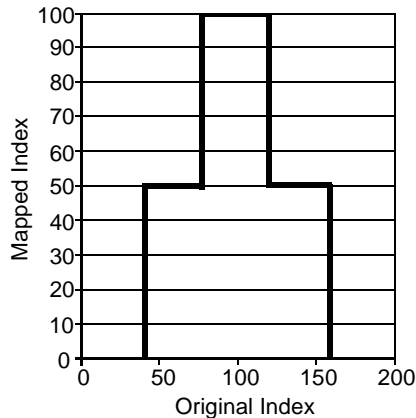
**Figure 4-5** Bipolar Smooth–100 optimum index mapping

- Bipolar Smooth-200 optimum: Original index values from 0 to 200 are mapped from 200 down to 0 in both directions from an optimal value of 100. The mapped index value of 100 occurs at the original index value of 100%, as shown in Figure 4-6. Mapped index values are continuous.



**Figure 4-6** Bipolar Smooth-200 optimum index mapping

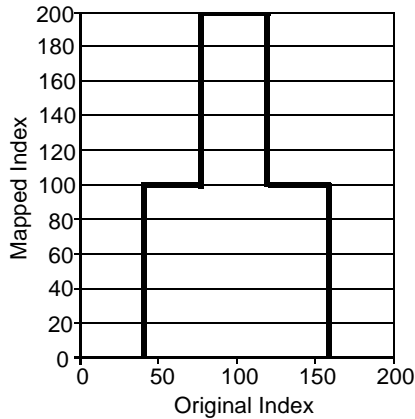
- Bipolar Stepped-100 optimum: Original index values from 0 to 200 are mapped from 200 down to 0 in both directions from an optimal value of 100. The mapped index value of 100 occurs at the original index value of 100%, as shown in Figure 4-7. This mapping uses stepped values instead of a continuous scale.



**Figure 4-7** Bipolar Stepped-100 optimum index mapping

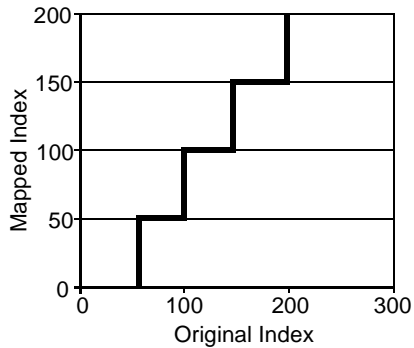
- Bipolar Stepped-200 optimum: Original index values from 0 to 200 are mapped from 200 down to 0 in both directions from an optimal value of 200. The mapped index value of 100 occurs at the original index value of 100%, as shown in Figure 4-8. This mapping uses stepped values instead of a

continuous scale.



**Figure 4-8** Bipolar Stepped-200 optimum index mapping

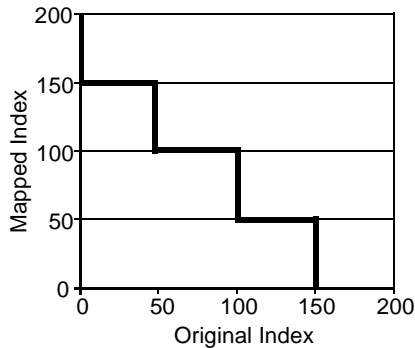
- High Values are Good—Stepped: Similar to the standard High Values Are Good polarity. This mapping uses stepped values instead of a continuous scale, as shown in Figure 4-9.



**Figure 4-9** High Values are Good—Stepped

- High Values are Bad—Stepped: Similar to the standard High Values Are Bad polarity. This mapping uses stepped values instead of a continuous scale, as shown in Figure 4-10.





**Figure 4-10** High Values are Bad—Stepped

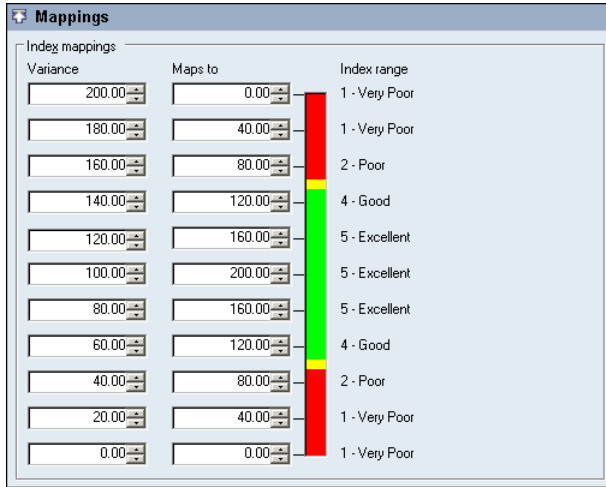
## Creating an index mapping

Choose to use the index mappings you create with more than one measure.

### How to create an index mapping



- 1 In the Navigation Pane, choose Setup>Index Mappings>Create.
- 2 In Setup Index Mappings: <New>—Properties:
  - In Name, provide a name for the index mapping.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Mappings, for each value in the Original Index column, provide a corresponding value in Maps to, as shown in Figure 4-11.



**Figure 4-11** Mapping index values to an index range

- 4 Choose Security. Then, assign access rights for the index mapping to groups and users.
- 5 Choose Save.

## Editing an index mapping

Use the following procedure to make changes to an index mapping.

### How to edit an index mapping

- 1 In the Navigation Pane, choose Setup>Index Mappings.
- 2 In Setup Index Mappings—Index Mappings, select an index mapping name.
- 3 Choose View or Edit.
- 4 In Setup Index Mappings—Properties, edit properties, if necessary.
- 5 If necessary, select Security. Then, edit security properties for the index mapping.

- 6 Choose Save.

## Deleting an index mapping

Use the following procedure to delete an index mapping.

### How to delete an index mapping

- 1 In the Navigation Pane, choose Setup>Index Mappings.
- 2 In Setup Index Mappings—Index Mappings, select an index mapping name.



- 3** Choose Delete.
- 4** Choose Yes to confirm.



# Working with views

This chapter discusses the following topics:

- Working with views
- About exceptions by location
- About the order of calculation

---

## Working with views

A view is a hierarchical structure that displays data similar to an organizational chart. A view includes all the measures and locations for which performance is to be tracked. A performance view typically includes overall performance (the top level of the chart), with your strategic or core values at the next level, followed by a number of measures and groupings. You can create any number of views, which can include some or all of the same measures. These views can be set up for a number of different purposes, but all views share the same database.

### Creating a view

To create a view, you define a top measure, top location, base series, and at least one comparison series. You can create multiple location structures that can be based on such criteria as geography and business lines. You may have very different measure structures or views for your various locations. For each view, you choose the top measure and the top location that displays in the view. In this way, you can tailor your views to best display the data across your organization. If you choose preferred location as the top location, a view is restricted to the user's preferred location. No other location is visible.

For views to be meaningful, they must compare a base series, usually actual, with some kind of reference point, or benchmark, which is called a comparative. Previous year and target are two commonly used comparatives. You are not limited to the number of comparatives you can have in a view, but Actuate recommends no more than three per view to avoid display issues in charts.

When choosing a display range for the view, you are limiting access to data. Choosing This Year to Date allows users to see information from the beginning of the year to the completed period. Choosing Moving Year allows users to view a full year of information at any point in time. That is, they would always have access to 12 months of information in a monthly view.

Specifying the consolidation range determines how the view calculates performance for data and formula measures.

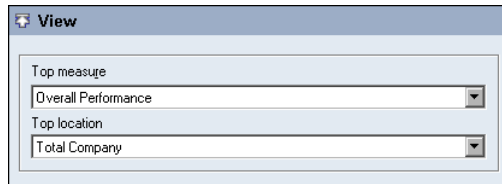
If you choose a commentary type for a view, it displays in the view and briefing book dashboard.

#### How to create a view



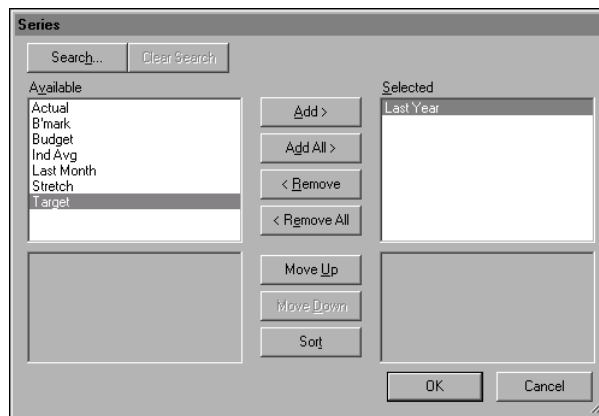
- 1 In the Navigation Pane, choose Setup>Views>Create.
- 2 In Setup Views: <New>—Properties:
  - In Name, provide a name for the view.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Provide a description. Then, choose OK.

- 3 In View, select a top measure for your view structure from the Top measure list, as shown in Figure 5-1. This should correspond to the measure that you want to see at the highest point of the view tree. From the Top location list, select a top location for the view.



**Figure 5-1** Choosing a top location for a view

- 4 In Base series, select a series name from the list. Most views include Actual as the base series.
- 5 To define one or more comparison series for a view:
  - 1 In Comparison series, choose Edit.
  - 2 In Series, add one or more series names from Available. The example in Figure 5-2 shows Last Year added as a comparison series.

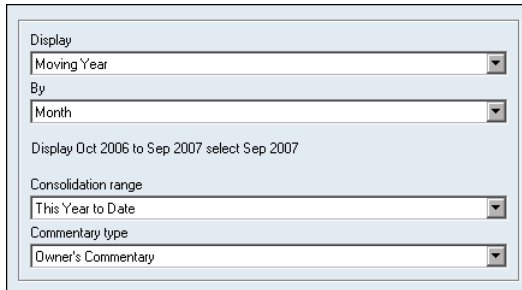


**Figure 5-2** Adding a comparison series to a view


- 3 Choose OK
- 6 To set how time periods appear in a view, in Display, select a period range to display. In By, select a period type. Figure 5-3 shows selections that set time periods in a view to appear as a moving year by month.
- 7 In Consolidation range, to define the consolidation range for data and formula measures, perform one of the following tasks:

- To specify one consolidation range for all measure in the view, select a consolidation range value. For example, select This Month. Specifying a value overrides the consolidation range defined in individual measures.
- To specify the consolidation range defined in individual measures, select Default.
- To displays unconsolidated data, select <None>.

Data is unconsolidated if a view and measure both define consolidation range as Default.





**Figure 5-3** Selecting time period settings for a view

- 8 In Commentary type, select a commentary type that appears for this view in a section.
- 9 If necessary, choose Security. Then, assign access rights for the view to groups and users.
-  10 Choose Save.

## Editing a view

Use the following procedure to make changes to a view.

### How to edit a view

- 1 In the Navigation Pane, choose Setup → Views.
- 2 In Setup Views—Views, select a view name.
-  3 Choose View or Edit.
- 4 In Setup View—Properties:
  - In Name, select alternative properties.
  - In View, select alternative properties.
-  5 Choose Save.



## Deleting a view

Use the following procedure to delete a view.

### How to delete a view

- 1 In the Navigation Pane, choose Setup➤Views.
- 2 In Setup Views—Views, select a view name.
- 3 Choose Delete.
- 4 Choose Yes to confirm.



---

## About exceptions by location

A view can include a measure structure that remains the same regardless of location. Some measure structures differ, based on location. A specific location's measure structure may share some measures with other locations. Use exceptions by location to create unique measure structures without creating a separate view to show each structure.

You can use exceptions by location to except, or exclude, specific measures from a view for a specific location. You can use exceptions by location to remove measures from a formula or grouping for a particular location. For example, after creating an exception by location, the Costs measure includes Admin Costs only at the Head Office location. All other locations calculate Costs using the Local Costs measure.

To properly represent the Costs measure at the very top location, include all submeasures of Costs. Otherwise, the drill-down path to Admin Costs is broken, and the value does not get rolled up.

## Creating exceptions by location

When you create exceptions by location, remember that:

- A formula or grouping measure at the top location where the exception is defined contains all measures outlined in the exceptions below it. Otherwise, the overall performance measure at the top of the view does not reflect performance values.

For example, a company that manufactures and sells auto parts may only sell what they make at their location. The top location includes all parts sold in their Sales formula, but the various sublocations include only the items that they actually sell.

- Use a default formula when the majority of locations use the same measures in a formula. Use a default submeasure definition when the majority of locations measure the same set of submeasures.

Default formulas and submeasures are designed to save time. If the majority of your locations contain the same measure definitions, use the shared definition as the default. Then, define exceptions to that general rule. Default formulas and submeasures apply to every location unless otherwise excepted.

## Understanding common problems with exceptions

Two common problems can occur with exceptions by location. One, when you drill down one way, the exception is enforced. When you drill down another way, it is not enforced. Two, although your exceptions have been created properly, you can still see the excepted measure.

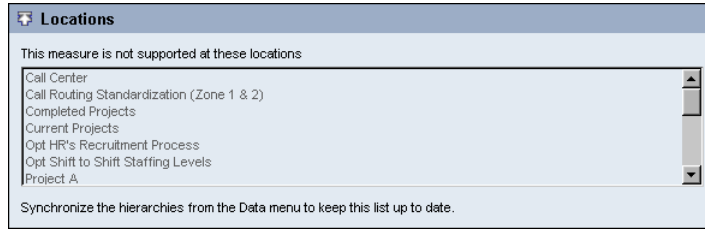
- If you do not create your exceptions for all submeasures below your initial exception, users may be able to bypass it and see measures that you intended to hide.

This issue occurs when you create an exception in the location structure. Locations below this measure are not excepted. Unless you create exceptions consistently for all submeasures in the structure, users can bypass the exception to access a measure. Users can drill down by measure, then access the measure by drilling down by location at lower levels in the view.

- Problem two occurs when your exception has been validated somewhere else and is being overridden by Metrics Management. Explaining this problem requires describing hierarchy calculations.

Hierarchy synchronization is the operation that enforces the exceptions by location. Synchronization suppresses or hides the measures in the view that should not be seen. Metrics Management synchronizes hierarchies in three passes. The first pass analyzes each view individually and tracks all valid measure and location pairs. The second pass flags all measure and location pairs that are invalid due to exceptions. The final pass checks if measure and location pairs are invalid in one view but valid in another view. If a measure and location pair is invalid in one view and valid in another, Metrics Management validates the measure across all views. Metrics Management assumes that if someone is using the measure and location pair then it should not be excepted.

After synchronizing hierarchies, in Setup—Measure—Properties, invalid locations for a measure appear in Locations, as shown in the example in Figure 5-4.



**Figure 5-4** Locations at which a measure is excepted

Although less likely, an additional problem occurs where certain measure and location pairs are validated and invalidated in the same view. Use Parent Measures to see measures in a view.

If a measure and location pair is validated, and you believe that it should not appear, verify that the exception was created properly. Also, check whether someone validated that the measure and location pair appears in another view or structure.

---

## About the order of calculation

Order of calculation provides rules that control how to calculate measure data based on consolidations and order of operation.

For simple mathematical formulas, the order in which calculations occur rarely affects the final result. For more complex formulas, results vary depending on the order in which the formula calculations occur.

Order of calculation applies to data and formula measures.

## Understanding the components of calculations

The order of calculation calculates values based on measures, locations, and periods.

- **Measure**  
Formula measures contain a formula which is performed on its submeasures. For example, Measure A \* Measure B. Data measure values may be entered directly into the system by a user.
- **Location**  
Locations get their data values from their sublocations. For example, the North America data value may be based on the Canada, USA, and Mexico sublocations.

- **Period**  
Periods are based on the consolidating range and the frequency of the measure. For example, a common consolidation range is This Year To Date and a common period frequency is Month.

## **Order of calculation terminology**

A leaf node is a measure, location, or period which cannot be broken down into smaller components. Examples of leaf nodes in a view include data measures, lowest level locations, and periods that match measure frequency, such as monthly periods for a monthly measure. Anything above a leaf node is called a node.

## **Understanding the order of Metrics Management calculations**

Metrics Management calculates values based on the location and period consolidation functions and by executing formulas.

Period consolidation can perform Sum, Average or Take Last Known Value functions.

Location consolidation can perform Sum or Average functions. These are applied to the fully broken down Measure (M), Location (L), and Period (P) components at the Leaf level.

The order of calculation can be MLP, MPL, PML, PLM, LPM, and LMP. All indicate the order in which Metrics Management breaks items down to get to the lowest level of the hierarchies. Most of the time, MLP is the order of calculation. MLP satisfies the calculation requirements of most measures.

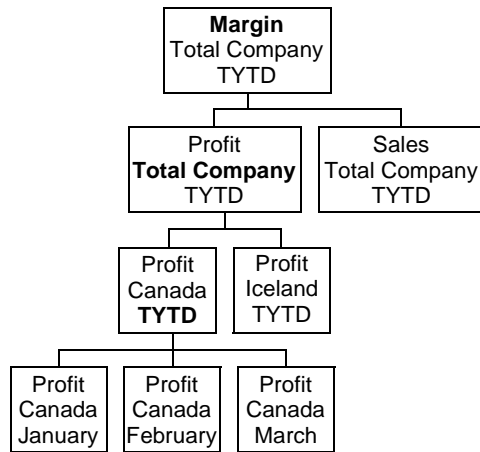
For example:

- The Margin, Profit, and Sales measures all have the same order of calculation: MLP.
- Profit and Sales are data measures.
- Margin is a formula measure, where  $\text{Margin} = \text{Profit}/\text{Sales} * 100$ .
- The Completed period is March and all measures are consolidating as This Year To Date.

Figure 5-5 shows an example of how Metrics Management calculates a data value based on an MLP order of calculation.

- Margin is composed of two submeasures: Profit and Sales.
- Profit is a leaf node that aggregates profit values for the Total Company location.

- Canada is a leaf node in locations that aggregates profit values for the periods from This Year To Date.



**Figure 5-5** A view with an MLP order of calculation

- Profit, Canada and the months are all leaf nodes. Metrics Management aggregates values based on Profit’s consolidation settings. The same process is done for Sales.

For a formula measure, the measure has the greatest affect upon the calculation. The order of calculation proceeds from left to right. In this case, the right-most items after M are never used. If a formula measure has an order of calculation of MLP, L and P are never broken down into leaf nodes from the formula level. This breakdown is accounted for when Profit and Sales are broken down.

Metrics Management aggregates values for each leaf node by applying the measure’s consolidation functions. The value of Profit for Canada in the preceding figure aggregates values from right to left for Period, Location, and then Measure. The Profit value equals a Sum across Period Consolidations. Metrics Management uses the function specified, and sums the values of Profit for Canada across January, February, and March.

Metrics Management then reassembles the locations based on the Location consolidation function. The Location consolidation is set to Average. For example, the total company locations’ profit value equals Canada’s Year To Date Total plus Iceland’s Year To Date Total, divided by two.

Metrics Management then reassembles the measure. In this case, Profit has no subcomponents to assemble, nor does Sales.

Metrics Management then reassembles total Profit for Total Company and the total Sales for Total Company at the Margin level, executing the formula on the aggregated data. To calculate the Margin and final result, the formula is executed

on the subcomponents of Margin. So  $\text{Margin} = \text{Profit for Total Company} / \text{Sales for Total Company} \times 100$ .

# 6

## **Exporting and importing Metrics Management objects**

This chapter discusses the following topics:

- About exporting and importing Metrics Management objects
- Exporting objects to XML
- Creating an XML import file from an export file
- Importing objects from XML
- XML export and import rules

---

## About exporting and importing Metrics Management objects

Metrics Management supports exporting objects to an XML file and importing XML objects into Metrics Management. Consider using object import and export to test a new object such as a book, map, or view. For example, create and test a map in the development environment. Once the map is ready for production, export the map to XML. Then, import the map into the production database.

Before performing an object export or import, Actuate recommends:

- Taking the database offline before importing and exporting to avoid errors. For example, an import may fail if a user makes changes to a database when an XML import is running.
- Running object imports and exports overnight if you plan to perform either operation in Serving mode. An object import or export can run on a remote database while the database is in the Serving mode. Running object imports and exports overnight avoids conflicts with other users on the system.

---

## Exporting objects to XML

Metrics Management supports exporting a single object, a filtered list of objects, all objects of one type, or all of the objects in a database to an export file in XML format.

Metrics Management exports only the security settings that you specifically define for an object. For example, if you allow or deny Edit actions for a measure, but do not specify Enter Commentary and Enter Data actions, only the Edit actions export to XML.

Metrics Management exports editable and non-editable objects and object properties. Non-editable objects are objects that cannot be modified in Metrics Management, for example, periods. Non-editable properties are properties that are unavailable for editing, for example, the list of excepted locations shown in Setup Measure—Locations. You cannot export and modify, and then import non-editable objects or object properties back into Metrics Management. Your changes are either ignored or the import fails.

The order in which properties appear in the XML export file may not match the order that properties appear in Setup for an object.

To automate the export process, use the `RUN_OBJECT_EXPORT` pbvcon command. For more information about using pbvcon to export objects, see “About pbvcon” in Chapter 11, “Using pbvcon to schedule Metrics Management.”



## About exporting referenced objects

Metrics Management supports exporting the objects directly referenced by a root object or group of objects. A root object is the parent object which is exported. A referenced object, also known as a dependant object, is an object that is referenced directly by the root object. For example, in a book export, the book is a root object and the sections are referenced objects. Indirectly referenced objects are not exported.

## About specifying import actions

Typically, you create an export file, then modify the file, and import the file back into Metrics Management. Depending on how you plan to use the import file, you define an import action when you create the export file. The import action specifies the action that Metrics Management performs on objects in the database during an import. Metrics Management supports using an import file to create new objects, and replace or delete existing objects. Metrics Management supports the following actions:

- **Add**  
Add creates a new object in Metrics Management for each unique object in the import file.
- **Edit**  
Edit replaces the object in Metrics Management with the object from the import file.
- **Add, Edit**  
Add, Edit applies the Edit action if the object exists in Metrics Management and the Add action if the object does not exist.
- **Delete**  
Delete removes any object from the database that matches the name and object type of the object in the import file.
- **None**  
None specifies that the file cannot be used as an import file.

## Defining performance range settings for the export file

During an XML import, Metrics Management applies performance range settings to measures from either the source export database or the destination import database. To preserve settings from the source database, specify performance range settings for individual measures before exporting measure objects to XML.

### How to specify measure performance range settings

- 1 Choose Setup→Measures.



2 Select a measure and choose View or Edit.

3 In Setup Measure→Options→Performance Ranges, perform one of the following tasks:

- To preserve performance range settings of the source database from which a measure exports, choose Define custom index ranges.
- To apply performance range settings of the destination database to which a measure imports, select Use default index ranges.



4 Choose Save and Close.

## Exporting objects to an XML file

Metrics Management supports exporting an individual object, such as a book or measure, and a filtered list of objects. To export a filtered list of objects, use the Search feature to create the list, and then export the list to XML. For example, if you need to make similar changes to financial measures, search the Finance category and export to XML. Then, edit the measures in the XML file. Finally, import the edited XML file into Metrics Management.

Metrics Management also supports exporting all objects of a specific object type or all objects in a database. For example, Metrics Management supports exporting all user objects from a database. Exporting all objects in a database also exports all dependant objects, for example, all images referenced by objects in the database.

### How to export objects

1 In the Navigation Pane, choose Setup, and choose an object type. For example, choose Measures.

2 To export an individual object:

- 1 In Setup <Object>, select an object name.



2 Choose View or Edit.



3 Choose Export as XML.

3 To export a filtered list of objects:



1 Choose Search.

2 In Search, select criteria appropriate to return the list of objects for export. For example, to return all data measures, choose Measure Type, and then choose Data. Choose OK. Then, choose OK again.

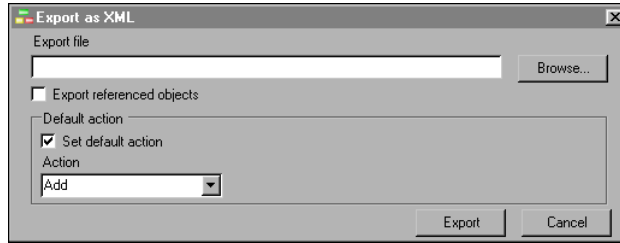


3 Choose Export as XML.



4 To export all objects of the selected type, choose Export as XML.

Export as XML appears, as shown in Figure 6-1.



**Figure 6-1** Export as XML

- 5 In Export file, type an export file name.
- 6 Choose Browse. Then, navigate to a location to save the export file. Choose Save.
- 7 To export all dependant objects, select Export referenced objects.
- 8 In Default action, to define an action based on the planned use of the import file, select Set default action. Then, in Action, perform one of the following tasks:
  - To use the import file to create new objects in Metrics Management, select Add.
  - To use the import file to replace objects in Metrics Management, select Edit.
  - Add, Edit uses the Edit action if the object is found in Metrics Management or the Add action if it is not.
  - To apply the Edit action if an object exists in the database, or the Add action if an object does not, choose Add or Edit.
  - To use the import file to delete objects in Metrics Management, select Delete.
  - To perform no imports using the XML file in Metrics Management, select None.
- 9 Choose Export.

A confirmation message appears indicating the number of objects which exported successfully.

#### **How to export all objects in a database**

- 1 Choose File→Open Servers and Databases.
- 2 To show the list of databases on the server, in the main window, choose the plus sign next to the appropriate server.
- 3 Select a database from the list of databases.
- 4 In the Navigation Pane, choose Database Tools→Export Objects.

- 5 In Verify User Credentials, provide log in credentials.
- 6 In Export Objects as XML, provide a name for the export file and navigate to a location to save your file. Choose Save.

A confirmation message appears indicating that the object export was successful.

---

## Creating an XML import file from an export file

After exporting an object to XML, you typically modify the exported XML file and import the file back into Metrics Management. This section describes Read-Only objects and shows how to modify the following attributes in the XML export file:

- Action  
Modify the attribute to define Add, Edit, and Delete action rules for the import file.
- BreakImportOnInvalidReferences  
Modify the attribute to specify the import rule for invalid references for the import file.
- Reference\_Resolution\_Mandatory  
Modify the attribute to define mandatory reference import rules for an object.
- EditByObjId  
Modify the attribute to specify that Metrics Management search for an object by object ID during import.

### About Read-Only objects and properties

The Read-Only attribute specifies whether an object or an object property is editable. Certain objects and object properties in Metrics Management are non-editable. For example, the period type object and the list of excepted locations that appears in Setup Measures—Locations are both non-editable. Metrics Management assigns the Read-Only attribute to non-editable objects and properties in the XML export file. The following example shows the Read-Only attribute for the Parent Measure property of a measure in an export file:

```
<ParentMeasuresList READ-ONLY="TRUE">
  <Measure name="Employee Survey Results">
    <MeasureKind>Group</MeasureKind>
  </Measure>
</ParentMeasuresList> Security Rules
```

The Read-Only attribute equals True for non-editable XML elements. If you change the Read-Only attribute for a non-editable object to False and import, the import fails.

## Specifying Add, Edit, and Delete import actions

The Action attribute determines how an import affects existing objects in Metrics Management. The Action attribute in the XML header specifies the default action that applies to all objects in the import file. Specifying the Action attribute for an individual object overrides the default action. In the following example, the Add action for the user object overrides the default Edit action for the import file:

```
<Database Document_Name="Metrics Management Database Export"
  Document_Description="Export of objects from DataBase: Sample
  Corporate" Default_Action="Edit" >
  <Objects>
    <User Action="Add" name="Manager of distribution" >
      <Name>Manager of distribution</Name>
    </Objects>
```

The Action attribute can contain one of the following properties:

- **Add**  
Add creates a new object in Metrics Management from each unique object in the import file. The object must have a distinct name to import successfully. The import fails if the database contains an object with the same name.
- **Add, Edit**  
Add, Edit uses the Edit action if the object is found in Metrics Management and the Add action if it is not.
- **Delete**  
Delete removes an object from the database that matches the object name and object type specified in the import file.
- **Edit**  
Edit replaces the object in Metrics Management with the object from the import file.
- **None**  
Objects with the None property cannot import back into Metrics Management. Use None when the file will not be imported back into Metrics Management. For example, you may wish to use the XML file with another system outside of Metrics Management.

## Specifying invalid reference import file rules

The BreakImportOnInvalidReferences attribute specifies whether to terminate an import if any imported object contains an invalid reference. An invalid reference is a reference to an object that does not exist in the database, for example, a reference from a measure to a non-existent unit type. BreakImportOnInvalidReferences applies to the entire import file. The attribute,

which appears in the XML header, is set to `False` by default. To enable the attribute, change the attribute property value to `True`.

## Specifying mandatory references for an object

Each object exported to XML contains the `Reference_Resolution_Mandatory` attribute. The `Reference_Resolution_Mandatory` attribute specifies whether a referenced object must exist in the target database. By default, the `Reference_Resolution_Mandatory` attribute is `True` for a root object, and `False` for a referenced object.

The following rules apply to objects imported into Metrics Management:

- If the attribute is `True`, the referenced object must exist in the target database. If it does not, the import fails.
- If the attribute is `False`, the import succeeds whether the referenced object exists or not in the target database.

If the attribute is `True` for the root object, the following import action rules apply to an import of a root object containing referenced objects:

- **Add**  
The import fails if any referenced objects exist in the target database.
- **Edit**  
The import of the root object succeeds only if all referenced objects exist in the target database.
- **Add, Edit**  
Metrics Management applies the `Edit` action to a reference object if the object is found in Metrics Management or the `Add` action if it is not.
- **Delete**  
The import deletes the root and referenced objects, except those marked as `Read-Only`.

Importing preserves valid references in the target database and defines as invalid references with the property value of `None`.

## Specifying searching for an object by object ID

The `EditByObjId` attribute specifies how Metrics Management searches objects in the database for imports that contain the `Edit` or `Add_Edit` action. The `EditByObjId` attribute specifies whether Metrics Management searches on object name or object ID, or on both values. Consider using the `EditByObjId` attribute to import measures by object ID if you expect measure names to change. Enter the `EditByObjId` in the XML header in the import file. The `EditByObjId` attribute accepts the values listed in Table 6-1.

**Table 6-1** EditByObjId attribute values

Value	Metrics Management searches for objects in the database by
0	Object name. Using the Edit action, if the object name is not found, the object import fails.
1	Object name. Using the Edit action, if the object name is not found, Metrics Management searches by object ID. If both values are not found, the import fails.
2	Object ID. Using the Edit action, if the object ID is not found, Metrics Management searches by object name. If both values are not found, the import fails.
3	Object ID. Using the Edit action, if the object ID is not found, the object import fails. Using the Add_Edit action, if the object ID is not found, the object is added as a new object.
4	Object name and object ID. Using the Edit action, if both values are not found, the object import fails. Using the Add_Edit action, if both values are not found, a new object is created.

---

## Importing objects from XML

Typically, you create an import file by modifying an XML object export file. For example, if you know the information required to build a measure, you export a similar measure from Metrics Management to identify the XML syntax for the measure, edit the measure in XML, and import the measure into Metrics Management.

Before performing an object import, note that a non-editable object in Metrics Management cannot be imported. For example, period type objects cannot be imported. Period types are non-editable objects, defined as Read-Only in Metrics Management. Metrics Management ignores non-editable objects during imports.

To automate the import process, use the `RUN_OBJECT_IMPORT` pbvcon command. For more information about using pbvcon to import objects, see “About pbvcon” in Chapter 11, “Using pbvcon to schedule Metrics Management.”

### Importing from an XML file

To import an object into a Metrics Management database from an XML file, use the following procedure.

#### How to import objects into a database

- 1 Choose File ➤ Open Servers and Databases.

- 2 In the main window, choose the plus sign next to a server to expand the list of databases on that server.
- 3 Select a database name from the list.
- 4 In Servers and Databases, choose Database Tools.
- 5 Choose Import Objects.
- 6 In Import Objects, navigate to the XML file to import. Then, choose Open.

## Applying a template to an object during XML import

When importing, you can apply a Metrics Management template to objects that the XML import file creates. In the XML import file, you specify which Metrics Management object template to apply during import. To import successfully, the template must exist in Metrics Management and the import file must specify the Add action.

Object properties specified in the XML import file override properties defined in the Metrics Management template. For example, user privileges specified in the XML import file override user privileges defined in the Metrics Management user template.

### How to create an object by XML import using a Metrics Management template

- 1 In the XML import file containing the objects to which you will apply the template, delete the object properties that the Metrics Management template specifies.
- 2 Add the following attribute to the import file:

```
useTemplate="Template Name"
```

where:

```
"Template Name"=The name of your template
```

- To apply the template to all objects in the file, add the useTemplate attribute to the XML header.
- To apply the template to specific objects in the XML import file, enter the useTemplate attribute for each individual object.

The following example shows using the View Only User template to create a new user named Project Mgr:

```
<Objects>  
  <User action="Add" name="Project Mgr" useTemplate="View Only  
    User">  
</Objects>
```

- 3 Import the XML file into Metrics Management.



## Using XML import to create an object template

When importing, you can create a new object as a Metrics Management template. For example, export a user having security settings that will apply to multiple new users. Then, edit the file and import the user as a template.

### How to create a template from an object import file

- 1 To create a template, export an existing object. Then, in the XML import file, delete the object properties that the template does not require.
- 2 Open the XML file and locate the XML header tag.
- 3 Add the `isTemplate` attribute to the tag, and enter a name for the template as a property of the attribute, for example:

```
isTemplate="Template Name"
```

- 4 Save the file.

---

## XML export and import rules

When exporting objects to XML and importing objects from XML, certain conditions may cause the export or import to fail. This section lists possible reasons for export or import failure.

### General conditions for import failure

Importing an XML file into a Metrics Management database fails if any of the following conditions are true:

- Missing object name  
An object has no name.
- Duplicate object name  
An object name already exists.
- Invalid property name  
An object property has an invalid name.
- Invalid property value  
An object property has an invalid value.
- Object references an object that does not exist  
An import only fails when the `BreakImportOnInvalidReferences` attribute is set to `True`.
- Inconsistent use of upper- and lowercase names

Attribute names are case-sensitive.

XML imports do not fail if an object property is missing. In this case, the default value for the property appears in the imported object.

## Security rules

This section lists possible reasons for XML import failure related to security settings.

### Importing an XML file with missing security properties

If an XML import does not have security elements, the import succeeds. Default security values are applied to the object. For example:

- If the <SecurityList> element is missing, the Everyone group and View actions are set to Allow.
- If the <Publisher name /> and <Published></Published> elements are missing, the Publisher name is defined as "Administrator" and Published is set to TRUE.

If an import contains a security element without any attributes, the import fails. For example:

- If a security attribute is missing in an XML import file, the import fails. An error message displays the name of the object that causes the import to fail.
- If the publisher name is not defined, the import fails. Metrics Management does not create an object that does not include a publisher name.

### Importing system object security settings in an XML file

The security properties of system objects are defined in the import XML file as Read-Only. System objects include index mappings, period ranges, relative periods, special periods, translators, and unit types.

XML imports function in the same way as Metrics Management. A user cannot edit his own security settings.

## Add action rules

For a specific object type, the Add action used to import objects as XML files fails in the following situations:

- For an image in a book or map  
The path linking the image and the book or map exports to the XML file. If the image path in the file changes, an incorrect path imports to Metrics Management.
- For data exports and sections

Data exports and sections must have a view defined. Before import, if the object's view is defined as <NONE>, the import fails, displaying the error message, 'Must select a view'.

- For filters, during export, if:
  - Filter by index range is cleared, index ranges do not export.
  - Filter by index range is selected, index ranges export and can be imported.
  - Filter by index value is cleared, index values do not export.
  - Filter by index value is selected, index values export and can be imported.
- For measures  
After importing a measure to a new database, performance ranges appear different than the original performance ranges. Performance ranges inherit settings from the new database.
- For period types and periods  
Import does not commit period type to a database. Periods and period types are non-editable, having all properties set as Read-Only.
- For users  
Users with duplicate Metrics Management login name.

## **Edit and Add, Edit action rules**

This section discusses the Edit action rules.

### **About Edit and Add, Edit actions for sections**

Under <SelectedMeasureLocations> an empty <ContextPointMeasure name="" /> property may appear. Context points with an empty name appear in the XML file if some measures have been deleted in Metrics Management. These are ignored during an import.

Context points having an empty name appear in the XML if some measures have been deleted. They are not skipped during the export because they appear on the setup form.

### **About Edit and Add, Edit actions for users**

If you are not making any changes to a user's login information (for example, a user's password), remove the <LoginInfo> property in the XML import file to avoid undesired changes to a user's login information.

## Delete action rules

Deleting an object removes the object and all references to that object from the Metrics Management database. Before deleting an object, consider the effects of deleting the following objects:

- **Commentary type**  
Deleting a commentary type deletes all commentary entries for the commentary type, and all references to the commentary type in views and dashboards.
- **Data or formula measure, location, or comparative**  
Deleting a data or formula measure, or a location or comparative deletes all data and commentary entries associated with the object.
- **Location**  
Deleting a location invalidates default and preferred locations. Objects that use default and preferred locations do not display the results you expect until the locations are created again.
- **Filter**  
Deleting a filter deletes all references to that filter in sections and views.
- **Link**  
Deleting a link deletes all references to the link. If a database uses a link as an info link, the link is deleted across the database.

# Creating data imports and exports

This chapter discusses the following topics:

- About advanced data connectivity
- Setting up advanced data connectivity
- About creating a database connection
- Creating a database connection
- Importing data
- About translators
- Exporting data

---

## About advanced data connectivity

Metrics Management supports importing data from and exporting data to an Microsoft Access, SQL Server, or Oracle database, or an Microsoft Excel file using Microsoft Active Data Objects (ADO). Advanced data connectivity also supports importing data from multi-dimensional databases using the Microsoft Object Linking and Embedding Database (OLE-DB) for Online Analytical Processing (OLAP) provider.

Using ADO, an OLE-DB link is set up between Metrics Management and your database server. Most common relational database management systems offer an OLE-DB provider. Metrics Management supports Access 2000, Excel, SQL Server 7.0, and Oracle 9i via the Microsoft Jet 4.0 OLE-DB provider. Test connections using any OLE-DB providers for other relational databases in your environment before setting up an import or export.

Advanced data connectivity supports importing data from Microsoft SQL Analysis Services using the Microsoft OLE-DB for OLAP Services 8.0 provider. Test connections to any other multi-dimensional databases that claim support for the OLE-DB for OLAP standard in your environment before setting up an import or export.

The Metrics Management import process supports accessing relational databases across the OLE-DB link using the following methods:

- Passing a SQL query
- Passing a call to a view

The Metrics Management import and export processes support accessing relational databases across the OLE-DB link using the following methods:

- Passing a call to a stored procedure
- Reading or writing an entire table specially formatted for Metrics Management

The Metrics Management import process allows access to multi-dimensional databases by passing a Multi-Dimensional Expression (MDX) query across the OLE-DB link.

Advanced data connectivity provides access to data in your standard databases using standardized tools such as MDX, SQL, stored procedures, and views. Ask your IT staff for help when setting up these items during the initial phase of your Metrics Management implementation.

Setting up connections to relational databases enables communication across these links. A connection does not include queries, stored procedures, or views referenced in this guide.

---

## Setting up advanced data connectivity

To use advanced data connectivity to export data to and import data from a Microsoft Access, SQL Server, or Oracle database, or an Excel file, complete the following tasks:

- Prepare the database to produce and receive data.
- Choose the type of database connection that supports the export or import.
- Create a database connection.
  - Use ADO to create an OLE-DB link.
  - Alternatively, define a data link string when you create the database connection.
- Create a data import or data export.

### Choosing an import database connection type

Table 7-1 lists import methods that Metrics Management supports for typical database connection types.

**Table 7-1** Supported import methods and database connection types

Import method	Access	SQL Server	OLAP	Oracle
MDX Query	No	No	Yes	No
SQL Query	Yes	Yes	No	Yes
Stored Procedure	N/A	Yes	No	Yes
Table	Yes	Yes	No	Yes
View	Yes	Yes	No	Yes

To help you choose an import method, read each description in the following list:

- **MDX**  
To pass an MDX query to a multi-dimensional database, or OLAP server, select SQL. Then, provide the MDX query text in the SQL editor.  
For MDX queries generated using a third party editor, save the generated query to a file. Then, in the Metrics Management SQL editor, choose Load to transfer the saved query into Metrics Management.
- **SQL**  
To pass a SQL query to a database server, select SQL. Choose Edit. Provide query text in the editor. Then, choose OK. Alternatively, save the SQL query to

a file. In the editor, choose Load to transfer the saved query text into Metrics Management.

To send a query to a database server, use a SQL statement. Alternatively, call a stored procedure that uses parameters values. For example, to choose a particular date range or specific location, use a SQL statement similar to one of the following examples:

- For SQL Server

```
select * from Sample
```

or

```
select MeasureName, LocationName, ComparativeName,  
       PeriodName, UserData from Sample
```

- For Oracle

```
select * from Sample
```

or

```
select MeasureName, LocationName, ComparativeName,  
       PeriodName, UserData from Sample
```

- Stored procedure

Passes a call from a stored procedure to your database server. The stored procedure definition must return mandatory columns.

