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Disclaimer

This document is intended to support administrators, technology managers or developers using and implementing Smarten. The business needs of each organization will vary and this document is expected to provide guidelines and not rules for making any decisions related to Smarten. The overall performance of Smarten depends on many factors, including but not limited to hardware configuration and network throughput.
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1 About this document

This document is designed to provide the administrator with fundamental skills to administer Smarten in the organisation. This guide provides step-by-step information on all administrative features of Smarten.

This chapter contains topics relating to the scope and use of the Smarten Advanced Data Discovery Administrator Guide.

1.1 Intended audience

This document is primarily intended for administrators who use Smarten. It assumes that the reader is familiar with the following:

- Overview of concepts and features of Smarten
- Data source management and connections
- User management and access rights privileges
- Security, authentication, and server management
- Java Enterprise Application management

1.2 Scope and organisation of topic areas

The content in this manual is organised according to the user interface components included in the Administration Interface and are arranged in the following topics:

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<th>Topic</th>
</tr>
</thead>
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<td>About this Document</td>
</tr>
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<td>8</td>
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<tr>
<td>9</td>
<td>Rebuild Cube</td>
</tr>
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<td>10</td>
<td>Working with Repository</td>
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<td>11</td>
<td>Using Scheduler</td>
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<tr>
<td>12</td>
<td>Managing Security &amp; Permissions</td>
</tr>
<tr>
<td>13</td>
<td>Configuring R server</td>
</tr>
<tr>
<td>14</td>
<td>Configuring TeamUp</td>
</tr>
<tr>
<td>15</td>
<td>Working with Logs</td>
</tr>
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<td>16</td>
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<td>17</td>
<td>Taking Backup</td>
</tr>
<tr>
<td>18</td>
<td>Product &amp; Support Information</td>
</tr>
</tbody>
</table>
1.3 Conventions used

This guide uses typographical conventions in the text to help you distinguish between the names of files, instructions, and other important notes that are relevant during installation. For example:

- Field names are mentioned in boldface font:
  Select **Page Setup** tab under **Page Setup Template**

- Important notes are indicated in a different font colour
  
  **Note:**
  Query Schema is not accessible in MS - Access Database.

- References to other Manuals are mentioned in highlights

  Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental
2  Introducing Smarten
This section provides an overview of the Smarten platform and covers the components and capabilities for Advanced Data Discovery and Corporate Performance Management.

2.1  High-level architecture
Smarten provides a comprehensive and integrated set of features and functions that deliver information to end users through Crosstab, tabular, graphical charts, GeoMap, KPI, and dashboards, thereby allowing users to use data in an interactive manner.

To understand how Smarten provides a complete BI framework for corporate performance management and advanced data discovery with enterprise-wide implementation, refer to the following high-level architecture diagram:

Refer to documents related to Managed Memory Computing to understand concept and working of Managed Memory Computing.
2.2 Responsive user interface

Smarten is designed with an adaptive and responsive user interface that renders the UI elements based on the resolution of the target device. The following three resolutions are taken into consideration:

- **Desktop view**: screen width of 980 px and above
- **Tablet portrait view**: screen width between 671px and 979px
- **Smartphone view**: screen width of 670 px and below

The following images explain how different target devices display the same dashboard objects:
## 2.3 Smarten modules

Smarten fulfils enterprise wide Advanced Data Discovery needs with crosstab, graphs, GeoMap, tabular, KPIs, dashboards, executive alerts and integrated information delivery agent.

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Extraction, Data Transformation, Cube Management</td>
<td>Data extraction, data transformation, and data management allow you to extract, load, and transform (ETL) data using an intuitive graphical interface through a unified, powerful browser-based platform.</td>
</tr>
<tr>
<td>Dashboards</td>
<td>Dashboards provide a customized snapshot of daily operations, assist you in identifying problems and their source, and provide valuable, up-to-date information about financial results, sales, and other critical information—all in one place!</td>
</tr>
<tr>
<td>Key Performance Indicators (KPI)</td>
<td>Simplified KPI management and tracking with powerful features, formulae and expressions, flexible frequency, and threshold levels enable clear definition and tracking of KPIs for a period and measure performance as compared with any previous cycle. You can analyse performance with easy-to-use features, such as drill-down, drill through, slice and dice, and graphical data mining.</td>
</tr>
<tr>
<td>Cross-Tab Analysis</td>
<td>Cross-tab analysis offers a 360-degree view of business, seamless integration with data extraction and cube management features, and ad hoc queries and BI reporting for a clear view of corporate performance and the ability to slice and dice, drill-down, and drill through data to find the most relevant information.</td>
</tr>
<tr>
<td>Graphs</td>
<td>Graphical technology makes it easy for you to find, filter, and analyse data. It allows you to go beyond numbers and view information with stunning displays, valuable indicators and gauges, charts, and a variety of graph types from which you can choose.</td>
</tr>
<tr>
<td>GeoMap</td>
<td>GeoMap makes it easy for you to find, filter and analyse data using geographic maps. It provides such features as drill down, spot lighter, zoom in / zoom out, and other visual properties, and does not need any active connection to the Internet.</td>
</tr>
<tr>
<td>Exception Reporting and Alerts</td>
<td>Exception Reporting allows you to define threshold points, monitor Key Performance Indicators and metrics, and receive alerts when exception conditions occur. You have the ability to set, modify, and delete alerts based on specific thresholds.</td>
</tr>
<tr>
<td>Tabular Analysis</td>
<td>Reports deliver web-based Advanced Data Discovery reports to anyone in the organisation within minutes! It is simple to use, easy to implement, and affordable for every organization. Use the point-and-click and drag-and-drop features to create a tabular analysis and summarize performance metrics and operational data and the ability to drill-down, and drill through data to find the most relevant information.</td>
</tr>
<tr>
<td>Publishing and Delivery Agent</td>
<td>This module ensures that every user has the information they need. Objects, tabular, cross-tab, graphs, GeoMap and dashboards are automatically delivered so that you are aware of issues, opportunities, finances, and sales. You can access information from anywhere and see information in a form that is meaningful to you on a schedule that you define.</td>
</tr>
<tr>
<td>Self-serve data preparation (SSDP)</td>
<td>The Self-Serve Data Preparation component of the Smarten Advanced Data Discovery solution allows business users to prepare and analyze data with clear results without the assistance of technology staff or analysts.</td>
</tr>
<tr>
<td>SmartenView – SmartVisualizatio</td>
<td>Smart Data Visualization allows business users to analyze, share, and present information without waiting for assistance from visualization...</td>
</tr>
<tr>
<td>n experts or programmers. With augmented data discovery tools, business users can cut through that mountain of data to find those elusive nuggets of information that have the most impact on business results.</td>
<td></td>
</tr>
<tr>
<td>SmartenInsight – Plug n play predictive modelling</td>
<td>SmartenInsight provides predictive modelling capability and auto-recommendations and auto-suggestions to simplify use and allow business users to leverage predictive algorithms without the expertise and skill of a data scientist.</td>
</tr>
</tbody>
</table>
3 Getting started with Smarten Administration

3.1 Logging in to Smarten

This section provides an overview of the Smarten Administration tool and covers the simple administrative tasks you need to perform to start administering Smarten.

Before you begin

Install the compatible browser on your device. For more information about compatible browsers, see the Technical Specifications guide.

You need to have Administration access rights to access Smarten administration features.

To access the Smarten Administrator interface:

Procedure
1. In the address field of the web browser, enter the following URL:
   http://<host name>:<port number> where
   host name is the host name or IP address or host name of the server.
   port number is the port number of the application server. The default port number is 8080.
   For example: http://localhost:8080/smarten/ or http://10.0.0.85:8080/smarten

2. Log in to the application with a default user name and password given below:
   User name—admin
   Password—admin
3  Click **Login** to log on to the interface.

On successful login, you will be taken to the home page of Smarten.

**Note:**
This is the default password setting in Smarten. For your system’s security, change this default password as soon as possible.

To go to Administrator interface:

**Procedure**

1  In the upper right-hand corner, click the **down arrow** icon. The system displays the Main Menu.
2  In the Main Menu, click **Administration**. The system displays the Administrator interface.
3.2 Components of the Smarten interface

The Smarten Administrator interface displays the user name of the user who is logged on. Navigation panel on the left side of the interface contains hierarchical menu items for different administrative features provided. The active window on the right displays screens for the feature selected in Navigation panel.
<table>
<thead>
<tr>
<th>Pane</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation pane</td>
<td>The Navigation pane is on the left side of the interface. It contains Configuration, Data source, Cube management, Repository, Scheduler, Security &amp; permissions, and logs.</td>
</tr>
<tr>
<td>Header pane</td>
<td>The Header pane displays the login information and the drop-down menu that lists various functions available to the logged-in user as per access rights granted by the administrator.</td>
</tr>
<tr>
<td>Active pane</td>
<td>The Active pane is to the right of the Navigation pane and under the Header pane. The contents of the Active pane change depending on the function you are performing on Smarten. For example, when you log in to the application, the Active pane displays the Environment information.</td>
</tr>
</tbody>
</table>

The system displays Error-, Warning-, and Info-type dialogue boxes.

**Error dialog box**
The system displays the error dialog box when you perform an incorrect action.

```
>Error

E1017
Please select parent folder

OK
```

**WARNING DIALOG BOX**

**Warning dialog box**
The system displays the warning dialog box to alert you of a condition that might cause a problem in the future.

```
>Delete

Are you sure you want to delete selected object(s)?

OK  CANCEL
```

**WARNING DIALOG BOX**

**Info dialog box**
The system displays the info dialog box to display relevant messages, such as tips, updates, or help regarding your current action.

```
>Info

Object(s) added to My favourites

OK
```

**INFO DIALOG BOX**
4 Application Configuration Settings

This section provides an overview of system configuration under Configuration settings available in Smarten.

In Configuration, you can view environmental information, general configuration, managed memory configuration, time dimension value mappings, and other related information.

4.1 Environment Information

If you have successfully installed Smarten, you should be able to view the environment information, such as license information, product version, and Java Virtual Machine details.

4.1.1 License Information

To check the product version of Smarten installed and license-related information:

Procedure

1. In the Navigation Panel, click Configuration. The system displays the Environment Information. In the License Information section, you can view Smarten version, information related to license, records, data source(s), and expiry date.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>Smarten Software License version</td>
</tr>
<tr>
<td>Licensed to</td>
<td>Name of company or a person to whom license is assigned</td>
</tr>
<tr>
<td>Number of users</td>
<td>Maximum number of power users, users, and publish-only users allowed for BI and BSC</td>
</tr>
<tr>
<td>Number of admin users</td>
<td>Maximum number of administrators allowed for BI and BSC</td>
</tr>
<tr>
<td>Maximum Records Limit</td>
<td>Maximum number of records limit</td>
</tr>
<tr>
<td>Number of data source(s)</td>
<td>Maximum number of data source(s) limit</td>
</tr>
<tr>
<td>API Access</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Mac Address</td>
<td>Mac Address of server host machine, e.g., 00-16-76-99-DD-4E</td>
</tr>
<tr>
<td>Expiry date</td>
<td>Date / No Expiry</td>
</tr>
</tbody>
</table>
4.1.2 Java Virtual Machine

To view Java Virtual Machine details:

Procedure

1. In the Navigation Panel, click Configuration.

   The system displays the Environment Information.
   In the Java Virtual Machine section, you can view information on Java home directory, maximum memory, and used memory.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Java Version</td>
<td>Installed version of JVM on which the application server is running</td>
</tr>
<tr>
<td>Java Home Directory</td>
<td>Location of default Java home directory</td>
</tr>
<tr>
<td>Maximum Memory</td>
<td>Maximum allocated JVM memory</td>
</tr>
<tr>
<td>Used Memory</td>
<td>JVM memory currently used</td>
</tr>
</tbody>
</table>

Note:
If you have more than one version of JVM installed on your server, this dialogue would display information for the JVM being used by application server on which Smarten is deployed.

4.2 General Configuration

You can set the application data directory path to specify a location where all application objects, such as crosstab, tabular, graphs, GeoMap, dashboards and configuration files, will be saved by default.