To successfully import data using a stored procedure, the stored procedure specified in Data Import Options must create a record set. A stored procedure returns a record set as a result. Two examples of stored procedures that return a record set to Metrics Management without additional changes appear in the following code examples:

- SQL Server

```
CREATE PROCEDURE sp_GetSampleData AS  
select * from Sample
```

- Oracle

Create a new package named TYPES with the following text as the body:

```
AS  
TYPE TCUR IS REF CURSOR;  
END;
```

Then create a procedure named SP\_GETSAMPLEDATA with the following text as the body:

```
(aCur OUT TYPES.TCUR) AS  
begin  
OPEN aCur FOR SELECT * FROM Sample;  
end;
```



A stored procedure that uses more sophisticated conditions must return a record set as a result.

For example, to call a stored procedure, type `sp_GetSampleData` in Stored Procedure in Import.

- **Stored Procedure with parameters**

The following examples run a stored procedure that uses a parameter value to retrieve only location data for Mexico. Oracle stored procedures do not support passing parameter values.

- **SQL Server**

SQL statement entered into Metrics Management:

```
exec sp_GetSampleDatawithParams @LocationName='Mexico'
```

SQL Server side to create the procedure

```
CREATE PROCEDURE sp_GetSampleDatawithParams
@LocationName varchar(255)
AS
select * from Sample
where LocationName = @LocationName
```

Use any SQL constructs supported by the target database server.

- **Table**

The entire table imports, if it is formatted correctly for Metrics Management.

- **View**

Passes a call from a database view to your database server. The view must return mandatory columns. For example:

- **SQL Server**

```
CREATE VIEW vw_GetSampleData AS
select * from Sample
```

- **Oracle**

Create a view named `VW_GETSAMPLEDATA` with the following text as the body:

```
select * from Sample
```

For more information about the column formats required to import data, see “Import column definitions,” later in this chapter.

## Choosing an export database connection type

To help you choose an export database connection type, read each description in the following list. The code in the first two examples shows stored procedures that insert records into a sample table:

### ■ SQL Server

```
CREATE PROCEDURE sp_InsertSampleData(  
    @MeasureName varchar (255),  
    @LocationName varchar (255),  
    @ComparativeName varchar (255),  
    @PeriodName varchar (13),  
    @UserData decimal(13)  
)  
AS  
insert into Sample(  
    MeasureName,  
    LocationName,  
    ComparativeName,  
    PeriodName,  
    UserData  
) values (  
    @MeasureName,  
    @LocationName,  
    @ComparativeName,  
    @PeriodName,  
    @UserData  
)
```

### ■ Oracle

Create a procedure named SP\_INSERTSAMPLEDATA with the following text as the body:

```
(  
    pMeasureName varchar2 ,  
    pLocationName varchar2 ,  
    pComparativeName varchar2 ,  
    pPeriodName varchar2 ,  
    pFact float  
) is  
begin  
    insert into Sample(  
        MeasureName ,  
        LocationName ,  
        ComparativeName ,  
        PeriodName ,  
        Fact
```

```

) values (
  pMeasureName ,
  pLocationName ,
  pComparativeName ,
  pPeriodName ,
  pFact
);
commit work;
end;

```

Specific field names, number of fields, parameter names, and number of parameters depend on the target structure. Metrics Management supports exporting data to targets more complex than shown in the preceding examples. For example, Metrics Management supports creating a procedure that exports data to several tables.

- **Stored Procedure**  
Exports the selected data to a stored procedure defined to handle the Metrics Management data column formats. Stored procedures that insert data must use an appropriate format for input parameters. The parameters must be ordered according to the field's structure defined inside the Metrics Management export object. The examples expose the structure of stored procedures for data insertion to tables of the same structure.
- **Table**  
Exports the selected data to a predefined table formatted for Metrics Management export. This target table must exist and have column definitions that match the target table column formats defined for Metrics Management.

For more information about table and data column formats, and the column formats required to export data, see "Export column definitions," later in this chapter.

## About importing to a Metrics Management database in another language

To import data to a Metrics Management database in another language, Metrics Management must run in the same language as the Metrics Management database from which the export was performed. For example, to export data from a French Metrics Management database to an English Metrics Management database, export data from Metrics Management running in French. Then, change the language of the English Metrics Management database to French before importing the data.

---

## About creating a database connection

Before creating a database connection, decide whether to create the connection either a Universal Data Link (UDL) string or file. Both the UDL string and the file contain the information required to connect to a specific database. This information includes the database name, account, and password. A valid account is required to connect to the database.

The UDL string is stored in the Metrics Management database in which it is created. The UDL file is portable, meaning the file can be copied to another machine. The database administrator of an external database, for example an Oracle DBA, can provide a UDL file to a Metrics Management system specialist without sharing Oracle user IDs and passwords.

## About connecting to an Access database

Database connections and import templates are created in Metrics Management and typically do not require the assistance of a DBA or of IT resources. To enable importing to and exporting from an Access database, first create a data connection to an Access database. Then, create and configure a Metrics Management import or export that uses that connection.

You may need to talk with your Access database administrator to ensure that the proper queries are configured and that you know where the resulting data is going to be stored, for example in a stored procedure, table, view, or direct SQL code in Metrics Management. Before importing data from an Access database, ensure that:

- Tables or queries include the data you wish to import.
- The column structure in Access matches the column import structure specified in Metrics Management.

Before exporting data to an Access database, ensure that:

- The Access database contains a table formatted to handle the output from Metrics Management.
- The column structures in Access are in the same order and are of the same type as those defined in Metrics Management.

## About creating a connection to an Excel file

Database connections and import templates are created in Metrics Management and typically do not require the assistance of a DBA or of IT resources. To create a connection to Excel, perform the following tasks:

- Define a named range in the Excel file.

- Create a connection to the Excel file.
- Create and configure a Metrics Management export or import that uses the connection.

To export to Excel, the system specialist defines a single row for the named range and exports into that named range. During the export, the number of rows changes dynamically as the export progresses.

To import data from Excel, the named range must encompass all of the data to import.

## **About creating a connection to an Oracle database**

To enable importing to and exporting from an Oracle database, first create a connection to an Oracle database. Then, configure a Metrics Management import or export that uses that connection.

Oracle's licensing requirements require installing Oracle SQL+ on the machine that runs the data import or export. Installing Oracle Client provides the required tools.

## **About creating a connection to a SQL database**

To enable importing to and exporting from a SQL database, first create a connection to a SQL database. Then, configure a Metrics Management import or export that uses that connection. Connect to a SQL database using the Microsoft OLE DB Provider for SQL Server.

---

# **Creating a database connection**

The following procedure explains how to create a database connection to an Access, Oracle, or SQL Server database or to an Excel file.

Importing and exporting to an Excel file requires creating a named range in the Excel file.

To create a database connection, you must complete the following tasks:

- Defining a database connection name and description
- Defining a data link string or UDL file

## **Defining a named range in the Excel file**

Metrics Management requires a named range in Excel to export data from Metrics Management and import data from Excel. The system specialist creates the

named range in Excel, which Metrics Management recognizes as a database table, and specifies the range in a Metrics Management data export.

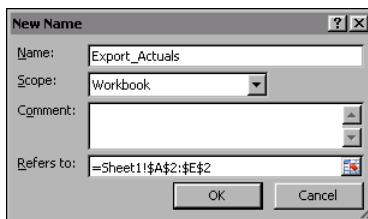
Before creating the named range, identify the number of columns specified in the Metrics Management data export. For example, by default, a Metrics Management user data export specifies five data columns: Measure Name, Location Name, Comparative Name, Period, and Data. When creating the named range, specify the same number of columns in Excel as the data export contains.

The system specialist defines a single row in the named range. During export, the range dynamically adjusts to accommodate the number of records in the export. For example, the system specialist creates a named range of `$A$2:$E$2` for an export that contains five columns. If the export contains ten records, Excel adjusts the range to `$A$2:$E$12`.

In cells to which numeric data imports, format the cells as Number. Otherwise, during the import, numeric values convert to strings and require using the `VALUE()` command to convert each record back to a number. Do not format an entire column as Number, or numbers will also convert to string values during import.

#### How to create a named range in Excel 2007

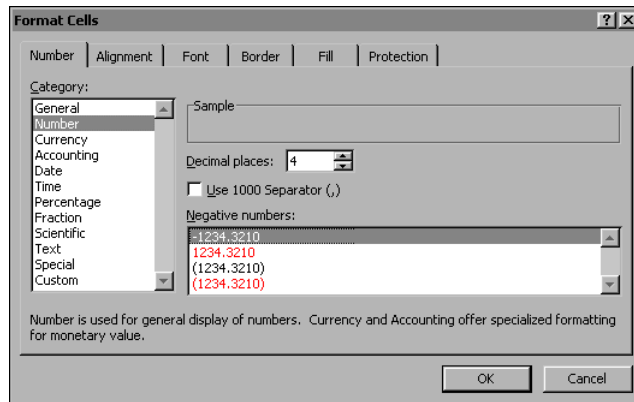
- 1 Create a new Excel file. Optionally, rename the worksheets with meaningful names, for example, rename one sheet to Actual and another to Budget.
- 2 In Excel, in one row, select the same number of columns as specified in the Metrics Management export. For example, select columns A through E in row 2. Do not define the named range in the first row. Doing so creates additional tasks due to formatting restrictions.
- 3 Choose Formulas → Define Name.
- 4 In New Name, type a name for the range. For example, name the range `Export_Actuals`, as shown in Figure 7-1. Then, choose OK.



**Figure 7-1** Naming a named range

- 5 To format a cell to accept numeric data, perform the following steps:
  - 1 Select a cell. For example, select E2.
  - 2 Right-click and choose Format Cells from the context menu.

- 3 In Format Cells—Number, in Category, select Number. In the Decimal places increase or decrease the value. For example, increase the number of decimal places to 4, as shown in Figure 7-2. Then, choose OK.



**Figure 7-2** Formatting cells which accept numeric data

- 6 Save the .xls file, and close Excel.

## Defining a database connection name and description

Define a database connection name that distinguishes the connection.

### How to create a database connection

The following procedure explains how to create a database connection.



- 1 In the Navigation Pane, choose Setup>Database Connection>Create.
- 2 In Setup Database Connection: <New>—Properties:
  - In Name, provide a name for the database connection.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.

## Defining a data link string

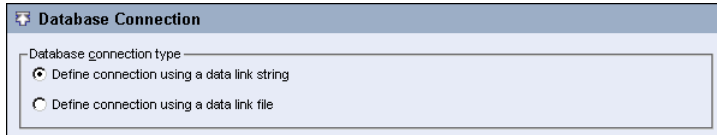
This topic describes how to create a data link string to an Access, Oracle, or SQL Server database or to an Excel file. The Microsoft Jet 4.0 OLE-DB Provider driver is the preferred method of connecting to an Access 2000, 2002, or 2003 database. Connecting to an Access 2007 database requires the ODBC provider. Access 2000 databases can also be accessed via the ODBC provider.

Excel is capable of functioning as an OLAP database and accepting a database connection. The Microsoft Jet 4.0 OLE-DB Provider enables connecting to .xls files

for the purpose of importing and exporting data. The Excel file must be open to establish a connection from Metrics Management.

### How to define a data link string

- 1 In Database connection type, select Define connection using a data link string, as shown in Figure 7-3.

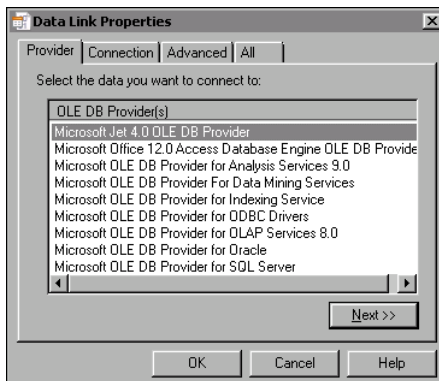


**Figure 7-3** Choosing to create a data link string

- 2 To define the data link string, choose Edit.

### How to define a link to an Access 2000, 2002, or 2003 database

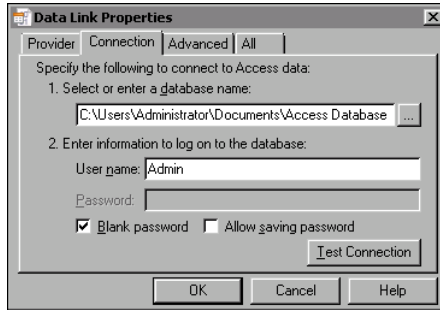
- 1 In Data Link Properties, in Provider, select Microsoft Jet 4.0 OLE DB Provider, as shown in Figure 7-4.



**Figure 7-4** Selecting a provider

- 2 Choose Connection. In Data Link Properties—Connection, in Specify or enter a database name, provide the path and name of the Access database to which to create the connection, as shown in Figure 7-5. Then, choose OK.

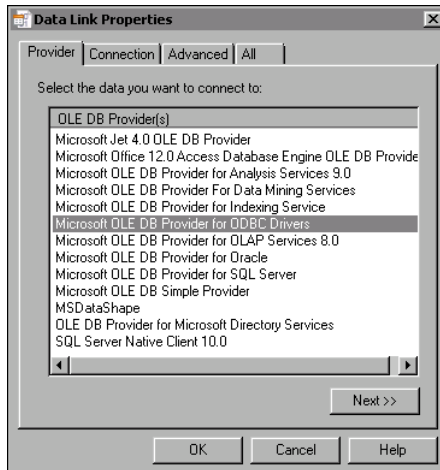




**Figure 7-5** Providing the database name and credentials

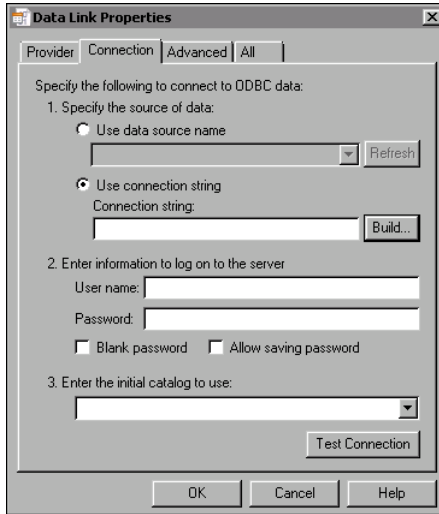
### How to define a link to an Access 2007 database

- 1 In Data Link Properties, in Provider, select the Microsoft OLE DB Provider for ODBC Drivers, as shown in Figure 7-6.



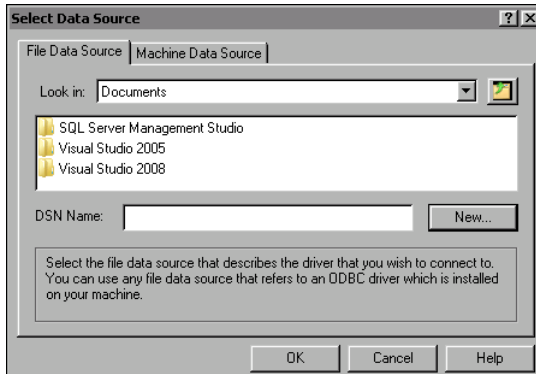
**Figure 7-6** Selecting a provider

- 2 Choose Connection. In Data Link Properties—Connection, in Specify the source of data, select Use connection string, as shown in Figure 7-7.



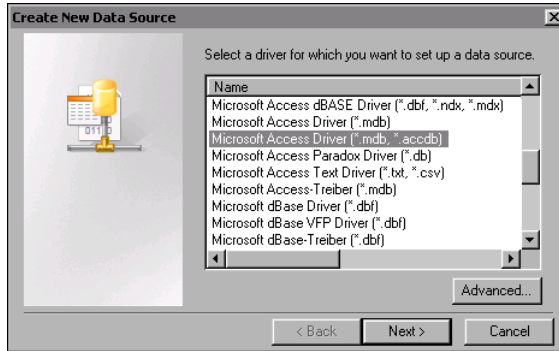
**Figure 7-7** Choosing to create a connection string

- 3 Choose Build.
- 4 In Select Data Source, as shown in Figure 7-8, in DSN Name, choose New.



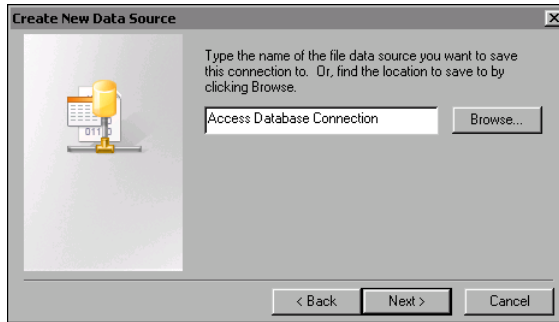
**Figure 7-8** Select Data Source

- 5 In Create New Data Source, select Microsoft Access Driver (\*.mdb, \*.accdb), as shown in Figure 7-9. Then, choose Next.



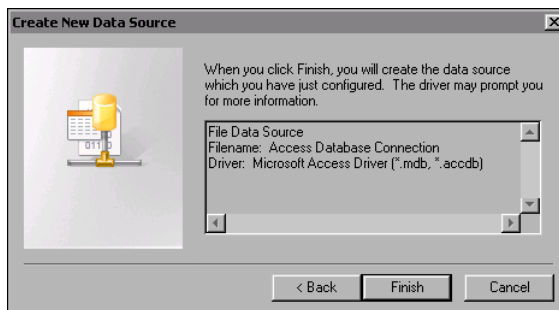
**Figure 7-9** Selecting the Microsoft Access Driver

- 6 In Create New Data Source, type a name for the DSN entry. For example, type Connection to Access Database, as shown in Figure 7-10. Then, choose Next.



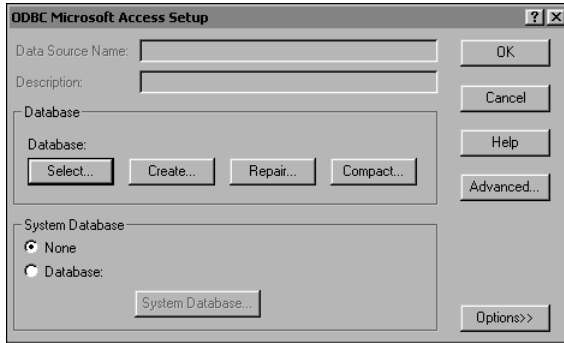
**Figure 7-10** Specifying the Access database

- 7 In Create New Data Source, as shown in Figure 7-11, choose Finish.



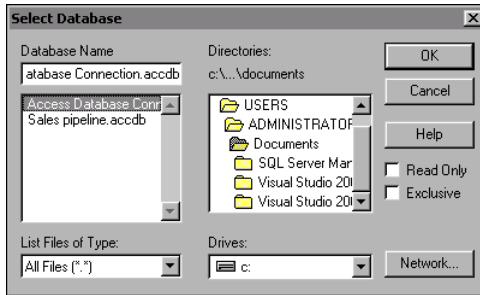
**Figure 7-11** Choosing Finish

- 8 In ODBC Microsoft Access Setup, as shown in Figure 7-12, choose Select.



**Figure 7-12** Choosing Select

- 9 In Select Database, in Directories, browse to the location containing the Access database. In Database Name, select the database connection, as shown in Figure 7-13. Then, choose OK.



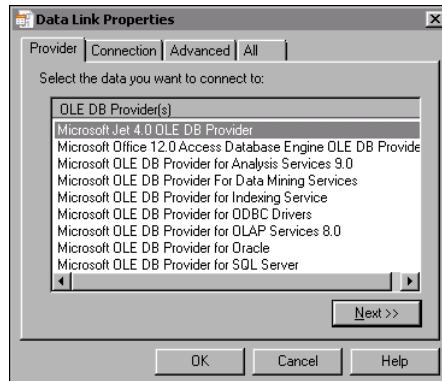
**Figure 7-13** Selecting the Access database

**10** In ODBC Microsoft Access Setup, choose OK.

**11** In Select Data Source, choose OK. Then, choose OK.

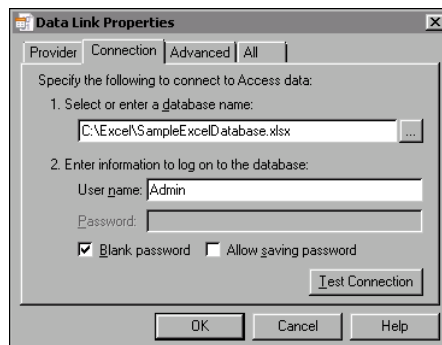
### How to define a link to an Excel file

- 1** In Data Link Properties, in Provider, select the Microsoft Jet 4.0 OLE DB Provider, as shown in Figure 7-14.



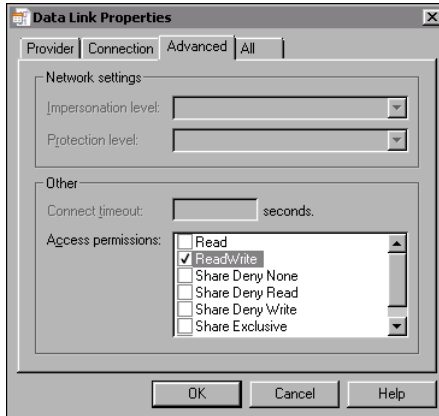
**Figure 7-14** Selecting a provider

- 2** Choose Connection. In Data Link Properties—Connection, in Specify or enter a database name, provide the path and name of the Excel file to which to export, as shown in Figure 7-15.



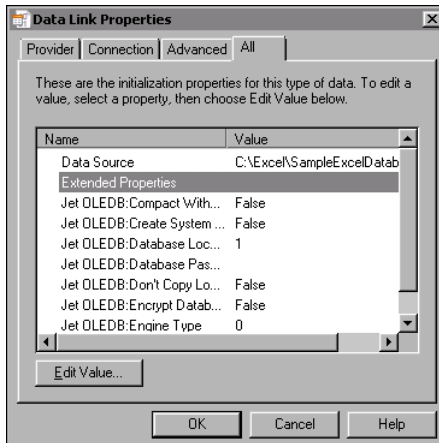
**Figure 7-15** Providing the database name and credentials

- 3** Choose Advanced. In Data Link Properties—Advanced, clear the Share Deny None check box, and select ReadWrite. Advanced looks like the example in Figure 7-16.



**Figure 7-16** Specifying the database access permissions

- 4 Choose All. In Data Link Properties—All, in Name, select Extended Properties, as shown in Figure 7-17. Choose Edit Value.



**Figure 7-17** Selecting Extended Properties

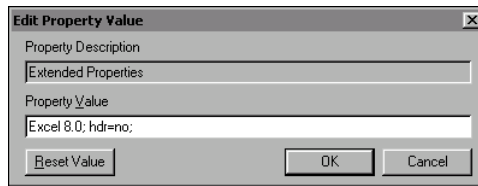
- 5 In Property Value, enter the following parameters, as shown in Figure 7-18, then choose OK:

Excel 8.0;hdr=no;

where

- Excel 8.0 specifies the ISAM (Indexed Sequential Access Method) driver. The ISAM driver allows Excel to import and export data. When connecting to Excel, you specify which ISAM driver to open to allow for the connection. For Microsoft Excel versions 2000, XP, 2003, and 2007 specify the Excel 8.0 ISAM driver.

- `hdr` specifies whether the Excel file contains header information. For imports, specifying "`hdr=no`" indicates that the first row of the Excel file does not contain header information or column names.

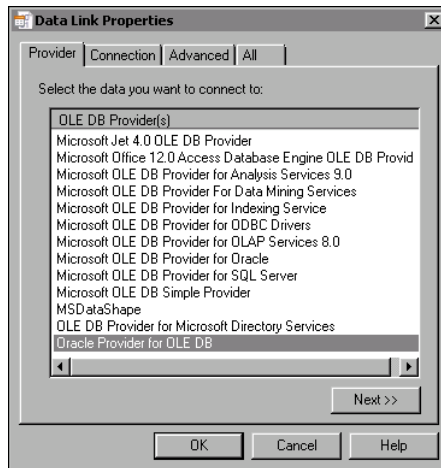


**Figure 7-18** Specifying parameters for the ISAM driver and header information

- 6 Choose OK.

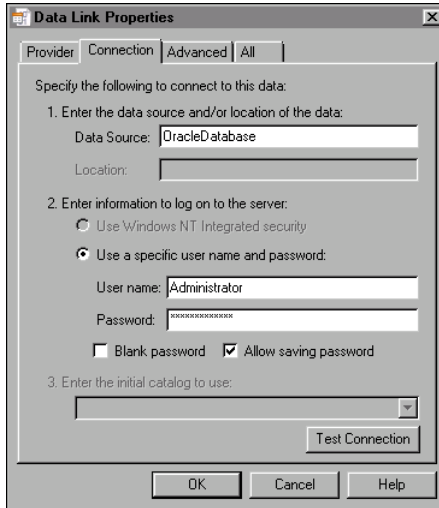
### How to define a link to an Oracle database

- 1 In the Data Link Properties dialog box, click on the Provider tab to set the correct provider. From the OLE DB Provider(s) list, select Oracle provider for OLE DB.
- 2 In Data Link Properties, in Provider, select the Oracle Provider for OLE DB, as shown in Figure 7-19.



**Figure 7-19** Selecting the Oracle Provider for OLE DB

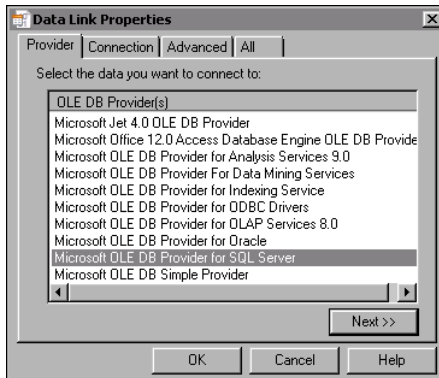
- 3 Choose Connection. In Data Link Properties—Connection, provide the database name and credentials, and select Allow saving password, as shown in Figure 7-20. Then, choose OK.



**Figure 7-20** Providing the Oracle database name and credentials

### How to define a link to a SQL Server database

- 1 In Data Link Properties, in Provider, select the Microsoft OLE DB Provider for SQL Server, as shown in Figure 7-21.

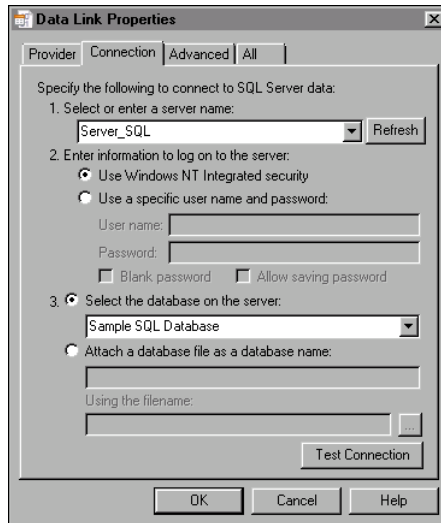


**Figure 7-21** Selecting the Microsoft OLE DB Provider for SQL Server

- 2 Choose Connection. In Data Link Properties—Connection, perform the following tasks, as shown in Figure 7-22. Then, choose OK.
  - Provide the server name on which the SQL Server database resides in Select or enter a server name.
  - In Enter information to log on to the server, either select Use Windows NT Integrated security, or select Use a specific user name and password, and provide a user name and password.



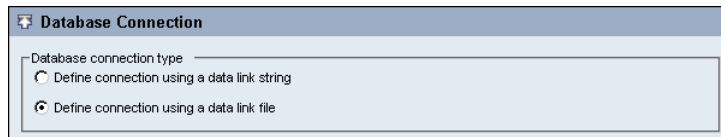
- Choose Select the database on the server. Select the SQL Server database.



**Figure 7-22** Providing the database name and credentials

#### How to define a data link file

- 1 In Database connection type, select Define the connection using a data link file, as shown in Figure 7-23.



**Figure 7-23** Choosing to create a data link file

- 2 Choose Browse. Then, navigate to a data link file. Alternatively, select a named path from the list. Then, type a file name. Choose Open.
- 3 Optionally, choose Edit. Then, make changes to the file, if necessary.



- 4 Choose Save.

#### How to test the database connection

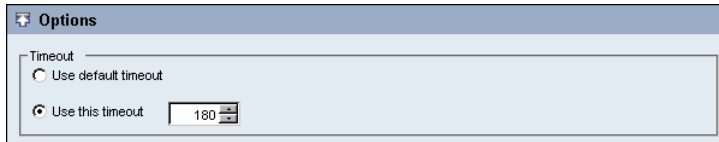
- 1 In Database Connection, choose Test. If the connection succeeds, the confirmation message appears. Then, choose OK.
- 2 To see the database connection properties, choose Properties. Save properties information as a text file using the .ini file format for troubleshooting purposes. Choose Close.



- 3 Choose Save.

### How to specify a connection time-out value

- 1 In Setup database connection, choose Options. In Options, either accept the default setting, 120 seconds or select Use this time out. Then, provide a value in seconds between 1 and 1800, as shown in the example in Figure 7-24.



**Figure 7-24** Specifying a database connection time-out value



- 2 Choose Save.

### How to specify security settings

- 1 If necessary, choose Security. Then, assign access rights for the database connection to groups and users.



- 2 Choose Save.

## Editing a database connection

Use the following procedure to make changes to a database connection.

### How to edit a database connection

- 1 In the Navigation Pane, choose Setup→Database Connections.
- 2 In Setup Database Connections—Database Connections, select a database connection name.



- 3 Choose Edit or View.

- 4 In Setup Database Connections—Properties, select alternative properties.



- 5 Choose Save.

## Deleting a database connection

Use the following procedure to delete a database connection.

### How to delete a database connection

- 1 In the Navigation Pane, choose Setup→Database Connection.
- 2 In Setup Database Connections—Database Connections, select a database connection name.



- 3 Choose Delete.

- 4 Choose Yes to confirm.

## Creating a Universal Data Link (UDL) file

The following procedure shows how to create a Universal Data Link (UDL) file outside of Metrics Management.

### How to create a Universal Data Link (UDL) file

- 1 Using Windows Explorer, navigate to the folder in which to save the UDL file.
- 2 Right-click in the right pane of Windows Explorer. From the shortcut menu, choose New→Text Document. A file called New Text Document.txt appears.
- 3 Rename the file to a meaningful name, such as Oracle\_Connection.udl, and double-click the UDL file. MDAC opens the file. Data Link Properties opens.
- 4 Choose Provider, and select the appropriate provider:
  - For a Microsoft Access Database, select Microsoft Jet 4.0 OLE DB Provider.
  - For an Oracle database, select Oracle Provider for OLE DB.
  - For a SQL Server database, select Microsoft OLE DB Provider for SQL Server.
  - For a Microsoft SQL Analysis Services database, choose the OLE-DB Provider for OLAP Services.
- 5 Choose Next, or choose Connection, as shown in Figure 7-25.



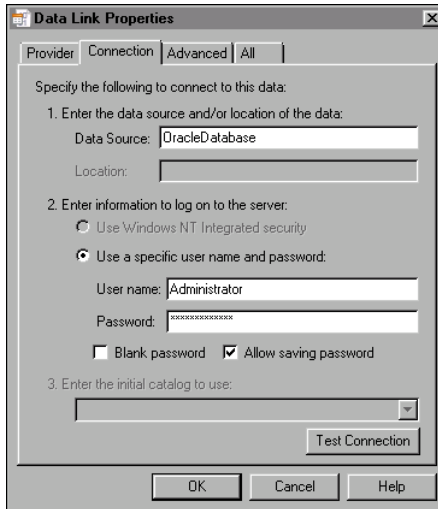
**Figure 7-25** Creating a UDL file for a Microsoft Access Database

- 6 To connect with a Microsoft Access database, in Connection:



- 1 In Select or enter a database name, type a database name. Alternatively, choose Browse to navigate to the path for your database.
- 2 In Enter information to log on to the database, provide appropriate login credentials for the database, including user name and password, if necessary.

- 7 To connect to an Oracle database, in Connection, complete the following tasks, as shown in Figure 7-26:
  - 1 In Enter the data source and location of the data, provide your server name.
  - 2 In Enter information to log on to the database, provide appropriate login credentials for the database, including user name and password, if necessary. Select Allow saving password.

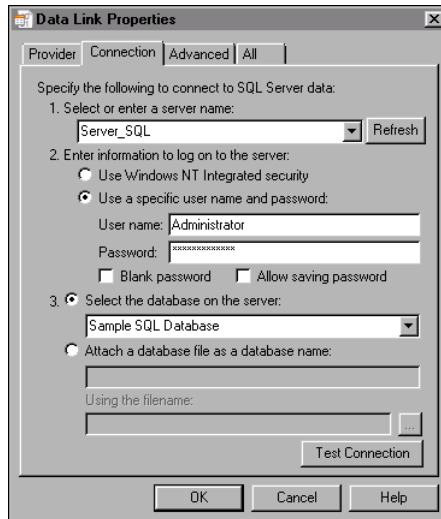


**Figure 7-26** Creating a UDL file for an Oracle database

- 8 To connect to a SQL Server database, in Connection, as shown in Figure 7-27, complete the following tasks:
  - 1 In Select or enter a server name, type a server name or select one from the list.
  - 2 In Enter information to log on to the database, provide appropriate login credentials for the database, including user name and password. Alternatively, select use Windows NT Integrated security.
  - 3 Choose Select the database on the server. Then, select a database name from the list. Alternatively, attach a database file as a database name. Typically, use this option in the following situations:
    - ❑ A conflict between MDAC and SQL Server exists.
    - ❑ Your Windows operating system cannot detect an older version of SQL Server.
    - ❑ A configuration problem exists on your workstation.

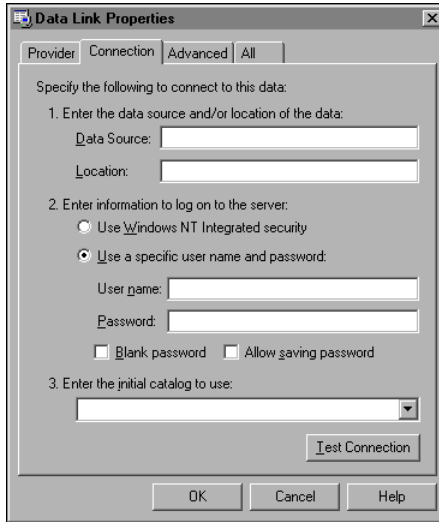
To attach a database file, you must know the physical location and name of the SQL Server database files, as well as the version of SQL Server currently being used.

To use this method, select Attach a database file as a database name. Then, provide the database name. In Using the filename, provide the full path and name of the database file. If the server name is known, leave this section empty.



**Figure 7-27** Creating a UDL file for a SQL Server

- 9 To connect using SQL Analysis Services OLAP, in Connection, as shown in Figure 7-28:
  - 1 In Enter the data source and or location of the data, provide the following information:
    - In Data Source, provide the logical name of the data source.
    - In Location, provide the path for the data source.
  - 2 In Enter information to log in to the database, provide appropriate login credentials for the database, including user name and password, if necessary. Alternatively, select use Windows NT Integrated security.
  - 3 In Enter the initial catalog to use, provide a table name.



**Figure 7-28** Creating a UDL file for SQL Analysis Services (OLAP)

- 10** Choose Test Connection. If the data link is connected properly, the confirmation message appears.
- 11** Choose OK.

---

## Importing data

A Metrics Management database supports importing data from a comma-separated values (CSV) or XML file. A single import file can include data or commentaries for any number of measures, locations, and periods. Importing data and commentaries requires separate imports to be performed. When importing data, the import source, such as a CSV file, table, or result from a view, stored procedure, or SQL or MDX query, must contain values for the mandatory fields. Examples of values for these fields appear in Table 7-2.

**Table 7-2** Data import source values

Column name	Example value
Measure name	Profit
Location name	Western US
Comparative name	Actual
Period name	2011/01
User data	500000

When importing commentaries, the import source must contain values for the mandatory fields. Examples of values for these fields are shown in Table 7-3.

**Table 7-3** Example values for commentary import

Column name	Example value
Measure name	Profit
Location name	Western US
Period name	2011/01
Commentary name	Commentary
Commentary	Profit once again shows a steady increase

If the values for commentary type, comparative, location, measure and period are different in your import source from those in Metrics Management, for example, your financial system has GL account numbers rather than measure names, use a translator to convert the import values into the required Metrics Management values. For more information about translators, see “About translators,” later in this chapter.

## Import column definitions

Table 7-4 lists and describes the default column definitions for new user data imports. The first column shows the column names used with a text import, and the second column shows the XML tags used with an XML import.

**Table 7-4** Default user data import column definitions

Column name	XML tag name	Definition
Measure Name	Measure_Name	Name of measure in Metrics Management
Location Name	Location_Name	Name of location in Metrics Management
Comparative Name	Comparative_Name	Name of comparative in Metrics Management
Period Name	Period_Name	Name of period in Metrics Management
User Data	User_Data	Value

Table 7-5 lists and describes the additional column definitions for new user data imports. The first column shows the column names used with a text import, and the second column shows the XML tags used with an XML import.

**Table 7-5** Additional user data import column definitions

Column name	XML tag name	Definition
Skip		Ignore this column in Import.
Measure ID	Measure_ID	Object ID of measure in Metrics Management.
Location ID	Location_ID	Object ID of location in Metrics Management.
Comparative ID	Comparative_ID	Object ID of comparative in Metrics Management.
Period ID	Period_ID	Object ID of period in Metrics Management.
User Data Type	User_Data_Type	See Table 7-9.
User Data Type Name	User_Data_Type_Name	See Table 7-9.

Table 7-6 lists and describes the default column definitions for user commentary imports.

**Table 7-6** Default user commentary import column definitions

Column name	XML tag	Definition
Measure Name	Measure_Name	Name of measure in Metrics Management
Location Name	Location_Name	Name of location in Metrics Management
Period Name	Period_Name	Name of period in Metrics Management
Commentary Type Name	Commentary_Type_Name	Name of commentary type used in Metrics Management
Commentary	Commentary	Text commentary
Signature Name	Signature_Name	Name of user who posted commentary
Signature Time	Signature_Time	Date and time that commentary was posted
Commentary Formatted	Commentary_Formatted	Rich text formatted commentary

Table 7-7 lists and describes the additional column definitions for user commentary imports.



**Table 7-7** Additional user commentary import column definitions

Column name	XML tag	Definition
Measure ID	Measure_ID	Object ID of measure in Metrics Management.
Location ID	Location_ID	Object ID of location in Metrics Management.
Period ID	Period_ID	Object ID of period in Metrics Management.
Commentary Type ID	Commentary_Type_ID	Object ID of commentary type in Metrics Management.
Skip		Ignore this column in Import.

Table 7-8 lists and describes column definitions for data imports that use a translator. When an object type uses a translator, translated column names or XML tags are required with an import. A translator object must also be specified. The translator object translates the Metrics Management object name according to the rules that the translator object defines.

**Table 7-8** Translated data import column definitions

Column name	XML tag name	Definition
Translated Measure Name	Translated_Measure_Name	Name of the measure to be translated.
Translated Location Name	Translated_Location_Name	Name of the location to be translated.
Translated Comparative Name	Translated_Comparative_Name	Name of the comparative to be translated.
Translated Period Name	Translated_Period_Name	Name of the period to be translated.
Skip		Ignore this column in Import.

Table 7-9 shows type descriptions for numeric data.

**Table 7-9** Numeric type descriptions

Value	Type description
1	<BLANK>
2	<VALID>

**Table 7-9** Numeric type descriptions

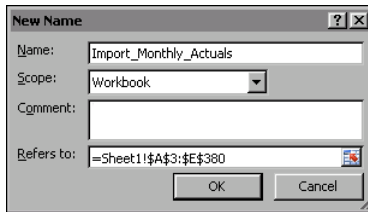
Value	Type description
3	<INVALID>

## Importing data into Metrics Management from Excel

Before importing data, configure the Excel file containing the data to import to Metrics Management. The Excel file containing import data must include a named range for Metrics Management to connect to and import from.

### How to define a named range in the Excel import file

- 1 Open the Excel file from which to import data.
- 2 Highlight the records to import.
- 3 Choose Formulas→Define Name.
- 4 In New Name, provide a meaningful name that indicates what data the range contains. The named range name must not contain any spaces. For example, name the range Import\_Monthly\_Actuals, as shown in Figure 7-29. Then, choose OK.



**Figure 7-29** Naming a named range

- 5 Save the Excel file.

## Creating a data import

The following procedure explains how to create a data import. To create a data import:

- Specify the import source.
- Specify import column definitions.
- Specify error log settings.
- Specify security settings.

A data import includes either user data or user commentary. To import both data and commentary, create and run two separate imports.

## How to create a data import

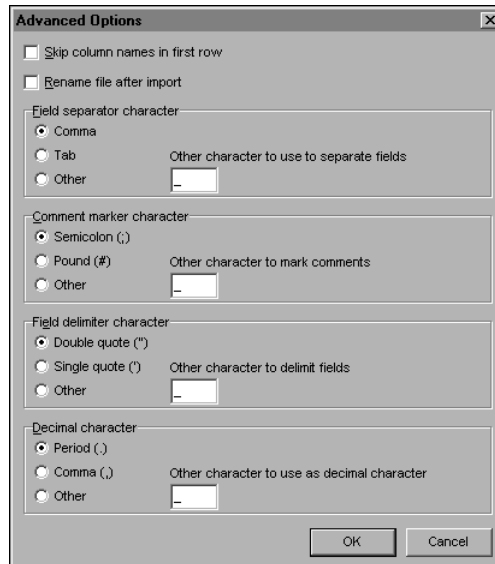


- 1 In the Navigation Pane, choose Data>Data Imports>Create.
- 2 In Setup Data Import: <New>—Properties:
  - In Name, provide a name for the data import.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Type, perform one of the following tasks:
  - To create a data import, choose Import user data.
  - To create a commentary import, choose Import user commentary.

## How to specify the import source

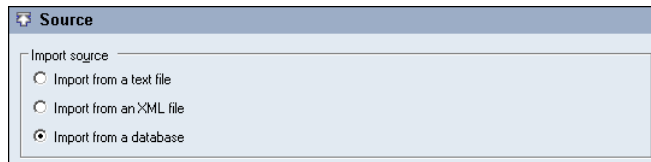
In Source, define the import source type as a text file, XML file, or a database:

- 1 To specify a text file as the source file, perform the following tasks:
  - 1 In Import source, choose Import from a text file.
  - 2 To specify the text file, in Import from a file, choose Browse. Then, navigate to the file location. Select the file. Then, choose Open.
  - 3 To customize the text file for import, choose Advanced. In Advanced Options, shown in Figure 7-30, perform any of the following optional tasks:



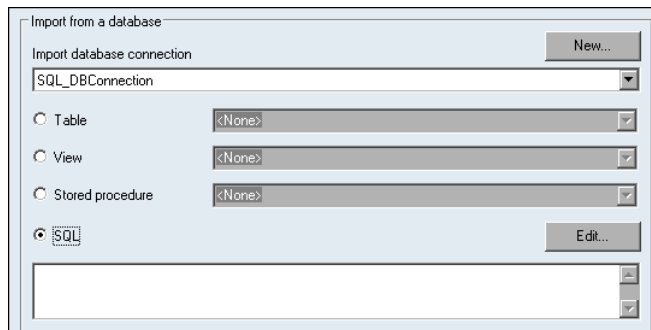
**Figure 7-30** Setting advanced options for a data import from a text file

- ❑ To exclude the header row from the import file, choose Skip column names in first row.
  - ❑ To append today's date to the import file name after import, choose Rename file after import.
  - ❑ To replace the current character for the field separator, comment marker, field delimiter, or decimal character with an alternative character, select or provide an alternative character for each.
- 2 To specify an XML file as the source file, perform the following tasks:
    - 1 In Import source, choose Import from an XML file.
    - 2 To specify the XML file, in Import from a file, choose Browse. Then, navigate to the file location, select the file, and choose Open.
  - 3 To specify a database as the source file, perform the following tasks:
    - 1 In Import source, choose Import from a database, as shown in Figure 7-31.



**Figure 7-31** Creating a data import from a database

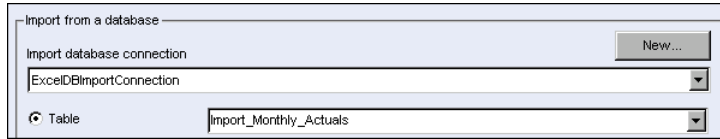
- 2 In Import database connection, select a connection name from the list, as shown in Figure 7-32.



**Figure 7-32** Selecting a connection name

Select one of the following data access methods:

- ❑ Table. Then, select a table name from the list. To import from an Excel file, select the named range created in the Excel import file. In the example in Figure 7-33, Import\_Monthly\_Actuals is selected.



**Figure 7-33** Specify database connection values

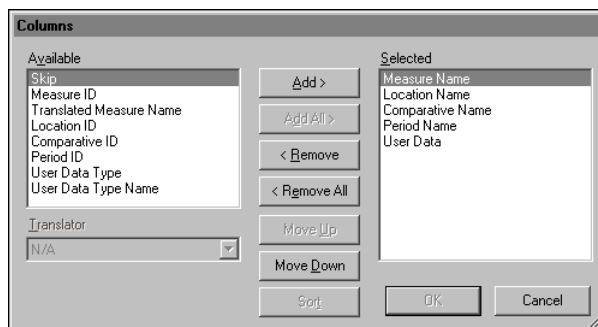
- ❑ View. Then, select a view name from the list.
- ❑ Stored Procedure. Then, select a procedure name from the list.
- ❑ SQL. Choose Edit. Then, type or provide a SQL or MDX query, in SQL.

### How to specify import column definitions

- 1 In Table, to specify a value for a column, instead of importing a value, in Options perform any of the following tasks:
  - To specify a measure, select Do not import measures. Then, choose a measure.
  - To specify a location, select Do not import locations. Then, choose a location.
  - To specify a comparative, select Do not import comparatives. Then, choose a comparative.
  - To specify a period, select Do not import periods. Then, choose a period.
  - To specify a commentary type, select Do not import commentary types. Then, choose a commentary type. Selecting a commentary type is available with commentary imports only.

Specifying a value removes the column from Columns in Setup Data Import.

- 2 In Columns, either accept the order that the columns are in or rearrange and add to them to match the import file. To add or remove import column definitions, choose Change. In Columns, shown in Figure 7-34, perform any of the following steps:

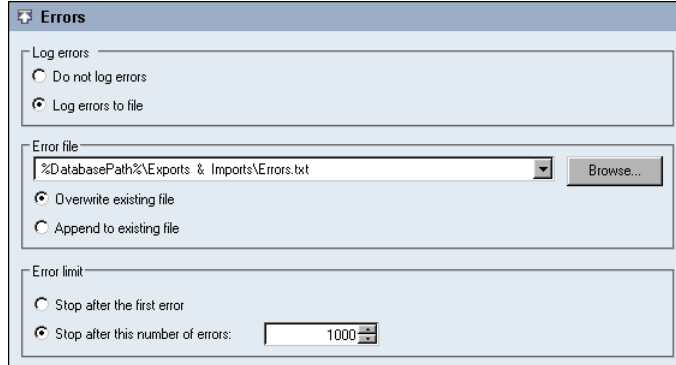


**Figure 7-34** Selecting data import column definitions

- To add a column definition to Selected, select the definition in Available and choose Add.
  - To change to order of definitions in Selected, select a definition and choose Move Up or Move Down. Choose Sort to sort definitions alphabetically.
  - To add a column definition that uses a translator:
    - 1 In Available, select a translated column name.
    - 2 In Translator, select a translator name.
    - 3 Choose Add to move a translated column name from Available to Selected.
    - 4 Choose OK.
  - To add a skip column, add Skip to Selected.
- 3** To view the import file, in Columns, perform one of the following steps:
- If the import source is a text or XML file, choose Show File.
  - If the import source is a database, choose Show SQL.

### How to specify error log settings

To enable the import error log file, in Errors, make selections similar to those shown in Figure 7-35.



**Figure 7-35** Defining error log settings

- 1 To enable logging of data import errors, in Log errors, choose Log errors to file.
- 2 To define the log file location, in Error file, choose Browse and navigate to a location to save the file. Provide a file name with the .txt file extension.
- 3 In Error file, select one of the following file handling options:

- To overwrite the log file each time the import runs, select overwrite existing file.
  - To append the error log each time the import runs, select Append the error log to an existing error file.
- 4 To limit the number of errors logged, in Error limit, select Stop after this many errors. Then, provide a value.

#### How to specify security settings

- 1 If necessary, choose Security. Then, assign access rights for the data import to groups and users.



- 2 Choose Save.

## Editing a data import

Use the following procedure to make changes to a data import.

#### How to edit a data import

- 1 In the Navigation Pane, choose Setup>Data Imports.
- 2 In Setup Data Imports—Data Imports, select a data import name.



- 3 Choose View or Edit.

- 4 In Setup Data Import—Properties, select alternative properties.



- 5 Choose Save.

## Deleting a data import

Use the following procedure to delete a data import.

#### How to delete a data import

- 1 In the Navigation Pane, choose Setup>Data Imports.
- 2 In Setup Data Imports—Data Imports, select a data import name.



- 3 Choose Delete.

- 4 Choose Yes to confirm.

## About import error messages

Import creates error messages using the following format:

```
<"Import/Export Error"><$NNN:><error name/error description><#N>
```

where

- Import or Export indicates the direction of data transfer.

- \$NNN is a hexadecimal error code.
- Error name/error description identifies and describes a specific error condition. This text can include an error class name or a detailed error specification.
- #N is a data record, if applicable.

Each error message must contain at least one line of text. No maximum limit of text lines applies to an error message.

For example, the message Import Error 03024: Unrecognized column name appears for a data import that fails to write data to a undefined column.

Save the details of any error message and call Actuate Performance Management Customer Support at 1-800-658-2352 extension 3.

## About translators

A translator converts an external name to a name recognized in Metrics Management. Set up a translator for each data set that imports or exports to a Metrics Management database. For example, set up one translator for an accounting system and another for an ERP system with which data imports to or exports from Metrics Management.

### Creating a translator

Creating a translator requires providing a target value to which each Metrics Management object name translates. Before using a new translator, verify that it functions as intended.

#### How to create a translator



- 1 In the Navigation Pane, choose Setup➤Translators➤Create.
- 2 In Setup Translator: <New>—Properties:
  - In Name, provide a name for the translator.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Translations, select the translation type from the list. For example, Figure 7-36 shows Location selected in Translation type.
- 4 In Translations, provide a value to which each Metrics Management object name translates. For example, provide the value Administration for the Metrics Management location Admin. Then, do one of the following tasks:



- To use existing Metrics Management names when you do not provide translation values, select Use <Translation type> name if no name is given.
- To clear all existing translation values, choose Clear.
- To save translations as a text file, choose Export.
- To import a translation file that was created or edited in another system, choose Import.

**Translations**

Translation type  
Location

Translations

Location name in Views	Location name translation
Admin	
All Projects	
AsiaPac	
Call Center	
Call Routing Standardization (Zone 1 & 2)	
Canada	
Central US	
Completed Projects	
Current Projects	
Eastern US	
EMEA	
Finance	

Use location name if no name is given

Export... Import...

**Figure 7-36** Selecting a translation type

- 5 If necessary, choose Security. Then, assign access rights for the translator to groups and users.
- 6 Choose Save.



#### How to verify formatting of a translator

To verify that a translator file format is correct, use the following procedure:

- 1 Export data from Metrics Management, using the translator file.
- 2 Edit the exported file.
- 3 Import the edited file to the Metrics Management database.
- 4 If no errors or omissions occur, the translator file format is correct.

## Editing a translator

Use the following procedure to make changes to a translator.

### How to edit a translator



1 In the Navigation Pane, choose Setup ▶ Translators.

2 In Setup Translators—Translators, select a translator name.



3 Choose View or Edit.

4 In Setup Translator—Properties, select alternative properties.



5 Choose Save.

## Deleting a translator

Use the following procedure to delete a translator.

### How to delete a translator

1 In the Navigation Pane, choose Setup ▶ Translators.

2 In Setup Translators—Translators, select a translator name.



3 Choose Delete.

4 Choose Yes to confirm.

---

## Exporting data

Metrics Management supports exporting data from the Metrics Management database into a text file for import to other applications. Advanced Data Connectivity supports exporting data directly into another database.

Metrics Management supports exporting the following kinds of data:

- Individually selected or filtered measures
- Pending data
- Raw or consolidated data
- Calculated indexes and colors
- Performance commentaries

Columns named Translated appear only if a translator is defined for the object type. When a column of this type is used, a translator object must also be specified. The translator object translates the Metrics Management object name according to rules defined in the translator object.

## Export column definitions

Table 7-10 lists and describes the default column definitions for a user data export.

**Table 7-10** Default user data export column definitions

Column name	Definition
Measure Name	Name of measure in Metrics Management
Location Name	Name of location in Metrics Management
Comparative Name	Name of comparative in Metrics Management
	<i>(continues)</i>
Period Name	Name of period in Metrics Management
User Data	Value

Table 7-11 lists and describes the additional column definitions for a new user data export.

**Table 7-11** Additional user data export column definitions

Column name	Definition
Skip	Ignore this column in Import.
Measure ID	Object ID of measure in Metrics Management.
Location ID	Object ID of location in Metrics Management.
Comparative ID	Object ID of comparative in Metrics Management.
Period ID	Object ID of period in Metrics Management.
User Data Type	See Table 7-9.
User Data Type Name	See Table 7-9.

Table 7-12 describes the default column definitions for a new user commentary export.

**Table 7-12** Default user commentary export column definitions

Export Type: User Commentary	Description
Measure Name	Name of measure in Metrics Management
Location Name	Name of location in Metrics Management

**Table 7-12** Default user commentary export column definitions

<b>Export Type: User Commentary</b>	<b>Description</b>
Period Name	Name of period in Metrics Management
Commentary Type Name	Commentary type name in Metrics Management
Commentary	Text commentary
Signature Name	Name of user who posted commentary
Signature Time	Date and time that commentary was posted
Commentary Formatted	Rich text formatted commentary

Table 7-13 describes the additional column definitions for new user commentary export.

**Table 7-13** Additional user commentary export column definitions

<b>Export Type: User Commentary</b>	<b>Description</b>
Skip	Skip this column in Export.
Measure ID	Object ID of measure in Metrics Management.
Location ID	Object ID of location in Metrics Management.
Period ID	Object ID of period in Metrics Management.
Commentary Type ID	Object ID of commentary type in Metrics Management.

Table 7-14 describes column definitions for user commentary exported using a translator.

**Table 7-14** Translated user commentary export column definitions

<b>Export Type: User Commentary</b>	<b>Description</b>
Translated Measure Name	Name of the measure to be translated.
Translated Location Name	Name of the location to be translated.
Translated Comparative Name	Name of the comparative to be translated.
Translated Period Name	Name of the period to be translated.
Skip	Skip this column in Export.

Table 7-15 describes the default column definitions for a new calculated data export.

**Table 7-15** Calculated data export column definitions

<b>Export Type: Calculated Data</b>	<b>Description</b>
Measure Name	Name of measure in Metrics Management
Location Name	Name of location user in Metrics Management
Comparative Name	Name of comparative in Metrics Management
Period Name	Name of period in Metrics Management
Period Range Name	Name of period range in Metrics Management
Calculated Data Type	Numeric data

**Table 7-15** Calculated data export column definitions (continued)

<b>Export Type: Calculated Data</b>	<b>Description</b>
Calculated Data	Value based on completed period

Table 7-16 describes the additional column definitions for a new calculated data export.

**Table 7-16** Additional data export column definitions

<b>Export Type: Calculated Data</b>	<b>Description</b>
Skip	Skip this column in Export.
Measure ID	Object ID of measure in Metrics Management.
Location ID	Object ID of location in Metrics Management.
Comparative ID	Object ID of comparative in Metrics Management.
Period ID	Object ID of period in Metrics Management.
Period Range ID	Object ID of period range in Metrics Management.
Calculated Data Type Name	Numeric data.
Calculated Data Latest Available Type	Numeric data.
Calculated Data Latest Available Type Name	Numeric data.
Calculated Data Latest Available	Value based on any available data.
Data Variance Type	Numeric data.
Data Variance Type Name	Numeric data.
Data Variance	Raw variance based on completed data.
Data Variance Percentage Type	Numeric data.
Data Variance Percentage Type Name	Numeric data.
Data Variance Percentage	Percent variance value based on completed period.
Data Variance Latest Available Type	Raw variance based on any available data.
Data Variance Latest Available Type Name	Numeric data.
Data Variance Latest Available	Raw variance based on any available data.
Data Variance Percentage Latest Available Type	Numeric data.
Data Variance Percentage Latest Available Type Name	Numeric data.

**Table 7-16** Additional data export column definitions

<b>Export Type: Calculated Data</b>	<b>Description</b>
Data Variance Percentage Latest Available	Numeric data.
Translated Measure Name	Name of the measure to be translated.
Translated Location Name	Name of the location to be translated.
Translated Comparative Name	Name of the comparative to be translated.
Translated Period Name	Name of the period to be translated.

Threshold color values can be represented in the following ways:

- An index that represents a threshold segment into which the index value falls.
- A red, green, and blue (RGB) palette color values used to reference each color in a section or view.

Table 7-17 describes the default column definitions for calculated indexes and color export types.

**Table 7-17** Default calculated indexes and colors export column definitions

<b>Export Type: Indexes and Colors</b>	<b>Description</b>
Measure Name	Name of measure in Metrics Management
Location Name	Name of location in Metrics Management
Comparative Name Base	Name of base series in Metrics Management
Comparative Name Comparison	Name of comparison series in Metrics Management
Period Name Base	Name of period used in Metrics Management
Period Name Comparison	Name of period used in Metrics Management
Period Range Name Base	Name of period range object in Metrics Management
Calculated Data Type Base	Numeric data
Calculated Data Base	Value
Calculated Data Type Comparison	Numeric data
Calculated Data Comparison	Value
Calculated Index Type	Numeric data



**Table 7-17** Default calculated indexes and colors export column definitions (continued)

<b>Export Type: Indexes and Colors</b>	<b>Description</b>
Calculated Index	Value
Color Type	Numeric data
Color Range	Color value
Worst Measure Color Type	Numeric data
Worst Measure Color Range	Color value
Worst Location Color Type	Numeric data
Worst Location Color Range	Color value

Table 7-18 describes the optional column definitions for calculated indexes and color export types.

**Table 7-18** Optional calculated indexes and colors export column definitions

<b>Export Type: Indexes and Colors</b>	<b>Description</b>
Skip	Skip this column in Export.
Measure ID	Object ID of measure in Metrics Management.
Location ID	Object ID of location in Metrics Management.
Comparative ID Base	Object ID of comparative in Metrics Management.
Comparative ID Comparison	Object ID of comparative in Metrics Management.
Period ID Comparison	Object ID of period in Metrics Management.
Period ID Base	Object ID of period in Metrics Management.
Period Range ID Base	Object ID of period range used in Metrics Management.
Period Range ID Comparison	Object ID of period range used in Metrics Management.
Period Range Name Comparison	Name of period range object in Metrics Management.
Calculated Data Type Name Base	Numeric data.
Calculated Data Type Name Comparison	Numeric data.
Calculated Index Type Name	Numeric data.
Color Type Name	Numeric data.
Color RGB	Color value.
Color Range Name	Numeric data.
Worst Measure Color Type Name	Numeric data.
Worst Measure Color Range Name	Numeric data.
Worst Measure Color RGB	Color value.
Worst Location Color Type Name	Numeric data.
Worst Location Color Range Name	Numeric data.
Worst Location Color RGB	Color value.

Table 7-19 lists column definitions for translated indexes and color type exports.

**Table 7-19** Translated index and color type export column definitions

<b>Export Type: Indexes and Colors</b>	<b>Description</b>
Translated Measure Name	Name of the measure to be translated.
Translated Location Name	Name of the location to be translated.
Translated Comparative Name Base	Name of the comparative to be translated.
Translated Comparative Name Comparison	Name of the comparative to be translated.
Translated Period Name Base	Name of the period to be translated.
Translated Period Name Comparison	Name of the period to be translated.
Skip	Skip this column in Export.

## Creating a data export

Use the following procedure to create a data export. To create a data export, perform the following tasks:

- Create a data export.
- Specify the export file.
- Specify columns.
- Specify the view and measures from which to export data.
- Specify sorting options.
- Specify security settings.

### How to create a data export



- 1 In the Navigation Pane, choose Data ► Data Exports ► Create.
- 2 In Setup Data Export: <New>—Properties:
  - In Name, provide a name for the data export.
  - In Description, choose Edit. Provide a description. Then, choose OK.
  - In Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 In Type, select one of the following export types:
  - To export unsynchronized user data, select Export user data with pending changes.
  - To export unconsolidated user data, choose Export user data.

- To export commentary, choose Export user commentary.
- To export calculated data, choose Export calculated data. For example, profit year-to-date values are calculated data.
- To export calculated indexes and text representations of index colors, choose Export calculated indexes and colors.

Options appearing in Columns depend on selections you make in Type.

### How to specify the export file

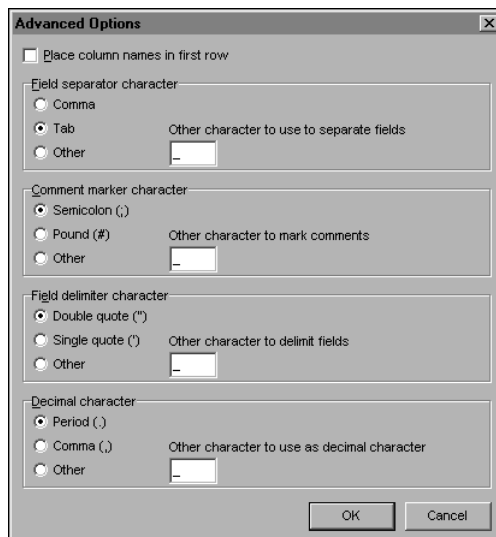
In Destination, specify the export file type as a text file, XML file, or database:

1 To export to a text file, perform the following tasks:

1 In Export to a file, choose Browse. Navigate to a location to save the file. In Select Filename, type a file name and file extension. Alternatively, in Export filename, select a listed named path. Then, type a file name.

To open a file using Microsoft Excel, include file extension .csv. This prevents the Text Import Wizard opening when the file opens.

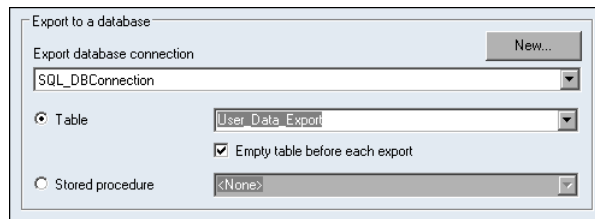
2 To customize the export text file to match the specifications of the program in which it opens, choose Advanced. In Advanced Options, shown in Figure 7-37, to arrange the export file so that column names appear in the top row of the file, select Place column names in the first row. Also, specify alternative separators and delimiters, and comment and decimal characters, if necessary.



**Figure 7-37** Choosing advanced options for a data export

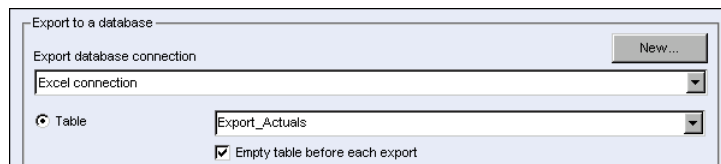
2 To export to an XML file, perform the following tasks:

- 1 In Export to file, choose Browse.
- 2 Navigate to the location to save the file. In Select Filename, type a file name and file extension. Alternatively, in Export filename, select a listed named path. Then, type a file name, including the .xml file extension.
- 3 To export to a database, perform the following tasks:
  - 1 In Export database connection, select a previously defined database connection from the list.
  - 2 To export the data to a table, select Table. Then, select a table from the list. The target table must already exist before Metrics Management can write to it. The column definitions must match the target table columns. The example in Figure 7-38 shows a connection to a table in a SQL database.



**Figure 7-38** Creating a data export to a database

- 3 To export to Excel, clear Empty table before each export check box, as shown in Figure 7-39. This functionality is not supported in databases that use the Microsoft Jet 4.0 OLE-DB Provider.



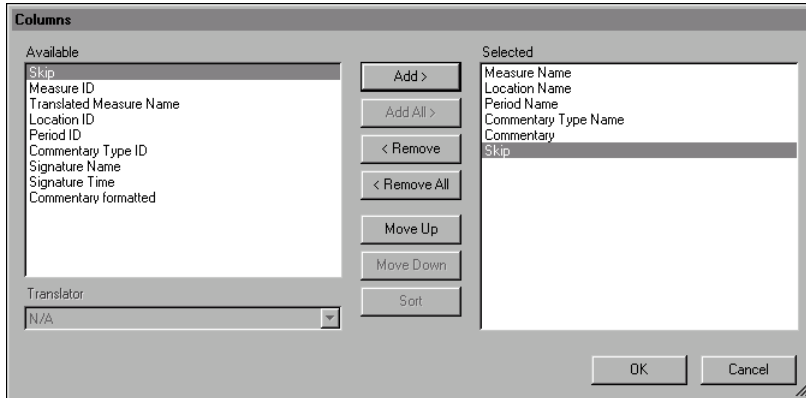
**Figure 7-39** Specify database connection values

- 4 To pass the data to a stored procedure for further processing, select Stored procedure. Then, select a stored procedure from the list.

### How to specify columns

In Columns, refine the export column definition, if necessary. If exporting to an Excel file, ensure the number of columns matches the number of columns defined in the named range in the Excel file.

- 1 To change the list, in Columns, choose Change.
- 2 In Columns, to add a skip column, add Skip to Selected, as shown in Figure 7-40.



**Figure 7-40** Defining the columns in an export

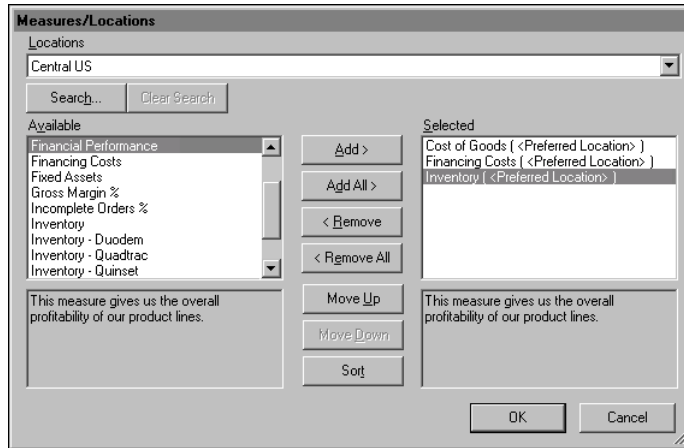
- 3 Choose Move Up or Move Down to reorder column names, as necessary, until Selected matches the export target.
- 4 To add a translated column, perform the following steps:
  - 1 In Available, select Translated <Column Name>.
  - 2 Select a translator from the Translator list.
  - 3 Choose Add to move it to Selected.
- 5 To see the file contents of an export to a text or XML file, choose Show File.
- 6 To see the required SQL table definition of an export to a database, choose Show SQL. This table must be defined before running the data export.

**How to specify the view and measures from which to export data**

- 1 In Selection Criteria, to specify the view from which to export data, in View, select a view.
- 2 In Source of measures and locations, specify the measures and locations from which to export data. To individually choose which measures and locations to export, perform the following steps:
  - 1 Choose Select measures and locations individually.
  - 2 In View, to customize the view specified in Selection Criteria, choose Customize View. Select an alternative base or comparison series, period, consolidation range, commentary type, top measure, and top location.
  - 3 In Selected Measures and Locations, choose Edit.
  - 4 In Measures and Locations, select a location from the Location list. Choose <Preferred Location> to create a reusable export file. For example, creating a reusable export file minimizes the number of exports. Select

<Top Location> to match the location defined as the top location for a selected view.

- 5 Add measures to the Selected list, as shown in Figure 7-41.



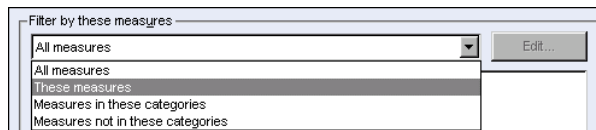
**Figure 7-41** Selecting specific measures for export

- 6 To export the measures in a particular order, rearrange the measure in the Selected list by choosing Move Up or Move Down, or choosing Sort to arrange the measures in alphabetical order. Then, choose OK.
- 3 To use a filter to select which measures and locations to export:
  - 1 Choose Select measures and locations individually.
  - 2 To filter measures for export, choose Select measures based on a filter from Selection Criteria. In View filter, select a filter from the list.

### How to personalize a filter

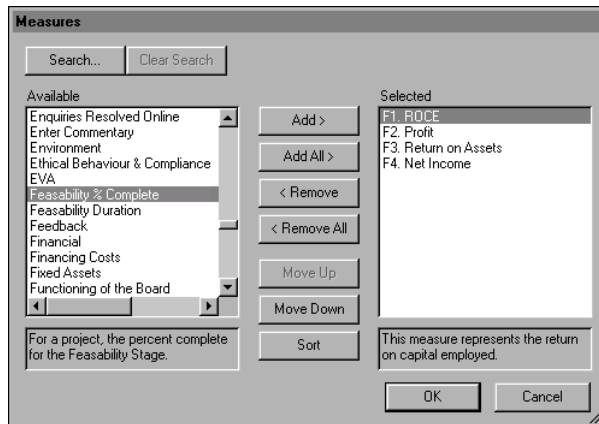
After you specify a filter, you can choose to personalize the filter.

- 1 Under Filters, choose Customize Filter.
- 2 To filter by measure, location, period type, or user, make a selection under the appropriate Filter by section. For example, to filter by specific measures, perform the following tasks:
  - 1 In Filter by these measures, select These measures, as shown in Figure 7-42.



**Figure 7-42** Choosing to filter by These measures

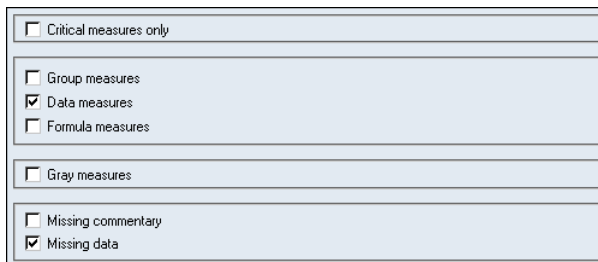
- 2 Choose Edit.
- 3 In Measures, use Add to move measures to the Selected list, as shown in Figure 7-43. Choose OK.



**Figure 7-43** Selecting the measures by which to filter

Alternatively, you can filter by measures that contain specific categories or by measures that do not contain specific categories.

- 3 To filter by measure criteria, such as by measure type, select filtering criteria, as shown in Figure 7-44.



**Figure 7-44** Choosing to filter by data measures which are missing data

- 4 To filter by index value, perform the following procedures:
  - 1 Deselect Filter by index range.
  - 2 Select Filter by index value.
  - 3 In Index is, choose Greater than or Less than, and provide a value, as shown in Figure 7-45.

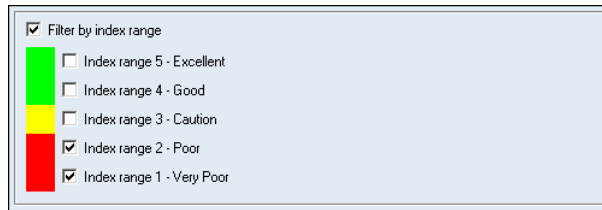




**Figure 7-45** Choosing to filter by index values greater than 105

5 To filter by index range, perform the following procedures:

- 1 Clear the Filter by index value check box.
- 2 Select Filter by index range.
- 3 Select the index ranges to filter by, as shown in Figure 7-46.



**Figure 7-46** Choosing to filter by poor and very poor index ranges

#### How to specify sorting options

Choose Options. In Sorting, choose to group measures in the export file by measure or by location.

#### How to specify security settings

- 1 Choose Security. Then, assign access rights for the export to groups and users.
- 2 Choose Save.



## About exporting data to an Oracle database

An export to Oracle fails when a column name exceed 30 characters. For example, the Calculated\_Data\_Type\_Comparison column name causes the export of calculated indexes and colors to fail. To export successfully, manually change column names which exceed 30 characters.

#### How to edit a column name

- 1 In the Navigation Pane, choose Setup→Data Exports.
- 2 In Setup Data Export—Data Exports, select a data export name.
- 3 Choose View or Edit.
- 4 In Setup Data Export—Columns, choose Show SQL.
- 5 In Show Export SQL, choose Save.
- 6 In Save As, type a file name. Then, choose Save.





- 7 Open the file in a text editor. Edit the column name. Then, choose Save.
- 8 Use a SQL editor, such as SQL Plus to create a table in Oracle with the shortened field names.

## Editing a data export

Use the following procedure to make changes to a data export.


### How to edit a data export

- 1 In the Navigation Pane, choose Setup➤Data Exports.
- 2 In Setup Data Exports—Data Exports, select a data export name.
-  3 Choose View or Edit.
- 4 In Setup Data Export—Properties, select alternative properties.
-  5 Choose Save.

## Deleting a data export

Use the following procedure to delete a data export.

### How to delete a data export

- 1 In the Navigation Pane, choose Setup➤Data Exports.
- 2 In Setup Data Exports—Data Exports, select a data export name.
-  3 Choose Delete.
- 4 Choose Yes to confirm.

# 8

## **Publishing data**

This chapter discusses the following topics:

- About DataMart
- About internet publishing
- About Metrics Management portal integration and active web publishing
- Using an alert to send information to users
- Working with links

---

## About DataMart

A DataMart is an export of data from one or more views to a set of tables in a SQL or Oracle database. Use the DataMart export tables to create customized reports using Actuate report technology, which includes BIRT and spreadsheet. Using DataMart requires the separately purchased DataMart Generation module.

You create a DataMart export in Metrics Management, and run the DataMart export manually from Metrics Management or on an automated schedule using pbvcon. For more information, see “About pbvcon” in Chapter 11, “Using pbvcon to schedule Metrics Management.”

You base a DataMart export on single or multiple views. Choose to export the commentary types linked to each view or specify a subset of commentary types.

The base data in a DataMart export are known as DataMart facts and consist of:

- Calculated data
- Calculated indexes
- Categories and category objects
- Commentaries
- User data

The data that describe the DataMart facts are known as DataMart dimensions and consist of:

- Comparatives
- Commentary types
- Locations
- Location trees
- Measures
- Measure formulas
- Measure links
- Measure owners and owners’ assistants
- Measure trees
- Periods
- Period ranges
- Period trees
- Series

- Users
- Views

The DataMart also contains two extensions to the export:

- Translations
- Translators

## About the DataMart export tables

A DataMart export table contains data from the view or views you export. Table 8-1 describes the column names in the calculated data table. The name of this table is PbvDM\_CalcData.

**Table 8-1** Column names in the calculated data table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Comparative_ID	Unique identifier for a comparative
Period_ID	Unique identifier for a period
Period_Range_ID	Unique identifier for a period range
Calculated_Data_Type _Name	Calculated data type: Valid, Invalid, or Blank
Calculated_Data	Calculated data value
Calc_Data_LatestAvail _TypeName	Latest available data type: Valid, Invalid, or Blank
Calc_Data_LatestAvail	Latest available data value
Data_Variance_Type_Name	Variance data type: Valid, Invalid, or Blank
Data_Variance	Variance value
Data_Variance_Perc _TypeName	Variance percent data type: Valid, Invalid, or Blank
Data_Variance_Percentage	Percent variance value
Data_Var_LatestAvail _TypeName	Latest available variance data type: Valid, Invalid, or Blank
Data_Variance_Latest _Available	Latest available variance value
Data_Var_Per_LatestAv _TypeName	Latest available variance percent data type: Valid, Invalid, or Blank
Data_Var_Perc_LatestAvail	Latest available variance percent value

Table 8-2 describes the column names in the calculated indexes table. The name of this table is PbvDM\_CalcIndices.

**Table 8-2** Column names in the calculated indexes table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Comparative_ID	Unique identifier for a base comparative
Comparative_ID _Comparison	Unique identifier for a comparative comparison
Period_ID	Unique identifier for a period
Period_ID_Comparison	Unique identifier for a period comparison
Period_Range_ID	Unique identifier for a period range
Period_Range_ID _Comparison	Unique identifier for a period range comparison
Calc_Data_Type_Name _Base	Calculated data type: Valid, Invalid, or Blank
Calc_Data_Base	Base calculated data value
Calc_Data_Type_Name _Comparison	Calculated data comparison data type: Valid, Invalid, or Blank
Calc_Data_Comparison	Calculated data comparison value
Calc_Index_Type_Name	Calculated index data type: Valid, Invalid, or Blank
Calc_Index	Calculated index value
Color_Type_Name	Performance color data type: Valid, Invalid, or Blank
Color_RGB	Performance color's RGB value
Color_Range_Lbl	Performance color's range label, for example, Excellent, Good, Poor
Color_Range	Performance color's range, for example, <NULL>, 3, 4, 5
Worst_Measure_Color _Type_Name	Performance color data type for the worst measure: Valid, Invalid, or Blank
Worst_Measure_Color _Range_Lbl	Performance color range label for the worst measures, for example, Poor

**Table 8-2** Column names in the calculated indexes table

Column name	Description
Worst_Measure_Color_Range	Performance color range for the worst measure
Worst_Measure_Color_RGB	Performance color's RGB value for the worst measure, for example, 12632256
Worst_Location_Color_Type_Name	Performance color data type for the worst measure: Valid, Invalid, or Blank
Worst_Location_Color_Range_Lbl	Performance color range label for the worst locations, for example, Poor
Worst_Location_Color_Range	Performance color range for the worst locations, for example, 2, 3
Worst_Location_Color_RGB	Performance color range's RGB value for the worst location, for example, 12632256

Table 8-3 describes the column names in the categories table. The name of this table is PbvDM\_Categories.

**Table 8-3** Column names in the categories table

Column name	Description
Category_ID	Unique identifier for a category
Category_Name	Category's name, for example, Lagging Indicators

Table 8-4 describes the column names in the category object table. The name of this table is PbvDM\_CategoryObject.

**Table 8-4** Column names in the category object table

Column name	Description
Category_ID	Unique identifier for a category
Object_ID	Unique identifier for an object

Table 8-5 describes the column names in the commentary types table. The name of this table is PbvDM\_CommentaryTypes.

**Table 8-5** Column names in the commentary types table

<b>Column name</b>	<b>Description</b>
Commentary_Type_ID	Unique identifier for a commentary type
Commentary_Type_Name	Commentary type's name, for example, Owner's Commentary
Commentary_Type_Description	Commentary type's description

Table 8-6 describes the column names in the comparatives table. The name of this table is PbvDM\_Comparatives.

**Table 8-6** Column names in the comparatives table

<b>Column name</b>	<b>Description</b>
Comparative_ID	Unique identifier for a comparative
Comparative_Name	Comparative's name, for example, Actual or Target
Comparative_Description	Comparative's description

Table 8-7 describes the column names in the locations table. The name of this table is PbvDM\_Locations.

**Table 8-7** Column names in the locations table

<b>Column name</b>	<b>Description</b>
Location_ID	Unique identifier for a location
Location_Name	Location's name
Location_Description	Location's description

Table 8-8 describes the column names in the location tree table. The name of this table is PbvDM\_LocationTree.

**Table 8-8** Column names in the location tree table

<b>Column name</b>	<b>Description</b>
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Sublocation_ID	Unique identifier for a sublocation

Table 8-9 describes the column names in the measure formulas table. The name of this table is PbvDM\_MeasureFormulas.



**Table 8-9** Column names in the measure formulas table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Formula	The content of the formula for the measure and location pair

Table 8-10 describes the column names in the measure links table. The name of this table is PbvDM\_MeasureLinks.

**Table 8-10** Column names in the measure links table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Link	Link name

Table 8-11 describes the column names in the measure owners table. The name of this table is PbvDM\_MeasureOwners.

**Table 8-11** Column names in the measure owners table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Owner_ID	Unique identifier for a measure owner
Assistant_ID	Unique identifier for a measure owner assistant

Table 8-12 describes the column names in the measures table. The name of this table is PbvDM\_Measures.

**Table 8-12** Column names in the measures table

Column name	Description
Measure_ID	Unique identifier for a measure.
Measure_Name	Measure's name.
Measure_Description	Measure's description.
Measure_Kind_Name	Measure's type: Data, Group, or Formula.
Polarity_Kind_Name	Measure's polarity: High is good, or High is bad.

*(continues)*

**Table 8-12** Column names in the measures table (continued)

Column name	Description
Critical	Whether a measure is a critical measure or not: 0 is not critical, 1 is critical.
Calculation_Kind_Name	Order of calculation, for example, "Measure, Location, Period".
StoragePeriodType_Name	Storage period type, for example, Month, Quarter, Week, or Year.
ConsolidationPeriodType_ID	Unique identifier for a consolidation period type.
LocationConsolidation_Kind	Location consolidation function: Sum or Average.
LocationIgnoreBlanks	Whether or not blanks are ignore in location consolidation functions: 0 blanks are not ignored, 1 blanks are ignored.
PeriodConsolidation_Kind_Name	Period consolidation function: Sum, Take last known value, or Average.
PeriodIgnoreBlanks	Whether to ignore blanks in period consolidation functions: 0 blanks are not ignored, 1 blanks are ignored.
Unit_Name	Measure unit, for example, Days, Rating, %, \$000.
Unit_Description	Unit's description.
Unit_Prefix	Optional symbol or text used as the measure unit's prefix, for example, "\$".
Unit_Suffix	Optional symbol or text used as the measure unit's suffix, for example, "%".
Unit_ThousandSeparator	Symbol used as a separator for numbers of 1,000 or larger, for example, ",".
Unit_DecimalSeparator	Symbol used as a decimal separator.
Unit_WholeDigits	Number of digits for a value.
Unit_DecimalDigits	Number of decimal places for a value.

Table 8-13 describes the column names in the measure tree table. The name of this table is PbvDM\_MeasureTree.

**Table 8-13** Column names in the measure tree table

Column name	Description
Measure_ID	Unique identifier for a measure.

**Table 8-13** Column names in the measure tree table

Column name	Description
Location_ID	Unique identifier for a location.
Submeasure_ID	Unique identifier for a submeasure.
Weight	Weight of the submeasure. Value is NULL for formula measures, and group measures without default submeasures.