Using the General Configuration dialog, you can set the data directory path, publishing directory, Logged in Home Page Icons, Log settings, set date & time format, and manage time series hierarchy.
### GENERAL CONFIGURATION

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data directory path</td>
<td>[Your Path]</td>
</tr>
<tr>
<td>Published directory</td>
<td>[Your Path]</td>
</tr>
<tr>
<td>Logged in home page</td>
<td>Default Theme Page</td>
</tr>
<tr>
<td>No. of objects to be processed simultaneously in dashboard</td>
<td>5</td>
</tr>
<tr>
<td>Audit log</td>
<td>Basic, Application version tag, Object access, Detail</td>
</tr>
<tr>
<td>Time series level</td>
<td>Year, Week, Half Year, Quarter</td>
</tr>
<tr>
<td>Time series selection</td>
<td>From 2011 To 2017</td>
</tr>
<tr>
<td>Cross tab default theme properties</td>
<td>Default</td>
</tr>
<tr>
<td>Graph default theme properties</td>
<td>Default</td>
</tr>
<tr>
<td>GeoMap default theme properties</td>
<td>Default</td>
</tr>
<tr>
<td>Tabular default theme properties</td>
<td>Default</td>
</tr>
<tr>
<td>KPI default theme properties</td>
<td>Default</td>
</tr>
<tr>
<td>KPI group default theme properties</td>
<td>Default</td>
</tr>
</tbody>
</table>

Visit us at www.smarten.com
To view and modify General Configuration settings:

**Procedure**

1. In the **Navigation Panel**, click **Configuration**.
2. In the **Configuration** menu, click **General configuration**. The system displays the **General configuration** page.
3. In the **General Configuration** page, enter or update all the required information.
4. Click Save to save the changes.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Directory Path</td>
<td>This is the directory where application data is to be stored. It contains the following sub-directories: Cubes directory contains Cube repository DB directory contains Smarten metadata database files Logs directory contains all log files Uploaded files directory contains all uploaded files, such as CSV files used for cube creation Uploaded images directory contains logos and other uploaded images Temp directory contains object cache files Path: &lt;Smarten Installation/data&gt; can be set on any drive of the system. Click on “Default” button to set default Data Directory path</td>
</tr>
<tr>
<td>Publishing Directory</td>
<td>Directory where objects published by Delivery &amp; Publishing agent (scheduler) are stored. Click on “Default” button to add default Publishing Directory path</td>
</tr>
<tr>
<td>Logged-in home page</td>
<td>Logged-in home page that is displayed after logging in Default—Default Smarten home page URL—Any URL as the home page Select object from repository - any Smarten object (e.g., a dashboard or crosstab or graph or GeoMap or KPI) from Smarten repository as home page Selected object will be shown as homepage by default to all the users in the system. If any homepage for the group has been configured, this group homepage will be given priority over the default homepage configured by admin. If any home page for individual has been configured, priority will be given to personal homepage over the group homepage. TeamUp — TeamUp home page will be displayed after logging in</td>
</tr>
<tr>
<td>No. of objects to be processed simultaneously in dashboard</td>
<td>Number of objects that will be processed simultaneously in a dashboard.</td>
</tr>
<tr>
<td>Logs settings</td>
<td>Audit log – Basic, Object access or Detail log Application error log – Basic or Detail log</td>
</tr>
<tr>
<td>Allow users to edit profile</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Financial Year Starts from</td>
<td>Start (month) of financial year, e.g., April or January Reference: Concept Manual &gt; Designing the Data Model &gt; Cube &gt; Time Dimension &gt; Time dimension based on a financial year</td>
</tr>
<tr>
<td>Date format</td>
<td>Default Date format from various</td>
</tr>
<tr>
<td>Time format</td>
<td>Default Time format</td>
</tr>
<tr>
<td>Time Series Level</td>
<td>Time Series level options to be displayed in Time Series Dialogue throughout the application Reference: Concept Manual Designing the Data Model &gt; Cube &gt; Time Dimension &gt; Time dimension hierarchy</td>
</tr>
<tr>
<td>Time Series Selection</td>
<td>Range of Absolute and Relative Year values to be displayed in Time series dialog throughout the application</td>
</tr>
<tr>
<td>Crosstab Default Theme</td>
<td>Crosstab object that will be used as default theme for new crosstab created</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Graph Default Theme Properties</td>
<td>Graph object that will be used as default theme for new graph created</td>
</tr>
<tr>
<td>GeoMap Default Theme Properties</td>
<td>GeoMap object that will be used as default theme for new GeoMap created</td>
</tr>
<tr>
<td>Tabular Default Theme Properties</td>
<td>Tabular object that will be used as default theme for new tabular created</td>
</tr>
<tr>
<td>KPI Default Theme Properties</td>
<td>KPI object that will be used as default theme for new KPI created</td>
</tr>
<tr>
<td>KPI Group Default Theme Properties</td>
<td>KPI Group object that will be used as default theme for new KPI Group created</td>
</tr>
<tr>
<td>Google map key</td>
<td>Specify google map API key for creating Geomap using Google maps.</td>
</tr>
</tbody>
</table>

### 4.3 Managed Memory Configuration

In the managed memory configuration section, you can view details regarding allocated memory, used memory, and free memory. You can set the managed memory working using allocated memory and memory eviction scheme.

**To view and modify Managed Memory Configuration settings:**

**Procedure**

1. In the **Navigation Panel**, click **Configuration**.
2. In the **Configuration** menu, click **Managed memory configuration**.
3. The system displays the **Managed memory configuration** page.
4. In the **Managed memory configuration** page, enter or update all the required information.
5. Click **Save** to save the changes.
4.3.1 Managed Memory Information

Managed Memory Information:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Managed memory configuration.
   
   The system displays the Managed memory configuration page.
   
   In the Managed Memory Information section, you can view information about allocated memory, used memory, and free memory.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocated Memory</td>
<td>View total allocated memory for managed memory computing</td>
</tr>
<tr>
<td>Used Memory</td>
<td>View memory used by managed memory computing</td>
</tr>
<tr>
<td>Free Memory</td>
<td>View memory available for managed memory computing</td>
</tr>
</tbody>
</table>

4.3.2 Managed Memory Settings

Managed Memory Settings:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Managed memory configuration.
3. The system displays the Managed memory configuration page.
4. Go to Managed Memory Settings section.
5. In the Allocate memory field, enter the memory to be allocated for managed memory computing.
6. Click Save to save the changes.
7. Click Details.
8. The system displays the Managed memory current usage dialog box. You can see managed memory allocated and utilized by those cubes and objects for which the “Enable managed memory” checkbox has been selected. You can also flush data from managed memory by clicking the Flush data from managed memory icon against a cube or object name.
9. Click Close to exit the dialog box.

Reference: Managed Memory computing concept document
4.4 Email Settings

By using Email settings, you can configure Simple Mail Transfer Protocol (SMTP) server parameters to send your email messages to users.

You can set host name, port no., authentication, user name, password, From Email address, Reply To address, Email Display Name, and Secure Connection.

To configure Email Template settings:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Email settings.
3. The system displays the Email settings page.
4. In the Email settings page, enter or update all the required information.
5. Click Save to save the changes.

Note:
“Flush data from managed memory” is a forced eviction of cube or object data from managed memory. If cube data is being accessed by users, system will wait till user request for data access is over and will flush the data only when cube data is not being used by any user.
EMAIL SETTINGS

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host name</td>
<td>SMTP Host Name</td>
</tr>
<tr>
<td>Port number</td>
<td>SMTP Port Number</td>
</tr>
<tr>
<td>Authentication required</td>
<td>Select the checkbox if authentication is required by the SMTP server for sending the email</td>
</tr>
<tr>
<td>User name</td>
<td>User name for SMTP authentication</td>
</tr>
<tr>
<td>Password</td>
<td>Password for SMTP authentication</td>
</tr>
<tr>
<td>From email address</td>
<td>Email address to be displayed as From email address in the outgoing email messages</td>
</tr>
<tr>
<td>Reply to email address</td>
<td>Email address on which you want to get replies back</td>
</tr>
<tr>
<td>Display name</td>
<td>Display name for email sender</td>
</tr>
<tr>
<td>Enable secure connection (SSL)</td>
<td>Select the checkbox if secure connection to mail server (SSL) is required</td>
</tr>
</tbody>
</table>

4.5 Email Templates

The application uses predefined email templates to automatically generate email messages for various events, such as Cube Creation, Scheduler Events, and Publishing & Delivery Agent.

To configure Email Template settings:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Email templates. The system displays the Email templates page.
3. Select an email template to edit content. The system displays the Subject and Body fields of the selected template.
4. Click the email parameter icon for the Subject and Body fields and select parameter from the list.
5. In the Subject and Body fields, edit the subject line and email body as required.
6. Click Save to save the changes in the template.
7. Click Reset to reset to default template.

4.5.1 Cube Update Process Notification Email

The cube update process notification email template is used to send email notification to the owner for success or failure of the cube update process. Owner is the user who has created that cube.

<table>
<thead>
<tr>
<th>Tags</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$USER_NAME$</td>
<td>User name</td>
</tr>
<tr>
<td>$CUBENAME$</td>
<td>Cube name</td>
</tr>
<tr>
<td>$NO_OF_PROCESSED_RECORDS$</td>
<td>Total number of records processed</td>
</tr>
<tr>
<td>$START_TIME$</td>
<td>Start time</td>
</tr>
<tr>
<td>$FINISH_TIME$</td>
<td>Finish time</td>
</tr>
<tr>
<td>$RESULT$</td>
<td>Result, success or failure</td>
</tr>
</tbody>
</table>
4.5.2 Scheduler Notification Email

The Scheduler Notification Email template is used to send email notification to owner for success or failure of scheduler task. Owner is the user who has created that scheduler task. Owner should have checked the email notification option in scheduler general settings to receive such notifications.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Through Automatic Scheduler

<table>
<thead>
<tr>
<th>Tags</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$TASKTYPES$</td>
<td>Cube rebuild task / Delivery &amp; publishing agent task</td>
</tr>
<tr>
<td>$USER_NAME$</td>
<td>User name</td>
</tr>
<tr>
<td>$SCHEDULER_NAME$</td>
<td>Scheduler name</td>
</tr>
<tr>
<td>$START_TIME$</td>
<td>Start time</td>
</tr>
<tr>
<td>$FINISH_TIME$</td>
<td>Finish time</td>
</tr>
<tr>
<td>$RESULT$</td>
<td>Result, success or failure</td>
</tr>
</tbody>
</table>

4.5.3 Publishing Agent Email for Recipients

The Publishing Agent Email template is used to form an email message for recipients of various emails sent by publishing agent.

Reference: Concept Manual > Delivery & Publishing Agent

<table>
<thead>
<tr>
<th>Tags</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$USER_NAME$</td>
<td>User name</td>
</tr>
<tr>
<td>$SCHEDULER_NAME$</td>
<td>Scheduler name</td>
</tr>
<tr>
<td>$OBJECTS$</td>
<td>Object name</td>
</tr>
<tr>
<td>$PUBLISH_TIME$</td>
<td>Publishing time</td>
</tr>
</tbody>
</table>

4.5.4 Reset password email

The reset password email template is used to send email to the user during “Forget password” process.

4.5.5 Test email

The test email template is used to send test email to verify SMTP settings.

4.5.6 Welcome email

Welcome email is sent to a new user whose registration is successful.

4.5.7 TeamUp email

The TeamUp Notification Email template is used to send email notification by the owner to users who have been invited to join a conversation. Owner is the user who has created that conversation.
4.6 Page Setup Template

The Page Setup template is used as the default template for PDF files generated for various BI objects through export option. It contains settings for page margins, size, orientation, header, footer, and other related parameters.

To set the page for printing:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Page setup template. The system displays the Page setup template page.

#### PAGE SETUP TEMPLATE

3. **Page setup:**
   - Enter Page Margins to set top, bottom, left, and right margins for page.
   - From the Predefined page size drop-down list, select size.
   - Customize the Height and Width for page
   - Select the page orientation, either Portrait or Landscape.

4. **Header:**
   - Click a specific panel from left, centre, and right panels.
   - Click Save to save the changes.

5. **Footer:**
   - Click a specific panel from left, centre, and right panels.
   - Click Save to save the changes.
### 4.7 Upload images

Administrator can manage repository of all the images used throughout the application. Users cannot upload and use their own images from user interface; only the administrator can upload images that can be used by users. These images can be used throughout the application by users for various purposes, such as background images for various BI objects, images within dashboards, and headers and footers for PDF exports.

**To upload the images:**

**Procedure**

1. In the **Navigation Panel**, click **Configuration**.
2. In the **Configuration** menu, click **Upload images**.
   The system displays the **Upload images** page.
To add image:

**Procedure**
1. Click the **Add** icon to upload new images.
   - The system displays the **Upload image** dialog box.
2. Click **Browse** to browse images.
3. Select the image and click **Upload**.

To delete image:

**Procedure**
1. Select the checkbox displayed against the image, and click the **Delete** icon.
   - The system will display a confirmation message to delete the selected image.
2. Click **OK** to delete the image or click **Cancel**.
3. Click **Check All box** to select all the uploaded images.
4. Click **Uncheck All box** to deselect all the uploaded images.
4.8 Upload Login page Banner

Administrator can manage repository of all the frontpage banners used in login page of the application.

To upload the images for banners:

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Upload frontpage banners. The system displays the Upload frontpage banners page.

To add image:

Procedure
1. Click the Add icon to upload new images. The system displays the Upload image dialog box.
2. Click Browse to browse images.
3. Select the image and click Upload.