Table 8-14 describes the column names in the period ranges table. The name of this table is PbvDM\_PeriodRanges.

**Table 8-14** Column names in the period ranges table

Column name	Description
Period_Range_ID	Unique identifier for a period range
Period_Range_Name	Period range name, for example, Moving Quarter
Period_Range_Description	Period range's description
Period_Range_Kind_Name	Period range kind: None, Default, or Range

Table 8-15 describes the column names in the periods table. The name of this table is PbvDM\_Periods.

**Table 8-15** Column names in the periods table

Column name	Description
Period_ID	Unique identifier for a period.
Period_Name	Period name, for example, 2011/W34.
Period_Description	Period's description.
Period_TypeName	Type of period, for example, Week, Month, Year, Quarter.
Period_Sequence	Value of the period's position in a sequence.
Period_Current	Period calendar setting. A value of 1 indicates the current period.
Period_Completed	Period calendar setting. A value of 1 indicates a completed period.
Period_Locked	Period calendar setting. A value of 1 indicates a locked period.

Table 8-16 describes the column names in the period tree table. The name of this table is PbvDM\_PeriodTree.

**Table 8-16** Column names in the period tree table

Column name	Description
Period_ID	Unique identifier for a period
Period_ParentID	Unique identifier for a parent period

Table 8-17 describes the column names in the series table. The name of this table is PbvDM\_Series.

**Table 8-17** Column names in the series table

Column name	Description
View_ID	Unique identifier for a view
Comparative_ID	Unique identifier for a comparative
Period_ID	Unique identifier for a period
Period_ID_Base	Unique identifier for a period base translator
Series_Name	Series name, for example, Target, Last Year

Table 8-18 describes the column names in the translations table. The name of this table is PbvDM\_Translations.

**Table 8-18** Column names in the translations table

Column name	Description
Translator_ID	Unique identifier for a translator.
Object_ID	Unique identifier for an object. This object's name is translated.
Translated_Object_Name	The translation name replacing the object name.

Table 8-19 describes the column names in the translators table. The name of this table is PbvDM\_Translators.

**Table 8-19** Column names in the translators table

Column name	Description
Translator_ID	Unique identifier for a translator
Translator_Type	Unique identifier for a translator type, for example, 1,2,3,4
Translator_Type_Name	The translator type name, for example, Measure, Location, Period
Translator_Name	Translator's name

**Table 8-19** Column names in the translators table

Column name	Description
Translator_Description	Translator's description

Table 8-20 describes the column names in the user commentaries table. The name of this table is PbvDM\_UserCommentaries.

**Table 8-20** Column names in the user commentaries table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Period_ID	Unique identifier for a period
Commentary_Type_ID	Unique identifier for a commentary type
Commentary	The commentary text, for example, "Eastern US levels are a high. Inventory manager to analyze."
StampUserName	Name of user who posted the commentary
StampUTCTime	The date and time of the commentary posting

Table 8-21 describes the column names in the user data table. The name of this table is PbvDM\_UserData.

**Table 8-21** Column names in the user data table

Column name	Description
Measure_ID	Unique identifier for a measure
Location_ID	Unique identifier for a location
Comparative_ID	Unique identifier for comparative
Period_ID	Unique identifier for a period
User_Data_Type_Name	The user data type name: Valid, Invalid, or Blank
User_Data	The user data value

Table 8-22 describes the column names in the users table. The name of this table is PbvDM\_Users.

**Table 8-22** Column names in the users table

Column name	Description
User_ID	Unique identifier for a user.

*(continues)*

**Table 8-22** Column names in the users table (continued)

Column name	Description
User_Name	User's name, for example, Administrator, CFO, CEO
User_Description	User's description
Active	Whether a user is active and allowed to log in: 0 if the user is not active, 1 if the user is active
Named	Indicates whether the user is named or concurrent: 0 if the user is a concurrent user, 1 if the user is a named user

Table 8-23 describes the column names in the views table. The name of this table is PbvDM\_Views.

**Table 8-23** Column names in the views table

Column name	Description
PeriodRange_Consolidation_ID	Unique identifier of period consolidation range
PeriodRange_Display_ID	Unique identifier of the view's period range, for example, This Year
Period_Selected_ID	Unique identifier for period that is selected when the view opens
PeriodType_DisplayBy	Name of the period range for data that the view displays, for example, Month
Series_Name_Base	The name of the base series of the view
View_ID	Unique identifier for a view
View_Name	View's name
View_Description	View's description

## Creating a DataMart

Before creating a DataMart, ensure that you have create function privileges for the database into which you are exporting the DataMart. For example, if you are using SQL Server, ensure that your login account has create function privileges. For an Oracle database, ensure that the user account used with the Metrics Management database connection string user has create function privileges.

Exporting a DataMart to an existing Metrics Management database in Oracle or SQL Server is possible but not advisable. Actuate strongly recommends using another database, ideally one dedicated just for reports.

For a database used just for DataMart exports, you must assign a user to that database, for example, Metrics ManagementUser. Ensure that the user has Create Table and Create View privileges for SQL Server, or Connect, Resource, Select\_Catalog\_Role, and Create View privileges for Oracle.

### How to create a DataMart export



- 1 In the Navigation Pane, choose Setup→DataMart→Create.
- 2 In Name:
  - In Name, provide a name for the DataMart export.
  - For Description, choose Edit. Type a description. Then, choose OK.
  - For Categories, choose Edit. Select or create categories. Then, choose OK.
- 3 To select the views on which to base this DataMart:
  - 1 In Source, choose Edit.
  - 2 Add the views to the Selected list.
  - 3 To have the views appear in a particular order, rearrange them in the Selected list by choosing Move Up or Move Down, or choose Sort to arrange the views in alphabetical order.
  - 4 Choose OK.
- 4 In Destination, set the database to which to export the DataMart by choosing a database connection from the DataMart database connection list. If there are no database connections, choose New to open the Setup Database Connection tab. Ensure that you specify a user with sufficient access rights to the database.
- 5 In Table prefix, specify a table prefix. PbvDM\_ is the table prefix default. Unless you have a good reason to change the prefix, you should accept the default.
- 6 The Reset DataMart tables check box is selected by default. This replaces any existing DataMart tables in the destination database the next time you run the export. If you clear the check box, you must manually empty the DataMart tables before you run a DataMart export. You should keep this check box selected, unless you have a good reason not to.
- 7 In Commentaries, select the Use commentary types from views check box to include the commentary types assigned to the view your DataMart export is based on. If you want to use just a subset of commentary types assigned to the view, select the Use selected commentary types check box, and choose Edit to select which commentary types you want included with your DataMart export.
- 8 Choose the Security tab and assign access rights to groups and users.



- 9 Choose Save.



- 10 After saving the settings, run the export, by choosing Open and Run. Verify that the export works as expected.

## Running a DataMart export

The following procedure explains how to run a DataMart export.

### How to run a DataMart export



- 1 In the Navigation Pane, choose Data ► DataMart.
- 2 In the main window, select a DataMart, and choose Open and Run.

A progress message appears as the DataMart export runs. It should take a few minutes, but this depends on the speed of both the database server and the network connection. Once the export is finished, a message box appears confirming that the export completed successfully.
- 3 Choose OK to close the dialog box.

Next, use another reporting tool, such as Actuate BIRT Report Designer or Actuate e.Spreadsheet Designer, to create reports based on the DataMart export.

## Deleting a DataMart

Use the following procedure to delete a DataMart.

### How to delete a DataMart export



- 1 In the Navigation Pane, choose Setup ► DataMart.
- 2 In the main window, select a DataMart.
- 3 Choose Delete.
- 4 Choose Yes to confirm.

---

## About internet publishing

Using internet publishing requires the separately purchased Internet Publishing module.

Internet publishing supports publishing a library of read-only briefing books to communicate performance information to employees and other stakeholders through a browser. Users of published books do not need to install Metrics Management or require in-depth training.

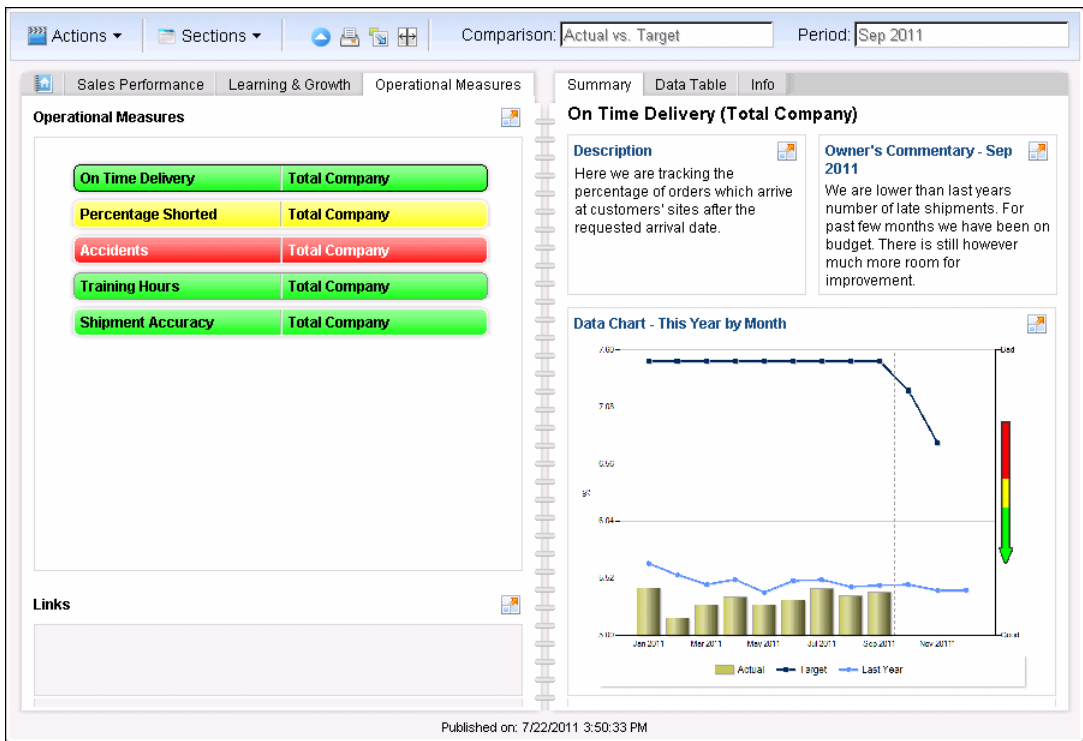
The system specialist defines the information that the published library contains by choosing which books to publish and specifying a user as the content publisher for the library. The content publisher's security settings apply to all the



books in a library. The system specialist publishes the library on an internet or intranet site, and updates performance data and commentary by republishing the library. The information in a published briefing book is static and reflects the specific period in time at which the book is published. Documents linked to a published briefing book must be specified as a URL, for example, <http://website/folder/doc.pdf>.



The internet library home page contains links to the books in the library. A published book does not display toolbars and the navigation pane, as shown in the example in Figure 8-1. Published books display one comparison series and period only. An internet published book displays a maximum of three tabs in the dashboard, Summary, Data Table, and Info. To return to the Internet library home page, choose Internet library home page.



**Figure 8-1** Publishing of the Employee Library internet library

To publish an internet library, the system specialist performs the following tasks:

- Creating or choosing which books to publish
- Creating an internet library
- Generating and deploying the internet library

## About internet publishing security

A published briefing book consists of static HTML files which display measures and locations depending on the security settings of the user who is defined as the content publisher of the internet library. For example, if the system specialist is the content publisher of a book with a section containing the top measure in a view, all the measures in that view are available to internet publishing users. After the book is generated, Metrics Management security settings do not apply. By default, only the system specialist has the ability to create and generate an internet library.

Consider creating a user specifically for which to define library security settings. Limit view access for the user to the measures and locations that you intend to publish. Only those measures and locations that the content publisher has permissions to view appear in published briefing books.

Restrict access to the measure and locations in published books by disabling submeasure and sublocation drill down for the internet library. Disabling submeasure drill down ensures that only the measures that appear in the book are available to library users. Disabling sublocation drill down ensures that only the top location specified in each book section is viewable by internet publishing users.

Additionally, limit which measures and locations appear in published books by changing the top location for book sections to a location lower in the view hierarchy.

## Creating an internet library

Before creating an internet library, decide which books to include in the library. Choose from existing books, or create books specifically defined for publishing.

Metrics Management supports creating any number of libraries. Each library can contain multiple briefing books.

The system specialist restricts access to published data by specifying the Publish content for user setting in an internet library.

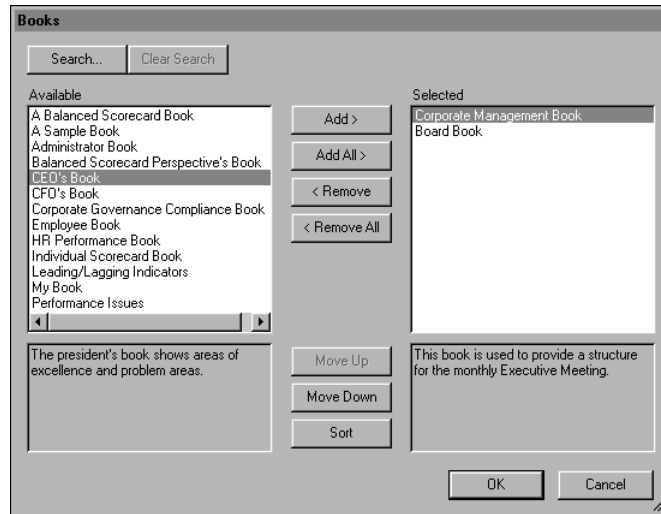
### How to create an internet library



- 1 In the Navigation Pane, choose Setup>Internet Libraries>Create.
- 2 In Name, perform the following tasks:
  - In Name, provide a name for the internet library. This name appears on the library home page.
  - For Description, choose Edit. In Edit, enter a description and choose OK. The description appears below the library name on the library home page.
  - For Categories, choose Edit and select or create categories.

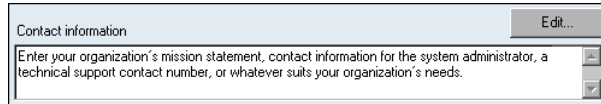
**3** In Library Options, perform any of the following tasks to specify internet library settings:

- To select which briefing books to publish:
  - 1 In Books, choose Edit.
  - 2 Add the briefing books to the Selected list, as shown in Figure 8-2.



**Figure 8-2** Choosing books for an internet library

- 3 To show briefing books in a particular order, rearrange the books in the Selected list by choosing Move Up or Move Down, or choose Sort to arrange the briefing books in alphabetical order.
  - 4 Choose OK.
- To enable users to drill down into the measures or locations in a briefing book, select Enable submeasure drill down and Enable sublocation drill down. Clear the appropriate check box to restrict access to submeasures or sublocations in a book or to limit the size of a published briefing book.
  - To show Info in the briefing book's dashboard, select Show measure info.
  - To show Notes in Info in the briefing book's dashboard, select Show notes.
  - To display a background image on the library home page, select a graphic in Image for library page.
  - To overwrite the default contact information for an internet library briefing book, choose Edit. Then, type new contact details, as shown in Figure 8-3, and choose OK. Contact information appears at the top of each book's home page.



**Figure 8-3** Entering contact information for an internet library

- To specify which user's security settings apply to published books, select a user from Publish content for user.
  - To change the text direction for a right-to-left language, for example Arabic or Hebrew, select Right to left, and select the appropriate character set. Otherwise, select Undefined.
- 4 In Path, specify the location in which to create published briefing books. Choose Browse to navigate to a location. Alternatively, select a predefined named path in Content path. Actuate recommends generating internet library files in a folder dedicated to internet libraries.
  - 5 Choose Options. In Internet library header and in Internet library footer, perform any of the following tasks:
    - To add an existing header or footer, select a header or footer from the list.
    - To show no header or footer, select <None>.
    - To show the header or footer specified for the database, select <Default>.
    - To edit an existing header or footer, select a header or footer from the list, and choose Edit.
    - To create a new header or footer, choose New to open Setup→Header and Footer.
  - 6 Choose Security, and assign access rights to groups and users.
  - 7 Choose Save.



## Generating an internet library in Metrics Management

Generating an internet library overwrites files in the folder specified for internet libraries. To avoid overwriting existing generated files, make a copy of the original directory, or change the current internet library directory.

To display up-to-date information for internet library users, generate and publish an internet library on a regular basis. To decrease publishing time and to capture the most recent information from Metrics Management, consider generating internet libraries when users are not logged in to Metrics Management, for example, overnight.

### How to generate an internet library

- 1 In the Navigation Pane, choose Data→Internet Libraries, and select an internet library in the main window.



- 2 Choose Generate.
- 3 In the dialog box, choose Yes to generate the internet library.  
A progress bar shows the status of the internet library.

## Generating an internet library using pbvcon

Use pbvcon, Metrics Management's command-line utility, to generate internet libraries for any of the following reasons:

- To automate and schedule the generation of libraries containing large briefing books.
- To specify the period name for all book sections in a library.
- To suppress the time stamp from generated libraries and books.

For more information, see "About pbvcon" in Chapter 11, "Using pbvcon to schedule Metrics Management."

## Publishing an internet library

Typically, an internet library is moved or copied to an internet or intranet site. Consult your website administrator for help.

## Editing an internet library

Use the following procedure to make changes to an internet library.

### How to edit an internet library

- 1 In the Navigation Pane, choose Setup➤Internet Libraries, and select an internet library in the main window.
- 2 Make your changes.



- 3 Choose Save.

## Deleting an internet library

Use the following procedure to delete an internet library.

### How to delete an internet library

- 1 In the Navigation Pane, choose Setup➤Internet Libraries, and select an internet library in the main window.



- 2 Choose Delete.
- 3 Choose Yes to confirm.

# About Metrics Management portal integration and active web publishing

Metrics Management supports embedding a book, dashboard, map, section, or view in a web page using one of the two following Metrics Management modules:

- Metrics Management portal integration. Metrics Management authenticates a user who accesses a Metrics Management portal object using one of Metrics Management's single sign-on methods. Metrics Management portal integration requires a user license for each user that accesses a portal object.
- Active web publishing. Active web publishing links are available at one period only. Active web publishing requires the appropriate license module.

The system specialist creates a Metrics Management portal integration or an active web publishing link that references a specific object and deploys the link, typically in a web portal frame or as a link in custom web page. Metrics Management toolbars and the navigation pane do not display in a portal or published object. Figure 8-4 shows the Sample Book in portal mode.

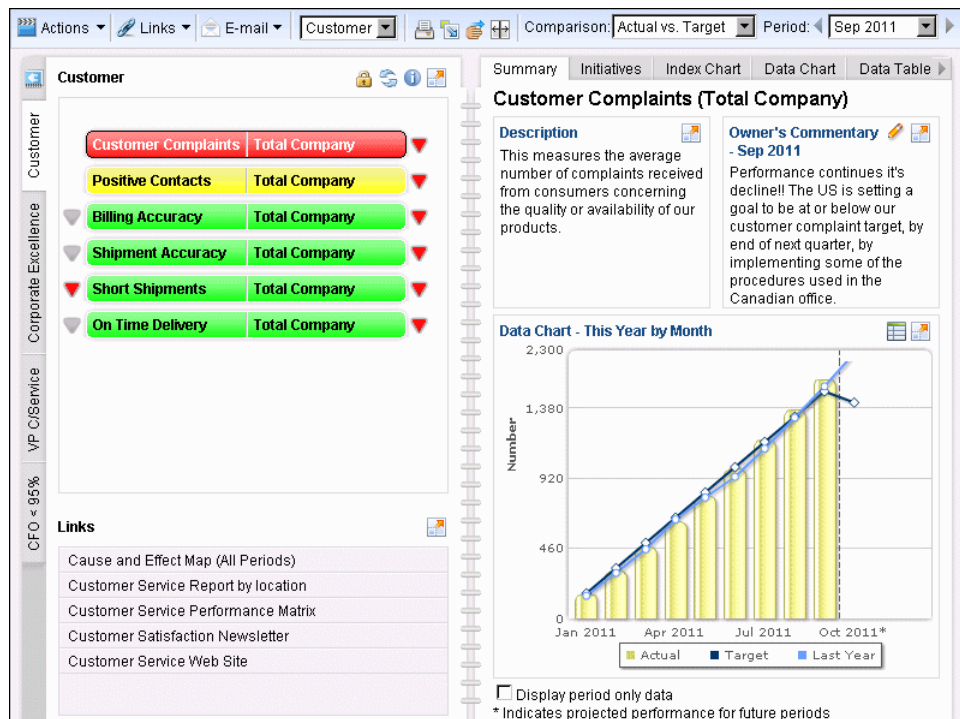
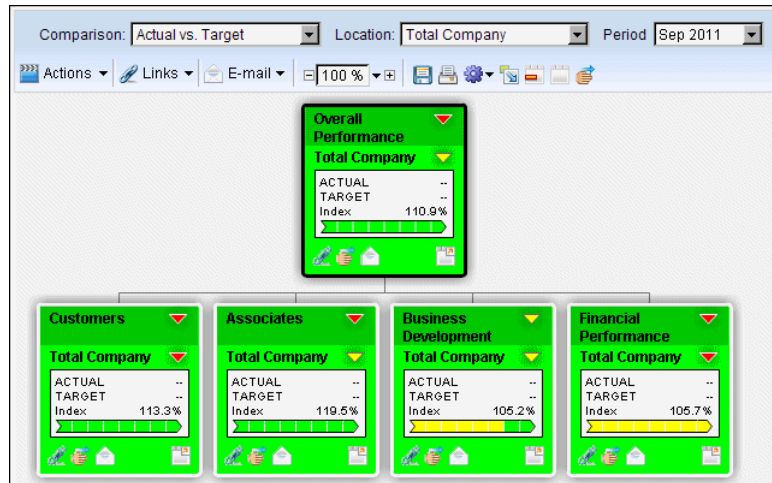


Figure 8-4 The Sample Book opened from a Metrics Management portal link

Figure 8-5 shows active web publishing of An Overall View of Performance view.



**Figure 8-5** Active web publishing of the An Overall View of Performance view

To make a Metrics Management portal link available in a web page, the system specialist performs the following tasks:

- Create a web server URL named path in the Windows Client.
- Generate or manually create a Metrics Management portal link.
- Deploy the Metrics Management portal link.

To make an active web publishing link available in a web page, the system specialist performs the following tasks:

- Create an active web publishing user to define security on published object types.
- Specify the server and database in which the active web publishing user resides.
- Create a web server URL named path in the Windows Client.
- Generate or manually create a Metrics Management portal link.
- Deploy the Metrics Management portal link.

## Creating the active web publishing user

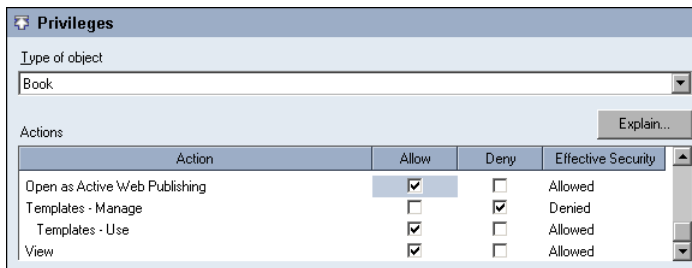
The system specialist creates and configures the active web publishing user to define the object types available for active web publishing. The active web publishing user's privilege settings allow or deny other users from opening content from an active web publishing link. Creating the active web publishing user requires administrator privileges.

Ensure that the active web publishing user has read-only access to the database to prevent other users from entering data or commentary. Also provide the user with the privilege to open and view published object types. For example, to enable other users to open a book from an active web publishing link, allow the active web publishing user the privilege to open and view books. Define object security settings to enable web users to view all objects opened from the active web publishing link. For example, ensure that the active web publishing user has view rights to the measures and locations in a published book.

### How to create and configure an active web publishing user



- 1 In the Navigation Pane, choose Setup>Users>Create.
- 2 In Name, provide a name, for example, Active web publishing user.
- 3 Choose Setup>Security. In Privileges, and in Type of object, select the object for which to define active web publishing privilege settings.
- 4 In Actions, to enable active web publishing for the selected object, beside Open as Active Web Publishing, select Allow. In the example shown in Figure 8-6, active web publishing is allowed for books.



**Figure 8-6** Allowing the active web publishing user to publish books



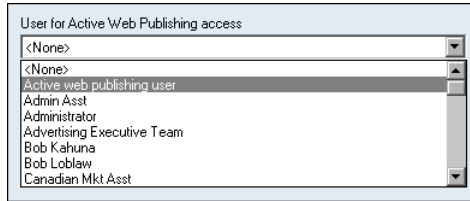
- 5 Choose Save.
- 6 Log in as the active web publishing user and verify that privileges are defined correctly for the object types to publish.

Next, specify the active web publishing user for the database to apply the user's privileges to published content.

### How to set the active web publishing user for the database

- 1 In the Navigation Pane, choose Setup>Configure>Options.
- 2 In Database Preferences, in User for Active Web Publishing access, select the user created as the active web publishing user, as shown in Figure 8-7.





**Figure 8-7** Setting the active web publishing user for the database



- 3 Choose Save.

## Defining the active web publishing database

The system specialist defines the server and database in which to authenticate the active web publishing user.

### How to define the active web publishing database

- 1 Open Windows Explorer and navigate to the Web.config file. By default this is found in:

```
C:\Program Files\Actuate\iHub3\modules
  \Metrics Management\WebRootAspx
```

- 2 Open the Web.config file in a text editor, such as Notepad.
- 3 Navigate to the following lines:

```
<!--Active Web Publishing settings -->
<add key="pbvServer" value="" />
<add key="pbvDatabase" value="" />
```

- 4 Provide your server and database names as values, for example:

```
<!--Active Web Publishing settings -->
<add key="pbvServer" value="MetricsManagementServer" />
<add key="pbvDatabase" value="Sample Corporate" />
```

- 5 Save and close the Web.config file.

## Creating the web server URL named path

Metrics Management supports generating Metrics Management portal and active web publishing links from the Windows Client and the Web Client. Links generated from the Web Client contain the URL of the Web Client application on which Metrics Management resides. In the Windows Client, before generating a link, create a named path which defines the web server URL that hosts the link. Otherwise, links generated from the Windows Client begin with `http://localhost/MetricsManagement/`. The URL specified in the named path must end with a forward slash. Create a named path using the following syntax:

```
http://ServerName/MetricsManagementWebClient/
```

where

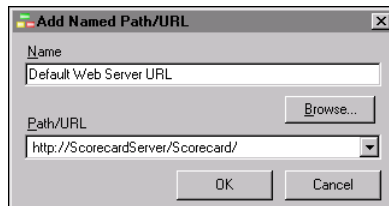
- `ServerName/MetricsManagementWebClient` specifies the address of the Metrics Management Web Client application, for example:

`MetricsManagementServer/MetricsManagement/`

Alternatively, create a named path using the URL to the intranet or internet site which hosts Metrics Management.

### How to create a named path to the web server URL

- 1 In the Windows Client, choose Setup→Configure→Options.
- 2 In Named Paths or URLs, choose Add.
- 3 In Add Named Path or URL, perform the following tasks:
  - 1 In Name type Default Web Server URL.
  - 2 In Path or URL, type the web server URL, as shown in the example in Figure 8-8.



**Figure 8-8** Creating the web server URL named path

- 4 Choose OK.

## Generating a portal or active web publishing link

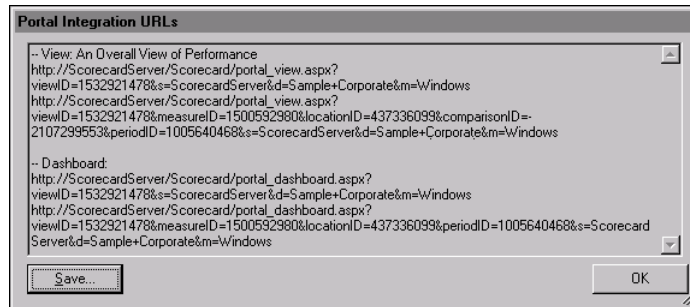
Metrics Management generates Metrics Management portal or active web publishing links depending on the object selected in a book, map, or view. For each object, Metrics Management generates a simple link containing mandatory link parameters and an additional link containing all available link parameters. For example, with the Business Development measure selected in the Overall View of Performance, Metrics Management generates the following URLs.

- A simple link to the view at the top measure.
- A link to a custom view displaying the Business Development as the top measure, at the comparison series, location, and period selected in the view.
- A simple link to the dashboard for the top measure in the view.
- A link to the dashboard for the Business Development measure for the comparison series, location, and period selected in the view.

Each Metrics Management portal link also contains parameters specifying the Metrics Management server, database, and authentication method.

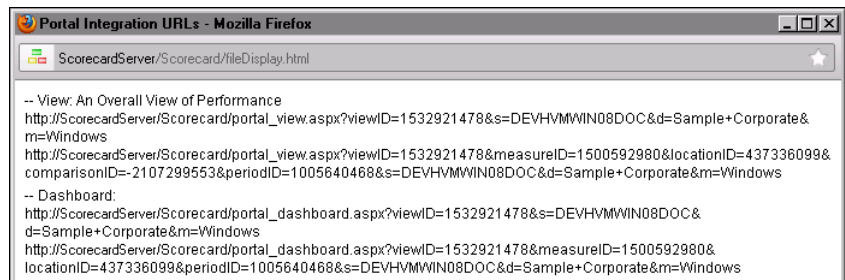
### How to generate a link

- 1 Log in to the Windows Client or Web Client. To generate a portal link, log in using a Metrics Management single sign-on authentication method.
- 2 Open the book, map, or view for which to create a link. If necessary, select the appropriate object.
- 3 To generate a link perform one of the following tasks:
  - To generate a portal link, choose Actions→Generate Portal Integration URLs. A list of available portal links displays in Portal Integration URLs. Figure 8-9 shows example links generated from the Overall View of Performance view in the Windows Client.



**Figure 8-9** Generating Metrics Management portal links in the Windows Client

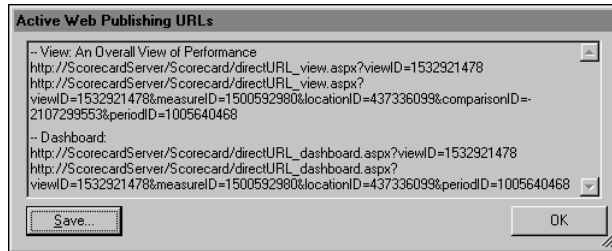
Figure 8-10 shows example links generated from the Overall View of Performance view in the Web Client.



**Figure 8-10** Generating Metrics Management portal links in the Web Client

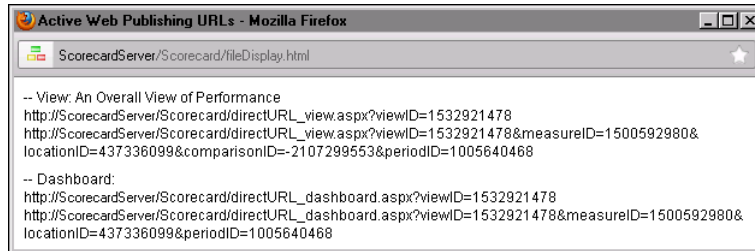
- To generate an active web publishing link, choose Actions→Generate Active Web Publishing URLs. A list of available active web publishing links displays in Active Web Publishing URLs. Figure 8-11 shows example

links generated from the Overall View of Performance view in the Windows Client.



**Figure 8-11** Generating active web publishing links in the Windows Client

Figure 8-12 shows example active web publishing links generated from the Overall View of Performance view in the Web Client.



**Figure 8-12** Generating active web publishing links in the Web Client

- 4 To open the link in a browser, select a link. Right-click and choose Copy from the shortcut menu. Then, paste the link in a web browser.
- 5 In the Windows Client, to save the links as a text file, choose Save. In Save To File, provide a file name. Then, navigate to a location to save the file and choose Save.

## Creating a portal or active web publishing link

Optionally, choose to manually construct a portal or active web publishing link. The following sections show the syntax for portal or active web publishing links and describe mandatory and optional object IDs.

Links require the object IDs for the objects to which you link. To obtain object IDs for the link, export an object to XML to view the object ID. Metrics Management objects available to reference through a Metrics Management portal link contain the object ID value. The ID is guaranteed to be unique and does not change.

### How to obtain the object ID for an object

- 1 Open the setup tab for an object. For example, choose Setup>Maps and open Homepage Map.



- 2 Choose Export as XML.
- 3 In Export file, provide an export file name and a location to save the file. Choose Export.
- 4 Open the XML file in a text editor. Locate the value in the objid parameter. For example, the following line shows the objid value from the Homepage Map XML file:

```
<Map objid="-1456528854" name="Strategy Map"
  directURLId="-1456528854"
  Reference_Resolution_Mandatory="TRUE">
```

## Creating a portal link

Metrics Management portal link parameters differ for each object type. A link is case-sensitive. A Metrics Management portal link uses the following syntax:

```
http://ServerName/MetricsManagementWebClient/
  portal_ObjectType.aspx
  ?objectID=<objectIDvalue>&s=ServerName&d=DatabaseName
  &m=SingleSignOnMethod
```

where

- ServerName/MetricsManagementWebClient specifies the address of the Metrics Management Web Client application, for example:  
MetricsManagementServer/MetricsManagement
- portal\_ObjectType.aspx?objectID specifies the object type, for example:  
portal\_view.aspx?viewID

Table 8-24 describes the available object types and mandatory object IDs.

**Table 8-24** Metrics Management object type parameters

Object type	Parameter
Book	portal_book.aspx?bookID
Dashboard	portal_dashboard.aspx?viewID
Map	portal_map.aspx?mapID
Section	portal_section.aspx?sectionID
View	portal_view.aspx?viewID

- objectID=<objectIDvalue> specifies the object ID parameters, for example:  
viewID=-1970514038

Use the ampersand (&) character to separate multiple parameters, for example:

```
viewID=-1970514038&periodID=60930526
```

- `&s=ServerName` specifies the Metrics Management Server name, for example:

```
&s=MetricsManagementServer
```

- `&d=DatabaseName` specifies the Metrics Management database name, for example:

```
&d=Sample+Corporate
```

- `&m=SingleSignInMethod` specifies the Metrics Management single sign-on method that authenticates the user, for example:

```
&m=MetricsManagement
```

Table 8-25 describes the supported Metrics Management single sign-on methods.

**Table 8-25** Metrics Management single sign-on method parameter

Single sign-on method	Parameter
Active Directory single sign-on	AD-SSO
Metrics Management authentication	MetricsManagement
LDAP single sign-on	LDAP-SSO
Windows authentication	Windows

The server name, database name, and single sign-on method parameters must be URL encoded. For example, use the plus (+) sign to separate parameters values that contain multiple spaces, such as `&d=Sample+Corporate`.

The following sample Metrics Management portal link references the Leading Indicators section, Sample Corporate database, and Windows authentication method:

```
http://MetricsManagementServer/MetricsManagementWebClient  
/portal_book.aspx?sectionid=-2044797168&s=  
MetricsManagementServer&d=Sample+Corporate&m=  
MetricsManagement
```

## Creating an active web publishing link

Active web publishing link parameters differ for each object type. A link is case-sensitive. Create an active web publishing link using the following syntax:

```
http://ServerName/MetricsManagementWebClient/  
directURL_ObjectType.aspx  
?objectID=<objectIDvalue>&objectID=<objectIDvalue>
```

where

- `ServerName/MetricsManagementWebClient` specifies the address of the Metrics Management Web Client application, for example:  
`MetricsManagementServer/MetricsManagement`
- `directURL_ObjectType.aspx?objectID` specifies the object type, for example:  
`directURL_view.aspx?viewID`  
Table 8-26 describes the available object types and mandatory object IDs.

**Table 8-26** Metrics Management object type parameters

Object type	Parameter
Book	<code>directURL_book.aspx?ID</code>
Dashboard	<code>directURL_dashboard.aspx?viewID</code>
Map	<code>directURL_map.aspx?mapID</code>
Section	<code>directURL_book.aspx?sectionID</code>
View	<code>directURL_view.aspx?viewID</code>

- `objectID=<objectIDvalue>` specifies the object ID parameters. For example:  
`viewID=-1970514038`  
Use the ampersand (&) character to separate multiple parameters, for example:  
`viewID=-1970514038&periodID=60930526`

The following sample active web publishing link references the Balanced Metrics Management view and January 2011 period:

```
http://<yourservername>/Metrics Management  
/directURL_view.aspx?viewID=-1970514038&periodID=60930526
```

## About book objectID parameters

Table 8-27 describes book objectID parameters for active web publishing links.

**Table 8-27** Book objectID parameters for Active web publishing links

Parameter	Description
ID	Mandatory. Specifies the book to open. Users can also open all sections in the book.
periodID	Optional. Specifies the period for the book. To use the most recent completed period, do not specify the periodID parameter.

The following sample active web publishing link opens the Corporate Management book:

```
http://MetricsManagementServer/MetricsManagement/  
directURL_book.aspx?ID=1986762926
```

Table 8-28 describes the book objectID parameter for Metrics Management portal links.

**Table 8-28** Book objectID parameter for Metrics Management portal links

Parameter	Description
bookID	Mandatory. Specifies the book to open. Users can also open all sections in the book.

The following sample Metrics Management portal link opens the Corporate Governance Compliance Book:

```
http://MetricsManagementServer/MetricsManagement  
/portal_book.aspx?bookID=-1960247508&s=  
MetricsManagementServer&d=  
Sample+Corporate&m=MetricsManagement
```

## About book section objectID parameters

Table 8-29 describes book section objectID parameters.

**Table 8-29** Book section objectID parameters

Parameter	Description
sectionID	Mandatory. Specifies the book section to open.
periodID	Optional. Specifies the period for the section. To use the most recent completed period, do not specify the parameter.

The following sample Metrics Management portal link opens the Leading Indicators section only at the January 2010 period:

```
http://MetricsManagementServer/MetricsManagement  
/portal_section.aspx?sectionID=  
-2044797168&periodID=-347543466&s=  
MetricsManagementServer&d=Sample+Corporate&m=MetricsManagement
```

The following sample active web publishing link opens the Operational Measures section only:

```
http://MetricsManagementServer/MetricsManagement  
/directURL_book.aspx?sectionID=1146842186
```



## About dashboard objectID parameters

Table 8-30 describes dashboard objectID parameters. A link with no optional parameters displays the dashboard at the top measure, top location, and completed period for the specified view.

**Table 8-30** Dashboard objectID parameters

Parameter	Description
viewID	Mandatory. Specifies the view available to the dashboard.
locationID	Optional. Specifies the location at which the dashboard opens. The location must belong to the specified view.
measureID	Optional. Specifies the measure at which the dashboard opens. The measure must belong to the specified view.
periodID	Optional. Specifies the period for the dashboard. To use the most recent completed period, do not specify the parameter.

The following sample Metrics Management portal link opens the dashboard to the Customer Perspective measure and UK location:

```
http://MetricsManagementServer/MetricsManagement  
/portal_dashboard.aspx?viewID=-1970514038&measureID=  
1397935581&locationID=1787291502&s=  
MetricsManagementServer&d=Sample+Corporate&m=  
MetricsManagement
```

The following sample active web publishing link opens the dashboard to the Environment measure and EMEA location:

```
http://MetricsManagementServer/MetricsManagement  
/directURL_dashboard.aspx?viewID=1532921478  
&measureID=883965183&locationID=-2021725154
```

## About map objectID parameters

Table 8-31 describes map objectID parameters.

**Table 8-31** Map objectID parameters

Parameter	Description
mapID	Mandatory. Specifies the map to open.
comparisonID	Optional. Specifies the comparison series at which the map opens.
locationID	Optional. Specifies the location for measures in a measure only map.

*(continues)*

**Table 8-31** Map objectID parameters (continued)

Parameter	Description
measureID	Optional. Specifies the measure for locations in a location only map.
periodID	Optional. Specifies the period for the map. To use the most recent completed period, do not specify the parameter.

The following sample Metrics Management portal link opens the Strategy map:

```
http://MetricsManagementServer/MetricsManagement  
/portal_map.aspx?mapID=-1456528854&s=  
MetricsManagementServer&d=Sample+Corporate&m=MetricsManagement
```

The following sample link opens the Critical Measures Performance Matrix map to the Solvent Reduction measure:

```
http://MetricsManagementServer/MetricsManagement  
/directURL_map.aspx?mapID=-1700065194&measureID=-2044672214
```

## About view objectID parameters

Table 8-32 describes view objectID parameters.

**Table 8-32** View objectID parameters

Parameter	Description
viewID	Mandatory. Specifies the view that a link opens.
comparisonID	Optional. Specifies the comparison series at which the view opens.
locationID	Optional. Specifies the top location for the view.
measureID	Optional. Defines the specified measure as the top measure in a custom view.
periodID	Optional. Specifies the period for the view. To use the most recent completed period, do not specify the parameter. The period must be within the display period range of the specified view.

The following sample Metrics Management portal link opens the Balanced Metrics Management view at the customer perspective measure:

```
http://MetricsManagementServer/MetricsManagement  
/portal_view.aspx?viewID=-1970514038&measureID=1397935581  
&locationID=437336099&comparisonID=-2107299553  
&periodID=1005640468&s=MetricsManagementServer&d=  
Sample+Corporate&m=MetricsManagement
```

The following sample link opens the Overall View of Performance view at July 2011:

```
http://MetricsManagementServer/MetricsManagement  
/directURL_view.aspx?viewID=1532921478&periodID=-558287148
```

## Deploying a portal or active web publishing link

A Metrics Management portal link is typically integrated into a corporate intranet portal, such as Microsoft SharePoint. An active web publishing link can be integrated into existing dashboards, intranets, or web sites. Consult your website administrator for help.

Ensure that portal link users have the appropriate permissions to view the object referenced by a Metrics Management portal link. For example, to enable a user to view a book referenced by a portal link, ensure that the user is allowed to view and open the book.

## About Metrics Management portal link sessions

Opening a Metrics Management portal link opens a Web Client session in the browser. Closing a Metrics Management portal link does not end the Web Client session. The web session expires when the Web Client is inactive for a default period of 30 minutes. If users are unable to access a link during the time-out period, consider purchasing additional user licenses or decreasing the Web Client time-out setting.

---

## Using an alert to send information to users

Use alerts to send automated notifications about performance to users by e-mail or to an XML file.

Metrics Management supports only SMTP servers. If your organization uses Exchange or Domino, you must enable SMTP support on those servers before you can e-mail alerts. Metrics Management can send e-mail alerts if the Metrics Management Server is behind the firewall. Metrics Management cannot send e-mail alerts if the SMTP server is beyond the firewall.

Use the XML file as a log of sent mail, or as a way to send alerts through a Windows or internet application. For example, post XML file alerts to a web site.

The content of an alert is based on the book sections that the system specialist specifies when creating an alert. A section generates information based on specific measure and location pairs or on a filter. As each section is based on a view, the settings in the section's view, such as the series, period display, top measure, or top location, affect the information a recipient sees in an alert.

Typically, the selected sections use filters that reference <Current User> so that the output is specific to the current user.

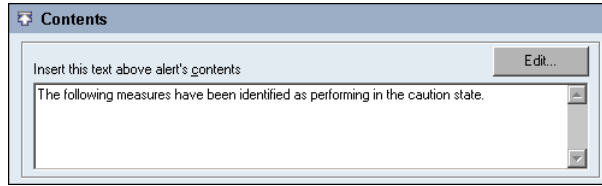
The system specialist can generate an alert manually or automate sending alerts by using pbvcon. For more information about using pbvcon, see “About pbvcon” in Chapter 11, “Using pbvcon to schedule Metrics Management.”

### How to create an alert

Use the following procedure to create an alert.

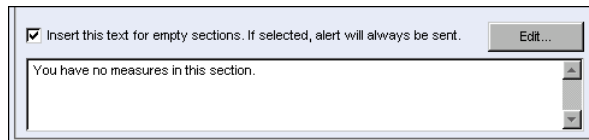


- 1 In the Navigation Pane, choose Setup>Alerts>Create.
- 2 In Name, provide information about the alert:
  - 1 In Name, type a name for the alert.
  - 2 In Description, type a description.
  - 3 For Categories, choose Edit. In Categories, select or create categories. Then, choose OK.
- 3 In Header, specify the recipients, sender, and subject of the alert:
  - 1 To select groups and users to receive the alert, choose Edit. In Groups and Users, add groups and users to the Selected list. Then, choose OK.
  - 2 In Send the alert only to users in this list who are, refine the recipients of the alert within the groups and users you selected in the previous step. Select any of the following groups and users:
    - Owners of any measure in the section’s views
    - Owners assistants of any measure in the section’s views
    - Data-entry users for any measure in the section’s views
    - Commentary-entry users for any measure in the section’s views
  - 3 Optionally, change the user that is the sender of the alert from the user creating the alert to a different user. Typically, the system specialist sends alerts. In From this user, select a user to be the sender of the alert.
  - 4 In Subject, type the subject of the alert. This text appears in the subject line of the e-mail.
- 4 In Contents, provide the text for the body of the alert:
  - 1 In Insert this text above alert’s contents, choose Edit. In Edit, type any introductory comments for the alert. Then, choose OK. The text appears in Insert this text above alert’s contents, as shown in Figure 8-13.



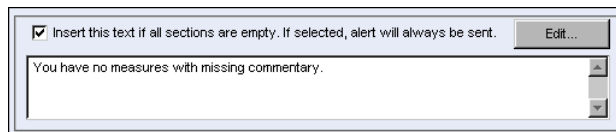
**Figure 8-13** Introductory text for an alert

- 2 To select sections from which the alert generates information, in Sections, choose Edit. In Sections, add sections to the Selected list. Then, choose OK.
- 3 To show the description of the section after the section name in the alert, select Include sections' description.
- 4 To inform a user that a particular section has no results, select Insert this text for empty sections. Choose Edit. In Edit, type the text to appear in the message. Then, choose OK. The text appears below Insert this text for empty sections, as shown in Figure 8-14. Alternatively, to send no notification to a user when a section is empty, deselect Insert this text for empty sections.



**Figure 8-14** Sample message informing users about empty sections

- 5 To show base and comparison series values for data measures, select Include base and comparative values.
- 6 To exclude index values for measures, select Exclude index.
- 7 To inform a user that no selected sections have results, select Insert this text if all sections are empty. Choose Edit. In Edit, type the text to appear in the message. Then, choose OK. The text appears below Insert this text if all sections are empty, as shown in Figure 8-15. Alternatively, if you do not want a notification sent to a user when all their sections are empty, deselect Insert this text if all sections are empty.



**Figure 8-15** Sample message informing users that all sections are empty

- 5 In Destination, configure how Metrics Management sends alerts. To configure a mail server authentication method:
  - 1 Select E-mail this Alert.

- 2 In Address of SMTP mail server, type the SMTP address or the TCP/IP address of your mail server.
- 3 In Mail server authentication method, select an authentication method:
  - ❑ To use no authentication, select None required. An account name or password is not required.
  - ❑ To use a plain text user name and password, select Login. Metrics Management sends alerts encoded as base-64.
  - ❑ To send e-mail alerts through a secure Microsoft Exchange Server using Windows NT Login Manager and SSPI, select NTLM (Microsoft Exchange only).
  - ❑ To attempt to send the alert using first None and then NTLM, select Automatic. If both methods fail, Metrics Management does not send the alert.
- 4 If you selected the Login, NTLM, or Automatic methods, specify credentials for the SMTP server. In Account on mail server, type a user name. In Password for this account, type a password.
- 5 To test the alert e-mail, choose Test.
- 6 To send an alert to an XML file, perform the following tasks:
  - 1 Select Write this alert to an XML file.
  - 2 From the XML file name list, select a named path. Alternatively, choose Browse. In Select Filename, navigate to the location in which to save the file, and type a name having an extension of .xml. Then, choose Open.
- 7 In Status Log and Errors, specify how to log errors in sending alerts:
  - To log no errors, in Log status messages, select Do not log status messages.
  - To log errors to a file:
    - 1 In Log status messages, select Log status messages to file.
    - 2 In Log file, select a named path. Alternatively, choose Browse. In Select Filename, navigate to the location in which to save the log, and type a name having an extension of .txt. Then, choose Open.
    - 3 Select whether to replace or extend the log file when Metrics Management writes a status message:
      - ❑ To overwrite the log file, select Overwrite existing file.
      - ❑ To append to the log file, select Append to existing file.
    - 4 Specify how Metrics Management responds to error conditions:
      - ❑ To stop sending alerts if an error occurs, in Error limit, select Stop after first error.

- To continue to send alerts until Metrics Management reaches an error limit, select Stop after this many errors. Then, type or select a value.

8 To assign access rights to groups and users, use the Security tab.



9 Choose Save.

#### **How to generate an alert**

1 In the Navigation Pane, choose Data ► Alerts.



2 In the main window, select an alert. Then, choose Generate.

3 In the prompt, choose Yes.

---

## Working with links

A link is a reference in Metrics Management to an application, document, Metrics Management object, or a web site. This reference is the link destination. The link destination can use Metrics Management information, such as values from the current measure, location, or user. The link destination can be within Metrics Management, for example, to a map, or to external content, such as an application, file, or web site.

Adding a link to a Metrics Management object makes the link available to other users. For example, a link that opens an e-mail message to a measure's owner supports a user discussing the performance of that measure with its owner. Adding a link to the database makes the link available in the toolbar. A database link is always accessible to users. A link placed on other objects is available to a user only when viewing that object.

A link has other properties that provide information to a user. A link's description appears when a user moves the mouse pointer over the link. The application type property enables a link user to find an appropriate link quickly in Share. For example, use Email for a link that sends an e-mail message and Excel Spreadsheets for a link that opens a spreadsheet.

By default, Firefox does not permit access to local files. For example, Firefox does not allow opening a file located on a UNC path. Launching a link from the Web Client that points to a file on a UNC path requires configuring the security policy in Firefox. Instead, Actuate recommends making files available from a directory on the Metrics Management Web Client application. Consult with your web server administrator for assistance with copying files to the Metrics Management Web Client application.

## About a link destination

Links can reference static or dynamic content. Static links reference a static destination, such as a web site address or file path. System variables or link tags that access contextual Metrics Management information modify the destination of a dynamic link. Examples of system variables are the logged-in database or selected measure owner. The system specialist or the object's owner creates link tag values for specific measures, locations, databases, and users. The link destination can also include named paths.

A link destination has one of the following types:

- A path to a file  
For example, a Word or Excel file on a network drive.
- A path to an external application  
Metrics Management categorizes links by the application type defined by each link's creator. Users can search for links by application type.  
  
Metrics Management supports passing command-line parameters to modify the opening state of the application.
- An e-mail address in a mailto link
- A URL to a web site  
For example, to an intranet site, or to an external web site or search engine.
- A URL containing values from a Metrics Management object  
A link having a destination of this type is a dynamic link.

### How to create a link


This procedure provides the information to create a simple, static link. This type of link opens a web page or uses the Windows default application to open a file. To create other link types, see the following sections:

- Using a link to open an application
- Using a link to send an e-mail message
- Using Metrics Management information in a link



- 1 In the Navigation Pane, choose Setup → Links → Create.
- 2 In Name:
  - 1 In Name, type a name for the link.
  - 2 In Description, type a description.
  - 3 For Categories, choose Edit. In Categories, select or create categories. Then, choose OK.



- 3 In File or URL, in Filename or URL, type a web site address or a file name.
  - To create a link to a web site, in Filename or URL, type a URL.
  - To create a link to a file, in Filename or URL, type the path to the file or choose Browse to navigate to the file.
- 4 To assign an application type, in Application type, select an existing application type, or choose Edit to create a new application type.
- 5 To assign access rights to groups and users, use the Security tab.
-  6 Choose Save.

## Using a link to open an application

To use a link to open a specific application, use the link's Application path property. Metrics Management uses this property in conjunction with the Filename or URL property. If a link has a file name as the value for the Filename or URL property and no value for the Application path property, Metrics Management opens the file using Windows' default application for the file type. If there is no Windows' default application for the file type, an error message appears when the user opens the link. To avoid this error for a custom file type or to open a different application from the Windows default, specify the application in Application path.

To modify how an application opens when launched by Metrics Management, use the link's Options property. Type the options exactly as you would to open the application using a Windows command line. A link to a custom report opens the report in the user's default browser. Specifying the browser type makes the link unavailable in the Web Client. Metrics Management supports Google Chrome, Mozilla Firefox and Microsoft Internet Explorer.

To launch an application without opening a specific file, leave the link's Filename or URL property empty.

The Application path and Options properties do not have access to Metrics Management information such as the name of the currently selected measure. Using dynamic link syntax in these properties results in an error when a user opens the link.

### How to specify a link that opens an application

- 1 Open an existing link or create a new link.
- 2 In File or URL, in Filename or URL, provide the following information:
  - In Application path, provide the path to the application. Type the path to the application, choose Browse to navigate to the application, or choose the arrow to select a named path.
  - In Options, type command-line parameters to modify how the application opens. Include any spaces in the original command line argument. For

example, to open a new Microsoft Outlook 2003 task, use the following values:

- ❑ Application path  
C:\Program Files\Microsoft Office\Office11\Outlook.exe
- ❑ Options  
/c ipm.task

**3** To assign an application type, in Application type, select an existing application type, or choose Edit to create a new application type.



**4** Choose Save.

## Using a link to send an e-mail message

The Filename or URL property of a link supports sending an e-mail message. In this property, type `mailto:` before the name of the e-mail recipient. Place any additional parameters that the e-mail program specified for the Metrics Management system uses after the name of the e-mail recipient. For example, most e-mail programs accept the `?subject` parameter to specify the message's subject. The e-mail recipient can be Metrics Management information such as the owner of the currently selected measure. Similarly, the subject can use values such as the name of the logged-in user or the currently selected location.

### How to specify a link that sends an e-mail message

- 1** Open an existing link or create a new link.
- 2** In File or URL, in Filename or URL, type an e-mail address preceded by `mailto:`, for example, `mailto:vp.sales@company.com`.
- 3** To enable a user to find the e-mail link using Share, in Application type, select E-mail.



**4** Choose Save.

## Using Metrics Management information in a link

A dynamic link uses variables to pass information from Metrics Management to a URL. These variables are either system variables or link tags. A system variable supports passing properties of a specific Metrics Management object to a link, for example, the name of the selected measure or the logged-in user's e-mail address. A link tag is a user-defined text value for a specific Metrics Management object. Each book, database, location, measure, and user supports up to four link tags. The object owner or the system specialist defines the link tag value.

When using a variable in a link, ensure that the variable has a value in the context in which a user accesses it. Using a variable that has no value causes the link to fail. For example, a link using location information fails if placed on a measure.

A variable provides access to properties of any of the context items named in Table 8-33.

**Table 8-33** Context item types and names

Context item type	Context item name
Assistant to the owner of the currently selected measure	SelectedMeasureAssistant
Currently selected location	SelectedLocation
Currently selected map	SelectedMap
Currently selected measure	SelectedMeasure
Currently selected section	SelectedSection
Currently selected view	SelectedView
Logged-in database	CurrentDatabase
Logged-in user	CurrentUser
Owner of the currently selected measure	SelectedMeasureOwner
Period information	Calendar
Period of the currently selected data	SelectedPeriod

Most context items have a name property. Other properties are specific to the type of context item.

A dynamic link is not available if the specified property does not have a value. For example, `<%SelectedMeasureOwner.Email%>` does not appear if the selected measure owner does not have e-mail information.

## About calendar properties

Calendar properties provide values for the completed, current, and locked period for each available period type. If the database does not use a period type, those period properties do not have a value. For example, most Metrics Management databases do not support the week or day period types. The context item that provides calendar properties is Calendar. Table 8-34 lists and describes calendar properties.

**Table 8-34** Calendar properties

Property name	Value	Format and example
Completed.Year	The completed year, specified in Calendar Settings	yyyy 2010

*(continues)*

**Table 8-34** Calendar properties (continued)

Property name	Value	Format and example
Completed.Quarter	The completed quarter, specified in Calendar Settings	Qq yyyy Q4 2010
Completed.Month	The completed month, specified in Calendar Settings	mmm yyyy Feb 2011
Completed.Week	The completed week, specified in Calendar Settings	yyyy/Www 2011/W09
Completed.Day	The completed day, specified in Calendar Settings	yyyy/mm/dd 2011/03/10
Current.Year	The current year, specified in Calendar Settings	yyyy 2011
Current.Quarter	The current quarter, specified in Calendar Settings	Qq yyyy Q1 2011
Current.Month	The current month, specified in Calendar Settings	mmm yyyy Mar 2011
Current.Week	The current week, specified in Calendar Settings	yyyy/Www 2010/W11
Current.Day	The current day, specified in Calendar Settings	yyyy/mm/dd 2011/03/15
Locked.Year	The locked year, specified in Calendar Settings	yyyy 2009
Locked.Quarter	The locked quarter, specified in Calendar Settings	Qq yyyy Q3 2010
Locked.Month	The locked month, specified in Calendar Settings	mmm yyyy Jan 2011
Locked.Week	The locked week, specified in Calendar Settings	yyyy/Www 2011/W05
Locked.Day	The locked day, specified in Calendar Settings	yyyy/mm/dd 2011/02/10

The following line shows an example of a calendar property as used in a link URL:

```
<%Calendar.Current.Year%>
```

### About database properties

Database properties provide information about the database to which the user logs in. Database properties also include link tags, which are custom values defined by the system specialist. The context item that provides database

properties is CurrentDatabase. Table 8-35 lists and describes database properties.

**Table 8-35** CurrentDatabase properties

Property name	Value	Format and example
Name	Name of the current database	Text Sample Corporate
Tag1	Link tag text from Link Tag field 1	Text
Tag2	Link tag text from Link Tag field 2	Text
Tag3	Link tag text from Link Tag field 3	Text
Tag4	Link tag text from Link Tag field 4	Text

The following line shows an example of a database property as used in a link URL:

```
<%CurrentDatabase.Name%>
```

## About location properties

Metrics Management provides a single name property for the currently selected location. Location properties also include link tags, which are custom values defined by the system specialist or location owner. The context item that provides location properties is SelectedLocation. Table 8-36 lists and describes location properties.

**Table 8-36** SelectedLocation properties

Property name	Value
Name	Name of the currently selected location
Tag1	Link tag text from Link Tag field 1
Tag2	Link tag text from Link Tag field 2
Tag3	Link tag text from Link Tag field 3
Tag4	Link tag text from Link Tag field 4

The following line shows an example of a location property as used in a link URL:

```
<%SelectedLocation.Name%>
```

## About measure properties

Metrics Management provides a single name property for the currently selected measure. Measure properties also include link tags, which are custom values defined by the system specialist or measure owner. Three context items provide measure properties: SelectedMeasure, SelectedMeasureAssistant, and SelectedMeasureOwner. Table 8-37 lists and describes measure properties

provided by SelectedMeasure.

**Table 8-37** SelectedMeasure properties

Property name	Value
Name	Name of the currently selected measure
Tag1	Link tag text from Link Tag field 1
Tag2	Link tag text from Link Tag field 2
Tag3	Link tag text from Link Tag field 3
Tag4	Link tag text from Link Tag field 4

Table 8-38 describes measure properties provided by SelectedMeasureAssistant.

**Table 8-38** SelectedMeasureAssistant properties

Property name	Value
Name	Name of the assistant to the measure owner
Email	E-mail address of the assistant to the measure owner

Table 8-39 describes measure properties provided by SelectedMeasureOwner.

**Table 8-39** SelectedMeasureOwner properties

Property name	Value
Name	Name of the owner of the currently selected measure
Email	E-mail address of the measure owner

The following example shows measure properties used in a link URL to send an e-mail message to the measure owner:

```
mailto:<%SelectedMeasureOwner.Email%>  
?subject=<%SelectedMeasure.Name%>
```

## About user properties

User properties provide information about the currently logged-in user. User properties also include link tags, which are custom values defined by the system specialist or user owner. Table 8-40 lists and describes user properties.

**Table 8-40** User properties

Property name	Value	Format and example
Email	E-mail address of the current user	UserName@Company.Type Sales@Actuate.com
LoginId	Login name defined for the Standard authentication method	Text admin asst
Name	Name of the current user	Text Admin Asst
Tag1	Link tag text from Link Tag field 1	Text
Tag2	Link tag text from Link Tag field 2	Text
Tag3	Link tag text from Link Tag field 3	Text
Tag4	Link tag text from Link Tag field 4	Text

The following example shows a measure property as used in a link URL:

```
<%CurrentUser.Email%>
```

### About selected map, period, section, and view properties

Metrics Management provides a single name property for each currently selected map, period, section, and view. The context items providing the name property are SelectedMap, SelectedPeriod, SelectedSection, and SelectedView respectively. The selected period is the period of the data displayed in the currently selected object. Table 8-41 shows examples of the name property for these context items.

**Table 8-41** Examples of selected object names

Context item	Examples of name values
SelectedMap	Critical Measures Performance Matrix
SelectedPeriod	2011, Q1 2011, Mar 2011
SelectedSection	Critical Measures
SelectedView	An Overall View of Performance

### Using a variable in a link destination

To use a variable in a link's destination, you type the variable name in the link's Filename or URL property. Type the variable using the following structure:

```
<%Context item.Property%>
```

The <% and %> characters must enclose the variable. To use multiple variables in the URL, enclose each variable separately in these characters.

For example, the following link opens a Google search on the selected measure:

```
http://www.google.ca/search?hl=en&q=<%SelectedMeasure.Name%>
```

The following e-mail link passes the selected measure owner's e-mail address to the default mail program, and uses the selected measure name as the subject line:

```
mailto:<%SelectedMeasureOwner.Email%>  
?subject=<%SelectedMeasure.Name%>
```

If a property value contains characters that Windows or an application launched by a link misinterprets, the link fails to open the destination as expected. Common examples of these characters include `&`, `%`, `<`, `>`, and space. Add `.AsURL` after the property name to encode these special characters so that Windows or the application interprets them correctly. For example, use `<%SelectedMeasure.Name.AsURL%>`. If the property contains international symbols, such as the Euro symbol, `€`, use `.AsUTF8URL` instead of `.AsURL`.

### How to create a dynamic link using system variables

- 1 Open an existing link or create a new link.
- 2 In File or URL, in Filename or URL do one of the following tasks:

- Use the following syntax to create a URL:

```
http://www.linkaddress.com?item<%ContextItem.Property%>
```

where

- `ContextItem` is the context item, for example, `SelectedMeasure`.
- `Property` is the property of the context item, for example, `Name`.

- Use the following syntax to create an e-mail link:

```
mailto:<%ContextItem.Email%>
```

where `ContextItem` is the context item. Select `SelectedMeasureOwner`, `SelectedMeasureAssistant`, or `CurrentUser`.



- 3 Choose Save.

### Using link tags in a dynamic link

You can use a link tag to pass context information as a variable to a link. Define custom text values for up to four link tags for a database, user, measure, or location to pass the text values to links. For example, you can create an employee number as a link tag value. The number is then available in a link.

For example, if the selected measure's name is "Employee Satisfaction," and the value of the selected measure's Link tag 1 is "Morale", the following link:

```
http://www.google.com/search?hl=en  
&q=<%SelectedMeasure.Name%>+<%SelectedMeasure.Tag1%>  
&btnG=Google+Search&meta=
```



opens the following URL:

```
http://www.google.com/search?hl=en
    &q="Employee Satisfaction"+"Morale"&btnG=Google+Search&meta=
```

### How to create a link tag

- 1 From the Navigation Pane, choose Setup. Then, perform one of the following tasks:
  - Choose Configure to define link tags for the overall database.
  - Choose Locations to define link tags for a specific location.
  - Choose Measures to define link tags for a specific measure.
  - Choose Users to define link tags for a specific user.



2 In the main window, select an object and choose View and Edit.

3 In Setup, choose Options → Link Tags.

4 Type up to four link tag values.



5 Choose Save.

After you have created link tags, you can pass them to URL, filename, application, and e-mail links.

### How to use a link tag

- 1 Open an existing link or create a new link.
- 2 In File or URL, in Filename or URL, use the following syntax to create a URL:

```
http://www.linkaddress.com?item<%ContextItem.TagN%>
```

where

- <ContextItem> can be the SelectedMeasureOwner, CurrentUser, CurrentDatabase, SelectedMeasure, or the SelectedLocation.
- <TagN> is a reference to the link tag, where N is 1 through 4. For example, to pass the Link tag 1 text value, use Tag1.



3 Choose Save.

## About making links available in Metrics Management

To make a link available to Metrics Management users, add the link to a Metrics Management database or a Metrics Management object such as a book section, typically as an info link or an e-mail link. You can make a link available to users in the following locations:

- Book section  
The link is available at the lower left of a section.


- **Dashboard**  
The link is available for the selected measure in the measure’s dashboard.
- **Database**
  - A database information link is available for all users in Information Links on the home page, and from the Links menu in a book section, map, and view.
  - A database e-mail link is available from the E-mail menu in a measure in a view.
- **Home page**  
The link is available in Links on the home page.
- **Location**  
A location info link is available when a specific location is selected in a book section, map, or view under Location Info Links in the Links menu. The link is also available under Location Info Links from a measure and location box in a view.
- **Map in the Map Designer**  
The link is available from a measure and location boxes or text box in a map.
- **Measure**  
A measure link is available when a specific measure is selected in a book section, map, or view under Measure Links in the Links menu. The link is also available under Measure Links from a measure and location box in a view.

You can also attach a map to a book section, and select favorite books, maps, and views for a home page. You do not need to create a link to any of these favorite items.

## Making a link available in Metrics Management

To add a link to an existing book section, measure’s dashboard, database, home page, or location or a measure, use one of the following procedures.

### How to add a link to a book section

- 1 From the Navigation Pane, choose Setup→Sections, and select a section in the main window.
-  2 Choose View and Edit.
- 3 In Options, in Links, choose Edit.
- 4 In Links, add the link to the Selected list.

- 5 To change the order in which links appear in the briefing book, use either Move Up or Move Down to move a selected link, or choose Sort to arrange the links in alphabetical order.



- 6 Choose OK and choose Save.

#### **How to add a link to a measure's dashboard**

- 1 From the Navigation Pane, choose Setup→Measures, and select a measure in the main window.



- 2 Choose View and Edit.

- 3 Choose Options, and choose Links.

- 4 From the Dashboard Link list, select a link.



- 5 Choose Save.

#### **How to add a link to a database**

- 1 From the Navigation Pane, choose Setup→Configure.

- 2 Choose Options, and choose Links.

- 3 In Info links or E-mail links, choose Edit.

- 4 In Links, add the link to the Selected list.

- 5 To change the order in which links appear in Metrics Management, use either Move Up or Move Down to move a selected link, or choose Sort to arrange the links in alphabetical order.



- 6 Choose OK and choose Save.

#### **How to add a link to a home page**



- 1 From the Metrics Management toolbar, choose My Home Page.



- 2 In Links, choose Edit Links.

- 3 In Links, add the link to the Selected list.

- 4 To change the order that links appear in Metrics Management, either choose Move Up or Move Down to move an individual link, or choose Sort to arrange the links in alphabetical order.

- 5 Choose OK.

#### **How to add a link to a location**

- 1 From the Navigation Pane, choose Setup→Locations, and select a location in the main window.



- 2 Choose View and Edit.

- 3 Choose Options, and choose Links.

- 4 In Links, add the link to the Selected list.
- 5 To change the order that links appear in the Links menu, use either Move Up or Move Down to move a selected link, or choose Sort to arrange the links in alphabetical order.



- 6 Choose OK and choose Save.

#### **How to add a link to a measure**

- 1 From the Navigation Pane, choose Setup>Measures, and select a measure in the main window.



- 2 Choose View and Edit.

- 3 Choose Options, and choose Links.

- 4 To add the link as a measure info link:

- 1 In Links, add the link to the Selected list.
- 2 To change the order that links appear in the Links menu, use either Move Up or Move Down to move a selected link, or choose Sort to arrange the links in alphabetical order.
- 3 Choose OK.

- 5 To add a link for a specific location for the measure:

- 1 In Options, and in Links by location, choose Edit.
- 2 In Links, add the link to the Selected list.
- 3 To change the order that links appear in the Links menu, use either Move Up or Move Down to move an individual link, or choose Sort to arrange the links in alphabetical order.
- 4 Choose OK.



- 6 Choose Save.

## **Editing a link**

Use the following procedure to make changes to a link.

#### **How to edit a link**

- 1 In the Navigation Pane, choose Setup>Links, and select a link in the main window.

- 2 Make your changes.



- 3 Choose Save.

## Deleting a link

Use the following procedure to delete a link.

### How to delete a link



- 1 In the Navigation Pane, choose Setup➤Links, and select a link in the main window.
- 2 Choose Delete.
- 3 Choose Yes to confirm.

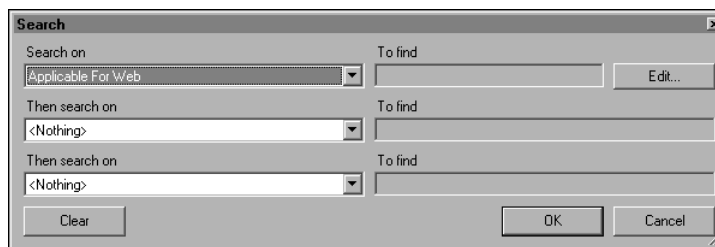
## Searching for Web Client links

The Metrics Management Web Client can open all URL and e-mail links successfully. The Web Client is unable to open some Windows network paths. Links that are not accessible from the Web client are inactive. Users are unable to choose and open inactive links. You can use Metrics Management's search functionality to find links that are accessible to the Metrics Management Web Client.

### How to search for Web Client links



- 1 Choose Setup➤Links. Then, choose Search.
- 2 In Search, as shown in Figure 8-16, select Applicable For Web from the Search on list.



**Figure 8-16** Search function in Metrics Management

- 3 In Applicable For Web, select Yes to find links that Metrics Management Web Client can open. Select No to find links that Metrics Management Web Client cannot open.
- 4 If necessary, select further conditions from Then search on lists to narrow your search results.
- 5 Choose OK. Then, choose OK again.

## Organizing links in Share



In Share, you can access, organize, and share information links. You can open the information links associated with a specific measure and location pair from a view or book. You can also organize and view your information links by category, measure, location, or application. To open the Share window, choose Share from a view or briefing book. Share is context sensitive. For example, the links that open depend on the measure and location pair that you select.

When creating links, create and assign meaningful names to categories. Share uses these categories to group your information links. Create the categories through Setup>Measures and Setup>Locations.

Information links are either document or web links. Links to maps, for example, cannot be opened in Share. Such links appear unavailable.

# 9

## **Metrics Management data objects reference**

This chapter provides an alphabetical listing of all the data objects used by Metrics Management.

---

## About BIRT data objects in Metrics Management

A data object is a BIRT object that contains all the information necessary to connect to an external data source, retrieve data from that data source, and structure the data in a way that supports business analysis. Data objects are similar to DataMarts, which are simplified repositories of data gathered from corporate data sources and designed to address specific business queries.

Data architects or report developers create data objects to provide data for the following items:

- Dashboards, which users create using Actuate Report Studio, a dashboard application on Actuate iServer
- BIRT reports that are created using either Actuate BIRT Report Designer or Actuate Report Studio on iHub

For more information on creating and using data objects, see *Using Actuate BIRT Designer Professional*.

This chapter provides a list of all the data objects that Metrics Management supports. The following sections provide a description of each data object and tables showing the data object's parameters and columns.

---

## HierarchicalMeasureDataFromSection data object

Returns hierarchical calculated index data for a set of measure and location pairs in the specified section. The result only includes data for the comparison series defined for the view on which the section is based. Table 9-1 lists and describes the parameters for HierarchicalMeasureDataFromSection.

**Table 9-1** Parameters for HierarchicalMeasureDataFromSection

Parameter	Description
sectionName	Section name. Mandatory.
periodName	Period from the view's display range used to calculate data. If undefined, the value is the selected period in the view.
measureLevels	Number of submeasure levels to include for each measure and location pair (0-all). Mandatory.
locationLevels	Number of sublocation levels to include for each measure and location pair (0-all). Mandatory.



**Table 9-1** Parameters for HierarchicalMeasureDataFromSection

Parameter	Description
latestAvailable	Whether to display the latest available data. Mandatory.
includeWorstColors	Whether to display the worst submeasure and sublocation colors and range identifiers with measure data.

Table 9-2 lists and describes the columns in HierarchicalMeasureDataFromSection.

**Table 9-2** Columns in HierarchicalMeasureDataFromSection

Column name	Description
MeasureLevel	Measure level (integer number)
ParentMeasureName	Parent measure name
MeasureName	Measure name
LocationLevel	Location level (integer number)
ParentLocationName	Parent location name
LocationName	Location name
PeriodName	Period name
BaseName	Base series name
BaseData	Base series data (floating point number)
CompName	Comparison series name
CompData	Comparison series data (floating point number)
CompVar	Comparison data variance (floating point number)
CompVarPct	Comparison data variance percent (floating point number)
CompIdx	Comparison series index (floating point number)
CompIdxRangeId	Comparison series range identifier
CompIdxColor	Comparison index color (RGB hex number)
CompTxtColor	Comparison text color (RGB hex number)
WorstMsrIdxRangeId	Worst measure range identifier
WorstMsrIdxColor	Worst measure index color
WorstLocIdxRangeId	Worst location range identifier
WorstLocIdxColor	Worst location index color

---

## HierarchicalMeasureDataFromView data object

Returns hierarchical calculated index data for a set of measure and location pairs in the specified view. The result only includes data for the comparison series defined for the view. Table 9-3 lists and describes the parameters for HierarchicalMeasureDataFromView.

**Table 9-3** Parameters for HierarchicalMeasureDataFromView

Parameter	Description
viewName	View name. Mandatory.
filterName	Filter name. Mandatory.
periodName	Period from the view's display range used to calculate data. If undefined, the value is the selected period in the view.
measureLevels	Number of submeasure levels to include for each measure and location pair (0-all). Mandatory.
locationLevels	Number of sublocation levels to include for each measure and location pair (0-all). Mandatory.
latestAvailable	Whether to display the latest available data. Mandatory.
includeWorstColors	Whether to display the worst submeasure and sublocation colors and range identifiers with measure data.

Table 9-4 lists and describes the columns in HierarchicalMeasureDataFromView.

**Table 9-4** Columns in HierarchicalMeasureDataFromView

Column name	Description
MeasureLevel	Measure level (integer number)
ParentMeasureName	Parent measure name
MeasureName	Measure name
LocationLevel	Location level (integer number)
ParentLocationName	Parent location name
LocationName	Location name
PeriodName	Period name
BaseName	Base series name
BaseData	Base series data (floating point number)

**Table 9-4** Columns in HierarchicalMeasureDataFromView

Column name	Description
CompName	Comparison series name
CompData	Comparison series data (floating point number)
CompVar	Comparison data variance (floating point number)
CompVarPct	Comparison data variance percent (floating point number)
CompIdx	Comparison series index (floating point number)
CompIdxRangeId	Comparison series range identifier
CompIdxColor	Comparison index color (RGB hex number)
CompTxtColor	Comparison text color (RGB hex number)
WorstMsrIdxRangeId	Worst measure range identifier
WorstMsrIdxColor	Worst measure index color
WorstLocIdxRangeId	Worst location range identifier
WorstLocIdxColor	Worst location index color

## InitiativesCommentary data object

Returns commentaries for the specified initiative. Table 9-5 lists and describes the parameters for InitiativesCommentary.

**Table 9-5** Parameters for InitiativesCommentary

Parameter	Description
initiativeId	Initiative ID. Mandatory.
richText	Whether commentaries display in rich text format.

Table 9-6 lists and describes the columns in InitiativesCommentary.

**Table 9-6** Columns in InitiativesCommentary

Column name	Description
Id	Commentary ID (integer number)
AuthorName	Author name
Text	Commentary text

*(continues)*

**Table 9-6** Columns in InitiativesCommentary (continued)

Column name	Description
CreationDate	Commentary creation date
LatestModificationDate	Latest commentary change date

## InitiativesDataFromSection data object

Returns initiative data, for example, user defined and calculated data, for all initiatives from the specified section. Table 9-7 lists and describes the parameters for InitiativesDataFromSection.

**Table 9-7** Parameters for InitiativesDataFromSection

Parameter	Description
sectionName	Section name. Mandatory.
includeDetails	Whether to include an initiative's description, creation date, and latest modification date. Mandatory.

Table 9-8 lists and describes the columns in InitiativesDataFromSection.

**Table 9-8** Columns in InitiativesDataFromSection

Column name	Description
Id	Initiative ID (integer number)
Name	Initiative name
Description	Initiative description
MeasureName	Initiative measure name
LocationName	Initiative location name
CreationDate	Initiative creation date
ModificationDate	Initiative latest modification date
IsFavourite	Whether the initiative is a favorite for a user
IsHidden	Whether the initiative is hidden
IsRoot	Whether the initiative is a root initiative
HasChildren	Whether the initiative has children
Level	Initiative level (integer number)
ParentId	Initiative parent ID (integer number)

**Table 9-8** Columns in InitiativesDataFromSection (continued)

<b>Column name</b>	<b>Description</b>
Sequence	Initiative sequence number as a child (integer number)
Weight	Initiative weight (floating point number)
StartDate_A	Actual start date
StartDate_F	Forecasted start date
StartDate_P	Planned start date
StartDate_AvF	Actual vs. Forecasted start date deviation
StartDate_AvF_Range Name	Actual vs. Forecasted start date performance range name
StartDate_AvF_Color	Actual vs. Forecasted start date performance range background color
StartDate_AvF_Text Color	Actual vs. Forecasted start date performance range text color
StartDate_AvP	Actual vs. Planned start date deviation
StartDate_AvP_Range Name	Actual vs. Planned start date performance range name
StartDate_AvP_Color	Actual vs. Planned start date performance range background color
StartDate_AvP_Text Color	Actual vs. Planned start date performance range text color
StartDate_FvP	Forecasted vs. Planned start date deviation
StartDate_FvP_Range Name	Forecasted vs. Planned start date performance range name
StartDate_FvP_Color	Forecasted vs. Planned start date performance range background color
StartDate_FvP_Text Color	Forecasted vs. Planned start date performance range text color
EndDate_A	Actual end date
EndDate_F	Forecasted end date
EndDate_P	Planned end date
EndDate_AvF	Actual vs. Forecasted end date deviation
EndDate_AvF_Range Name	Actual vs. Forecasted end date performance range name

*(continues)*

**Table 9-8** Columns in InitiativesDataFromSection (continued)

<b>Column name</b>	<b>Description</b>
EndDate_AvF_Color	Actual vs. Forecasted end date performance range background color
EndDate_AvF_Text Color	Actual vs. Forecasted end date performance range text color
EndDate_AvP	Actual vs. Planned end date deviation
EndDate_AvP_Range Name	Actual vs. Planned end date performance range name
EndDate_AvP_Color	Actual vs. Planned end date performance range background color
EndDate_AvP_Text Color	Actual vs. Planned end date performance range text color
EndDate_FvP	Forecasted vs. Planned end date deviation
EndDate_FvP_Range Name	Forecasted vs. Planned end date performance range name
EndDate_FvP_Color	Forecasted vs. Planned end date performance range background color
EndDate_FvP_Text Color	Forecasted vs. Planned end date performance range text color
BudgetDate_A	Actual budget
BudgetDate_F	Forecasted budget
BudgetDate_P	Planned budget
BudgetDate_AvF	Actual vs. Forecasted budget deviation
BudgetDate_AvF_RangeName	Actual vs. Forecasted budget performance range name
BudgetDate_AvF_Color	Actual vs. Forecasted budget performance range background color
BudgetDate_AvF_TextColor	Actual vs. Forecasted budget performance range text color
BudgetDate_AvP	Actual vs. Planned budget deviation
BudgetDate_AvP_RangeName	Actual vs. Planned budget performance range name
BudgetDate_AvP_Color	Actual vs. Planned budget performance range background color
BudgetDate_AvP_TextColor	Actual vs. Planned budget performance range text color

**Table 9-8** Columns in InitiativesDataFromSection (continued)

Column name	Description
BudgetDate_FvP	Forecasted vs. Planned budget deviation
BudgetDate_FvP_RangeName	Forecasted vs. Planned budget performance range name
BudgetDate_FvP_Color	Forecasted vs. Planned budget performance range background color
BudgetDate_FvP_TextColor	Forecasted vs. Planned budget performance range text color
PercentComplete	Percent completed (floating point number)
Rating	User rating (floating point number)
Rating_RangeName	User rating performance range name
Rating_Color	User rating performance range background color
Rating_TextColor	User rating performance range text color

## ListOfObjects data object

Returns a list of Metrics Management objects for the specified object kind. Table 9-9 lists and describes the parameters for ListOfObjects.

**Table 9-9** Parameters for ListOfObjects

Parameter	Description
objectKind	Object kind. Mandatory.
includeDescription	Whether to display the object's description.

Table 9-10 lists and describes the columns in ListOfObjects.

**Table 9-10** Columns in ListOfObjects

Column name	Description
Id	Object ID (integer number)
Name	Object name
Description	Object description

---

## ListOfPeriodsFromSection data object

Returns the list of periods valid for the view on which the specified section is based. The list only includes periods made available by the view's display range. Table 9-11 lists and describes the parameters for ListOfPeriodsFromSection.

**Table 9-11** Parameters for ListOfPeriodsFromSection

Parameter	Description
sectionName	Section name. Mandatory.
includeDescription	Whether to display the period description.

Table 9-12 lists and describes the columns in ListOfPeriodsFromSection.

**Table 9-12** Columns in ListOfPeriodsFromSection

Column name	Description
Id	Period object ID (integer number)
Name	Period name
Description	Period description

---

## ListOfSeriesFromSection data object

Returns the list of series defined in the specified section. The base series displays first in the list followed by the comparison series. Table 9-13 lists and describes the parameters for ListOfSeriesFromSection.

**Table 9-13** Parameters for ListOfSeriesFromSection

Parameter	Description
sectionName	Section name. Mandatory.
includeDescription	Whether to display the series description.

Table 9-14 lists and describes the columns in ListOfSeriesFromSection.