To delete image:

Procedure
1. Select the checkbox displayed against the image and click the Delete icon. The system will display a confirmation message to delete the selected image.
2. Click OK to delete the image or click Cancel.
3. Click Check All box to select all the uploaded images.
4. Click Uncheck All box to deselect all the uploaded images.

4.9 Time dimension value mappings (default)

Administrator can edit the time dimension values for various time series hierarchy, such as year, half year, month, etc., to suit their naming convention needs throughout the application.

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click Time dimension value mappings. The system displays the Time dimension value mappings page.

3. Click the Edit icon of a time dimension. The system displays the Edit time dimension value mapping dialog box.

4. In the Actual value field, enter value.
5. In the Alternate text field, enter text.
6. Click Add to save. You can delete the entered value by clicking the Delete icon.
7. Click OK.

When automatic time series is created during create cube process, system allocates integer numbers to time series dimensions—quarter, month, half year, and week. For example, first quarter would have value “1,” and the second quarter would have value “2.” Using this default dimension value
mapping, administrator can give user-friendly names to these values, e.g., “Q1” instead of “1” and “Q2” instead of “2.”

This is the default setting for time dimension value mapping, which is applied by default for all cubes created in the system. Administrator can remove or edit these values for a specific cube by using Data display value mapping configuration option under Cube management.

4.10 GeoMap Data

Administrator can add or edit the GeoMap data for various GeoMap field types, such as country, county, state, city, area, etc.

Procedure
1. In the Navigation Panel, click Configuration.
2. In the Configuration menu, click GeoMap data.
   The system displays the GeoMap data page.

<table>
<thead>
<tr>
<th>GeoMap data</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>Afghanistan</td>
</tr>
<tr>
<td>Alexandria</td>
</tr>
<tr>
<td>Algeria</td>
</tr>
<tr>
<td>America Samoa</td>
</tr>
<tr>
<td>Andorra</td>
</tr>
<tr>
<td>Angola</td>
</tr>
<tr>
<td>Antigua &amp; Barbuda</td>
</tr>
<tr>
<td>GEOMAP DATA</td>
</tr>
</tbody>
</table>

© 2020, Smarten
To import GeoMap data from file:

Procedure
1. Click the Import icon.
   The system displays the Import GeoMap data from file dialog box.

   ![Import GeoMap data from file dialog box]

To Append GeoMap data:
1. In the Select file field, browse the file.
2. From the Field type drop down, select a filed type.
3. Select Append radio option, to import new records from the file.
4. Click OK

To Delete & Import GeoMap data:
1. In the Select file field, browse the file.
2. From the Field type drop down, select a filed type.
3. Select Delete & import radio option, to delete all existing records for the selected field type and import new records from the file.
4. Click OK

   Note: Sample import formats are available in <Smarten Installation Dir >/Docs/Sample files.

To delete GeoMap data:

Procedure
1. Select the checkbox displayed against the GeoMap data and click the Delete icon.
   The system will display a confirmation message to delete the selected data.
2. Click OK to delete or click Cancel.
3. Click Check All box to select all the GeoMap data.
4. Click Uncheck All box to deselect all the GeoMap data.
5  Data Source

Smarten allows you to extract data from various transactional, historical, and reference data sources.

Reference: User manual – SSDP >> Data source management
6 Cube Management

Cube is a set of data organised and summarised into a multidimensional structure with an easy-to-use mechanism for querying, with quick and uniform response times.

6.1 Cube Repository

To view and manage cube repository:

Procedure
1. In the Smarten Navigation Panel, click Cube Management.
2. In Cube Management, click Cube Repository.
   The system displays all the available cubes.

From the cube repository, you can view Cube Name, Description, Created By, Created Date, Updated By, and Updated Date.

Note:
A cube for social BI named “TeamUp” is by default available and displayed in the cube repository. This cube is used to access predefined dashboards for TeamUp Analytics. A user need not create it. Neither can a user delete or edit this cube.

Reference: Working with TeamUp > TeamUp Analytics

You can Search for the cube by Cube Name or Description. You can also sort the Cube Name by clicking on options Name, Created, or Updated. You can also filter cube list by cube type by clicking on All Cubes, Cache, Real-Time, CSV, Linked, MDX, R real-time, or R cache

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon name</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄</td>
<td>Refresh</td>
</tr>
<tr>
<td>🏡</td>
<td>Edit</td>
</tr>
<tr>
<td>✖️</td>
<td>Delete</td>
</tr>
<tr>
<td>🌐</td>
<td>Copy</td>
</tr>
<tr>
<td>☑️</td>
<td>Permissions</td>
</tr>
</tbody>
</table>
6.1.1 Edit Cube Profile

6.1.1.1 General

To edit cube profile:

Procedure

1. Select a cube profile from the Cube Repository.
2. Click the Edit icon.
   The system displays the Edit cube profile dialog box.

3. Edit the Name, Description, and Financial Year Starts From fields as required.
4. Click the Visible (for users) checkbox to show/hide cube.
5. Click the Enable Managed Memory checkbox as per your need.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Cube Profile Name</td>
</tr>
<tr>
<td>Description</td>
<td>Description of Cube Profile</td>
</tr>
<tr>
<td>Financial Year Starts From</td>
<td>Start (month) of financial year, e.g., April or January</td>
</tr>
<tr>
<td>Visible</td>
<td>Show/month of financial year, e.g., April or January</td>
</tr>
<tr>
<td>Enable Managed Memory</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>
6.1.1.2 Cube Update—Incremental

6.1.1.2.1 Cube created using Database Profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – Incremental.
3. The system displays the various fields for editing.

4. In the SQL Query list, modify the query for cube update.
5. From the Data Source Profile drop-down list, select a profile.
6. Select an option for Email Notification for cube rebuild process.
7. In the Cube rebuild process fetch size field, enter a value, -1 for auto selection by the system.
8. Click OK to proceed, or click Cancel to go back to Cube Repository.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental
6.1.1.2.2 Cube created using CSV profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – Incremental.
   The system displays the various fields for editing.

3. From the Data Source Profile drop-down list, select CSV profile.
4. Select an option for Email Notification for cube rebuild process.
5. In the Cube rebuild process fetch size field, enter a value, -1 for auto selection by the system.
6. Click OK to proceed, or click Cancel to go back to Cube Repository.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental

6.1.1.2.3 Cube created using R script profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – Incremental.
   The system displays the various fields for editing.
3 From the Data Source Profile drop-down list, select R script profile.
4 Select an option for Email Notification for cube rebuild process.
5 Click OK to proceed, or click Cancel to go back to Cube Repository.

Reference: Working with R integration > Create R cube with R Script Profile as data source

6.1.1.2.4 Cube created using SAP profile

To update cube:

Procedure
1 Follow the Procedure of Edit Cube.
2 Click Cube update – Incremental.
   The system displays the various fields for editing.

3 From the Data Source Profile drop-down list, select SAP profile.
4 Select an option for Email Notification for cube rebuild process.
5 Click OK to proceed, or click Cancel to go back to Cube Repository.
6.1.1.3 Cube update—from scratch

6.1.1.3.1 Cube created using database profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – from scratch.
   The system displays the various fields for editing.

3. In the SQL query list, enter the query.
4. From the Data Source Profile drop-down list, select a profile.
5. Select an option for Email Notification for cube rebuild process.
6. In the Cube rebuild process fetch size field, enter a value, -1 for auto selection by the system.
7. Click OK to proceed, or click Cancel to go back to Cube Repository.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental

6.1.1.3.2 Cube created using CSV profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – from scratch.
   The system displays the various fields for editing.
3. From the **Data Source Profile** drop-down list, select CSV profile.
4. Select an option for **Email Notification for cube rebuild process**.
5. In the **Cube rebuild process fetch size** field, enter a value, -1 for auto selection by the system.
6. Click **OK** to proceed, or click **Cancel** to go back to Cube Repository.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental

### 6.1.1.3.3 Cube created using R script profile

**To update cube:**

**Procedure**
1. Follow the **Procedure** of Edit Cube.
2. Click **Cube update – from scratch**.
   
   The system displays the various fields for editing.

3. From the **Data Source Profile** drop-down list, select R script profile.
4. Select an option for **Email Notification for cube rebuild process**.
5. Click **OK** to proceed, or click **Cancel** to go back to Cube Repository.
6.1.1.3.4 Cube created using SAP profile

To update cube:

Procedure
1. Follow the Procedure of Edit Cube.
2. Click Cube update – from scratch.
   The system displays the various fields for editing.

3. From the Data Source Profile drop-down list, select SAP profile.
4. Select an option for Email Notification for cube rebuild process.
5. Click OK to proceed, or click Cancel to go back to Cube Repository.

Reference: Integration with SAP > Create SAP cube with SAP Profile as a data source

6.1.2 Delete Cube Profile

To delete cube profile:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Delete icon.
   The system displays the Delete dialog box.
3. Select the **Also delete associated object(s)** checkbox if required.
4. Click **OK** to confirm deletion, or click **Cancel** to go back to Cube Repository.
   If you wish to delete the entire cube profile list, select the checkbox on the top to select all the cubes listed in the list view. You can deselect all profiles by clicking this checkbox again.

### 6.1.3 Copy Cube Profile

This feature will copy a cube with its metadata and tool templates. This will improve the process of replicating cubes and the reusability for a template-driven deployment process.

**To copy cube profile:**

**Procedure**

1. Select a cube profile from the Cube Repository.
2. Click the **Copy** icon.
   The system displays the **Copy** dialog box.
3. In the **New Cube Name** field, enter a name for new cube.
4. Click **OK** to proceed, or click **Cancel** to go back to Cube Repository.

Reference: Concept Manual > Designing the Data Model > Cube & Object Management > Copy cube

### 6.1.4 Permissions for Cube

You can grant permissions to roles and users to enable them to view or export cubes.

**Cube Permissions**

**Procedure**

1. Select a cube profile from the Cube Repository.
2. Click the **Permissions** icon. The system displays the **Permissions – “Cube profile name”** dialog box, in this example **Sales_Demo**.

![Permissions - Sales_Demo](image)

3. In the **Roles** tab, manage **View** and **Export** permissions for roles as required.
4. Select the **View** or **Export** checkboxes for the roles for which you want to grant the view or export permission.
   
   You can filter roles by searching for a specific role using the **Search** field.
5. In the **Users** tab, manage **View** or **Export** permissions for users as required.
6. Select the **View** or **Export** check boxes for the users for which you want to grant the view or export permission.
CUBE PERMISSIONS: GRANT PERMISSIONS TO USERS

7 You can filter the users based on the group they belong to by selecting a group from the list.

CUBE PERMISSION: FILTER USERS BASED ON GROUP

8 You can further filter the users based on the numeric and alphabetical range. For example, if you have selected A – E from the list. The system displays only those usernames that start with alphabets A, B, C, D, or E.
### CUBE PERMISSION: FILTER USERS BASED ON NUMERIC OR ALPHABET RANGE

9. You can also search for specific user by using the **Search** field.

<table>
<thead>
<tr>
<th>USERNAME</th>
<th>PERSON NAME</th>
<th>VIEW</th>
<th>EXPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>sanjay</td>
<td>Sanjay Patel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>kartik</td>
<td>Karthik Patel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janvi</td>
<td>Janvi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nisarg</td>
<td>Nisarg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pradip</td>
<td>Pradip Sharma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pathik</td>
<td>Pathik Shah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rushabh</td>
<td>Rushabh Sheetal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Click **Apply permissions to other cubes** option to grant the same permissions to other cubes which you have granted to roles and users in the previous step.
This option allows you to grant the same set of permissions you have granted to a role to other cubes instead of granting the same set of permissions to the role for each cube separately. For example, if you have granted view and export permissions to Role 1 and want to grant the same permissions for Cube1, Cube2, and Cube3, you can use the Apply permissions to other cubes option to grant the view and export permissions to Role 1 for Cube1, Cube2, and Cube3.

11. Click the plus sign adjacent to the cubes to select cubes to grant the permissions you have granted to the roles in the earlier step.

12. Click OK to grant the permissions you have selected for roles and users or click Cancel to go back to Cube Repository.

### 6.1.4.1 General

**Procedure**

1. Select a cube profile from the Cube Repository.
2. Click the **Cube Information** icon.
   - The system displays the **Cube Information** dialog box.
The **General** tab displays metadata information of the cube and its size and aggregation-related parameters. You can view information under **CUBE DATA SIZE SUMMARY** section, such as No. of aggregated records, No. of flat records, Aggregated record size, Flat record size, Total aggregated record size, Cube physical size, and Total columns.

3. Click **Details** to view unique count for dimensions.
**Unique count for dimensions**

<table>
<thead>
<tr>
<th>Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>5</td>
</tr>
<tr>
<td>Data</td>
<td>174</td>
</tr>
<tr>
<td>ProductIDname</td>
<td>28</td>
</tr>
<tr>
<td>ProductCategory</td>
<td>9</td>
</tr>
<tr>
<td>Employee Name</td>
<td>18</td>
</tr>
<tr>
<td>City</td>
<td>18</td>
</tr>
</tbody>
</table>

You can view the name and count of all cube dimensions.

4. Click **Close** to exit the dialog box.
6.1.4.2 Cube Columns

Dimensions and Measures:

Procedure
1. Follow the Procedure of General.
2. Select the Cube columns tab.

You can view Dimensions and Custom dimensions along with their data types.
You can view Measures and Custom measures along with their data types and data operations.

Other columns are available in source data, but not included as cube columns (dimensions & measures). These columns are available in drill through results to users.

3. Click Close to exit the dialogue box.
6.1.4.3 Objects

Objects:

Procedure
1. Follow the Procedure of General.
2. Select the Objects tab.

You can view information about various BI objects, such as Crosstab, Graph, GeoMap, Tabular, and KPIs associated with a cube.

3. Click Close to exit the dialogue box.

6.1.5 Rebuild Cube

To rebuild cube:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Rebuild icon.
   - The system displays the Cube rebuild- options dialog box.
6.1.5.1 Cube created using Database Profile

Rebuild cube options:

**STEP 1**

Procedure
1. Follow the Procedure of Rebuild Cube.
   The system displays the Cube rebuild- options dialog box.

2. From the Data source profile, select database profile and cube update option, either From scratch or Incremental.
3. In the Cube rebuild process fetch size field, enter a value, -1 for auto selection by the system.
4. Select an option for Email Notification for cube rebuild process.
5. Click Next to move on to STEP 2 or click Cancel.

   **Note:**
   Perform aggregation option is not visible for Incremental option.
   Store to drill though option is disabled for Incremental option.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental

**STEP 2**

Procedure
1. Follow the Procedure of STEP 1.
   The system displays the Cube rebuild- Query dialog box.
2. In the SQL query field, enter the query.
3. Click Next to move on to STEP 3, click Back to go back to STEP 1, or click Cancel.
STEP 3

Procedure
1. Follow the Procedure of STEP 2.
   The system displays the Cube rebuild - Dimensions / measures selection dialog box.
2. Move columns from Available cube columns to Dimension columns and Measure columns by clicking the right arrow.
   To deselect and move any column to Available cube columns, select from Dimension columns and Measure columns and click the left arrow icon.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
4. Click Add to generate a time dimension map.
5. Click the checkbox to edit or delete the existing time dimension map.
6. To update cube, click OK to confirm, click Back to move back to STEP 2, or click Cancel.
To Select Data operations:

Procedure
1. Click on the SELECT DATA OPERATIONS button below the Measures columns section. The system displays the Data operations dialog box.

![Data operations dialog box]

2. Click the checkboxes to select pre-defined data operations against each measure.
3. Click OK to confirm or click Cancel.

To add time dimension map:

Procedure
4. Click Add to generate a time dimension map.
   The system displays the Add time dimension map dialog box.
5. In the **Name** field, enter the name.
6. In the **Date column** drop-down list, select a column.
7. In the **Level** drop-down list, select a level.
8. Select an option for **Calendar / financial**.
9. Click **OK** to confirm or click **Cancel**.

**Reference:** Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimension

**To edit time dimension map:**

**Procedure**
1. In the **TIME DIMENSION MAP** section, select the time dimension map from the list.
2. Click the **Edit** icon.
   The system displays the **Edit time dimension map** dialog box.

3. In the **Name** field, edit the name.
4. In the **Level** drop-down list, edit the level.
5. Edit the **Display name** of each **Auto-generated name**.
6. Click **OK** to confirm or click **Cancel**.

**Reference:** Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimension

**To delete time dimension map:**

**Procedure**
1. In the **TIME DIMENSION MAP** section, select the time dimension map from the list.
2. Click the **Delete** icon.
   The system displays the **Delete** dialog box.
3. Click OK to confirm or click Cancel.

6.1.5.2 Cube created using CSV Profile

Rebuild cube options:

**STEP 1**

Procedure
1. Follow the Procedure of Rebuild Cube.
2. The system displays the Cube rebuild- options dialog box.
3. From the Data source profile, select CSV profile and cube update option, either From scratch or Incremental.
4. In the Cube rebuild process fetch size field, enter a value, -1 for auto selection by the system.
5. Select an option for Email Notification for cube rebuild process.
6. Click Next to move on to STEP 2 or click Cancel.

Note: Store to drill though option is disabled for Incremental option

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Types of Cube Updates—From scratch or incremental

Cube Rebuild Select Columns:

STEP 2

Procedure
1. Follow the Procedure of STEP 1.
   The system displays the Create cube - select columns dialog box.

   CUBE REBUILD: SELECT COLUMNS

2. From the Available Columns list, drag and drop the columns to the Selected columns list or
deselect the columns by moving the columns back from the Selected columns. Also, move up
and down to change the order of columns in the Selected columns.
3. Click Next to move on to STEP 3, click Back to go back to STEP 1, or click Cancel.
Cube rebuild dimensions measures selection:

STEP 3

Procedure
1. Follow the Procedure of STEP 2.
   The system displays the Cube rebuild - Dimensions / measures selection dialog box.
2. Move columns from Available cube columns to Dimension columns and Measure columns by clicking the right arrow.
3. To deselect and move any column to Available cube columns, select from Dimension columns and Measure columns and click the left arrow icon.

4. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
5. Click Add to generate a time dimension map.
6. Click the checkbox to edit or delete the existing time dimension map.
7. To update cube, click OK to confirm, click Back to move back to STEP 2, or click Cancel.

To Select Data operations:

Procedure
1. Click on the SELECT DATA OPERATIONS button below the Measures columns section. The system displays the Data operations dialog box.
2. Click the checkboxes to select predefined data operations against each measure.
3. Click OK to confirm or click Cancel.

To add time dimension map:

Procedure
1. Click Add to generate a time dimension map.
   The system displays the Add time dimension map dialog box.

   2. In the Name field, enter the name.
   3. In the Date column drop-down list, select a column.
   4. In the Level drop-down list, select a level.
   5. Select an option for Calendar / financial.
   6. Click OK to confirm or click Cancel.
To edit time dimension map:

Procedure
1. In the TIME DIMENSION MAP section, select the time dimension map from the list.
2. Click the Edit icon.
   The system displays the Edit time dimension map dialog box.

3. In the Name field, edit the name.
4. In the Level drop-down list, edit the level.
5. Edit the Display name of each Auto-generated name.
6. Click OK to confirm or click Cancel.

To delete time dimension map:

Procedure
1. In the TIME DIMENSION MAP section, select the time dimension map from the list.
2. Click the Delete icon.
   The system displays the Delete dialog box.
3. Click OK to confirm or click Cancel.

6.1.5.3 Cube created using R script Profile

Rebuild cube options:

**STEP 1**

**Procedure**

1. Follow the **Procedure** of Rebuild Cube.
2. The system displays the **Cube rebuild- options** dialog box.
3. From the Data source profile, select R script profile and cube update option, either From scratch or Incremental.
4. Select an option for Email Notification for cube rebuild process.
5. Click Next to move on to STEP 2 or click Cancel.

Reference: Working with R integration

Cube Rebuild Select Columns:

STEP 2

Procedure

1. Follow the Procedure of STEP 1.
   The system displays the Cube Rebuild – R script parameters dialog box.

2. Select the Input cube from the drop-down list.
   Note: In case the source of data for the Input variables of selected R script profile is “Cube data/Manual input”, select the Input cube from the drop-down list. In case the source of data for the Input variables of selected R script profile is “Manual input”, this field will not appear at all.

3. Map the Input variables with Smarten input cube by selecting the cube columns for each input variable.
   OR
   Enter the data for the manual input variable(s).

4. Select the radio button of the Output variable. From the drop-down list, select either Output data as individual table, or Append output data as column, or Append output data as row.
5. Click BACK to go back to the **Cube rebuild** page.
6. Click CANCEL to go back to **Cube rebuild** page without saving any change.
7. Click NEXT.
   The system displays the **Cube rebuild - Dimensions/measures selection** page.

**STEP 3**

**Procedure**
1. Follow the **Procedure** of **STEP 2**.
   The system displays the **Cube rebuild - Dimensions / measures selection** dialog box.
2. Move columns from **Available cube columns** to **Dimension columns** and **Measure columns** by clicking the **right arrow**.
3. To deselect and move any column to **Available cube columns**, select from **Dimension columns** and **Measure columns** and click the **left arrow** icon.
4. Click BACK to go back to the **Cube rebuild – R script parameters** page.
5. Click CANCEL to go back to the **Cube rebuild - cube column selection** page without saving any change.
6. Click OK to rebuild cube.

![Cube rebuild - Dimensions / measures selection](image)

**REBUILD CUBE: R SCRIPT PROFILE: DIMENSION COLUMN SELECTION**

### 6.1.5.4 Cube created using SAP Profile

**Rebuild cube options:**

**STEP 1**
Procedure
1. Follow the Procedure of Rebuild Cube.
2. The system displays the Cube rebuild- options dialog box.

3. From the Data source profile, select SAP profile and cube update option, either From scratch or Incremental.
4. Select an option for Email Notification for cube rebuild process.
5. Click Next to move on to STEP 2 or click Cancel.

Reference: Integration with SAP

Cube Rebuild Select Columns:

STEP 2

Procedure
1. Follow the Procedure of STEP 1.
   The system displays the Cube Rebuild – Select SAP BAPI parameter(s) dialog box.
2. In the **SAP BAPI(s)** list, look for the required BAPI. You can also search it by entering its name in the search box.
   Double click on the BAPI name in the list.
3. From the **Output Parameters** tab, select the Output parameter from the drop-down list.
   The system displays a list of Columns belonging to the selected Output parameter.
4. Click **EDIT DISPLAY NAME**.
   The system displays the **Edit Display Name** dialog box.
5. Under the **Column display name** section, edit the display name for a column in the field adjacent to that column.
6. Click **OK** to save the settings.
7. Click **CANCEL** to go back to the **Create cube – Select SAP BAPI Parameters** page.
8. Click **Input Parameters** tab.
   The system displays all the input parameters of the selected BAPI.
9. Enter data, if required for the input parameters. Input data which is mandatory to be entered is indicated by an asterisk.
10. Click **BACK** to go back to the **Create Cube** page.
11. Click **CANCEL** to go back to **Create Cube** page without saving any change.
12. Click **NEXT**.
   The system displays the **Create cube - Dimensions/measures selection** page.

**STEP 3**

**Procedure**
1. Follow the **Procedure** of **STEP 2**.
   The system displays the **Cube rebuild - Dimensions / measures selection** dialog box.
2. Move columns from **Available cube columns** to **Dimension columns** and **Measure columns** by clicking the **right arrow**.
3. To deselect and move any column to **Available cube columns**, select from **Dimension columns** and **Measure columns** and click the **left arrow** icon.
4. Click **BACK** to go back to the **Cube rebuild – R script parameters** page.
5. Click **CANCEL** to go back to the **Cube rebuild - cube column selection** page without saving any change.
6. Click **OK** to rebuild cube.
7. Click on **SELECT DATA OPERATIONS** to select pre-defined data operations for selected measures
8. Click **Add** to generate a time dimension map.
9. Click the checkbox to edit or delete the existing time dimension map.
10. To update cube, click **OK** to confirm, click **Back** to move back to **STEP 2**, or click **Cancel**.

**To Select Data operations:**

**Procedure**
1. Click on the **SELECT DATA OPERATIONS** button below the **Measures columns** section. The system displays the **Data operations dialog box**.
2. Click the checkboxes to select pre-defined data operations against each measure.
3. Click OK to confirm or click Cancel.

To add time dimension map:

Procedure
1. Click Add to generate a time dimension map.
   The system displays the Add time dimension map dialog box.
2. In the Name field, enter the name.
3. In the Date column drop-down list, select a column.
4. In the Level drop-down list, select a level.
5. Select an option for Calendar / financial.
6. Click OK to confirm or click Cancel.

To edit time dimension map:

Procedure
1. In the TIME DIMENSION MAP section, select the time dimension map from the list.
2. Click the Edit icon.
   The system displays the Edit time dimension map dialog box.
3. In the **Name** field, edit the name.
4. In the **Level** drop-down list, edit the level.
5. Edit the **Display name** of each Auto-generated name.
6. Click **OK** to confirm or click **Cancel**.

**To delete time dimension map:**

**Procedure**

1. In the **TIME DIMENSION MAP** section, select the time dimension map from the list.
2. Click the **Delete** icon.
   
   The system displays the **Delete** dialog box.

3. Click **OK** to confirm or click **Cancel**.
6.1.6 Import Cube Profile

To import cube profile:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Import Cube icon.
   The system displays the Import cube dialog box.
3. Click the Browse button to select XML file generated through Export Cube Profile.
4. Click OK to confirm or click Cancel.

![IMPORT CUBE PROFILE]

Note:
If the cube is already available in the system, then it will overwrite that particular cube.