**Table 9-14** Columns in ListOfSeriesFromSection

Column name	Description
Id	Series object ID (integer number)
Name	Series name
Description	Series description



---

## MeasureCommentariesFromSection data object

Returns commentaries for the measure and location pairs defined in the specified section. Commentaries return for all periods in the section's display range. Table 9-15 lists and describes the parameters for MeasureCommentariesFromSection.

**Table 9-15** Parameters for MeasureCommentariesFromSection

Parameter	Description
sectionName	Section name. Mandatory.
commentaryTypes	The commentary types to display. The list can include multiple quoted commentary type names separated by commas. If undefined, the value is the commentary type in the view on which the section is based.
richText	Whether to display commentaries in rich text format.

Table 9-16 lists and describes the columns in MeasureCommentariesFromSection.

**Table 9-16** Columns in MeasureCommentariesFromSection

Column name	Description
MeasureName	Measure name
LocationName	Location name
PeriodName	Period name
CommentaryType	Commentary type name
CommentaryText	Commentary text
SignatureName	User name for the latest commentary change
SignatureTime	Time stamp for the latest commentary change

---

## MeasureDataFromSection data object

Returns extended calculated index data for the measure and location pairs defined in the specified section. The result only includes data for the comparison series and periods defined in the view on which the section is based. Table 9-17 lists and describes the parameters for MeasureDataFromSection.

**Table 9-17** Parameters for MeasureDataFromSection

Parameter	Description
sectionName	Section name. Mandatory.
periodOnly	Whether to calculate data with consolidation by periods. By default, the value is false.
latestAvailable	Whether to calculate the result using the latest available data. By default, the value is true.
includeWorstColors	Whether to display the worst submeasure and sublocation colors and range identifiers with measure data.

Table 9-18 lists and describes the columns in MeasureDataFromSection.

**Table 9-18** Columns in MeasureDataFromSection

Column name	Description
MeasureName	Measure name
LocationName	Location series name
PeriodName	Period name
BaseName	Base series name
BaseData	Base series data (floating point number)
CompName	Comparison series name
CompData	Comparison series data (floating point number)
CompVar	Comparison data variance (floating point number)
CompVarPct	Comparison data variance percent (floating point number)
CompIdx	Comparison series index (floating point number)
CompIdxRangeId	Comparison series range identifier
CompIdxColor	Comparison index color (RGB hex number)
CompTxtColor	Comparison text color (RGB hex number)
WorstMsrIdxRangeId	Worst measure range identifier
WorstMsrIdxColor	Worst measure index color
WorstLocIdxRangeId	Worst location range identifier
WorstLocIdxColor	Worst location index color

---

## MeasureDataFromView data object

Returns extended calculated index data for a set of measure and location pairs in the specified view. The result only includes data for the comparison series and periods defined in the view. Table 9-19 lists and describes the parameters for MeasureDataFromView.

**Table 9-19** Parameters for MeasureDataFromView

Parameter	Description
viewName	View name. Mandatory.
filterName	The filter used to pull measures and locations from the view. If undefined, only the view's top measure and location are used to calculate index data.
periodOnly	Whether to calculate data with consolidation by periods. By default, the value is false.
latestAvailable	Whether to calculate the result using the latest available data. By default, the value is true.
includeWorstColors	Whether to display the worst submeasure and sublocation colors and range identifiers with measure data.

Table 9-20 lists and describes the columns in MeasureDataFromView.

**Table 9-20** Columns in MeasureDataFromView

Column name	Description
MeasureName	Measure name
LocationName	Location series name
PeriodName	Period name
BaseName	Base series name
BaseData	Base series data (floating point number)
CompName	Comparison series name
CompData	Comparison series data (floating point number)
CompVar	Comparison data variance (floating point number)
CompVarPct	Comparison data variance percent (floating point number)
CompIdx	Comparison series index (floating point number)

*(continues)*

**Table 9-20** Columns in MeasureDataFromView (continued)

Column name	Description
CompIdxRangeId	Comparison series range identifier
CompIdxColor	Comparison index color (RGB hex number)
CompTxtColor	Comparison text color (RGB hex number)
WorstMsrIdxRangeId	Worst measure range identifier
WorstMsrIdxColor	Worst measure index color
WorstLocIdxRangeId	Worst location range identifier
WorstLocIdxColor	Worst location index color

## MeasureIndexRangesAsTableFromSection data object

Returns index ranges in a table for the measures in the specified section. Table 9-21 lists and describes the parameters for MeasureIndexRangesAsTableFromSection.

**Table 9-21** Parameters for MeasureIndexRangesAsTableFromSection

Parameter	Description
sectionName	Section name. Mandatory.

Table 9-22 lists and describes the columns in MeasureIndexRangesAsTableFromSection.

**Table 9-22** Columns in MeasureIndexRangesAsTableFromSection

Column name	Description
MeasureName	Measure name
RangeId	Range ID (integer number)
EndsAt	Range upper limit (double number)
BkgColor	Background color (RGB hex number)
TxtColor	Text color (RGB hex number)
Identifier	Range text identifier

---

## SeriesDataFromSection data object

Returns series data for a set of measure and location pairs from the specified section. The result only includes data for the series and periods valid for the section. Table 9-23 lists and describes the parameters for SeriesDataFromSection.

**Table 9-23** Parameters for SeriesDataFromSection

Parameter	Description
sectionName	Section name. Mandatory.
periodOnly	Whether to consolidate data with consolidation by periods. Mandatory.
includeLatest Available	Whether the series data includes the latest available values.

Table 9-24 lists and describes the columns in SeriesDataFromSection.

**Table 9-24** Columns in SeriesDataFromSection

Column name	Description
MeasureName	Measure name
LocationName	Location name
PeriodName	Period name
SeriesName	Series name
Data	Data (floating point number)
DataVar	Data variance (floating point number)
DataVarPct	Data variance percent (floating point number)
DataLatest	Latest data (floating point number)
DataLatestVar	Latest data variance (floating point number)
DataLatestVarPct	Latest data variance percent (floating point number)



# Administering servers and databases

This chapter discusses the following topics:

- About dataflow architecture and server operations
- About server and database references
- Maintaining servers
- Maintaining databases
- About advanced auditing
- About Metrics Management log files
- About the Measure Detail report
- About synchronization
- About files that Metrics Management creates or modifies

---

## About dataflow architecture and server operations

Figure 10-1 shows a high-level overview of how the Metrics Management Server interacts concurrently with other dataflow channels to provide data for reporting software.

Server and database maintenance operations are performed in Servers and Databases, shown in Figure 10-2. Here you can create databases, create database and server references, and perform server and database maintenance.

To perform operations in Server Tools and Database Tools with User Account Control (UAC) enabled, ensure that Metrics Management is allowed elevated permissions by running Metrics Management as an administrator.

Choose one of the tools at the bottom of the Navigation Pane to display all available options. Choose

- Setup Tools to manage, create, and delete databases, and manage logical references to databases and servers.
- Server Tools to display information about the server, manage the Windows service and all configurable parameters for the server, and manage named users and data access only users.
- Database Tools to display information about a specific database, including current status and properties, manage the current status of a database, and perform database backup and maintenance functions.

Servers and Databases contains the following sections:

- Navigation Pane displays the available functions for the selected tool.
- Name displays the server and databases available for you to manage.
- Type displays whether this is a Standard, Oracle, or SQL Server database.
- Path displays the path to the database.
- Login opens the login dialog box for the selected database.
- Source displays the path to a particular database.

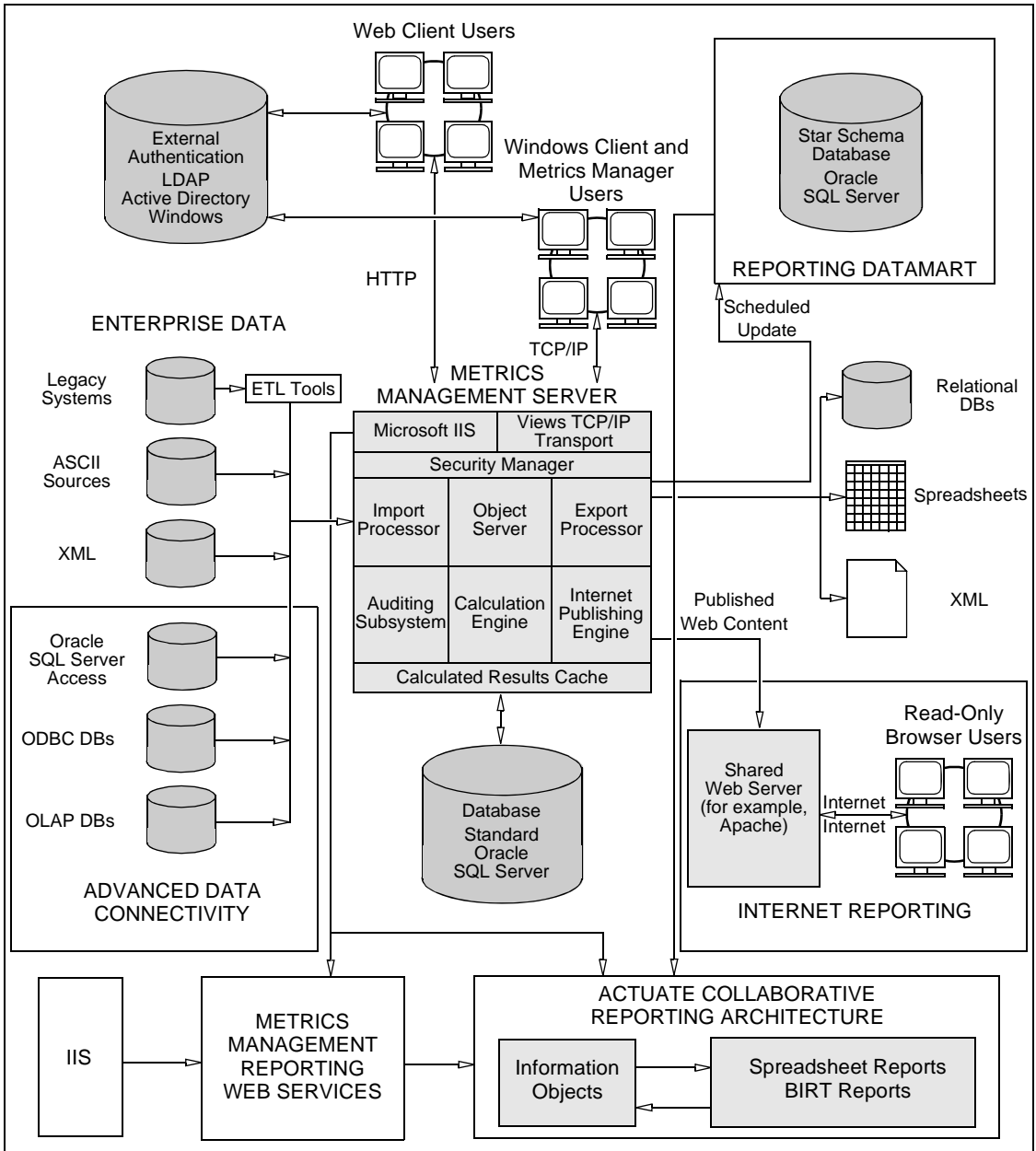
### How to open Servers and Databases

Launch Metrics Management and choose File→Open Servers and Databases. If prompted, choose Yes to close the currently open database.

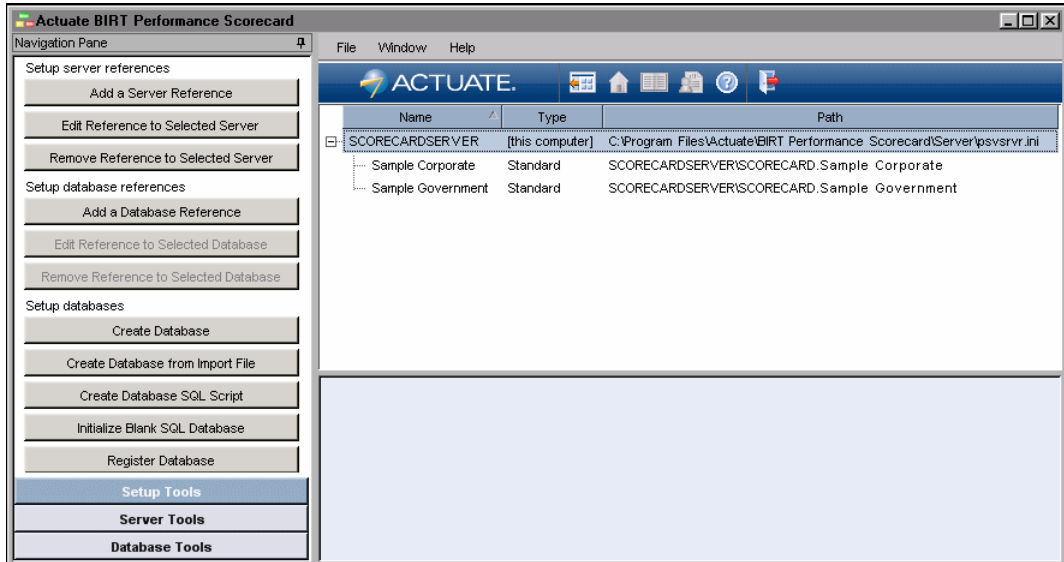
### How to show the database available on the server

- ☞ The server name section of Servers and Databases displays the server to which you are connecting. Depending on your license, multiple servers can appear in the list. Choose the plus sign beside a server name to show the list of databases available on that server.





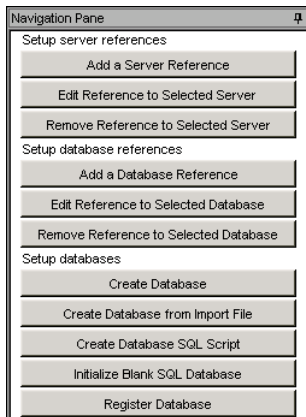
**Figure 10-1** Metrics Management dataflow architecture



**Figure 10-2** Servers and Databases

## About server and database references

Setup Tools, shown in Figure 10-3, support adding, editing, or removing server and database references, and creating new databases. Server references show the location of the appropriate INI file. Database references list the name and location of each database. Editing or removing a database reference does not affect the database itself. Use Server and Databases to choose which database to access.



**Figure 10-3** The Setup Tools menu in the Navigation Pane

You access Setup Tools by choosing File➤Servers and Databases. The Server name section of Servers and Databases displays the server that you are connecting to and below that a list of the databases available on the server.

## Working with server references

In Setup server references, the system specialist can add a new server to Metrics Management by creating a reference or link to that server. Setup server references also supports editing and deleting server references.

### Adding a server reference

Creating a server reference adds a Metrics Management server to the system. Metrics Management servers appear in the main window in File➤Open Servers and Databases.

#### How to add a server reference

- 1 Choose File➤Open Servers and Databases.
- 2 In the Navigation Pane, choose Setup Tools➤Add a Server Reference.
- 3 In Server configuration file, type the path (UNC or drive letter) to the psvsrvr.ini file on the Metrics Management server, or choose Browse and navigate to this location.



- 4 Choose Apply.

The new Metrics Management server appears in the list of available servers. Share the psvsrvr.ini file with Metrics Management users on a read-only basis.

### Editing a server reference

After renaming or moving a Metrics Management server, modify the server initialization file on which the server reference is based.

#### How to edit a server reference

- 1 Choose File➤Open Servers and Databases.
- 2 Select a server from the list of servers in the main window.
- 3 In the Navigation Pane, choose Setup Tools➤Edit Reference to Selected Server.
- 4 In Server configuration file, type the new path (UNC or drive letter) to the psvsrvr.ini file on the Metrics Management server or choose Browse and navigate to this location.



- 5 Choose Apply.

## Deleting a server reference

Deleting a server's reference information removes the server from Metrics Management.

### How to delete a server reference

- 1 Choose File>Open Servers and Databases.
- 2 Select a server from the list of servers in the main window.
- 3 In the Navigation Pane, choose Setup Tools>Remove Reference to Selected Server.
- 4 When prompted to confirm this action, choose Yes.

The listed server reference is removed from the list of servers.

## Working with database references

In Setup database reference, the system specialist can add an existing database to Metrics Management by creating a reference or link to that database. Setup database reference also supports editing and deleting database references.

### Creating a database reference

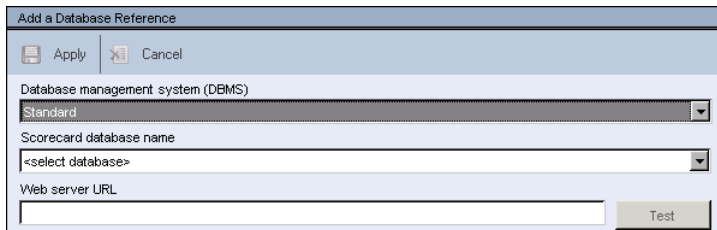
Creating a database reference adds an existing Standard, SQL Server, or Oracle database to Metrics Management.

#### How to add a database reference

- 1 Choose File>Open Servers and Databases.
- 2 Select a server from the list of servers in the main window.
- 3 In the Navigator, choose Setup Tools>Setup database references>Add a database reference.

#### How to specify a reference to a Standard database

- 1 In Add a database reference, in Database management systems (DBMS), select Standard, as shown in Figure 10-4.



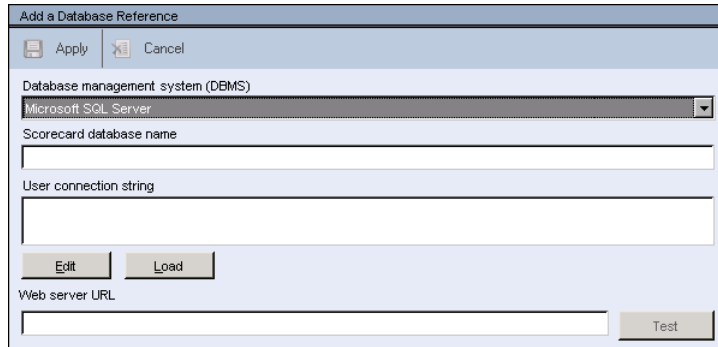
The screenshot shows a dialog box titled "Add a Database Reference". At the top, there are "Apply" and "Cancel" buttons. Below that, there are three input fields: "Database management system (DBMS)" with a dropdown menu showing "Standard", "Scorecard database name" with a dropdown menu showing "<select database>", and "Web server URL" with a text input field. A "Test" button is located at the bottom right of the dialog box.

**Figure 10-4** Adding a reference to a Standard database

- 2 In Metrics Management database name, select a database name.
- 3 In Web server URL, to redirect this database to another Metrics Management web server, provide the URL for a Metrics Management web server. For information about redirecting a server request, see *Installing and Configuring Metrics Management*.

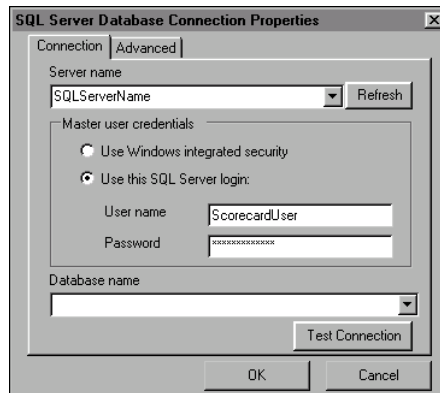
**How to specify a reference to a SQL Server database**

- 1 In Add a database reference, in Database management systems (DBMS), select Microsoft SQL Server, as shown in Figure 10-5.



**Figure 10-5** Adding a reference to a SQL Server database

- 2 In Metrics Management database name, provide the name of the Metrics Management database on a SQL Server.
- 3 In User connection string, perform one of the following tasks:
  - To create a connection to the SQL Server database, choose Edit. In SQL Server Database Connection Properties, shown in Figure 10-6, provide the following parameters. Then, choose OK.

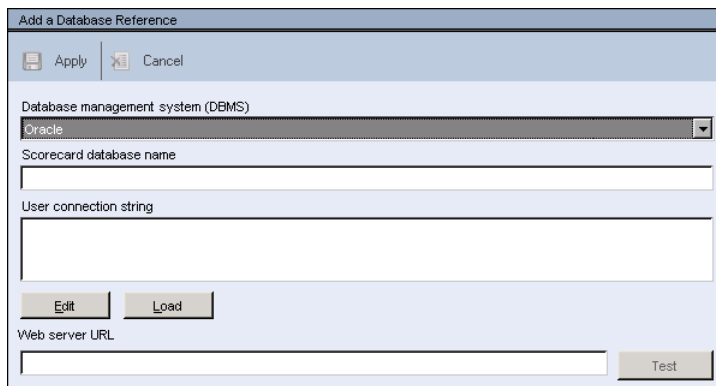


**Figure 10-6** Specifying SQL Server connection settings

- 1 In Connection, from Server name, select the SQL Server name.
- 2 In Database user credentials, provide credentials to log on to SQL Server by performing one of the following tasks:
  - To log on using Windows credentials, select Use Windows integrated security. The account running the Metrics Management Server must have the appropriate rights to SQL Server.
  - To log on using SQL Server user credentials, select Use this SQL Server login. Then, provide the appropriate user name and password.
- 3 In Database name, select the name of the Metrics Management database on SQL Server.
- 4 Choose Test Connection. In the confirmation message, choose OK.
  - To load a connection file, choose Load. In Select Data Link File, navigate to the connection file. Then, choose Open.
- 4 In Web server URL, to redirect this database to another Metrics Management web server, provide the URL for a Metrics Management web server. For information about redirecting a server request, see *Installing and Configuring Metrics Management*.

#### How to specify a reference to an Oracle database

- 1 In Add a database reference, in Database management systems (DBMS), select Oracle, as shown in Figure 10-7.

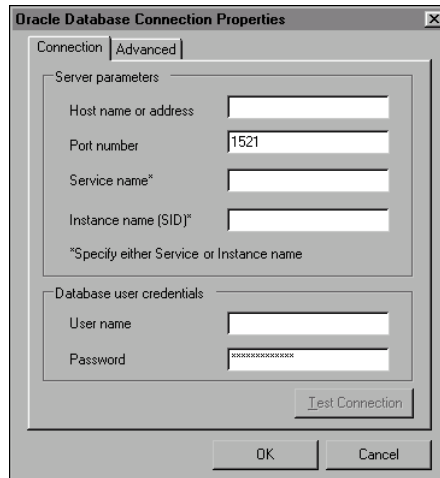


**Figure 10-7** Adding a reference to a Standard database

- 2 In Metrics Management database name, provide the name of the Metrics Management database in Oracle.
- 3 In User connection string, perform one of the following tasks:

- To create a connection to the Oracle database server, choose Edit. In Oracle Database Connection Properties, shown in Figure 10-8, provide the following parameters. Then, choose OK.
  - 1 In Server parameters, in Host name or address, provide the name or IP address of the Oracle database server machine.
  - 2 In Port number, provide the port number for Metrics Management to communicate with the Oracle database server.
  - 3 Perform one of the following tasks:
    - In Service name, provide the Oracle service name. The service name is the name of Oracle Service on the Oracle database server.
    - In Instance name (SID), provide the instance name or system ID of the Oracle database.

If both server parameters are provided, Metrics Management connects using the Oracle service name.
  - 4 In Database user credentials, provide the Metrics Management database user name and password.
  - 5 Choose Test Connection. Then, choose OK.



**Figure 10-8** Specifying Oracle database connection settings

- To load a connection file, choose Load. In Select Data Link File, navigate to the connection file. Then, choose Open.
- 4 In Web server URL, to redirect this database to another Metrics Management web server, see *Installing and Configuring Metrics Management*.

### How to apply the database reference




Choose Apply.

The database name and directory location displays below its server name in the main window.

### Editing a database reference

When a database is moved, the database reference information must be updated. Any users must edit their local database references. Editing server database entries could affect all other users.

#### How to edit a database reference


- 1 Choose File➤Open Servers and Databases.
- 2  In the main window, choose the plus sign to display the databases on the selected server. The list of databases displays.
- 3 Select the database to edit and choose Setup Tools.
- 4 Choose Edit reference to selected database.
- 5 Change any settings, for example change the database name or path.
- 6 Choose OK.

The server list reflects your changes. Note that database names are not case-sensitive. Therefore, you cannot save a database reference if changing only the case in a database name.

### Deleting a database reference

Deleting a database reference does not remove any database files. This option only deletes the link from the database list. Any user can delete a link that references a database from the list of database reference links.

#### How to delete a database reference

- 1 Choose File➤Open Servers and Databases.
- 2  In the main window, choose the plus sign to display the databases on the selected server. The list of databases displays.
- 3 Select the database reference to delete.
- 4 Choose Remove reference to selected database.
- 5 On the prompt to confirm this action, choose Yes.

The selected database reference deletes from Metrics Management.



## About creating databases

You can create a database in Metrics Management by importing a binary export file, or from SQL scripts. For information about creating a new database in Metrics Management, see “Creating a Metrics Management database” in Chapter 1, “Creating and configuring a database.”

### Creating a new database from an import file

You can create a database by importing a binary export file. For more information about creating a binary export file, see “Exporting a database,” later in this chapter. This function creates a completely new database and adds the database reference to your list of available databases.

You must provide a database license if your organization purchased the database licensing model. A license file is not required if you use a server license.

#### How to create a new database from an import file

- 1 Choose File→Open Servers and Databases.
- 2 In the Navigation Pane, choose Setup Tools→Create Database from Import File.
- 3 In Create Database from Import File, shown in Figure 10-9, provide a name for the new database.

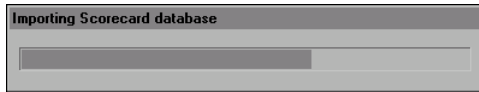
**Figure 10-9** Creating a database from an import file

- 4 In Import, choose Browse. In Select import file path, locate and select the import file. Then, choose Open.
- 5 If your organization purchased the database licensing model, in Import, perform one of the following tasks:

- To use the database license file from the imported database, select Use database license from import file. This optional is available for standard databases only.
  - To provide a new database license, deselect Use database license from import file. Then, in Database license, choose Browse. In Upload new license to Metrics Management, locate and select the database license file and choose Open.
- 6 In Import, if the SBF file contains audit data, select Import Audit part of the database to import audit data.
  - 7 In Database server settings, in Type, select the type of database to create from the list. For information about specifying parameters for a SQL Server or Oracle database, see “Configuring a database” in Chapter 1, “Creating and configuring a database.”



- 8 Choose Create. The progress of the import appears, as shown in Figure 10-10. In the confirmation message, choose OK.



**Figure 10-10** The progress of the import

On completion, the new imported database is available to Metrics Management.

## Creating a new database manually using a SQL script

Metrics Management supports creating a new Metrics Management database in Oracle or SQL Server using a SQL script. Your database administrator (DBA) runs the script manually against an Oracle or SQL Server database. The DBA can choose to examine the contents of the script before creating the database. Consider initializing a Metrics Management database using this method in either SQL Server or Oracle for any of the following reasons:

- Your corporate policy prevents the SQL Server or Oracle DBA from sharing SQL Server or Oracle master user privileges with the Metrics Management system specialist.
- Your SQL Server or Oracle DBA must review the database table structure before creating the Metrics Management database.
- You plan to import Metrics Management data on top of the empty shell at a later time.

To create a new database manually using SQL scripts, you must perform the following tasks in this order:

- Create a database SQL script.

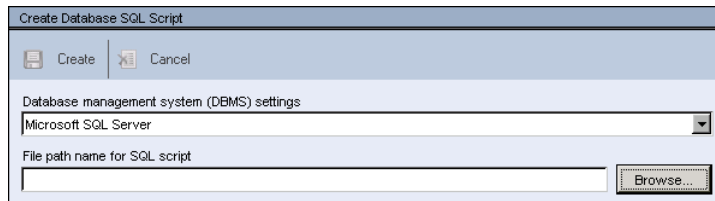
- Create a blank Metrics Management database.
- Initialize a blank SQL database.

## Creating a database SQL script

In Metrics Management, create either a SQL Server or Oracle database SQL script.

### How to create a database SQL script

- 1 Choose File→Open Servers and Databases.
- 2 In the Navigation Pane, choose Setup Tools→Create Database SQL Script.
- 3 In Create Database SQL Script, shown in Figure 10-11, in Database management system (DBMS) settings, select either Microsoft SQL Server or Oracle.



**Figure 10-11** Creating a database SQL script

- 4 In File path name for SQL script, choose Browse. Then, navigate to a location to save the script. In File name, provide a file name. Then, choose Save.
- 5 Choose Create.



## Creating a blank Metrics Management database

In Oracle or SQL, create the empty database container, and execute the database script against the container.

### How to create a blank Metrics Management database

- 1 In Oracle or SQL, create an empty database container.
- 2 Optionally, in a text or SQL editor, open the SQL script. Examine the SQL script and table structure, and confirm that the SQL code conforms with your best practices.
- 3 Execute the SQL script against the blank SQL Server or Oracle database using a tool such as SQL Server Management Studio.

## Initializing a blank Metrics Management database

In Metrics Management, initialize the blank Metrics Management database. Initializing the blank Metrics Management database populates the database with non-editable Metrics Management system objects, such as periods.

## How to specify the database name and administrator credentials

Using a Standard database, a new administrator password must be at least eight characters, is case-sensitive, and can contain special characters. In Metrics Management database settings, name the Metrics Management database, and change the administrator password.

- 1 In the Navigation Pane, choose Setup Tools→Initialize Blank SQL Database.
- 2 In Initialize Blank SQL Database, shown in Figure 10-12, in Metrics Management database settings, provide the name of the blank database created from the SQL script.

The screenshot shows the 'Initialize Blank SQL Database' dialog box. It is divided into three main sections. The top-left section, 'BIRT Performance Scorecard database settings', contains four input fields: 'Scorecard database name' (empty), 'Administrator login name' (filled with 'sysadmin'), 'Password' (filled with asterisks), and 'Re-enter password' (filled with asterisks). The top-right section, 'Database calendar', has a checked 'Create calendar' checkbox, 'Start year' (2009), 'End year' (2016), and 'Year starts on first day of' (January). It also features checkboxes for 'Years', 'Quarters', 'Months', and 'Days', each with a corresponding dropdown menu. The bottom section, 'Database server settings', has a 'Type' dropdown set to 'Microsoft SQL Server' and a 'User connection string' field. At the bottom of the dialog are 'Apply', 'Cancel', 'Edit', and 'Load' buttons.

**Figure 10-12** Initializing a blank SQL database

- 3 In Administrator login name, leave Administrator unchanged.
- 4 In Password and Reenter password, type a password for the Administrator user.

## How to provide a database license file

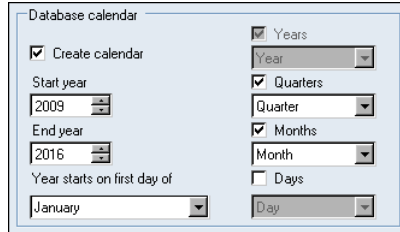
If your organization purchased the database license model, provide the database license file. Otherwise, Database license appears unavailable.

- 1 To provide the license, in Database license, choose Browse.
- 2 In Upload new license to Metrics Management, locate and select the database license file. Then, choose Open.

## How to specify calendar settings

In Database Calendar, as shown in Figure 10-13, ensure that Create calendar is selected and perform any of the following tasks:

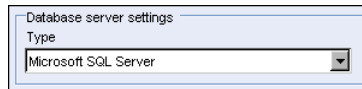
- To define start and end dates for the database, select a year in Start year and End year.
- To create a fiscal year that begins in a month other than January, in Year starts on first day of, select a start month.
- To make a period type available in the database, select Quarters, Months, or Days. You cannot deselect the Years period type because is it mandatory.



**Figure 10-13** Defining database calendar settings

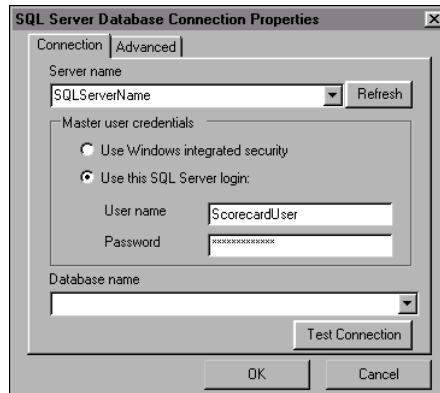
### How to specify SQL Server database settings

- 1 In Database server settings, in Type, select Microsoft SQL Server as the database type, as shown in Figure 10-14.



**Figure 10-14** Selecting the Microsoft SQL Server database type

- 2 In User connection string, perform one of the following tasks:
  - To create a connection to the SQL Server database, choose Edit. In SQL Server Database Connection Properties, shown in Figure 10-15, provide the following parameters. Then, choose OK.

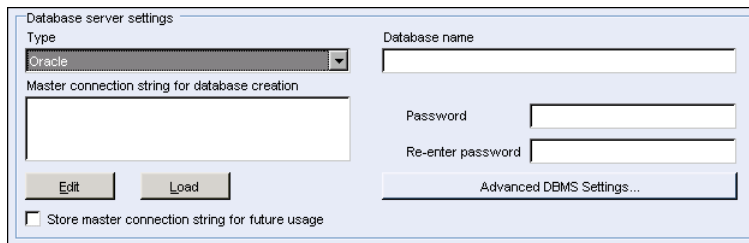


**Figure 10-15** Specifying SQL Server connection settings

- 1 In Connection, from Server name, select the SQL Server name.
  - 2 In Database user credentials, provide credentials to log on to SQL Server by performing one of the following tasks:
    - To log on using Windows credentials, select Use Windows integrated security. The account running the Metrics Management Server must have the appropriate rights to SQL Server.
    - To log on using SQL Server user credentials, select Use this SQL Server login. Then, provide the appropriate user name and password.
  - 3 In Database name, select the name of the Metrics Management database on SQL Server.
  - 4 Choose Test Connection. In the confirmation message, choose OK.
- To load a connection file, choose Load. In Select Data Link File, navigate to the connection file. Then, choose Open.

#### How to specify Oracle database settings

- 1 In Database server settings, in Type, select Oracle as the database type, as shown in Figure 10-16.



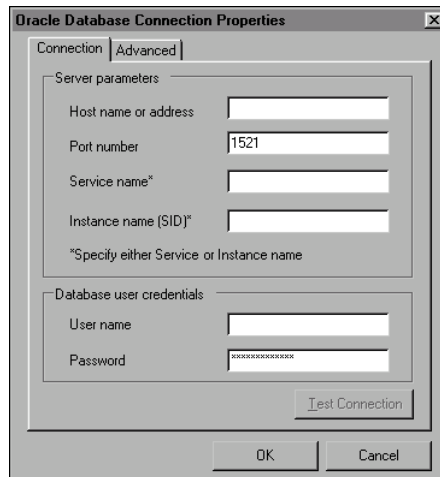
**Figure 10-16** Selecting the Oracle database type

- 2 In User connection string, perform one of the following tasks:
  - To create a connection to the Oracle database server, choose Edit. In Oracle Database Connection Properties, shown in Figure 10-17, provide the following parameters. Then, choose OK.
    - 1 In Server parameters, in Host name or address, provide the name or IP address of the Oracle database server machine.
    - 2 In Port number, provide the port number for Metrics Management to communicate with the Oracle database server.
    - 3 Perform one of the following tasks:
      - In Service name, provide the Oracle service name. The service name is the name of Oracle Service on the Oracle database server.

- In Instance name (SID), provide the instance name or system ID of the Oracle database.

If both server parameters are provided, Metrics Management connects using the Oracle service name.

- 4 In Database user credentials, provide the Metrics Management database user name and password.
- 5 Choose Test Connection. Then, choose OK.



**Figure 10-17** Specifying Oracle database connection settings

- To load a connection file, choose Load. In Select Data Link File, navigate to the connection file. Then, choose Open.

### How to initialize the blank Metrics Management database



Choose Apply. Metrics Management initializes the database. Choose OK to accept the confirmation message. In the main window, the new database appears under the server on which the database was created.

## Uploading a Metrics Management license file

The system specialist uses Register Metrics Management to upload a server or database license to Metrics Management. Optionally, use Register Metrics Management to view the following information for a Metrics Management server or database license:

- License model type, either server or database, owner, and expiration date
- Enabled license options, such as Active Web Publishing

- Maximum number of named, concurrent, act as administrator named, act as administrator concurrent, and data access only users
- Maximum number of databases and processors

Uploading a license is available in the Windows Client only.

### How to upload a Metrics Management license

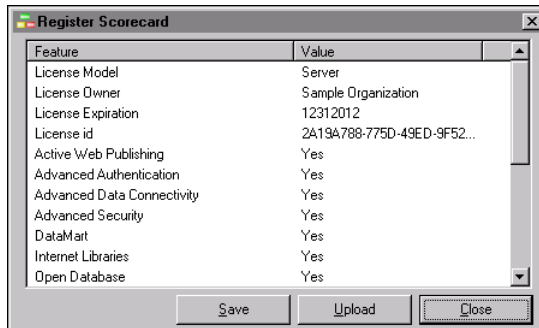
1 Choose File ➤ Open Servers and Databases.



2 In the main window, perform one of the following tasks:

- To upload a server license, select a server.
- To upload a database license, choose the plus sign to display the databases on the selected server. Then, select a database.

3 Choose Help ➤ Register Metrics Management. In Register Metrics Management, license information appears, as shown in Figure 10-18. Choose Upload.



**Figure 10-18** Viewing license information

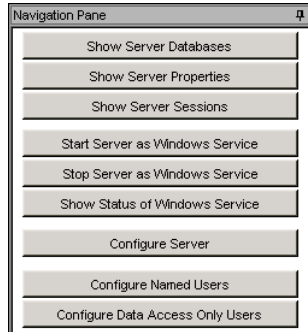
4 In Upload new license to Metrics Management, navigate to a Metrics Management license file. Then, choose Open. A message indicates that the license uploaded.

5 To apply the license file changes to Metrics Management, restart the Metrics Management Server and Internet Information Services (IIS).

## Maintaining servers

Application servers are often housed in a centralized location which may not be physically accessible to the system specialist. Server Tools, shown in Figure 10-19, support performing common Metrics Management server tasks from a workstation, such as viewing the status of server databases and controlling the service on that server.





**Figure 10-19** The Server Tools menu in the Navigation Pane

You access Server Tools by choosing File→Open Servers and Databases. The server name section of the main window displays a list of servers to which you are connecting. Each server name can be expanded to show the databases available on that server.

To perform operations in Server Tools with User Account Control (UAC) enabled, ensure that Metrics Management is allowed elevated permissions by running Metrics Management as an administrator.

## Performing remote server operations

You can perform most server console tasks from a remote workstation. Actuate strongly recommends that you restrict access to these commands by enforcing Windows authentication on server and database tools. For more information, see “Configuring a server,” later in this chapter.

## Showing databases on a server

You can display a list of all the databases on a specific server and view runtime properties for the databases. You can view the following information for the selected server’s databases:

- Database process IDs on the Metrics Management Server
- Date and time serving began
- Database state, one of Serving, Available, Not Available
- Database name
- Database management system (DBMS) type
- Database source or path
- Number of active sessions
- Port number used to connect to the database

### **How to show a server's databases**

- 1 Choose File→Open Servers and Databases.
- 2 Select your server from the list of servers in the main window, and choose the Server Tools tab.
- 3 Choose Show Server Databases.

## **Showing properties on a server**

You can display properties for a specific server, which includes:

- Number of databases being served
- Language of the server
- Licensing model type
- Name of user who is licensed
- Total number of login requests
- Process ID on Server
- Location of the public list of server databases
- Registration and serial number information
- Relogin requests
- Status of remote administration
- Number of active sessions
- Maximum number of active sessions (user license limit)
- Time the server process was started
- Communication channel information

### **How to show a server's properties**

- 1 Choose File→Open Servers and Databases.
- 2 Select your server from the list of servers in the main window, and choose the Server Tools tab.
- 3 Choose Show Server Properties.

## **Showing sessions on a server**

You can display a list of active user sessions on a server. Depending on your license model type, display sessions by server or by database. Server sessions displays:

- Session ID
- Type of session
- Logged-in users
- Type of client being accessed
- Time session was created
- Database being accessed
- User's host name

#### **How to show a server's sessions**

- 1 Choose File→Open Servers and Databases.
- 2 Choose Server Tools.
- 3 In the main window, perform one of the following tasks:
  - If your organization purchased a database license, select a server from the list of servers. Then, select a database.
  - If your organization purchased a server license, select a server from the list of servers.
- 4 Choose Show Server Sessions.

## **Starting the server as a Windows service**

The system specialist can start the Metrics Management server using an installed and configured service.

#### **How to start the server as a Windows service**

- 1 Choose File→Open Servers and Databases.
- 2 Select your server from the list of servers in the main window, and choose Server Tools.
- 3 To start the selected Metrics Management server as a Windows service choose Start Server as Windows Service.
- 4 Choose Yes to confirm.
- 5 On the message indicating that the service is started, choose OK.

## **Stopping the server as a Windows service**

The system specialist can use Stop Server as Windows Service to stop the selected Metrics Management server.

### **How to stop the server as a Windows service**

- 1 Choose File→Open Servers and Databases.
- 2 Select a server from the list of servers in the main window, and choose Server Tools.
- 3 To stop the selected server service, choose Stop Server as Windows Service.
- 4 Choose Yes to confirm.
- 5 On the message indicating that the service is stopped, choose OK.

### **Showing the status of a Windows service**

You can show whether the service is running or stopped on the server machine.

#### **How to show the status of a Windows service**

- 1 Choose File→Open Servers and Databases.
- 2 Select a server from the list of servers in the main window, and choose Server Tools.
- 3 To show if the server service is running, choose Show Status of Windows Service.
- 4 On the confirmation message indicating that the service is Running or Stopped, choose OK.

### **Configuring a server**

In Configure Server you can change settings for a Metrics Management server, including security and connectivity settings. Any changes you make are not reflected until you restart the server application or Metrics Management service.

#### **How to configure the server**

- 1 Choose File→Open Servers and Databases.
- 2 In the Navigation Pane, choose Server Tools→Configure Server.
- 3 In Name, to change the default server name, which is your computer name, type a new name in Server name. This name describes the server to end users. The maximum number of characters is 64. Figure 10-20 shows an example of a default server name.

The screenshot shows a configuration window with several tabs: Name, Security, Communication, Applications, and Database. The 'Name' tab is active. It contains the following fields:

- Server name: ScorecardServer
- Server machine name: HVM\MND8
- Server machine id: (8EB23527-0001-41F4-85AE-F5B00DBE55C0)
- Default web server URL: (empty)
- Test button

**Figure 10-20** Changing the default server name

- 4 In Security, choose whether to enforce Windows security for users who perform server and database maintenance functions. To restrict access to maintenance functions by Metrics Management workstations, select Enforce Windows security on server and database tools, as shown in Figure 10-21. To set additional security requirements for a remote administrator, select one of the following Windows login options:
  - Single Windows account (Metrics Management server login account)  
User must log in to the Windows account that runs the Metrics Management server
  - All login accounts that belong to this Windows user group  
User must belong to the specified Windows user group

The screenshot shows the 'Security' tab in the configuration window. It contains the following options:

- Enforce Windows security on server and database tools
- Windows security login options:
  - Single Windows account (BIRT Performance Scorecard server login account)
  - All login accounts that belong to this Windows user group

**Figure 10-21** Choosing to enforce Windows security

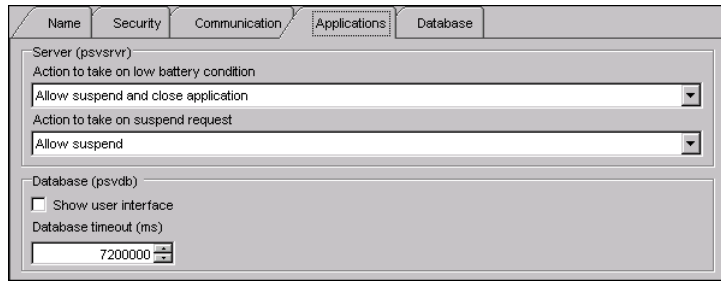
- 5 In Communication, shown in Figure 10-22, you can change and reset connectivity settings. Actuate recommends that you take a database offline before changing these settings. Perform any of the following optional tasks:
  - Change the Server IP address. When installing, Metrics Management checks the IP address of the server. If the server has multiple IP addresses or network cards, you may need to change the IP address on which the Metrics Management server communicates.

- Specify the ports on which the Metrics Management Server communicates. The default ports are 17326 and 13000. If your organization has port restrictions, you can define different communication ports for Metrics Management. Specify the ports in Server TCP/IP port and Management Server Port. If the same server runs IIS and Metrics Management, port 80 is not available because IIS has exclusive use of port 80.
- Define the client time-out and retry values for contacting the server. Adjusting these values can help to overcome issues with network latency.
- Adjust the Windows Session Time-out value to define when the Metrics Management server closes an inactive session.

Name	Security	Communication	Applications	Database
Server IP address		Management Server Port		
192.168.220.124		13000		
Server TCP/IP port				
17326				
Client RPC timeout (ms)				
60000				
Client RPC retry (times)				
3				
Restore Defaults				

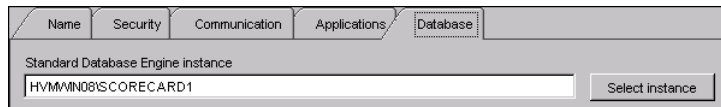
**Figure 10-22** Defining connectivity settings

- 6 In Applications, shown in Figure 10-23, perform any of the following optional tasks:
  - To specify the behavior of the server when Windows generates a low battery alert, in Server (psvsrvr), select an action in Action to take on low battery condition.
  - To specify the behavior of the server when Windows tries to suspend the computer in power saving mode, in Server (psvsrvr), select an action in Action to take on suspend request.
  - To run the database server in the foreground in the Windows computer on which it is running, in Database (psvdb), select Show user interface. You must also run the Metrics Management server as a foreground server.
  - To specify the time-out period that the Metrics Management server observes before shutting down the Metrics Management database server, choose a value in Database time out (ms).



**Figure 10-23** Defining power-saving and time-out settings

- 7 In Database, shown in Figure 10-24, to change the default Standard database engine instance, choose Select instance. In Browse for Standard database engine instances, select an instance and choose OK.



**Figure 10-24** Defining the default Standard database engine instance

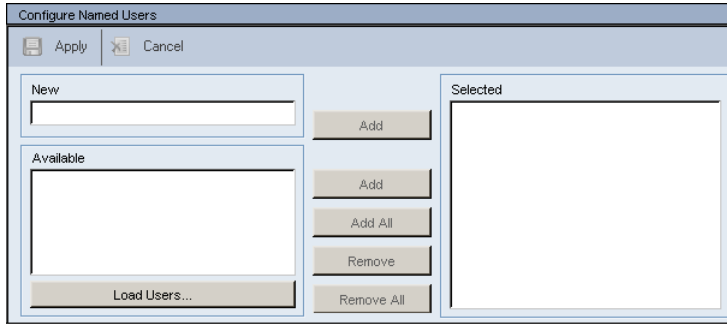
## Configuring named users

If your organization purchased Named Users licenses and a server license, the system specialist creates a list of named users to define the users who can access Metrics Management. Configuring named users from Server Tools supports performing bulk updates to the named user list. Metrics Management must run on the server to perform this function. Metrics Management also supports defining named users on an individual basis from Setup>Users. Metrics Management stores the list of named users in the PbvNamedUsers.ini file.

The Administrator is a special user type. The Administrator can always log into the database even if both the concurrent and named user maximums have been reached. Do not define the Administrator as a named user.

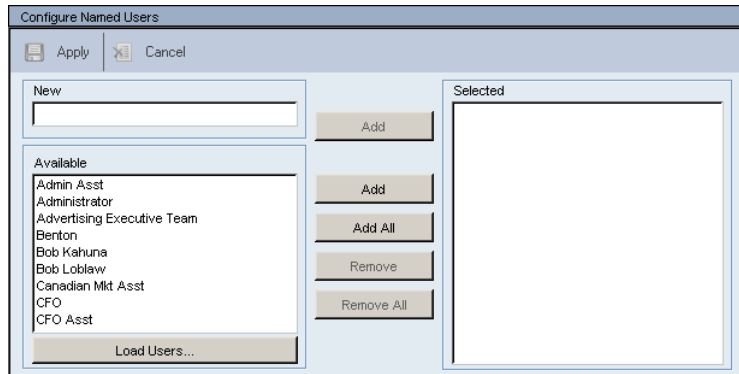
### How to configure named users

- 1 Choose File>Open Servers and Databases.
- 2 If your organization purchased the database license model, in the main window, select the appropriate database.
- 3 In the Navigation Pane, choose Server Tools>Configure Named Users. Configure Named Users appears, as shown in Figure 10-25.



**Figure 10-25** Configuring named users

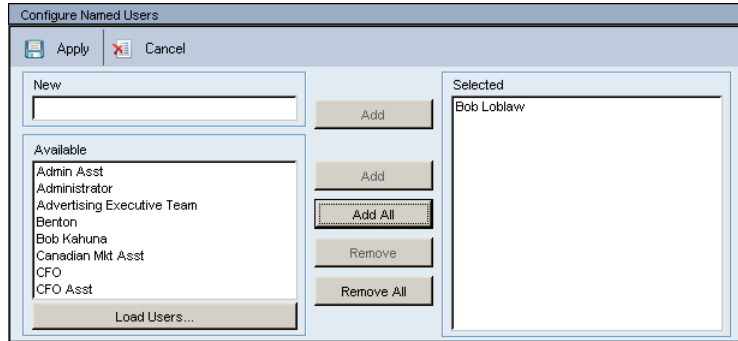
- 4 To specify the database from which to select named users, perform the following tasks:
  - 1 Choose Load Users.
  - 2 In the login dialog box, select a database and provide login credentials. Then, choose Login. Users appear in Available, as shown in Figure 10-26.



**Figure 10-26** Loading users for a database

- 5 To define a named user, add the user to Selected, as shown in Figure 10-27.





**Figure 10-27** Specifying a user as a named user



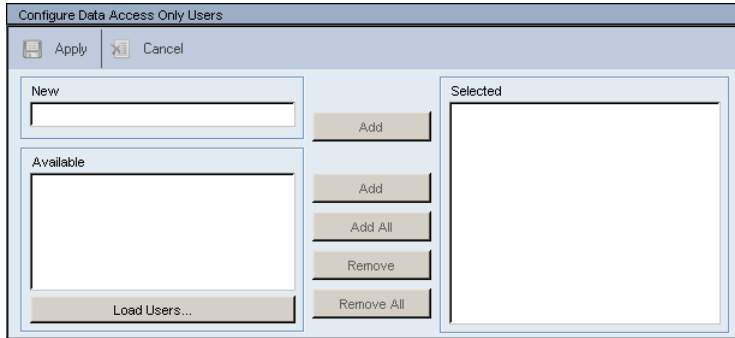
- 6 Choose Apply.
- 7 Restart the Metrics Management Server service on the server machine.

## Configuring data access only users

If your organization purchased Data Access Only licenses and a server license, the system specialist specifies data access only users for the database. A data access only user can use BIRT reports that access Metrics Management data. A data access only user cannot log in to Metrics Management. Metrics Management also supports defining data access only users on an individual basis from Setup>Users. Metrics Management must run on the server to perform this function.

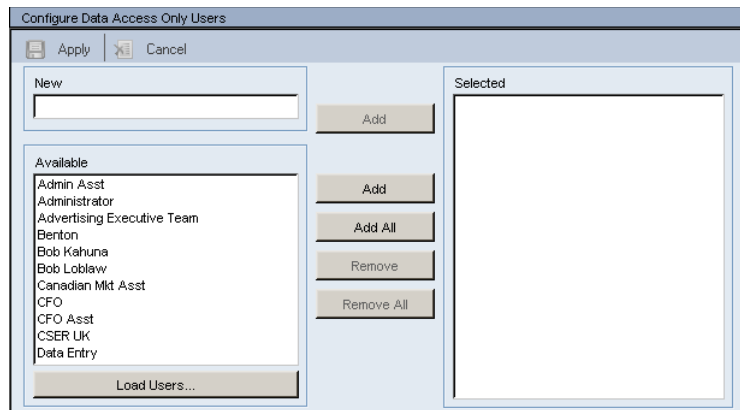
### How to specify data access only users

- 1 Choose File>Open Servers and Databases.
- 2 If your organization purchased the database license model, in the main window, select the appropriate database.
- 3 In the Navigation Pane, choose Server Tools>Configure Data Access Only Users. Configure Data Access Only Users appears, as shown in Figure 10-28.



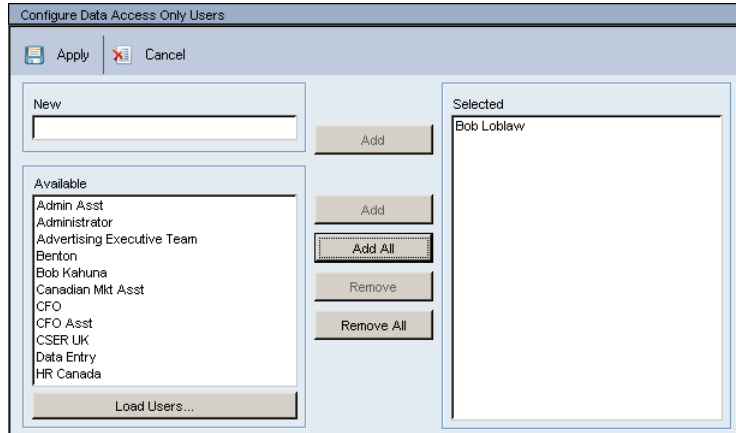
**Figure 10-28** Configure Data Access Only Users

- 4 To select the database for which to configure data access only users, perform the following tasks:
  - 1 Choose Load Users.
  - 2 In the login dialog box, select a database and provide login credentials. Then, choose Login. Users appear in Available, as shown in Figure 10-29.



**Figure 10-29** Loading users for a database

- 5 To define a user as data access only, add the user to Selected, as shown in Figure 10-30.



**Figure 10-30** Specifying a user as a data access only user

- 6 Choose Apply.
- 7 Restart the Metrics Management Server service on the server machine.

## Maintaining databases

The system specialist is responsible for maintaining the database. These tasks include the day-to-day operation of the database and routine maintenance tasks. To access Database Tools, choose File → Open Servers and Databases. The server name list in the main window displays servers available for connection. Each server name is expandable to show the databases available on that server.

Certain database maintenance tools are available to Standard databases only. Table 10-1 shows which database maintenance tasks are available to each database type.

**Table 10-1** Database maintenance task available to Standard, SQL Server, and Oracle databases

Database maintenance task	Standard	SQL Server	Oracle
Duplicate database	✓		
Copy and backup	✓		
Verify database	✓	✓	✓
Compact database	✓		
Delete database	✓	✓	✓
Upgrade database	✓	✓	✓

Metrics Management supports remote access to the following database maintenance tools:

- Verify database
- Delete database
- Upgrade database

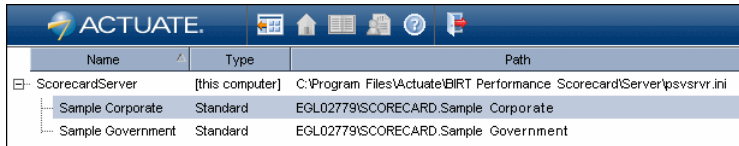
Verify database is not available by remote access to SQL Server and Oracle databases. Metrics Management does not support remote access to the compact, copy and backup, and duplicate database tools. Copy and backup requires providing a local path destination for the database backup.

To perform operations in Database Tools with User Account Control (UAC) enabled, ensure that Metrics Management is allowed elevated permissions by running Metrics Management as an administrator.

### How to select a database

Before performing actions on a database, select the database in the main window.

- 1 Choose File → Open Servers and Databases.
- 2 In the main window, choose the plus sign to display the databases on the selected server. The list of databases appears.
- 3 Select a database, as shown in Figure 10-31.



**Figure 10-31** Selecting a database

## Showing a database's properties

You can display the following properties for the selected database:

- The enabled authentication methods
- The user and machine who created the database
- The date and time the database was created
- The current version of the database
- The database size
- The amount of unused database space
- The database mode, read-write or read-only

The example in Figure 10-32 shows database properties. Properties—Provider shows which database you are using, Oracle, SQL, or Standard, and the version of that software.

Properties	
BIRT Performance Scorecard   Provider	
Property	Value
Authentication methods	Standard[W],Windows[WSI],Active Directory[W],Active Directory Single Sign-On[S]
Created by Windows user	Administrator
Created from machine	ScorecardServer
Created using	Views 8.5.0.1417
Creation time	03/06/2009 12:53:47
Current version	562
Database size	62.36 MB
Database unused space	0.13 MB
Mode	Read-write

**Figure 10-32** Showing database properties

### How to show a database's properties

- 1 In Servers and Databases, select a database.
- 2 In the Navigation Pane, choose Database Tools → Show Database Properties.

## Getting a database's status on the server

You can show status for a specific database. A database is in one of the following three states:

- **Available:** No clients are active and the database is offline. The database can be activated by a client request.
- **Unavailable:** The database is inaccessible to clients.
- **Serving:** Clients are active. The database should be taken offline before attempting any maintenance functions.

### How to get a database's status on the server

- 1 In Servers and Databases, select a database.
- 2 In the Navigation Pane, choose Database Tools → Get Database Status on Server. A message appears, indicating the status of the selected database.

## Making a database available

If a database is unavailable, you can make it available so that clients can access it.

### How to make a database available

- 1 In Servers and Databases, select a database.
- 2 In the Navigation Pane, choose Database Tools → Make Database Available.

In the confirmation message, shown in Figure 10-33, choose OK. The Metrics Management server changes the database status from Unavailable to Available.



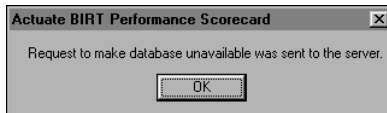
**Figure 10-33** Making a database available

## Making a database unavailable

Before performing maintenance on a database, make the database unavailable.

### How to make a database unavailable

- 1 In Servers and Databases, select the database to make unavailable.
- 2 In the Navigation Pane, choose Database Tools→Make Database Unavailable.
- 3 In Verify User Credentials, provide login credentials. Then, choose OK.
- 4 In the confirmation message, shown in Figure 10-34, choose OK. The Metrics Management server changes the database status from Available to Unavailable.



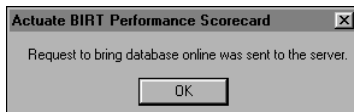
**Figure 10-34** Making a database unavailable

## Bringing a database online

You can bring a database online by changing its status to Serving. A database must be in Available status to be brought online.

### How to bring a database online

- 1 In Servers and Databases, select the database to bring online.
- 2 In the Navigation Pane, choose Database Tools→Bring Database Online.
- 3 In the confirmation message, shown in Figure 10-35, choose OK. The Metrics Management server sets the database status to Serving.



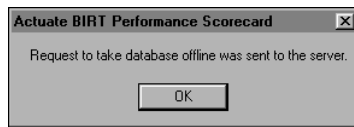
**Figure 10-35** Making an online database unavailable

## Taking a database offline

If a database is in Serving status, you can change the status to Available by taking it offline.

### How to take a database offline

- 1 In Servers and Databases, select the database to take offline.
- 2 In the Navigation Pane, choose Database Tools→ Take Database Offline.
- 3 In Verify User Credentials, provide login credentials. Then, choose OK.
- 4 In the confirmation message, shown in Figure 10-36, choose OK. The Metrics Management server sets the database status to Available.



**Figure 10-36** Making an online database available

## Duplicating a database

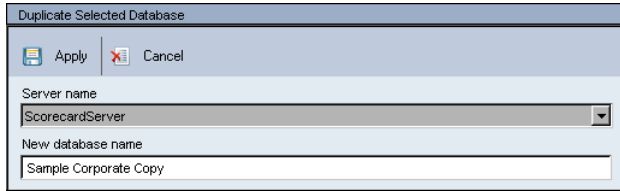
Duplicating a database creates a named copy of the selected database and a reference to the new database in Metrics Management. Duplicating a database is supported for Standard databases only.

Ensure that you have read and write access to the data folders for the Standard database instance which you will duplicate. If you do not have rights to these folders, consider copying the database, and then creating a reference to the copied database.

### How to duplicate a database

- 1 In Servers and Databases, select the database to duplicate.
- 2 Take the database offline.
- 3 Choose Database Tools→Duplicate Database.
- 4 In Verify User Credentials, provide login credentials and choose OK.
- 5 In Duplicate Selected Database, shown in Figure 10-37, choose Browse to specify the location in which to save the copy of the database. Type a new database name if desired. Choose Apply. The database is copied to the specified path.





**Figure 10-37** Specifying the duplicate database name and location

## Copying and backing up a database

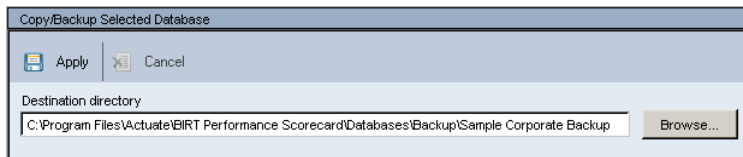
The copy and backup command copies a database to the location that you specify. Copy and backup performs the same action as duplicating a database, without creating a reference to the new database in Metrics Management. To perform this function:

- Ensure that no users are accessing the database.
- Metrics Management must be running on the server.

Copying and backing up a database is supported for Standard databases only.

### How to copy and back up a database

- 1 In Servers and Databases, select the database to copy and back up.
- 2 Take the database offline.
- 3 Choose Copy and Backup Database.
- 4 In Verify User Credentials, provide login credentials and choose OK.
- 5 In Copy and Backup Selected Database, shown in Figure 10-38, choose Browse to specify the location in which to save the backup database. Choose Apply. The backup is created in the specified path.



**Figure 10-38** Specifying where to backup the database

## Verifying a database

With regular maintenance and proper database handling, Metrics Management database problems are uncommon. Nonetheless, database structures can become corrupted. If a problem or unusual behavior occurs with a database, perform a database verification. A database verification searches for logical errors in Metrics Management database tables. Completion of a database verification does not



indicate whether or not the database is in a healthy state. Review the database verification reports to determine the health of the database. The verification process generates the following reports:

- Verification overview. Contains database statistics such as the number of measures and locations, and data points in the database, and provides an overview of orphaned objects and duplicated initiatives.
- Orphaned objects references. Contains information about orphaned objects. An orphaned object is a Metrics Management object that is no longer referenced by any other object.
- Duplicated initiative sequences. Contains information about duplicated initiative sequences. A duplicated initiative sequence is a sequence number which is incorrectly applied to more than one initiative at one level of an initiative hierarchy.

Table 10-2 lists the report file name syntax for each verification report type.

**Table 10-2** Database verification report syntax

Report type	Report syntax
Verification overview	DbVerification.MachineName.DatabaseName.txt
Orphaned objects reference	DbVerification.MachineName.DatabaseName.Orphaned object references.txt
Duplicated initiative sequence	DbVerification.MachineName.DatabaseName.Duplicated initiative sequence.txt

In Table 10-2:

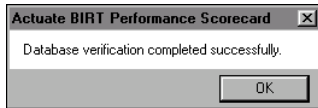
- MachineName is the name of the machine on which Metrics Management runs.
- DatabaseName is the name of the database on which the verification is performed.

Reports generate in the user's application data folder, for example the Administrator\AppData\Roaming\Actuate folder on Microsoft Windows Server 2008. An orphan objects or duplicated initiative sequences report generates only on the Metrics Management Server machine if the report is larger than 50 MB and is merged into the overview report if the report is less than 5 KB.

#### How to verify a database

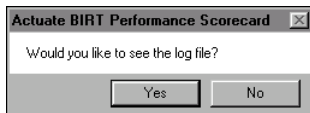
- 1 In Servers and Databases, select the database to verify.
- 2 Make the database unavailable.
- 3 Choose Verify Database. Metrics Management backs up the existing database and begins to verify.

- 4 A message appears to indicate that the verification completes successfully, as shown in Figure 10-39. Choose OK.



**Figure 10-39** Verifying a database

- 5 To open the verification overview log file, in the dialog box shown in Figure 10-40, choose Yes.



**Figure 10-40** Choosing whether to open the verification overview log file

## Compacting a database

The database compact utility searches and scans the database for unused pointers and remnants of deleted items, and removes redundant items from the associated tables. Before compacting a database, Metrics Management first performs a verification to ensure that the logical structures are intact. After compaction, typically the size of database tables decreases and the efficiency of the database increases. If the database compaction fails, contact Actuate Performance Management Customer Support for assistance.

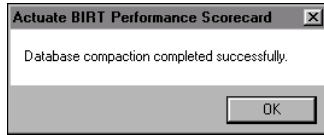
Actuate recommends compacting the database once a month. Compacting more frequently is unnecessary.

After compacting, to refresh the database size in Show Database Properties, take the database offline to restart the database.

Compacting a database is supported for Standard databases only.

### How to compact a database

- 1 In Servers and Databases, select the database to compact.
- 2 Make the database unavailable.
- 3 Choose Compact Database. Metrics Management backs up, verifies, and compacts the existing database.
- 4 After compaction completes, the message displayed in Figure 10-41 appears. Choose OK.



**Figure 10-41** Compacting a database

## Deleting a database

This function deletes both the database reference and all the database files. To delete the database reference from Metrics Management and keep the database itself, see “Deleting a database reference,” earlier in this chapter.

### How to delete a Standard database

- 1 In Servers and Databases, select the database to delete.
- 2 Make the database unavailable.
- 3 In the Navigation Pane, choose Database Tools→Delete Database.
- 4 In Verify User Credentials, provide login credentials and choose OK.
- 5 In the confirmation message, choose Yes to delete the selected database.

## Upgrading a database

Typically, the system specialist upgrades a database after installing a new Metrics Management service pack or a new version of Metrics Management. If Upgrade Database is unavailable in the Navigation Pane, the database does not require an upgrade.

At the beginning of the upgrade, Metrics Management creates a backup of a Standard database. If the upgrade fails, Metrics Management restores the database from the backup. Metrics Management does not create a backup of SQL Server and Oracle databases. Ensure that the database administrator creates a backup of a SQL Server or Oracle database before upgrading.

### How to upgrade a database

- 1 In Servers and Databases, select the database to upgrade.
- 2 In the Navigation Pane, choose Database Tools→Upgrade Database.
- 3 Choose Upgrade Database. In the confirmation message, choose OK. Metrics Management displays the progress of the upgrade, as shown in Figure 10-42.



**Figure 10-42** The progress of a database upgrade

- 4 After the process is complete, a message indicates that the database upgraded successfully. Choose OK.

## Exporting a database

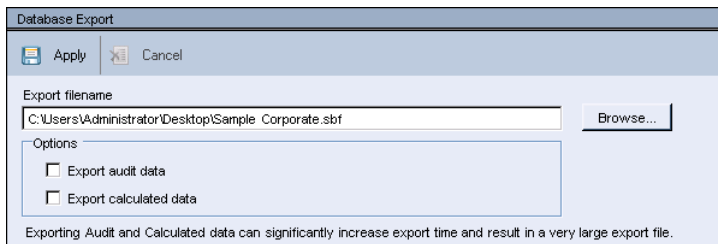
A system specialist typically runs a database export to create a backup file which can be used to restore a database. A database export produces a copy of a Metrics Management database as a single binary encoded (SBF) file, for example, Sample Corporate.sbf. An SBF file opens only in Metrics Management. The SBF file provides a common file format to import or export any of the three supported Metrics Management database types, Standard, Oracle, and SQL Server. The system specialist uses the export to create simplified backups from any Metrics Management database type without the need for a database administrator's intervention or attention. A database export is not suitable for exporting data to Microsoft Excel or to XML formats.

Before exporting a database, decide whether to export audit data and calculated data. Actuate recommends exporting without audit and calculated data to reduce the time to export and the size of the SBF file. Unless the SBF file is your primary backup mechanism, consider exporting audit data to a separate XML file and synchronizing calculated in Metrics Management after importing an SBF file.

### How to export a database

Before performing a database export, take the database offline.

- 1 In Servers and Databases, select a database.
- 2 In the Navigation Pane, choose Database Tools→Export Database.
- 3 In Verify User Credentials, provide login credentials. Then, choose OK.
- 4 In Database Export, and in Export filename, provide the path and export file name for the .sbf file, as shown in the example in Figure 10-43.



**Figure 10-43** Specifying database export settings

- 5 In Options, perform any of the following tasks:
  - To export audit data with the database, choose Export audit data.
  - To export calculated data with the database, choose Export calculated data.



- 6 Choose Apply. A message displays the progress of the export.
- 7 In the confirmation message, shown in Figure 10-44, choose OK.



**Figure 10-44** Database export confirmation message

## Importing a database

Imports into an existing database completely overwrite existing data with the data contained in the binary export file. The import removes all new data entered after the date the binary file was created, and reverts any data that was modified to the value recorded in the binary file.

Alternatively, import the binary file into a new database. For more information, see “Creating a new database from an import file,” earlier in this chapter.

### How to import a database

- 1 In Servers and Databases, select a database.
- 2 Make the database available.
- 3 In the Navigation Pane, choose Import Database.
- 4 In Verify User Credentials, provide login credentials and choose OK. Metrics Management takes the database offline.
- 5 In Select import file path, select the binary export file and choose Open.
- 6 A warning message appears, again reiterating the dangers of this operation. If you are sure you want to proceed and understand the implications of this operation, choose Yes.

A progress indicator message displays as the import proceeds. After the import completes successfully, a confirmation message appears.

## Configuring import and export for a large database

The import or export of a large database may result in excessive memory use on the server. To reduce memory use, set the values of the `EnableSqlBatching` and `UseDiskBuffer` parameters to true in the `abpsmgmt.exe.config` file. The `EnableSqlBatching` parameter is supported for database exports only.

## How to add the EnableSqlBatching and UseDiskBuffer parameters

- 1 On the server machine, navigate to the abpsmgmt.exe.config file. By default, the file is found in the following location:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \Server
```

- 2 In a text editor, open the abpsmgmt.exe.config file.
- 3 Navigate to the following lines:

```
<DatabaseExport EnableSqlBatching="false"
  UseDiskBuffer="false" />
<DatabaseImport UseDiskBuffer="false" />
```

- 4 Perform any of the following tasks:
  - To modify memory use for a database export, in the DatabaseExport section, change the value of both parameters to true.
  - To modify memory use for a database import, in the database import section, change the value of the UseDiskBuffer parameter to true.

For example, change both parameters in the database export section to true:

```
<DatabaseExport EnableSqlBatching="true" UseDiskBuffer="true"/>
```

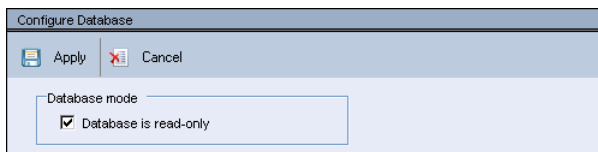
- 5 Save and close the file.

## Making a database read-only

Prevent users from making changes to a database by making it read-only. Users cannot change any objects within a read-only database. You are required to provide a login name with rights to set database properties.

### How to make a database read-only

- 1 In Servers and Databases, select a database.
- 2 Make the database available.
- 3 In the Navigation Pane, choose Database Tools→Configure Database.
- 4 In Verify User Credentials, provide login credentials. Then, choose OK.
- 5 In Configure database, select Database is read only, as shown in Figure 10-45. Choose Apply. In the confirmation message, choose OK.

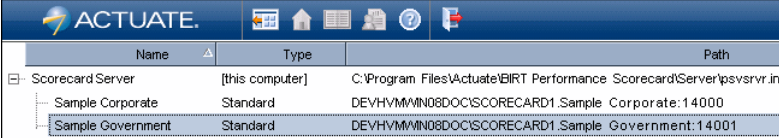


**Figure 10-45** Making a database read-only

## Assigning a port to a database

Metrics Management assigns one port to each Metrics Management database that is online. To locate open ports, Metrics Management begins searching at the default Management server port value of 13,000. For example, if two databases are online, Metrics Management attempts to assign ports 13,001 and 13,002 to the databases.

Metrics Management supports assigning a specific port to a database. After assigning a port, the port number appears after the database name in the database list for a server, as shown in the example in Figure 10-46. Metrics Management does not support assigning fixed and dynamic ports to multiple databases. If you use fixed ports, then assign fixed ports to all Metrics Management databases.

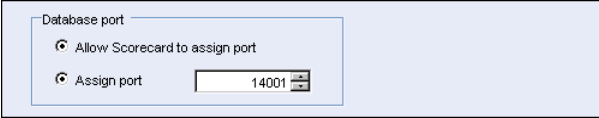


Name	Type	Path
Scorecard Server	[this computer]	C:\Program Files\Actuate\BIRT Performance Scorecard\Server\psvsrvr.ini
Sample Corporate	Standard	DEVHVM\MMN08DOC\SCORECARD1.Sample Corporate:14000
Sample Government	Standard	DEVHVM\MMN08DOC\SCORECARD1.Sample Government:14001

**Figure 10-46** Port numbers assigned to the sample databases

### How to assign a database port

- 1 In Servers and Databases, select a database.
- 2 Make the database available.
- 3 In the Navigation Pane, choose Database Tools→Configure Database.
- 4 In Verify User Credentials, provide login credentials. Then, choose OK.
- 5 In Configure database, in Database port, shown in Figure 10-47, perform one of the following tasks:
  - 1 To enable Metrics Management to assign the port, choose Allow Metrics Management to assign port.
  - 2 To assign a specific port, select Assign port, and provide a port value.



Database port

Allow Scorecard to assign port

Assign port

**Figure 10-47** Assigning a database port



- 6 Choose Apply. In the confirmation message, choose OK.
- 7 Restart the Metrics Management Server.

## Registering a database

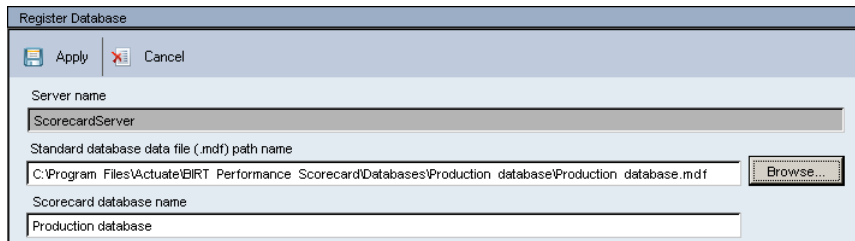
Registering a database attaches a separate MDF and LDF file to SQL Server Express. The MDF file is the database file in SQL Server format. The LDF file is a transactional record of actions performed on the database. Attaching the files makes the database available to SQL Server Express. Then, Metrics Management creates a database reference to make the database available to Metrics Management.

The system specialist can use register database to move a Standard database from one server to another. To move a database, first use Copy and backup to create a copy of the MDF and LDF database files. Copy both files to the second server, and use register database to make the database available in Metrics Management.

The SQLServerMSSQLUser group has full permission to the default folder in which the database is originally created. To register the database in another folder, first assign full permissions for the groups to the new folder.

### How to register a database

- 1 Choose File>Open Servers and Databases.
- 2 In the main window, select the server on which to register the databases.
- 3 In the Navigation Pane, choose Setup Tools>Register Database.
- 4 In Register Database, shown in Figure 10-48, choose Browse to specify the destination to save the backup database. Provide a new database name if necessary. Choose Apply.



**Figure 10-48** Providing the path to backup the database

- 5 In the confirmation message, choose OK. The database appears in the list of databases.

---

## About advanced auditing

Advanced auditing keeps a log of changes made to the database. The audit log can record when changes were made to a database and who made the changes. For example, you can see that user JaneB added commentary text to the Solvent Reduction measure at 14:16 on 2010 December 8th. The audit trail does not record



the original and new values, so you cannot assemble a snapshot of the database at a given point in time. In this example, the log does not show that the measure commentary text was previously empty but now reads “Sales were off that quarter because of problems at the Western US warehouse complex”.

You can configure auditing to include the text of any commentary added to the database. In the preceding example, if you configured Metrics Management to record commentary text in the audit log, the log contains the full text that JaneB added to the Solvent Reduction Measure.

In most cases, Actuate recommends that you do not enable the options to include content of user data and commentary in log. Depending on how much data entry your organization performs, auditing to this level of detail may cause your audit log to grow dramatically. By default, Metrics Management does not enable this option when you create a new database.

Actuate recommends performing an audit archive on a regular basis to prevent the audit table from growing too large.

To enable or configure auditing, you must log in to the Metrics Management database using either the Administrator account or an account that has Act as an Administrator privileges. For information about how to enable and configure auditing, see “Configuring a database” in Chapter 1, “Creating and configuring a database.”

On a newly created database, Metrics Management enables the following auditing options:


- Audit changes to objects
- Audit changes to user data
- Audit changes to user commentary

Audit system events is enabled by Metrics Management itself. You cannot disable this option.

## Displaying an audit log

You can create and view a custom audit log.

### How to display an audit log

- 1 Log in to your database.
- 2 In the Navigation Pane, choose Data→Audit.
-  3 No audit data is displayed initially in the Audit tab in the main window. To view all of the audit log entries, choose Refresh. Metrics Management displays every audit log record.

The date and time that Metrics Management displays in the audit log may appear to be incorrect because the time does not match your server’s clock.

However, all time values are stored in Universal Time Conversion (UTC) format, a 24-hour clock that is not specific to a particular time zone. UTC is the same as Greenwich Mean Time (GMT).

- 4 You may want to restrict your review to only specific types of audit log records. For example:



- To view or export audit log entries that relate only to the Metrics Management Classic Web Client, under Modules clear the All modules check box, and select the Metrics Management Classic Web Client check box. Choose Refresh.



- To view or export only audit log entries where the subject is System, under Subjects clear the All subjects check box, and select the System check box. Choose Refresh.



- To view only audit log entries created by the CFO, under Users, clear the All users check box, and select the CFO check box. Choose Refresh.



- To view only delete actions, under Actions clear the All actions check box, and select the Delete check box. Choose Refresh.

You can quickly create very detailed reports by specifying specific modules, subjects, users, objects, actions, and date ranges.

- 5 You can review your logs on the screen or export the data to an XML or CSV file. You can use the data to create a report for presentation or to analyze the audit log report.

## Exporting to an XML file

You can export your audit log entries to an XML file. You can use some other tool to analyze the XML file or publish reports to a web site. To do so, Metrics Management does not create a DTD specifying what the field names and values represent. However, the XML files created by Metrics Management are easy to read and a capable programmer should not have a difficult time parsing the file.

### How to export to an XML file

- 1 Select the audit log entries to view.



- 2 Choose Refresh.



- 3 Choose Export to XML and specify the name of the XML file. Specify the location to write the audit log entries.

## Exporting to a CSV file

A CSV file separates field names with a comma. On the first line of the file, Metrics Management records the column names. This is a common practice when

creating CSV files. Microsoft Excel imports the file and automatically picks up the column names from the CSV file.

#### **How to export to a CSV file**

1 Select the audit log entries to view.



2 Choose Refresh.



3 Choose Export to CSV and specify the name of the CSV file. Specify the location to write the audit log entries.

## **Archiving an audit trail**

You can archive Metrics Management audit trail events to either a CSV or XML file. Once the archive file is created, these audit trail events are removed from the database. You can also use the Metrics Management Console to schedule archiving of audit trail events.

#### **How to archive the audit trail information**

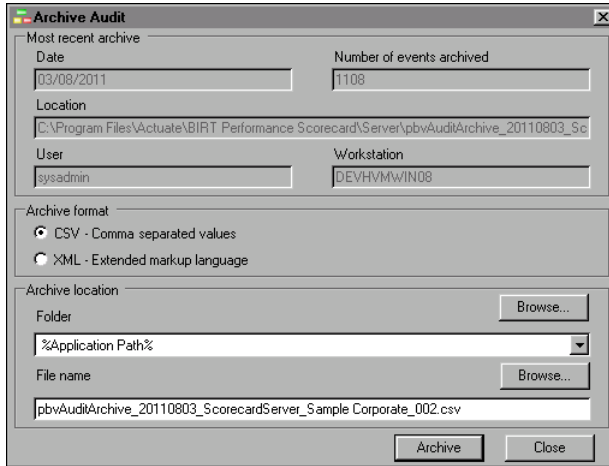
1 Choose File → Open Servers and Databases.

2 Select a database in the main window, and choose Database Tools.

3 Choose Audit Archive. In Verify User Credentials, provide login credentials and choose OK.

In the Most recent archive section of Archive Audit, shown in Figure 10-49, statistics display for the last time you archived the audit trail events:

- The date you archived the data
  - The number of audit trail events written to the archive file
  - The location of the archive file
  - The user name of the person who archived the data
  - The workstation from which the archive instruction was issued
- 4 In Archive format, select the file type, CSV or XML, in which to store audit information.
  - 5 In Archive location, in Folder, select a location from the list, or choose Browse and navigate to the location to store the file and choose OK.
  - 6 In Filename, provide the name of a file in which to save your audit information.
  - 7 Choose Archive to save the changes.



**Figure 10-49** Archive audit statistics

The first time Archive Audit runs, the fields under Most recent archive displays N/A. The next time that Archive Audit runs, the fields displays valid information. If auditing is not enabled, then no data is archived.

## About Metrics Management log files

A Metrics Management log file is a text file containing a list of events performed by a specific Metrics Management component, such as a Metrics Management client, server, or service. Table 10-3 provides a full list of the components which support log files. By default, only the Metrics Management Server is enabled for logging. A log file is useful for performing troubleshooting on a Metrics Management component.

**Table 10-3** Metrics Management log file locations

Components	Log file location
Connection Manager	C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server
Database process	C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server
Metrics Management Server	C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server
Web reporting services	C:\ProgramData\Actuate
Web server	C:\ProgramData\Actuate
Windows and Smart clients	User's Application Data folder

Metrics Management creates logs using the following syntax:

Metrics Management.Process name.Machine name.Date.log  
where

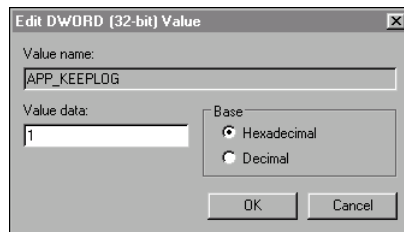
- Process name specifies the name of the Metrics Management component, for example, for the Windows client:  
`psvnclientmain`
- Machine name specifies the name of the Metrics Management Server machine, for example:  
`METRICSMANAGEMENTSERVER`
- Database name specifies the name of the database. A database process log file specifies the machine name followed by the database name, for example:  
`METRICSMANAGEMENTSERVER-Sample Corporate`
- Date specifies the date, in day-month-year format, for example:  
`17-03-2013`

### How to enable logging for the Connection Manager

- 1 In the registry, navigate to the following location:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Actuate\Metrics Management 10.3  
  \Connection Manager
```

- 2 Right-click on APP\_KEEPLLOG key, and choose Modify. If the key does not appear, right-click and choose New→DWORD and name the key APP\_KEEPLLOG.
- 3 Double-click APP\_KEEPLLOG. Then, in Edit DWORD Value, shown in Figure 10-50, in Value data, perform one of the following tasks:
  - To enable logging, enter 1.
  - To disable logging, enter 0.