6.1.7 Export Cube Profile

To export cube profile:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Export Cube icon.
   The system displays a dialog box to save the file.
3. Cube profile is exported in XML file. This file can be used to import cube profile using Import Cube Profile.

6.1.8 Import Cube Permissions

To import cube permissions:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Import Cube Permissions icon.
   The system displays the Import cube permissions dialog box.
To Append Cube Permissions:

1. In the Select file field, browse the file.
2. Select Append radio option, to import new permissions from the file.
3. Click OK

To Delete & Import Cube Permissions:

1. In the Select file field, browse the file.
2. Select Delete & import radio option, to delete all existing permissions and import new permissions from the file.
3. Click OK

Note:
Sample Import formats are available in <Smarten Installation Dir>/Docs/Sample files.

6.1.9 Export Cube Permissions

To export cube permissions:

Procedure
1. Select a cube profile from the Cube Repository.
2. Click the Export Cube icon.
   The system displays a dialog box to save the file.
3. Cube permissions are exported in XLS file. This file can be used to import cube permissions using Import Cube Permissions as required.
7 Create Cube

You can create the cube using Create Cube using different data sources.

- Using Database Profile
- Using CSV Profile
- Using MDX Profile
- Using R script Profile
- Using SAP Profile

Note:
Cache cubes will store indexed, pre-aggregated data along with metadata in the cubes. MDX and Real-time cubes will store only metadata information and will not store any data in the cubes.

To create cube:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create Cube.
The system displays the Create Cube page.

7.1 Using Database profile

7.1.1 Cache cube using Graphical query generation

The cube creation process through graphical query generation is divided into the following easy steps:
- Table Selection
- Cube Column Selection
- Where Criteria
- Group By
- Having Criteria
- Order By
- Cube Options
- Dimension Column Selection

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from Database

To create cache cube using graphical query generation:

STEP 1

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create Cube.
The system displays the Create Cube page.
3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **Database** radio button, and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** filed, select the **Cache** radio button.
6. In the **Query design option** field, select the **Graphical query generation** radio button.
7. In the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).
8. From the **Financial year starts from** drop-down list, select a month.
9. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set fetch size.
10. Select the checkbox **Perform aggregation** to write aggregation data
11. Select the checkbox **Store drill through data** to write drill though data.
12. Click **Next**.
13. The system displays the **Create cube - select tables** page.

**STEP 2**

**Table Selection**
The table selection option is used to select table(s) for creating the cube.

---

**Note:**
Query Schema is not available in some databases, for example, MS - Access Database.

**Procedure**
1. Follow the **Procedure of STEP 1**.
2. From the **Available tables** list, you can drag and drop the tables to the **Selected tables** list or deselect the selected tables by moving the tables back from the **Selected tables**.
3. Click **BACK** to go back to **Create Cube** dialog box.
4. Click **CANCEL** to go back to **Create Cube** dialog box without saving any change.
5. Click **Next**.
The system displays the **Create cube - cube column selection** page.
STEP 3
Cube Column Selection
In the Cube Column Selection option, you can select columns that are used for creating cube, changing display value name of cube columns, and creating custom cube columns using formula.

Procedure
1. Follow the Procedure of STEP 2.
2. From the Select table drop-down list, select table name.
3. From the Available columns list, you can drag and drop the columns to the Selected columns list or deselect the selected columns by moving the columns back from the Selected columns.
4. From the table list, you can select columns from multiple tables by selecting table.
5. Select the checkbox Show table name to see table name in the Selected columns list.
6. You can move the columns up and down by drag and drop within Selected columns list to set the order of cube columns.
7. Click EDIT DISPLAY NAME.
   The system displays the Create cube - edit display name dialog box.
8. In the **Create cube - edit display name** dialog box, edit the display name for the selected columns.
9. Click **OK**.
10. To add custom column using formulas, click the **Add** icon in the **Create cube - cube column selection** page.
   The system displays the **Add formula** dialog box.
11. In the Name field, enter a name.
12. In the Expression box, enter the expression.
13. You can create or edit expression by direct edit in the Expression box or by selecting values from Tables, Columns, Functions, and Operators boxes.
14. Click OK.
15. The system displays the Create cube - where criteria page.

**STEP 4**

**Where Criteria**

This option is used to specify Where criteria for the database query.

From the Create Cube - where Criteria page, you can set various conditions using the following:

- Comparison of Values
- Range Specification
- Pattern Matching
- Relation

**Procedure**

1. Follow the Procedure of STEP 3
2. From the topmost drop-down list, select a condition (Comparison, Range, Pattern, and Range). The system displays the fields according to the selected condition.
3. Select the values for the displayed fields.
4. Click ADD.
5. Under the Extraction condition section, group two or more conditions by enclosing them together using the Enclose Parenthesis icon.
6. Select the Remove parenthesis icon to remove parenthesis.
7. Click the **Delete** icon to delete a condition. The system displays a confirmation message to delete the selected condition.

8. Click **OK** to delete the profile or click **Cancel**.

9. Click **Back** to go back to **Create Cube - cube column selection** page.

10. Click **Next**. The system displays the **Create cube - group by** page.
STEP 5
Group By
The Group By option is used to group the data by specific column.

Procedure
1. Follow the Procedure of STEP 4.
2. From the Available columns list, you can drag and drop the columns to the Selected columns list or deselect the selected columns by moving the columns back from the Selected columns.
3. You can move the columns up and down by drag and drop within the Selected columns list to set the order of group by columns.
4. Click OK.
5. Click BACK to go back to Create cube - where criteria page.
6. Click Next.
The system displays the Create cube - having criteria page.
STEP 6
Having Criteria
This option is used to specify Having criteria for a grouped data.

From the Create Cube - having criteria page, you can set various conditions using the following:

- Comparison of Values
- Range Specification
- Pattern Matching

Procedure
1. Follow the Procedure of STEP 5.
2. From the topmost drop-down list, select a condition (Comparison of values, Range specification, and Pattern matching).
3. The system displays the fields according to the selected condition.
4. Select the values for the displayed fields.
5. Click ADD.
6. Under the Extraction condition section, group two or more conditions by enclosing them together using the Enclose Parenthesis icon.
7. Select the Remove parenthesis icon to remove parenthesis.
8. Click the Delete icon to delete a condition.
9. The system displays a confirmation message to delete the selected condition.
10. Click OK to delete the profile or click Cancel.
11. Click Back to go back to Create cube - where criteria page.
12. Click Next.
13. The system displays the Create cube - order by page.
CREATE CUBE: GRAPHICAL QUERY GENERATION: HAVING CRITERIA

**Comparison**

Sales

Target

> 10000

**CREATE CUBE: GRAPHICAL QUERY GENERATION: HAVING CRITERIA: COMPARISON OF VALUES**

**Range**

Sales

SalesPrice

1000 To 20000

And

**CREATE CUBE: GRAPHICAL QUERY GENERATION: HAVING CRITERIA: RANGE SPECIFICATION**
STEP 7
Order By
This option is used to set specific selected columns in ascending or descending order.

Procedure
1. Follow the Procedure of STEP 6.
2. From the Available columns list, you can drag and drop the columns to the Selected columns list or deselect the selected columns by moving the columns back from the Selected columns.
3. You can set ascending or descending order by clicking cube column: up arrow for ascending and down arrow for descending.
4. You can move the columns up and down by drag and drop within the Selected columns lists to set the order of columns.
5. Click OK.
6. Click BACK to go back to Create cube - where criteria dialog box.
7. Click Next.
8. The system displays the Create cube - dimension/measure selection page.

CREATE CUBE: GRAPHICAL QUERY GENERATION: ORDER BY

STEP 8
Dimensions/ measures selection
This option is used to bifurcate the selected columns from the created cube in dimensions and measures.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure
Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimensions

Procedure
1. Follow the Procedure of STEP 7.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures.
4. Under the TIME DIMENSION MAP section,
   - Click the Add icon.
   - The system displays the Add time dimension map dialog box.
   - From the Date column drop-down list, select a column name.
   - From the Level drop-down list, select level.
   - Select the Use week of Year checkbox if you want to use week of the year in time series hierarchy.
   - Select the Use day of Year checkbox if you want to use day of the year in time series hierarchy.
   - Select the checkbox against Calendar Year and Financial Year for generating time dimension for specified year.
   - From the Starting month drop-down list, select a month.
   - In the Display name field, you can change the display name of time dimension columns.
   - Click OK to create cube.
   - Click Cancel to go back to the Create Cube page without saving any change.
1. Click on the **SELECT DATA OPERATIONS** button below the **Measures columns** section. The system displays the **Data operations dialog box.**

2. Click the checkboxes to select pre-defined data operations against each measure.

3. Click **OK** to confirm or click **Cancel**.
**Add time dimension map**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date_Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date columns</td>
<td>Date</td>
</tr>
<tr>
<td>Level</td>
<td>Up to Day</td>
</tr>
<tr>
<td>Use Week of Year</td>
<td>False</td>
</tr>
<tr>
<td>Use Day of Year</td>
<td>False</td>
</tr>
</tbody>
</table>

**Calendar / financial**

- Calendar: False
- Financial: True

**Starting month**

- April

**TIME DIMENSION**

<table>
<thead>
<tr>
<th>Auto generated name</th>
<th>Display name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date_Financial_Year</td>
<td>Date_Financial_Year</td>
</tr>
<tr>
<td>Date_Financial_Quarter</td>
<td>Date_Financial_Quarter</td>
</tr>
<tr>
<td>Date_Financial_Month</td>
<td>Date_Financial_Month</td>
</tr>
<tr>
<td>Date_Financial_Week</td>
<td>Date_Financial_Week</td>
</tr>
</tbody>
</table>

**Create cube:**

**Phase 1 - Writing source data**

- Processed Records: 299

**Create cube:**

**Creating cube**
7.1.2 Cache cube using Paste-generated query

The paste-generated query option is used to enter the pregenerated database query.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from Database

To create cache cube using paste-generated query:

**STEP 1**

**Procedure**

1. In the Navigation Panel, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**. The system displays the **Create Cube** page.

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **Database** radio button and select an option from the **Data source profile** drop-down list.

5. In the **Cube type** field, select the **Cache** radio button.

6. In the **Query design option** field, select the **Paste-generated query** radio button.

7. In the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).

8. From the **Financial year starts from** drop-down list, select a month.

9. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set fetch size.

10. Select the checkbox **Perform aggregation** to write aggregated data.

11. Select the checkbox **Store drill through data** to write drill through data.

12. Click **Next**.

   The system displays the **Create cube - query** page.

**STEP 2**

**Procedure**

1. Follow the **Procedure** of **STEP 1**.

2. In the **SQL query** box, enter the query.

3. Click **Next**.

   The system displays the **Create cube - Dimensions/measures selection** page.

**STEP 3**

**Procedure**

1. Follow the **Procedure** of **STEP 2**.

2. From the **Available cube columns list**, you can drag and drop the columns to the **Dimension columns list** and **Measure columns list**. You can deselect the selected columns by moving the columns back from the **Dimension columns** and **Measure columns**.

3. Click on **SELECT DATA OPERATIONS** to select pre-defined data operations for selected measures.

4. Under the **TIME DIMENSION MAP** section,
   
   - Select the checkbox against a column name to add time dimension.
   - Click the **Add** icon.
     
     The system displays the **Add time dimension map** dialog box.
   
   - From the **Date columns** drop-down list, select a column name.
- From the **Level** drop-down list, select level.
- Select the **Use week of Year** checkbox if you want to use week of the year in time series hierarchy.
- Select the **Use day of Year** checkbox if you want to use day of the year in time series hierarchy.
- Select the checkbox against **Calendar Year** and **Financial Year** for generating time dimension for specified year.
- From the **Starting month** drop-down list, select a month.
- In the **Display name** field, you can change the display name of time dimension columns.
- Click **OK** to create cube.
- Click **Cancel** to go back to the **Create Cube - Query** page without saving any change.

**Reference:**
- Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
- Concept Manual > Designing the Data Model > Cube Meta Data > Measure
- Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimension
2. Click the checkboxes to select pre-defined data operations against each measure.
3. Click OK to confirm or click Cancel.
7.1.3 Real-Time cube using graphical query generation

The cube creation process through graphical query generation is divided into the following easy steps:

- Table Selection
- Cube Column Selection
- Where Criteria
- Group By
- Having Criteria
- Order By
- Cube Options
- Dimension Column Selection

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from Database

To create Real-Time cube using graphical query generation:

STEP 1

Procedure
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**.
   The system displays the **Create Cube** page.

   ![Create Cube page](image)

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **Database** radio button, and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** field, select the **Real-Time** radio button.
6. In the **Query design option** field, select the **Graphical query generation** radio button.
7. From the **Financial year starts from** drop-down list, select a month.
8. Click **Next**.
9. The system displays the **Create cube - select tables** page.