**Figure 10-50** Enabling a log file

- 4 Choose OK.

## How to enable logging for a Metrics Management component

1 Navigate to and open one of the following configuration files:

- To edit settings for Metrics Management database logging, open the `abpscore.exe.config` file from the following default location:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \Server
```

- To edit settings for the Metrics Management Server, open the `abpsmgmt.exe.config` file from the following default location:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \Server
```

- To edit settings for the web reporting services, open the `Web.config` from the following default location:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \ReportingWebService
```

- To edit settings for the Web server, open the `Web.config` file from the following default location:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management\
  WebRootAspx
```

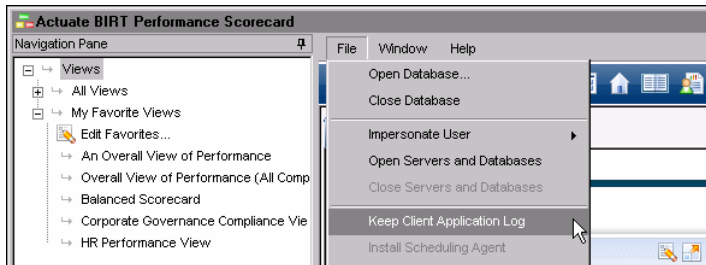
2 In the `<appSettings>` section, to enable logging, locate the following line of code, and change the value to true:

```
<add key="keepLog" value ="false"/>
```

3 Save and close the configuration file.

## How to enable logging for the Windows Client or Metrics Manager

In Metrics Management, choose `File`→`Keep Client Application Log`, as shown in Figure 10-51.



**Figure 10-51** Enabling logging for the Windows Client

---

## About the Measure Detail report

This report enables the System Administrator to export measure details into a text or Microsoft Excel format for easy viewing. The Measure Detail report is a useful tool for ensuring your measures are correctly set up.

It is recommended that a Measure Detail report be run after an initial view has been created and after any major view changes have been made.

### Exporting a Measure Detail report

Use the following procedure to export a Measure Detail report.

#### How to export a Measure Detail report

- 1 In the Navigation Pane, choose Data → Export Measure Details.
- 2 In Export Measure Details, select a location to save the file.
- 3 Type a name for the file.
- 4 Select a file type from the Save as type list. Saving as an XLS file keeps the measure name column stationary on the left as you scroll back and forth in Excel.
- 5 Choose Save. A progress bar appears. When the bar disappears, the report is saved and can be opened in a program that supports the file format in which it was saved.

### Reviewing a Measure Detail report

Table 10-4 outlines items to check when you review this report.

**Table 10-4** Measure Detail report review checklist

Report value	Items to check
Name	Check for spelling and naming conventions.
Description	Check for spelling. Ensure that all descriptions have been provided and explain what is being measured and why. Descriptions are recommended, but are not mandatory.
Location	Using Excel's AutoFiltering feature (Data → Filter → Auto Filter), you can select specific locations and see how they differ from the (Default) location. The Default location shows the standard settings for each measure. When looking at specific locations, only measure settings which differ from the (Default) location settings appear.

*(continues)*

**Table 10-4** Measure Detail report review checklist (continued)

Report value	Items to check
Type	All measures have a specified type. Filter on Group, Data, or Formula measures to check for specific setup information.
Critical	Yes indicates that the measure has been marked critical. For more information, see "About creating measures" in Chapter 3, "Working with measures."
Polarity	All data and formula measures have a polarity entry. Bad indicates that high values are bad, and Good indicates that high values are good. For more information, see "Choosing data properties for data and formula measures" in Chapter 3, "Working with measures."
Unit Type	All data and formula measures should contain a unit type. For more information, see "Choosing data properties for data and formula measures" in Chapter 3, "Working with measures."
Submeasures /Formula	<deleted measure> indicates that a measure has been deleted from the database, but not from the formula or grouping. These formulas need to be corrected in the database.
Submeasure Total %	For group measures, the total of submeasures should be 100%. If the total is less than 100%, it may indicate that a measure has been deleted from the database. The weightings should be corrected in the database.
Direct Data Entry	This indicates which comparatives are being provided at the formula level. Actual should not show up in this list. For more information, see "Creating formulas for formula measures" in Chapter 3, "Working with measures."
Storage Period	Each formula and data measure must have a storage period.
Dashboard	Each measure should have a dashboard. Group measures, for example, should have a group dashboard, while monthly measures should have monthly dashboards.
Period Consolidation	Check the period consolidation for each data and formula measure. Percentages and Ratios, for example, should not have Sum as the period consolidation.
Ignore Period Blanks	It is recommended that ignore period blanks should be No for the majority of measures to ensure that all data is provided.



**Table 10-4** Measure Detail report review checklist (continued)

<b>Report value</b>	<b>Items to check</b>
Location Consolidation	Check the location consolidation for each data and formula measure. Percentages and Ratios, for example, should not have Sum as the location consolidation.
Ignore Location Blanks	The majority of measures probably show Yes for the ignore location blanks.
Consolidation Range	There should be an entry for each formula and data measure. The most commonly used ranges are Moving Year and This Year to Date.
Order of Calc	All data and formula measures have an order of calculation chosen.
Owner	<Location Owner> indicates that measure ownership varies by location. Using Excel's auto-filter option allows you to see the lists of measures owned by specific users.
Owners Enter Data?	No indicates that the owner cannot enter data for the selected measure.
Owners Enter Commentary?	No indicates that the owner cannot enter commentaries for the selected measure.
Owner's Assistant	Lists the measure assistant. Assistants are optional.
Data Entry Users	Lists additional data entry users for the measure.
Commentary Entry Users	Lists additional commentary entry users for the measure.
Custom Index Ranges	This column lists any customized index ranges that have been made. To avoid confusion, it is recommended that this feature be used sparingly.
Notes	Any notes attached to the measure show in this column. For more information, see "Attaching notes, links, and link tags" in Chapter 3, "Working with measures."
Link Detail	Any documents linked to the measure display in this column.
Publisher	It is recommended that administrators be selected as the publishers for measures.
Published?	Yes indicates the measure is available to other users. No indicates the measure is not available to other users.

*(continues)*

**Table 10-4** Measure Detail report review checklist (continued)

<b>Report value</b>	<b>Items to check</b>
Orphaned?	Yes indicates that the measure does not appear in any of the views. Review and re-link measures that should appear in the view, leave those measures that will be used in the future, and delete the measures that will no longer be used.
Location Invalid?	At the highest location, lists the locations to which the measure does not apply. At lower locations, Yes indicates that there are some locations to which the measure does not apply.
Categories	Indicates any categories assigned to the measure.

---

## About synchronization

You can synchronize calculated and pending user data, and synchronize hierarchies.

### Synchronizing calculated data

Metrics Management performs calculations on data when you modify the system, for example, when adding new measures to a view structure, changing calendar settings, or adding or changing data. Actuate recommends synchronizing when a view is large, or after entering large amounts of data into the system. Synchronizing performs all calculations on a view at once, and greatly increases a view's drill-down performance.

To increase performance efficiency, complete the majority of data entry at the same time, either by data import, or by setting times for data input. Once data is entered, perform a synchronization.

Only the system specialist can perform a data synchronization. If possible, take a database offline before running a synchronization to reduce data processing time. Synchronization can be automated using pbvcon.

#### How to synchronize calculated data

- 1 In the Navigation Pane, choose Data > Synchronize.
- 2 Select the Synchronize calculated data check box. This option is unavailable when calculated data does not need synchronization.
- 3 Choose Yes. A progress bar appears as data synchronizes.

## About pending user data

The Enable pending user data entry option determines when data is used in calculations. If you have a large database and update your data frequently, you can improve database performance using pending user data. For more information about how to enable pending user data, see “Defining database audit settings” in Chapter 1, “Creating and configuring a database.”

If many users continually enter and change data, users can experience delays when opening books and views. Delays occurs because Metrics Management processes data when an object opens. Metrics Management determines whether data has changed, performs calculations, and displays the item.

With pending user data feature enabled, new or changed data does not immediately affect calculations. New or changed data is flagged as pending until you decide to use it in calculations. Metrics Management does not perform calculations dynamically. Objects display faster in books and views, and Metrics Management performs more efficiently.

Synchronizing pending user data includes the data in Metrics Management calculations. Choose to synchronize pending data when it is most convenient or logical for your organization, for example, after entering or importing large amounts of data, or when moving the calendar forward. You can synchronizing pending user data manually, or automatically using pbvcon.

### How to synchronize pending user data

- 1 In the Navigation Pane, choose Data → Synchronize.
- 2 Check Synchronize user data. This option is unavailable when calculated data does not need synchronization.
- 3 Choose Yes.

## Synchronizing hierarchies

Metrics Management allows definitions of different formulas and groupings by location. By synchronizing hierarchies, you prevent invalid measure and location combinations being displayed in view and book drill downs. Whenever a change is made that alters the stored matrix of valid measure and location combinations, the system specialist receives a message that the hierarchies are out-of-date and need to be synchronized.

Running the synchronize hierarchies process updates the database with the valid measure and location information.

Only the system specialist can perform a hierarchy synchronization. If possible, take the database offline before running this process. It can also be run as a scheduled task—please see “Scheduling pbvcon” in Chapter 11, “Using pbvcon to schedule Metrics Management.”

### **How to synchronize hierarchies**

- 1** In the Navigation Pane, choose Data➤Synchronize.
- 2** Check Synchronize Hierarchies. If this option is grayed out, the hierarchies do not need synchronization.
- 3** Choose Yes.

A progress bar appears when hierarchies synchronize.

---

## **About files that Metrics Management creates or modifies**

Metrics Management adds files to Windows\System and to Program Files\Actuate. An icon is added to your desktop. For a full listing of files created or modified, refer to your Installation and Server Operations Guide.

In Windows (2000, 2003, XP) an icon is added to all users' desktops and an item added to all users' start menus.

For further information about files installed by MDAC, go to [www.microsoft.com/data/MDAC21info/manifest\\_intro.htm](http://www.microsoft.com/data/MDAC21info/manifest_intro.htm).

# Using pbvcon to schedule Metrics Management

This chapter discusses the following topics:

- About pbvcon
- About the Metrics Management Scheduling Agent
- Syntax for pbvcon commands
- Sample pbvcon batch file
- Scheduling pbvcon
- About pbvcon log files and error handling

---

## About pbvcon

pbvcon is a command-line tool that enables scheduling and automating many Metrics Management processes. pbvcon can perform routine database maintenance, automate data imports and exports, generate reports and internet libraries, and send notifications using alerts. Table 11-1 lists and describes pbvcon commands.

Actuate recommends using batch files to call pbvcon commands. Either invoke batch files directly from the command line, or run batch files periodically using Windows Scheduler. For a sample batch file, see “Sample pbvcon batch file,” later in this chapter. Visit <http://support.actuate.com> for additional sample batch files.

Actuate recommends running pbvcon on the Metrics Management Server machine. The pbvcon executable file, pbvcon.exe, is located by default in C:\Program Files\Actuate\iHub3\modules\Metrics Management\Server.

**Table 11-1** Available pbvcon commands

Command name	Description
ADD_AUTHENTICATION_METHOD	Enables an authentication method for the specified database
BRING_DATABASE_ONLINE	Brings the database online
CLEAR_CALCULATED_DATA	Clears calculated data in the specified Standard database
COMPACT_DATABASE	Compacts the specified Standard database
COPY_DATABASE	Copies the Standard database to a specified destination
DOWNLOAD_IHUB_FILE	Download file from iHub volume
EXECUTE	Launches an external program, for example, Microsoft Word
GENERATE_INTERNET_LIBRARY	Generates the specified Internet library
GET_DATABASE_STATISTIC	Provides basic database statistics
HELP	Displays a summary of all help commands, or detailed help for the specified command
LIST_SESSIONS	Lists licensing sessions
MAKE_DATABASE_AVAILABLE	Makes the database available
MAKE_DATABASE_UNAVAILABLE	Makes the database unavailable

**Table 11-1** Available pbvcon commands (continued)

<b>Command name</b>	<b>Description</b>
MOVE_CALENDAR	Sets the special period
PAUSE	Causes the script to temporarily halt execution
REMOVE_AUTHENTIC ATION_METHOD	Disables an authentication method for the specified database
RUN_ALERT	Runs the specified alert
RUN_AUDIT_ARCHIVING	Periodically archives Metrics Management audit data
RUN_AUDIT_EXPORT	Exports audit data
RUN_DATA_EXPORT	Runs the specified data export
RUN_DATA_IMPORT	Runs the specified data import
RUN_DATABASE_EXPORT	Exports a database to a binary file
RUN_DATABASE_IMPORT	Imports a database from a binary file
RUN_DATAMART_EXPORT	Runs the specified DataMart export
RUN_MEASURE_DETAIL _EXPORT	Runs the Measures Detail report
RUN_OBJECT_EXPORT	Exports objects to a file
RUN_OBJECT_IMPORT	Imports objects from a file
SET_DATABASE_MODE	Sets the database to read-only or read-write
SHIFT_CALENDAR	Sets a special period in the Metrics Management calendar to a value that is relative to the specified calendar value.
SYNCHRONIZE _CALCULATED_DATA	Precalculates all data views
SYNCHRONIZE _HIERARCHIES	Precalculates all hierarchies
SYNCHRONIZE_USER_DATA	Publishes the unpublished user data
TAKE_DATABASE_OFFLINE	Takes the specified database offline
TEST_DATABASE _CONNECTION	Verifies connection parameters to the Metrics Management database server
UPGRADE_DATABASE	Upgrades the specified database
UPGRADE_SCRIPT	Upgrade batch files created for Views version 5.3.3 and earlier

*(continues)*

**Table 11-1** Available pbvcon commands (continued)

Command name	Description
UPLOAD_LICENSE_FILE	Uploads the Metrics Management license file
VERIFY_DATABASE	Verifies that the database is free of errors

## About the Metrics Management Scheduling Agent

The Metrics Management Scheduling Agent is a command-line tool that runs a subset of pbvcon commands. The Metrics Management Scheduling Agent requires a local machine with the Windows Client or Metrics Manager installed. Use the Metrics Management Scheduling Agent instead of requiring IT assistance to schedule commands on the Metrics Management Server machine. The following pbvcon commands are available to the Metrics Management Scheduling Agent:

- CLEAR\_CALCULATED\_DATA
- DOWNLOAD\_IHUB\_FILE
- EXECUTE
- GENERATE\_INTERNET\_LIBRARY
- GET\_DATABASE\_STATISTIC
- HELP
- PAUSE
- RUN\_ALERT
- RUN\_AUDIT\_ARCHIVING
- RUN\_AUDIT\_EXPORT
- RUN\_DATA\_EXPORT
- RUN\_DATA\_IMPORT
- RUN\_DATAMART\_EXPORT
- RUN\_MEASURE\_DETAIL\_EXPORT
- RUN\_OBJECT\_EXPORT
- SHIFT\_CALEDAR
- SYNCHRONIZE\_CALCULATED\_DATA
- SYNCHRONIZE\_HIERARCHIES
- SYNCHRONIZE\_USER\_DATA
- TEST\_DATABASE\_CONNECTION

Install the Metrics Management Scheduling Agent from the Windows Client or Metrics Manager. Installing from the Windows Client requires enabling the Metrics Management Scheduling Agent menu. After installing the Metrics Management Scheduling Agent, run pbvcon commands from the command line using the Metrics Management Scheduling Agent executable file, `ssa.exe`.

### How to enable the Metrics Management Scheduling Agent menu for the Windows Client

- 1 Open Windows Explorer and navigate to the `MetricsManagement.config.extra` file. By default the file is found in:

```
C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \Client
```

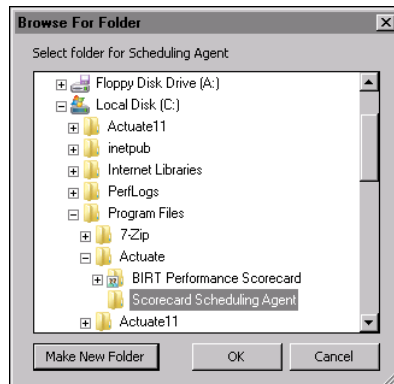


- 2 Open the MetricsManagement.config.extra in a text editor, such as Notepad.
- 3 In appSettings, add the following lines:
 

```
<add key="SchedulingAgentMenu" value="1" />
```
- 4 Save and close the MetricsManagement.config.extra file.
- 5 Restart the Windows Client.

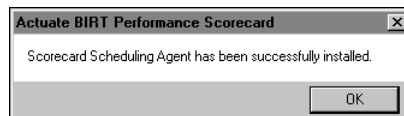
### How to install the Metrics Management Scheduling Agent

- 1 Open the Windows Client or Metrics Manager and log in.
- 2 Choose File→Install Scheduling Agent.
- 3 In Browse For Folder, select a location to install the Scheduling Agent. In the example shown in Figure 11-1, the agent is installed in a new folder.



**Figure 11-1** Choosing a location to install the Scheduling Agent

A message indicates that the Scheduling Agent installed, as shown in Figure 11-2.



**Figure 11-2** A message indicates installation of the Scheduling Agent

---

## Syntax for pbvcon commands

To obtain the full syntax of a pbvcon command, type:

```
pbvcon help command
```

where command is the command for which you require the syntax. For the Metrics Management Scheduling Agent, use ssa instead of pbvcon.

The following sections describe the syntax of the commands.

## **ADD\_AUTHENTICATION\_METHOD**

Enables an authentication method in the specified database.

**Usage** pbvcon ADD\_AUTHENTICATION\_METHOD Server\_Name Db\_Reference  
Login\_Name Login\_Password Auth\_Method

**Parameters**

**Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Auth\_Method**

Authentication method name. Valid values are AD, AD-SSO, LDAP, LDAP-SSO, Metrics Management, and Windows. Use #ALL to apply this action to all methods.

## **BRING\_DATABASE\_ONLINE**

Brings the specified database online.

**Usage** pbvcon BRING\_DATABASE\_ONLINE Server\_Name Db\_Reference Timeout

**Parameters**

**Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. Use #ALL to apply this action to all databases of the specified server.

**Timeout**

Specifies the time-out period for the command in milliseconds. If the command does not finish within the time-out period, the command terminates.

## CLEAR\_CALCULATED\_DATA

Clears calculated data in the specified Standard database.

**Usage** pbvcon CLEAR\_CALCULATED\_DATA Server\_Name Db\_Reference  
Login\_Name Login\_Password

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method, such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

## COMPACT\_DATABASE

Compacts the specified Standard database.

**Usage** pbvcon COMPACT\_DATABASE Server\_Name Db\_Reference

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

## COPY\_DATABASE

Copies the specified Standard database to the destination path.

**Usage** pbvcon COPY\_DATABASE Server\_Name Db\_Reference Login\_Name  
Login\_Password Dest\_Path

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Dest\_Path**

Destination database path. Use quotation marks if the value contains spaces.

**Warning** The destination folder must be empty. If the folder contains any files or subfolders, the command fails.

## DOWNLOAD\_IHUB\_FILE

Download file from an iHub volume.

**Usage** pbvcon DOWNLOAD\_IHUB\_FILE Server\_Name User\_Name Login\_Password  
iHub\_File\_Path Local\_File\_Path

**Parameters** **Server\_Name**

The Metrics Management Server name. Use quotation marks if the value contains spaces.

**User\_Name**

User name with rights to access iHub, for example, Administrator. Use quotation marks if the value contains spaces.

**Login\_Password**

Login password for the user with rights to access iHub.

**iHub\_File\_Path**

Path to iHub file. Separate the iHub volume name, file path, and file name with forward slashes, for example, "Metrics Management/Public/BIRT and Report Studio Examples/Crosstab Sample Revenue.rptdesign".

**Local\_Folder\_Path**

Path to the local folder in which to save the file downloaded from iHub, for example, C:\Temp.

**EXECUTE**

Launches an external program.

**Usage** pbvcon EXECUTE File\_Path Wait\_State

**Parameters** **File\_Path**

The executable path, file name, and optional line parameters, after a space. Use quotation marks if the value contains spaces.

**Wait\_State**

Whether the command waits until the executable finishes. If undefined, the value is WAIT. The value NOWAIT causes the command to return immediately.

**GENERATE\_INTERNET\_LIBRARY**

Generates the specified internet library.

**Usage** pbvcon GENERATE\_INTERNET\_LIBRARY Server\_Name Db\_Reference  
Login\_Name Login\_Password Object\_Name Period\_Name  
Suppress\_TimeStamp

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path, exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method, such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, such as AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password, such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Object\_Name**

The name of an internet library object. This parameter is case-sensitive. Use quotation marks if the value contains spaces.

**Period\_Name**

The name of the period object, for example, "March 2011". This parameter is case-sensitive. Use quotation marks if the value contains spaces. If undefined, the library generates using the completed period.

**Suppress\_TimeStamp**

Suppresses the time stamp. Valid values are YES and NO. The default value is NO.

## GET\_DATABASE\_STATISTIC

Provides basic database statistics.

**Usage** pbvcon GET\_DATABASE\_STATISTIC Server\_Name Db\_Reference  
Login\_Name Login\_Password

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

## HELP

Displays a summary of all pbvcon commands, or detailed help for the specified command.

**Usage** pbvcon HELP Help\_Kind

**Parameter** **Help\_Kind**

The type of help to display. To show a summary of all pbvcon commands, use a value of ALL. To show detailed help on a single command, use the command name as the value.

## LIST\_SESSIONS

Lists licensing sessions.

**Usage** pbvcon LIST\_SESSIONS Server\_Name Db\_Reference Format

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. This parameter is ignored if Metrics Management uses a server license.

**Format**

Whether to produce a detailed report of licensed sessions. Specify Long to displays licensing session information with details. If undefined, only active licensing sessions are listed.

## MAKE\_DATABASE\_AVAILABLE

Makes the specified database available.

**Usage** pbvcon MAKE\_DATABASE\_AVAILABLE Server\_Name Db\_Reference Timeout

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. Use #ALL to apply this action to all databases of the specified server.

**Timeout**

The time-out period for the command in milliseconds. If the command does not finish within the time-out period, the command terminates.

## MAKE\_DATABASE\_UNAVAILABLE

Makes the specified database unavailable.

**Usage** pbvcon MAKE\_DATABASE\_UNAVAILABLE Server\_Name Db\_Reference  
Timeout

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. Use #ALL to apply this action to all databases of the specified server.

**Timeout**

The time-out period for the command in milliseconds. If the command does not finish within the time-out period, the command terminates.

## MOVE\_CALENDAR

Sets the special period.

**Usage** pbvcon MOVE\_CALENDAR Server\_Name Db\_Reference Login\_Name  
Login\_Password Period\_Type\_Name Special\_Period\_Name  
Simple\_Period\_Name

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Period\_Type\_Name**

The period type: Month, Quarter, Week, or Year.



**Special\_Period\_Name**

The name of the special period: Completed, Current, or Locked.

**Simple\_Period\_Name**

The name of the period, for example, 2005, 2005/01, None.

**PAUSE**

Makes a pause in the execution of a script.

**Usage** pbvcon PAUSE Timeout

**Parameter** **Timeout**

Delay in the command execution in milliseconds. If undefined or the value is less or equal to zero, the delay continues until the user hits the ENTER (CR) key.

**REMOVE\_AUTHENTICATION\_METHOD**

Disables an authentication method in the specified database.

**Usage** pbvcon REMOVE\_AUTHENTICATION\_METHOD Server\_Name Db\_Reference  
Login\_Name Login\_Password Auth\_Method

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Auth\_Method**

Authentication method name. Use #ALL to apply this action to all methods: AD, AD-SSO, LDAP, LDAP-SSO, Standard, and Windows.

## RUN\_ALERT

Runs the specified alert.

**Usage** pbvcon RUN\_ALERT Server\_Name Db\_Reference Login\_\_Name  
Login\_Password Object\_Name Format

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Object\_Name**

The name of an alert object. Use #ALL to run all alerts in the specified database. This parameter is case-sensitive. Use quotation marks if the value contains spaces.

**Format**

An output format. Either Header or NoHeader. The default is Header. This is for XML parsers that do not accept input with a date time stamp header.

## RUN\_AUDIT\_ARCHIVING

Archives Metrics Management audit data.

**Usage** pbvcon RUN\_AUDIT\_ARCHIVING Server\_Name Db\_Reference Login\_Name  
Login\_Password Format File\_Path

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Format**

Output format. Valid values are CSV or XML. The default is XML.

**File\_Path**

Path of the archive file. The file name is generated automatically. Use quotation marks if the value contains spaces.

**RUN\_AUDIT\_EXPORT**

Exports audit data.

**Usage** pbvcon RUN\_AUDIT\_EXPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password File\_Path Format Starting\_Date End\_Date Subject Action  
Time\_Type

**Parameters Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**File\_Path**

The path and name of the export file. Use quotation marks if the value contains spaces.

**Format**

Output format. Valid values are CSV or XML. The default is XML.

**Start\_Date**

Starting date in the format yyyy/mm/dd.

**End\_Date**

Ending date in the format yyyy/mm/dd.

**Subject**

An audit subject. Valid values are Commentary, Data, Object, System, and #ALL.

**Action**

An audit action. Valid values are Create, Delete, Disable, Edit, Enable, Import, Remove, Run, and #ALL.

**Time\_Type**

A time type. Valid values are Local and UTC. The default is UTC.

**RUN\_DATA\_EXPORT**

Runs the specified data export.

**Usage** pbvcon RUN\_DATA\_EXPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password Object\_Name

**Parameters****Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Object\_Name**

The name of a data export object. This parameter is case-sensitive. Use quotation marks if the value contains spaces.

## **RUN\_DATA\_IMPORT**

Runs the specified data import.

**Usage** pbvcon RUN\_DATA\_IMPORT Server\_Name Db\_Reference User\_Name  
Password Object\_Name

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Object\_Name**

The name of a data import object. This parameter is case-sensitive. Use quotation marks if the value contains spaces.

## RUN\_DATABASE\_EXPORT

Exports a local ([LOCAL]) database to a binary file which you can later import into Metrics Management.

**Usage** pbvcon RUN\_DATABASE\_EXPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password File\_Path Include\_Audit\_Data Include\_Calc\_Data

### Parameters

#### **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

#### **Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

#### **Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

#### **Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

#### **File\_Path**

The path and name of an output file in which to save the data. If undefined, a file having a default name is created in the current directory. Use quotation marks if the value contains spaces.

#### **Include\_Audit\_Data**

Whether to include audit data in the export. Valid values are True or False. The default is False.

#### **Include\_Calc\_Data**

Whether to include calculated data in the export. Valid values are True or False. The default is False.

### Warning

Exporting audit and calculated data can significantly increase export time and result in a very large export file.

## RUN\_DATABASE\_IMPORT

Imports a database from a binary file.

**Usage** pbvcon RUN\_DATABASE\_IMPORT Server\_Name Db\_Reference User\_Name  
Password File\_Path

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**File\_Path**

The path and name of a Metrics Management binary file from which to import the data. Use quotation marks if the value contains spaces.

## **RUN\_DATAMART\_EXPORT**

Runs the specified DataMart.

**Usage** pbvcon RUN\_DATAMART\_EXPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password Object\_Name

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Object\_Name**

The name of a data import object. This parameter is case-sensitive. Use quotation marks if the value contains spaces.

## **RUN\_MEASURE\_DETAIL\_EXPORT**

Runs the Measures Detail report.

**Usage** pbvcon RUN\_MEASURE\_DETAIL\_EXPORT Server\_Name Db\_Reference  
Login\_Name Login\_Password File\_Path Format

**Parameters**

**Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**File\_Path**

The path and name of the output file in which to save the data. If undefined, a default file name is used. This name uses the command name and has an extension based on the value of the Format parameter. The file is created in the current directory. Use quotation marks if the value contains spaces.

**Format**

Output format. Valid values are CSV, Excel, or Text. The default is Text.



## RUN\_OBJECT\_EXPORT

Exports objects to a file.

**Usage** pbvcon RUN\_OBJECT\_EXPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password Kind Object\_Name Import\_Action Reference File\_Path

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Kind**

The object type, for example, ALERT or BOOK. Use #ALL to export all object types.

**Object\_Name**

The name of the object to export. Use #ALL to export all objects of a specified type.

**Import\_Action**

The import action type. Valid values are ADD, DELETE, or EDIT.

**Reference**

To export referenced objects, use a value of TRUE. This parameter is ignored if Kind is #ALL.

**File\_Path**

The file path and name. Use quotation marks if the value contains spaces.

## RUN\_OBJECT\_IMPORT

Imports objects from a file.

**Usage** pbvcon RUN\_OBJECT\_IMPORT Server\_Name Db\_Reference Login\_Name  
Login\_Password File\_Path

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**File\_Path**

The file path and name. Use quotation marks if the value contains spaces.

## SET\_DATABASE\_MODE

Sets the database mode to READ\_ONLY or READ\_WRITE.

**Usage** pbvcon SET\_DATABASE\_MODE Server\_Name Db\_Reference Login\_Name  
Login\_Password Db\_Mode

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Db\_Mode**

The database mode. Valid values are RO = Read-Only; RW = Read-Write. If undefined, pbvcon does not execute the command.

## SHIFT\_CALENDAR

Sets a special period in the Metrics Management calendar to a value that is relative to the specified calendar value.

**Usage** pbvcon SHIFT\_CALENDAR Server\_Name Db\_Reference Login\_Name  
Login\_Password Period\_Type\_Name Special\_Period\_Name Shift\_By

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Period\_Type\_Name**

The period type: Month, Quarter, Week, or Year.

**Special\_Period\_Name**

The name of the special period: Completed, Current, or Locked.

**Shift\_By**

An integer number which specifies how to replace the selected calendar period value. Use N, +N or -N, where N is an integer.

## SYNCHRONIZE\_CALCULATED\_DATA

Precalculates data in views. By precalculating data, the load on the Metrics Management Server is lower, and users open objects such as books and views more quickly. Unless you have a good reason for not doing so, synchronize hierarchies before running a precalculation.

**Usage** pbvcon SYNCHRONIZE\_CALCULATED\_DATA Server\_Name Db\_Reference  
Login\_Name Login\_Password Views\_Only Calc\_Dashboards

**Parameters****Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Views\_Only**

True or False. Specify True to calculate all named views, which are views that have not been customized. Specify False to also calculate all custom views associated with book sections, data exports, and maps. The default value is True.

**Calc\_Dashboards**

True or False. Specify True to calculate values that appear in dashboard charts and tables. Specify False to exclude dashboard data from precalculation. The default value is False.

## SYNCHRONIZE\_HIERARCHIES

Precalculates all hierarchies.

**Usage** pbvcon SYNCHRONIZE\_HIERARCHIES Server\_Name Db\_Reference  
Login\_Name Login\_Password

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

## **SYNCHRONIZE\_USER\_DATA**

Publishes the unpublished user data.

**Usage** pbvcon SYNCHRONIZE\_USER\_DATA Server\_Name Db\_Reference  
Login\_Name Login\_Password

**Parameters** **Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**TAKE\_DATABASE\_OFFLINE**

Takes the specified database offline.

**Usage** pbvcon TAKE\_DATABASE\_OFFLINE Server\_Name Db\_Reference Timeout

**Parameters****Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. Use #ALL to apply this action to all databases on the specified server.

**Timeout**

The time-out period for the command in milliseconds. If the command does not finish within the time-out period, the command terminates.

**TEST\_DATABASE\_CONNECTION**

Verifies connection parameters to the Metrics Management database server.

**Usage** pbvcon TEST\_DATABASE\_CONNECTION Server\_Name Db\_Reference  
Login\_Name Login\_Password Packet\_Size Packet\_Quantity

**Parameters****Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**Packet\_Size**

The size in kilobytes (KB) of the single data packet to transfer to the database. The maximum permitted value is 256.

**Packet\_Quantity**

The number of data packets to send to the database. The maximum permitted value is 512.

## UPGRADE\_DATABASE

Upgrades the specified database.

**Usage** pbvcon UPGRADE\_DATABASE Server\_Name Db\_Reference

**Parameter Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

## UPGRADE\_SCRIPT

Upgrades batch files created for Views version 5.3.3 and below.

**Usage** pbvcon UPGRADE\_SCRIPT Server\_Name Login\_Name Login\_Password  
File\_Path

**Parameters Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Login\_Name**

Login name that has rights to access a Metrics Management database.

If the database is configured to use an optional authentication method such as AD or LDAP, you can prefix the login name with the authentication method followed by a backslash, for example, LDAP\Joe.

If your authentication method does not require a Metrics Management login name, for example, AD-SSO, LDAP-SSO, or Windows, use any string as the login name. For example, you can use NONE.

**Login\_Password**

User login password. For authentication methods that do not require a user password such as AD-SSO, LDAP-SSO, or Windows, use any string for the password. For example, you can use NONE.

**File\_Path**

The script path and file name. Use quotation marks if the value contains spaces.

**UPLOAD\_LICENSE**

Uploads the Metrics Management license file.

**Usage** pbvcon UPLOAD\_LICENSE License\_File\_Path Server\_Name Db\_Reference

**Parameter License\_File\_Path**

The path to the new license file. This command uploads only the local license file.

**Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces. If undefined, pbvcon expects a server license.

**VERIFY\_DATABASE**

Verifies the specified database.

**Usage** pbvcon VERIFY\_DATABASE Server\_Name Db\_Reference

**Parameters Server\_Name**

The server name. Use quotation marks if the value contains spaces.

**Db\_Reference**

The database name or path exactly as it is known to the server. Use quotation marks if the value contains spaces.

**Sample pbvcon batch file**

The support web site at <http://support.actuate.com> contains more sample batch files. For assistance with batch scripting using pbvcon, contact Performance Management Customer Support.

```

REM *****
REM **                                     **
REM **  Batch File for Run Alert          **
REM **                                     **
REM *****
@ ECHO OFF

```



```

REM Log the date on which this alert occurred
Date /t >pbvalert.log
REM Log the time on which this alert occurred
time /t >pbvalert.log
REM Run the Alert for missing data
"C:\Program Files\Actuate\iHub3\modules\Metrics Management
  \pbvcon.exe" RUN_ALERT MyServer "Server Sample" Administrator
  Password "Missing Data"
exit

```

---

## Scheduling pbvcon

Scheduling events with pbvcon requires the use of the Windows NT Task Scheduler. The task scheduler is installed with Internet Explorer 7.0 or above. The task scheduler supports recurring tasks on a daily, weekly, monthly, reboot, once only, or login basis. You can use the scheduler to make pbvcon back up your databases, run imports and exports, precalculate data or hierarchies, and verify and compact a database. To perform these tasks, create a batch file instructing pbvcon to carry out the tasks on your databases.

You can set many different tasks to run at different frequencies. Some recommended best practices are:

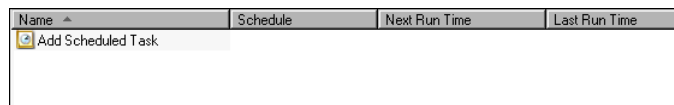
- Back up every night.
- Verify and compact monthly.

DOS batch files run sequentially, but if you schedule multiple batches to run at similar times, you might encounter conflicts between different pbvcon commands. For this reason, Actuate recommends scheduling the tasks far apart, or chaining dependant batch files into a single sequential batch file.

### How to set up a recurring task to run a pbvcon batch file

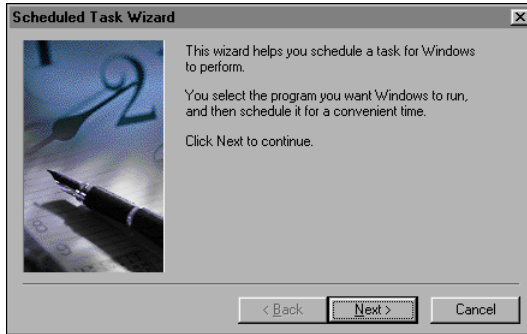
After creating and testing a pbvcon batch file, perform the following steps to set up the recurring task:

- 1 Choose Start→Settings→Control Panel→Scheduled Tasks.
- 2 From the Scheduled Tasks window, as shown in Figure 11-3, double-click Add Scheduled Task.



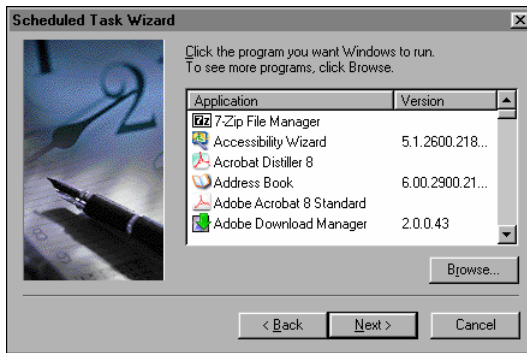
**Figure 11-3** The Scheduled Tasks window

- 3 In the Scheduled Task Wizard window, shown in Figure 11-4, choose Next.



**Figure 11-4** The Scheduled Task wizard

- 4 Choose Browse, as shown in Figure 11-5, and select the pbvcon batch file that you created earlier for the task to schedule. Then, choose Open.



**Figure 11-5** Locating the pbvcon batch file

- 5 At the scheduler, provide the name of the task and the frequency of the recurrence, as shown in Figure 11-6. Then, choose Next.



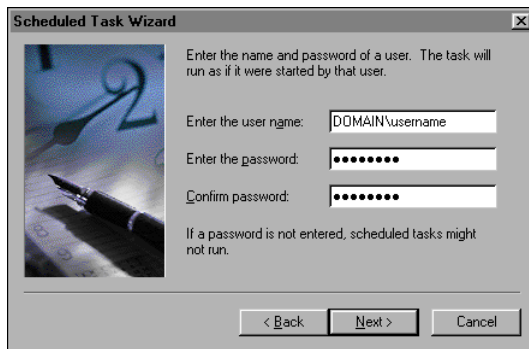
**Figure 11-6** Naming the task and setting the task frequency

- 6 Provide the Start time, as shown in Figure 11-7. Then, choose Next.



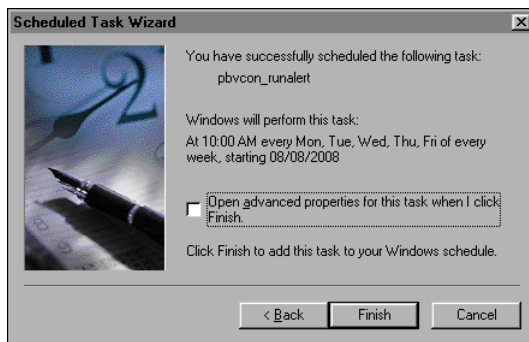
**Figure 11-7** Defining the task start date

- 7 Set the User and password for this task, as shown in Figure 11-8. Actuate recommends that this user is the same as the one running the Metrics Management server. This user must have the right to run batch processes. Then, choose Next.



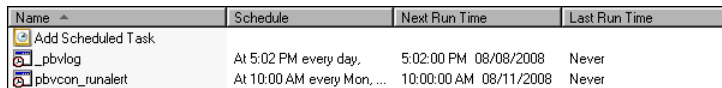
**Figure 11-8** Setting the user name and password for a task

- 8 Choose Finish to create the task, as shown in Figure 11-9.



**Figure 11-9** Confirming and creating the task

The new task is added to the Task scheduler. The scheduler window displays all the scheduled tasks, as shown in Figure 11-10.



Name	Schedule	Next Run Time	Last Run Time
Add Scheduled Task			
_pbvlog	At 5:02 PM every day,	5:02:00 PM 08/08/2008	Never
pbvcon_runalert	At 10:00 AM every Mon, ...	10:00:00 AM 08/11/2008	Never

**Figure 11-10** The Scheduled Tasks window, displaying all scheduled tasks

---

## About pbvcon log files and error handling

pbvcon produces a console level output that can be redirected to another output, and an XML log file. The log file output varies depending on the commands that are run. Log files can include a list of tasks pbvcon performed, parameter values, an execution time line, intermediate steps and events, and the command's success and failure status. pbvcon generates:

- A general status log in the pbvcon command-line window. You can send this log to a file or printer.  
When you run a batch command from the command line, pbvcon sets the ERRORLEVEL based on the outcome of the command.
- A detailed XML file log. The pbvcon.se.log.xml is saved in the C:\Program Files\Actuate\i\Hub3\modules\Metrics Management\Server folder. pbvcon overwrites the file each time pbvcon runs.

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