**STEP 2**

**Table Selection**
The table selection option is used to select table(s) for creating the cube.

- **Note:**
  Query Schema is not available in some databases, for example, MS - Access Database.

**Procedure**
1. Follow the **Procedure** of **STEP 1**.
2. From the **Available tables** list, you can drag and drop the tables to the **Selected tables** list or deselect the selected tables by moving the tables back from the **Selected tables**.
3. Click **BACK** to go back to **Create Cube** dialog box.
4. Click **CANCEL** to go back to **Create Cube** dialog box without saving any change.
5. Click **Next**.
   The system displays the **Create cube - cube column selection** page.
CREATE REAL-TIME CUBE: GRAPHICAL QUERY GENERATION: SELECT TABLE

STEP 3
Cube Column Selection
In the Cube Column Selection option, you can select columns that are used for creating cube, changing display value name of cube columns, and creating custom cube columns using formula.

Procedure
1. Follow the Procedure of STEP 2.
2. From the Select table drop-down list, select table name.
3. From the Available columns list, you can drag and drop the columns to the Selected columns list or deselect the selected columns by moving the columns back from the Selected columns.
4. From the table list, you can select columns from multiple tables by selecting table.
5. Select the checkbox Show table name to see table name in the Selected columns list.
6. You can move the columns up and down by drag and drop within Selected columns list to set the order of cube columns.
7. Click EDIT DISPLAY NAME.
The system displays the Create cube - edit display name dialog box.
8. In the **Create cube - edit display name** dialog box, edit the display name for the selected columns.
9. Click **OK**.
10. The system displays the **Create cube - where criteria** page.

**STEP 4**

**Where Criteria**

This option is used to specify Where criteria for the database query.

From the **Create Cube - where Criteria** page, you can set various conditions using the following:

- Comparison of Values
- Range Specification
- Pattern Matching
- Relation

**Procedure**

1. Follow the **Procedure** of STEP 3
2. From the topmost drop-down list, select a condition (Comparison, Range, Pattern, and Range).
   The system displays the fields according to the selected condition.
3. Select the values for the displayed fields.
4. Click **ADD**.
5. Under the **Extraction condition** section, group two or more conditions by enclosing them together using the **Enclose Parenthesis** icon.
6. Select the **Remove parenthesis** icon to remove parenthesis.
7. Click the **Delete** icon to delete a condition.
   The system displays a confirmation message to delete the selected condition.
8. Click **OK** to delete the profile or click **Cancel**.
9. Click **Back** to go back to **Create Cube - cube column selection** page.
10. Click **OK**.
    The system displays the **Create cube - dimension/measure selection** page.
CREATE REAL-TIME CUBE: GRAPHICAL QUERY GENERATION: WHERE CRITERIA

CREATE REAL-TIME CUBE: GRAPHICAL QUERY GENERATION: WHERE CRITERIA: COMPARISON

CREATE REAL-TIME CUBE: GRAPHICAL QUERY GENERATION: WHERE CRITERIA: RANGE SPECIFICATION
**STEP 5**

**Dimensions/ measures selection**

This option is used to bifurcate the selected columns from the created cube in dimensions and measures.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure

**Procedure**

1. Follow the Procedure of STEP 4.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
To Select Data operations:

Procedure

4. Click on the **SELECT DATA OPERATIONS** button below the **Measures columns** section. The system displays the **Data operations dialog box**.
5. Click the checkboxes to select pre-defined data operations against each measure.
6. Click OK to confirm or click Cancel.
7.1.4 Real-Time cube using Paste-generated query

The paste-generated query option is used to enter the pregenerated database query.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from Database

To create Real-Time cube using paste-generated query:

**STEP 1**

**Procedure**

1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**. The system displays the **Create Cube** page.

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **Database** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** field, select the **Real-Time** radio button.
6. In the **Query design option** field, select the **Paste-generated query** radio button.
7. From the **Financial year starts from** drop-down list, select a month.
8. Click **Next**. The system displays the **Create cube - query** page.

**STEP 2**

**Procedure**

1. Follow the **Procedure** of STEP 1.
2. In the **SQL query** box, enter the query.
3. Click **Next**. The system displays the **Create cube - Dimensions/measures selection** page.
STEP 3

Procedure
1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure
To Select Data operations:

Procedure

4. Click on the SELECT DATA OPERATIONS button below the Measures columns section the system displays the Data operations dialog box.

5. Click the checkboxes to select pre-defined data operations against each measure

6. Click OK to confirm or click Cancel.
Note:
Users can use global variables in cube query while rebuilding Real-Time cubes. Users can also use the predefined system level global variable ‘$currentuser$’ in cube query while creating or rebuilding Real-Time cubes.

7.2 Using CSV profile
You can create the cube using CSV file using this option.

The Cube Creation process through CSV Profile is divided into the following easy steps:
- Cube Column Selection
- Cube Options
- Dimension Column Selection

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from CSV or flat files

STEP 1
Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create Cube. The system displays the Create Cube page.
CREATE CUBE: CSV PROFILE: CUBE OPTIONS

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **CSV** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** field, select the **Cache** radio button.
6. In the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).
7. From the **Financial year starts from** drop-down list, select a month.
8. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set fetch size.
9. Select the checkbox **Perform aggregation** to write aggregated data.
10. Select the checkbox **Store drill through data** to write drill though data.
11. Click **Next**.

   The system displays the **Create cube - cube column selection** page.

**STEP 2**

**Procedure**

1. Follow the **Procedure of STEP 1**.
2. From the **Available columns** list, you can drag and drop the columns to the **Selected columns** list. You can deselect the selected columns by moving the columns back from the **Selected columns**.
3. You can move the columns up and down by drag and drop within the **Selected column** lists to set the order of columns.
4. Click **BACK** to go back to the **Create Cube** page.
5. Click **CANCEL** to go back to **Create Cube** page without saving any change.
6. Click **NEXT**.

   The system displays the **Create cube - Dimensions/measures selection** page.
STEP 3

Procedure
1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures.
4. Under the TIME DIMENSION MAP section,
   - Click the Add icon.
   - The system displays the Add time dimension map dialog box.
   - From the Date columns drop-down list, select a column name.
   - From the Level drop-down list, select level.
   - Select the Use week of Year checkbox if you want to use week of the year in time series hierarchy.
   - Select the Use day of Year checkbox if you want to use day of the year in time series hierarchy.
   - Select the checkbox against Calendar Year and Financial Year for generating time dimension for specified year.
   - From the Starting month drop-down list, select a month.
   - In the Display name field, you can change the display name of time dimension columns.
   - Click OK to create cube.
   - Click CANCEL to go back to the Create cube - cube column selection page without saving any change.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure
Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimension
CREATE CUBE: CSV PROFILE: DIMENSION COLUMN SELECTION

To Select Data operations:

Procedure
1. Click on the SELECT DATA OPERATIONS button below the Measures columns section. The system displays the Data operations dialog box.

2. Click the checkboxes to select pre-defined data operations against each measure
3. Click OK to confirm or click Cancel.
CREATE CUBE: CSV PROFILE: DIMENSION COLUMN SELECTION: ADD TIME DIMENSION

CREATE CUBE: CSV PROFILE: CREATING CUBE
7.3 Using MDX profile

The Cube Creation process through MDX Profile is divided into the following easy steps:

- Initial catalog selection
- Select cube
- Dimension and Measure selection

Reference: Concept Manual > Designing the Data Model > MDX Cubes

STEP 1

Procedure

1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create Cube.
   The system displays the Create Cube page.

3. In the Cube name field, enter a name.
4. In the Data source profile field, select the MDX radio button and select an option from the drop-down list.
5. From the Financial year starts from drop-down list, select a month.
6. Click Next.
   The system displays the Create cube - Dimensions/measures selection page.

STEP 2

Procedure
1. Follow the Procedure of STEP 1.
2. From the Initial catalog drop-down list, select Initial catalog
3. From the Select cube drop-down list, select a Cube
4. From the Available dimensions list, you can move the dimensions to the Selected dimensions list. You can deselect the selected columns by moving the columns back from the Selected dimensions.
5. From the Available measures list, you can move the measures to the Selected measures list. You can deselect the selected columns by moving the columns back from the Selected measures.
6. Click CANCEL to go back to Create Cube page without saving any change.
7. Click OK to create cube.

CREATE CUBE: MDX PROFILE: DIMENSION AND MEASURE COLUMN SELECTION

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure

To edit cube column display name
You can provide a name that will be displayed for the columns instead of their original name. To provide a display name for columns, click on the EDIT DISPLAY NAME button below the Selected measures section. The Create cube – Edit Display Name dialog box opens.

Procedure
1. In the Create cube - Dimensions/measures selection page, click EDIT DISPLAY NAME.
   The system displays the Create cube – Edit Display Name dialog box.
2. Under the **Column display name** section, edit the display name for a column in the field adjacent to that column.
3. Click **OK** to save the settings.
4. Click **CANCEL** to go back to the Create cube - Dimensions/measures selection page.
### 7.4 Using R script profile

You can create the R cube using R script profile using this option.

The Cube Creation process through R script Profile is divided into the following easy steps:
- R script parameters
- Dimension Column Selection

**Reference:** [Working with R integration > Create R cube with R Script Profile as data source](#)

#### 7.4.1 Cache R cube with Manual input

**STEP 1**

**Procedure**
1. In the Navigation Panel, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**.
   - The system displays the **Create Cube** page.
3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **R script** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** filed, select the **Cache** radio button.
6. In the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).
7. From the **Financial year starts from** drop-down list, select a month.
8. Click **Next**.
   The system displays the **Create cube – R script parameters** page.

**STEP 2**

**Procedure**
1. Follow the **Procedure** of **STEP 1**.
2. Enter the values for all the **Input variables** separated by a comma.
3. Select the radio button of the **Output variable**. From the drop-down list, select either Output data as individual table, or Append output data as column, or Append output data as row.
4. Click **BACK** to go back to the **Create Cube** page.
5. Click **CANCEL** to go back to **Create Cube** page without saving any change.
6. Click **NEXT**.
   The system displays the **Create cube - Dimensions/measures selection** page.
**STEP 3**

**Procedure**

1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click BACK to go back to the Create Cube – R script parameters page.
4. Click CANCEL to go back to the Create cube - cube column selection page without saving any change.
5. Click OK to create cube.
**7.4.2 Cache R cube with Cube data/Manual input**

**STEP 1**

**Procedure**
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**. The system displays the **Create Cube** page.

![Create Cube Page](image)

**CREATE CUBE: R SCRIPT PROFILE: CUBE OPTIONS**

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **R script** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** field, select the **Cache** radio button.
6. In the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).
7. From the **Financial year starts from** drop-down list, select a month.
8. Click **Next**. The system displays the **Create cube – R script parameters** page.

**STEP 2**

**Procedure**
1. Follow the **Procedure** of **STEP 1**.
2. Select the **Input cube** from the drop-down list.
3. Map the **Input variables** with Smarten input cube by selecting the cube columns for each input variable.
4. Enter the data for the **manual input variable(s)**.
5. Select the radio button of the **Output variable**. From the drop-down list, select either Output data as individual table, or Append output data as column, or Append output data as row.
6. Click **BACK** to go back to the **Create Cube** page.
7. Click **CANCEL** to go back to **Create Cube** page without saving any change.
8. Click **NEXT**. The system displays the **Create cube - Dimensions/measures selection** page.
STEP 3

Procedure

1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click BACK to go back to the Create Cube – R script parameters page.
4. Click CANCEL to go back to the Create cube - cube column selection page without saving any change.
5. Click OK to create cube.
7.4.3 Real-time R cube with Query parameters

**STEP 1**

**Procedure**
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Create Cube**. The system displays the **Create Cube** page.

**CREATE CUBE: R SCRIPT PROFILE: CUBE OPTIONS**

3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **R script** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** filed, select the **Real-Time** radio button.
6. From the Financial year starts from **drop-down list, select a month**.
7. Click **Next**.
   The system displays the **Create cube – R script parameters** page.

Reference: User Manual > Working with Dashboard > R script parameters

**STEP 2**

**Procedure**
1. Follow the **Procedure of STEP 1**.
2. Select the **Input cube** from the drop-down list.
3. Map the **Input variables** with Smarten input cube by selecting the cube columns for each input variable.
4. Enter the data manually for all the **Query parameters**.
5. Select the radio button of the **Output variable**. From the drop-down list, select either **Output data as individual table**, or **Append output data as column**, or **Append output data as row**.
6. Click **BACK** to go back to the **Create Cube** page.
7. Click **CANCEL** to go back to **Create Cube** page without saving any change.
8. Click **NEXT**.
   The system displays the **Create cube - Dimensions/measures selection** page.
STEP 3

Procedure

1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click BACK to go back to the Create Cube – R script parameters page.
4. Click CANCEL to go back to the Create cube - cube column selection page without saving any change.
5. Click OK to create cube.

### 7.5 Using SAP profile

You can create the SAP cube using SAP profile using this option.

The Cube Creation process through SAP Profile is divided into the following easy steps:

- BAPI selection
- SAP BAPI parameters
- Dimension Column Selection

Reference: Integration with SAP > Create SAP cube with SAP Profile as data source

### STEP 1

Procedure

1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create Cube.
   The system displays the Create Cube page.
3. In the **Cube name** field, enter a name.
4. In the **Data source type** field, select the **SAP** radio button and select an option from the **Data source profile** drop-down list.
5. In the **Cube type** filed, select a radio button (Cache or Real-Time).
6. For Cache cube, in the **Email notification for cube rebuild process** field, select a radio button (None, All, On success, and Fail).
7. From the **Financial year starts from** drop-down list, select a month.
8. Click **Next**.
   The system displays the **Create cube – Select SAP BAPI parameters** page.

**STEP 2**

**Procedure**
1. Follow the **Procedure of STEP 1**.
2. In the **SAP BAPPI(s)** list, look for the required BAPI. You can also search it by entering its name in the search box.
   Double click on the BAPI name in the list.
3. From the **Output Parameters** tab, select the Output parameter from the drop-down list. The system displays a list of Columns belonging to the selected Output parameter.

4. Click **EDIT DISPLAY NAME**. The system displays the **Edit Display Name** dialog box.

5. Under the **Column display name** section, edit the display name for a column in the field adjacent to that column.
6. Click **OK** to save the settings.
7. Click **CANCEL** to go back to the **Create cube – Select SAP BAPI Parameters** page.
8. Click **Input Parameters** tab. The system displays all the input parameters of the selected BAPI.
CREATE CUBE: INPUT PARAMETERS

9. Enter data, if required for the input parameters. Input data which is mandatory to be entered is indicated by an asterisk.
10. Click BACK to go back to the Create Cube page.
11. Click CANCEL to go back to Create Cube page without saving any change.
12. Click NEXT.

The system displays the Create cube - Dimensions/measures selection page.

STEP 3

Procedure
1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures.
4. Under the TIME DIMENSION MAP section,
   - Select the checkbox against a column name to add time dimension.
   - Click the Add icon.
     The system displays the Add time dimension map dialog box.
   - From the Date columns drop-down list, select a column name.
   - From the Level drop-down list, select level.
   - Select the Use week of Year checkbox if you want to use week of the year in time series hierarchy.
   - Select the Use day of Year checkbox if you want to use day of the year in time series hierarchy.
   - Select the checkbox against Calendar Year and Financial Year for generating time dimension for specified year.
   - From the Starting month drop-down list, select a month.
   - In the Display name field, you can change the display name of time dimension columns.
5. Click CANCEL to go back to the Create cube page without saving any change.
6. Click OK to create cube.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure
To Select Data operations:

Procedure
1. Click on the SELECT DATA OPERATIONS button below the Measures columns section. The system displays the Data operations dialog box.
2. Click the checkboxes to select pre-defined data operations against each measure.
3. Click **OK** to confirm or click **Cancel**.
CREATE SAP CUBE: DIMENSION COLUMN SELECTION: ADD TIME DIMENSION

CREATE CUBE: CREATING CUBE
7.6 Configure Dimension Map

Dimension Hierarchy refers to hierarchical levels of data within dimension map. Dimension maps can be defined at Cube level and enable automatic drill down and drill up to users. For example, Dimension Columns, such as State and City, can be specified together with common name as Region.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension Hierarchy

To add dimension map:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Dimension map. The system displays the Dimension map page.
3. Click the Add icon. The system displays the Add dimension map dialog box.

The dimension map list shows all the available dimension map(s) of selected cube. From the dimension map list, you can view dimension name and dimension columns.
4. In the **Name** field, enter a name.
5. From the **Available dimension** list, you can drag and drop the columns to the **Selected dimension(s)** list. You can deselect the selected columns by moving the columns back from the **Selected dimension(s)**.
6. You can move the columns up and down by drag and drop within the **Selected column** lists to set the hierarchy level of columns.
7. Click **OK**.

**To edit dimension map:**

**Procedure**
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Dimension map**.
The system displays the **Dimension map** page.

3. Select the checkbox against a dimension map.
4. Click the **Edit** icon.
   The system displays the **Edit dimension map** dialog box.

5. In the **Name** field, edit the name.
6. From the **Available dimension** list, drag and drop the columns to the **Selected dimension(s)** list. You can deselect the selected columns by moving the columns back from the **Selected dimension(s)**.
7. You can move the columns up and down by drag and drop within the **Selected column** lists to set the hierarchy level of columns.
8. Click **OK**.

### 7.7 Global Variables

You can create global variables for cubes using this option. These global variables will be available to users in global variable templates (under Manage global variables feature, as Public access), and users can readily use these templates in their crosstab, tabular, graph, GeoMap and other BI objects. Users can also use these global variables in cube query while rebuilding Cache or Real-Time cubes. User can also use the predefined system level global variable `$currentuser$` in Real-Time cube query.

**Note:**
Global variables created for one cube cannot be accessed within objects created from another cube.
To add global variable with Single value option:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Global variable.
   The system displays the Global variable page.
3. From the Select cube drop-down list, select a Cube.
4. Click the Add icon.
   The system displays the Add Global Variable dialog box.
5. In the **Name** field, enter a name.
6. In the **Type** field, select the **Type** from the drop-down list.
7. In the **Allowable Values** field, select a Single radio button option.
8. In the **Default value** field, enter default value.
9. Click **OK**.

**To add global variable with List value option:**

**Procedure**

1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Global variable**. The system displays the **Global variable** page.
3. From the Select cube drop-down list, select a **Cube**.
4. Click the Add icon. The system displays the **Add Global Variable** dialog box.

5. In the **Name** field, enter a name.
6. In the **Type** field, select the **Type** from the drop-down list.
7. In the **Allowable Values** field, select a List radio button option.
8. In the **Default value** field, enter default value.
9. Click **OK**.
To add global variable with Range value option:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Global variable. The system displays the Global variable page.
3. From the Select cube drop-down list, select a Cube
4. Click the Add icon. The system displays the Add Global Variable dialog box.

5. In the Name field, enter a name.
6. In the Type field, select the Type from the drop-down list.
7. In the Allowable Values field, select a Range radio button option.
8. In the Default value field, enter default value.
9. Click OK.

To edit global variable:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Global variable. The system displays the Global variable page.
3. From the Select cube drop-down list, select a Cube
4. Select the checkbox against a Global variable.
5. Click the Edit icon. The system displays the Edit Global Variable dialog box.
6. In the **Type** field, change the value.
7. In the **Allowable values** field, change the value.
8. In the **Default value**, change the value.
9. Click **OK**.

### 7.8 Data display value mapping

You can create data display value mapping for cubes using this option. This data display value mapping will be available to users in data display value templates (under Manage data display value feature, as Public access), and users can readily use these templates in their crosstab, tabular, graph, GeoMap and other BI objects.

**Note:**
Default data display value mapping templates for time series (as defined by administrator using Time dimension value mappings under Configuration) will be applied to all the new cubes created in the system and will be displayed in this page. You can edit these default templates as required.

**Reference:** Concept Manual > Analytic Functions > Data value / Display value mapping

**To add data display value mapping:**

**Procedure**

1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Data display value mapping**.
   The system displays the **Data display value mapping** page.
3. Click the **Add** icon.
   The system displays the **Add data display value mapping** dialog box.
### DATA DISPLAY VALUE MAPPING LINK

<table>
<thead>
<tr>
<th>NAME</th>
<th>DIMENSION</th>
<th>PERMISSION</th>
<th>CREATED</th>
<th>UPDATED</th>
</tr>
</thead>
</table>

### DATA DISPLAY VALUE MAPPING LIST

<table>
<thead>
<tr>
<th>NAME</th>
<th>DIMENSION</th>
<th>PERMISSION</th>
<th>CREATED</th>
<th>UPDATED</th>
</tr>
</thead>
</table>
4. In the **Dimension** field, select the dimension from the drop-down list.
5. In the **Actual value** field, select a value.
6. In the **Alternate text** field, select a value.
7. Click **ADD**.
   - The system displays the actual value against the alternate text with **Edit** and **Delete** icon.
   - To edit the selected value, click the **Edit** icon.
   - To delete the selected value, click the **Delete** icon.
8. Click **OK**.

To edit dimension map:

**Procedure**
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Data display value mapping**.
   - The system displays the **Data display value mapping** page.
3. Select the checkbox against a data display value.
4. Click the **Edit** icon.
   - The system displays the **Edit Data display value mapping** dialog box.
5. In the **Actual value** field, change the value.
6. In the **Alternate text** field, change the value.
7. Click **ADD**.
   The system displays the actual value against the alternate text with **Edit** and **Delete** icon.
   To edit the selected value, click the **Edit** icon.
   To delete the selected values, click the **Delete** icon.
8. Click **OK**.

### 7.9 Configure Custom Cube Dimensions and Measures

You can define custom cube dimensions and measures by defining formula on existing columns using this option.

Reference: [Concept Manual > Designing the Data Model > Smarten Cubes > Custom Cube Columns](#)

To add custom cube dimension/measure details:

**Procedure**

1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Custom cube columns**.
   The system displays the **Custom cube columns** page.
3. Click the **Add** icon.
   The system displays the **Add custom cube columns** dialog box.
### CUSTOM CUBE COLUMNS LINK

<table>
<thead>
<tr>
<th>Name</th>
<th>Column Type</th>
<th>Created</th>
<th>Updated</th>
</tr>
</thead>
</table>

### CUSTOM CUBE COLUMNS LIST

<table>
<thead>
<tr>
<th>Name</th>
<th>Column Type</th>
<th>Created</th>
<th>Updated</th>
</tr>
</thead>
</table>
4. In the Name field, enter a name.
5. In Column type, select either Dimension or Measure.
6. In the Expression box, enter the expression.
7. You can create or edit expression by direct edit in the Expression box or by selecting values from Dimension values, Functions, and Operators boxes.
8. Click VERIFY EXPRESSION.
9. Click OK.
To edit custom cube dimension/measure details:

**Procedure**

1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Custom cube columns**. The system displays the **Custom cube columns** page.
3. Select the checkbox against a custom cube column.
4. Click the **Edit** icon. The system displays the **Edit custom cube column** dialog box.
5. In **Column type**, select either **Dimension** or **Measure**.
6. In the **Expression box**, edit the expression.
7. You can create or edit expression by direct edit in the **Expression** box or by selecting values from Dimension values, Functions, and Operators boxes.
8. Click **VERIFY EXPRESSION**.
9. Click **OK**.

### 7.10 Column Access Permissions

You can grant or restrict access to cube columns using this option.

**To configure column access permissions:**

**Procedure**
1. In the **Navigation Panel**, click **Cube Management**.
2. In the **Cube Management** menu, click **Column access permissions**. The system displays the **Column access permissions** page.
3. From the Select Cube drop-down list, select a cube. The system displays all the cube columns in different tabs (Dimensions, Measures, Others columns, Custom Cube Dimensions, and Custom Cube Measures).

4. Click a specific tab from Dimensions, Measures, Others columns, Custom Cube Dimensions, and Custom Cube Measures to assign column access permission.

5. Select Roles or Users option to manage access rights by roles or users. You can select role from Roles drop-down list and users by user groups and A–Z drop-down list.

6. Check/Uncheck the checkbox against Role names and / or User names to set the column access permission.

COLUMN ACCESS PERMISSIONS LINK

COLUMN ACCESS PERMISSIONS—ROLES
7. Click the **Save** icon to save the changes.
8. Click the **Import** icon to import column access permissions from file.
9. The system displays the **Import column access permissions from file** dialog box.

![Import column access permissions from file](image)

**IMPORT COLUMN ACCESS PERMISSIONS FROM FILE**

10. Click **BROWSE** to select a file.
11. Click **OK** to import the column access permissions or click **CANCEL** to go back to **Column Access Permissions** dialog box.

**Note:**
Sample Import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

**Reference:** Concept Manual > Access Rights & Security > Column-based Access Rights (Column Access Permission)
7.11 Column Data Access Permissions

You can manage access rights at column value level, for example, City = London or New York, using this option.

To add data access permissions:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Data access permissions. The system displays the Data access permissions page.

3. From the Select cube drop-down list, select a cube. The system displays a list of column data access conditions.
4. Click the Add icon to add new data access permissions. The system displays the Add data access permissions dialog box.
5. In the **Data access conditions** section, select a column and a value.
6. Click **ADD**. You can add multiple conditions and delete them by clicking the **Delete** icon.

7. In the **Access permissions** section, click on the **Roles** and **Users** tab to set the data access permission.
8. Select **Roles** or **Users** option to manage access rights by roles or users. You can select roles by selecting the checkbox against role and users by user groups and A–Z drop-down list.
9. Check/Uncheck the checkbox against **Role names** and/or **User names** to set the data access permission.

![Add data access permissions](image)

**ADD DATA ACCESS PERMISSIONS—SET PERMISSIONS—USERS**

10. Click **OK**.

**To edit data access permissions:**

**Procedure**
1. In the Navigation Panel, click **Cube Management**.
2. In the **Cube Management** menu, click **Data access permissions**. The system displays the **Data access permissions** page.
3. Select the checkbox against a specific condition, and click the **Edit** icon to edit the condition. The system displays the **Edit data access permissions** dialog box.
4. In the **Data access conditions** section, change the column and value.  
5. Click **ADD**.  
   The system displays the selected column and value. You can delete the column and value by clicking the **Delete** icon.  
6. In the **Access permissions** section, click the **Roles** and **Users** tab to set the data access permission.  
7. Select **Roles** or **Users** option to manage access rights by roles or users. You can select roles by selecting the checkbox against role and users by user groups and A–Z drop-down list.  
8. Check/Uncheck the checkbox against **Role names** and / or **User names** to set data access permission.  
9. Click **OK**.  
10. Click the **Import icon** to import data access permissions from file.  
11. The system displays the **Import data access permissions from file** dialog box.
12. Click BROWSE to select a file.
13. Click OK to import the data access permissions, or click CANCEL to go back to Data Access Permissions dialog box.

Note: Sample Import formats are available in <Smarten Installation Dir>/Docs/Sample files.

Reference: Concept Manual > Access Rights & Security > Dimension Value Based Access Rights (Data Access Permissions)

7.12 Deleted cube profiles

You can view the list of all cube profiles deleted using Delete Cube feature from Cube Repository. Deleting cube from Cube Repository deletes cube data but does not delete cube profile permanently from the system. The cube profile is retained in the system for future reference. You can permanently delete these cube profiles using this option.

To delete cube profile:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Deleted cube profiles.
   The system displays the Cube repository page displaying the deleted cubes.

3. Select the checkbox against a cube to view its details.
4. Click Cube Info to view cube information.
   The system displays the Cube information dialog box. You can view General, Cube columns, and Objects information.
5. Click CLOSE to close the dialog box.
6. Click the Delete icon to permanently delete a cube profile from the system.
7.13 GeoMap Columns

Cube columns that represent geographic locations need to be marked as GeoMap columns. GeoMap columns should be associated with GeoMap field type.

To add GeoMap columns:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click GeoMap columns. The system displays the GeoMap columns page.
3. From the Select Cube drop down, select a cube.
4. Click the Add icon. The system displays the Add GeoMap column dialog box.
5. In the Cube columns field, select Dimension.
6. In GeoMap field type for the selected cube column, select Field type.
7. Click OK.

To edit GeoMap columns:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click GeoMap columns.
   The system displays the GeoMap columns page.
3. In the Select cube field, select Cube.
4. Select the checkbox against a GeoMap column.
5. Click the Edit icon.
   The system displays the Edit GeoMap column dialog box.
6. In **GeoMap field type for the selected cube column**, change the **Field type**.
7. Click **OK**.
Create Linked Cube

A linked cube combines records from two or more cubes, resulting in a new cube. Two or more than two cubes can be linked by UNION (union query) or JOIN (join query).

To create a linked cube, you need to define a base cube (master cube) and a secondary cube (detail cube). When you apply join on multiple cubes, the cubes will be merged based on join criteria, and on applying union, the information contained within the cubes will be appended based on union criteria.

Note: Linked cube cannot be created using Real-Time and MDX cubes.

You can create a linked cube using graphical user interface.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Linked Cube

To create a linked cube:

Procedure
1. In the Smarten Navigation Panel, click Cube Management.
2. In Cube Management, click Create linked cube.

The system displays the Create linked cube page.

8.1 Create a Linked Cube using Graphical User Interface

8.1.1 Using JOIN

When you create a linked cube using JOIN, the information in the base cube (master cube) and the secondary cubes (detail cubes) is merged and made available in the newly created linked cube.

The Linked Cube Creation process can be divided into the following steps:

1. Master Cube selection
2. Detail Cube Selection
3. Cube Column Selection
4. Define Cube Relationship
5. Dimensions and Measures Selection

To create a cube using Join:

STEP 1
Master cube selection & basic information

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Create linked cube.

The system displays the Create linked cube page.
3. In the **Cube name** field, enter a name for the cube.
4. Select the **Join** radio button to create linked cube by using the JOIN type.
5. From the **Select master cube** drop-down list, select an option to specify the master cube to be used.
6. For **Email notification for cube rebuild process**, select appropriate radio button to specify when the email notification will be sent for the cube rebuild process. You can specify whether to send notification email if the event is successful, failure, both, or none.
7. From the **Financial year starts from** drop-down list, select a month to specify the month as the start of a new financial year.
8. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set fetch size.
9. Click **NEXT** to open the **Create linked cube — Select cubes** page.

**STEP 2**

**Detail cube selection**

You need to select secondary cubes that will be used for creating the new linked cube within the **Create linked cube — Select cubes** page.

**Procedure**

1. Follow the **Procedure** of **STEP 1**.
2. From the **Available Cubes** list drag and drop the cubes to the **Selected cubes** list or deselect the cubes by moving the cubes back from the **Selected cubes**.
3. Click **NEXT** to open the **Create linked cube — Select cube columns** page.
4. Click **CANCEL** to go back to the **Create linked cube** page.
5. Click **BACK** to go back to the previous page.
STEP 3
Select cube columns
You need to select columns that will be used for creating the new linked cube within the Create linked cube – Select cube columns page.

Procedure
1. Follow the Procedure of STEP 2.
2. From the Select master cube drop-down list, select a cube.
3. From the Available Columns list, drag and drop the columns to the Selected columns list or deselect the columns by moving the columns back from the Selected columns.
4. Click NEXT to open the Create linked cube – select cube relationships page.
5. Click CANCEL to go back to the Create linked cube page.
6. Click BACK to go back to the previous page.
To edit cube column display name
You can provide a name that will be displayed for the columns instead of their original name. To provide a display name for columns, click on the EDIT DISPLAY NAME button below the Selected columns section. The Create linked cube – edit display name dialog box opens.

Procedure
1. In the Create linked cube – select cube relationships page, click EDIT DISPLAY NAME. The system displays the Create linked cube – edit display name dialog box.

CREATE LINKED CUBE: DISPLAY NAME SETTING

2. Under the Column display name section, edit the display name for a column in the field adjacent to that column.
3. Click OK to save the settings.
4. Click CANCEL to go back to the Create linked cube – select cube columns page.

STEP 4
Cube relationships selection
The cube relationships selection allows you to specify the relationship between columns of both cubes.

Procedure
1. Follow the Procedure of STEP 3.
2. From the master cube list, select a column.
3. From the secondary cube list, select a column.
4. Click ADD to add the relationship for the selected columns. You can repeat the above process to add multiple relationships.
   You can delete a relationship by clicking on the Delete button adjacent to a relationship.
5. Click OK to save the specified relationships.
6. Click CANCEL to go back to the Create linked cube page.
7. Click BACK to go back to the previous page.
STEP 5
Dimension/measures selection
You can specify the dimensions and measures from the available cube columns. You can also specify the time dimension map to determine the level of time series for the cube.

Procedure
1. Follow the Procedure of STEP 4.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
4. Under the TIME DIMENSION MAP section,
   - Click the Add icon.
   - The system displays the Add time dimension map dialog box.
   - From the Date column drop-down list, select a column name.
   - From the Level drop-down list, select level.
   - Select the Use week of Year checkbox if you want to use week of the year in time series hierarchy.
   - Select the Use day of Year checkbox if you want to use day of the year in time series hierarchy.
   - Select the checkbox against Calendar Year and Financial Year for generating time dimension for specified year.
   - Click OK to add a time dimension map.
5. In the Create linked cube – Dimensions/measures selection page, click OK.
The system displays a dialog box showing the process of creating a linked cube.
6. Click CANCEL to go back to the Create linked cube page.
7. Click BACK to go back to the previous page.
CREATE LINKED CUBE—DIMENSIONS/MEASURES SELECTION

DIMENSIONS/MEASURES SELECTION: SELECT DATA OPERATIONS
If the linked cube is created successfully, a prompt mentioning the same is displayed. Click **CANCEL** to go back to the **Create linked cube** page.
8. Click **GO TO CUBE REPOSITORY** to go to the cube repository.

### 8.1.2 Using UNION

You can create a linked cube using UNION only if the column names are the same in two or more cubes.

**To create a cube using Union:**

**STEP 1**

Linked cube basic information

**Procedure**

1. In the Navigation Panel, click **Cube Management**.
2. In the **Cube Management** menu, click **Create linked cube**.
   
   The system displays the **Create linked cube** page.

3. In the **Cube name** field, enter a name for the cube.
4. Select the **UNION** radio button to create a linked cube by using the UNION type.
5. For **Email notification for cube rebuild process**, select appropriate radio button to specify when the email notification will be sent for the cube rebuild process. You can specify whether to send notification email if the event is successful, failure, both, or none.

6. From the **Financial year starts from** drop-down list, select a month to specify the month as the start of a new financial year.

7. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set fetch size.

8. Click **NEXT** to open the **Create linked cube – Select cubes** page.

**STEP 2**

**Cube selection**

You need to select cubes that will be used for creating the new linked cube within the **Create linked cube – Select cubes** page.

**Procedure**

1. Follow the **Procedure** of STEP 1.
2. From the **Available Cubes** list, drag and drop the columns to the **Selected cubes** list or deselect the cubes by moving the cubes back from the **Selected cubes**.
3. Click **NEXT** to open the **Create linked cube – Select cubes** columns page.
4. Click **CANCEL** to go back to the **Create linked cube** page.
5. Click **BACK** to go back to the previous page.

**STEP 3**

**Select cube columns**

You need to select columns that will be used for creating the new linked cube within the **Create linked cube – Select cube relationships** page.

**Procedure**

1. Follow the **Procedure** of STEP 2.
   The system will display all the cubes selected to create linked cubes as tabs.
2. Click a tab to select a cube you want to select columns for.
3. From the **Available cube Columns** list, drag and drop the columns to the **Selected cube columns** list or deselect the columns by moving the columns back from the **Selected cube columns**. You can repeat the above process to add multiple columns. You can delete a column by clicking **Delete** adjacent to a column within the **Selected cube columns** section. You can move the
columns up and down by drag and drop within Selected cubes list to set the order of cube columns.

4. Click NEXT to open the Create linked cube – Select cube relationships page.
5. Click CANCEL to go back to the Create linked cube page.
6. Click BACK to go back to the previous page.

**To edit cube column display name**
You can provide a name that will be displayed for the columns instead of their original name. To provide a display name for columns, click on the EDIT DISPLAY NAME button below the Selected columns section. The Create linked cube – edit display name dialog box opens.

**Procedure**
1. In the Create linked cube – select cube relationships page, click EDIT DISPLAY NAME. The system displays the Create linked cube – edit display name dialog box.

---

**Create linked cube – edit display name**

<table>
<thead>
<tr>
<th>Selected columns</th>
<th>Column display name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee_Sales : Department</td>
<td>Department</td>
</tr>
<tr>
<td>Employee_Sales : Basic</td>
<td>Basic</td>
</tr>
<tr>
<td>Sales_Details : City_Code</td>
<td>City_Code</td>
</tr>
<tr>
<td>Sales_Details : Employee_ID</td>
<td>Employee_ID</td>
</tr>
</tbody>
</table>

2. Under the Column display name section, edit the display name for a column in the field adjacent to that column.
3. Click OK to save the settings.
4. Click CANCEL to go back to the Create linked cube – select cube columns page.
STEP 4
Union cube column matching
Union column matching for Linked Cube is used to automatically match columns from source cubes. Columns will be matched based on data type of columns. Columns that do not match are displayed in black background. The following table explains matching criteria with examples.

<table>
<thead>
<tr>
<th>Cube 1</th>
<th>Cube 2</th>
<th>Match (Yes / No)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Column Name</strong></td>
<td><strong>Data Type</strong></td>
<td><strong>Column Name</strong></td>
</tr>
<tr>
<td>ProductCategory</td>
<td>String</td>
<td>ProductCategory</td>
</tr>
<tr>
<td>EmployeeName</td>
<td>String</td>
<td>EmployeeName</td>
</tr>
<tr>
<td>SalesDate</td>
<td>Date</td>
<td>SalesDate</td>
</tr>
<tr>
<td>OrderDate</td>
<td>Date</td>
<td>OrderDate</td>
</tr>
<tr>
<td>SalesQty</td>
<td>Integer</td>
<td>SalesQty</td>
</tr>
<tr>
<td>SalesPrice</td>
<td>Integer</td>
<td>SalesPrice</td>
</tr>
<tr>
<td>GrossSales</td>
<td>Integer</td>
<td>GrossSales</td>
</tr>
</tbody>
</table>

Procedure
1. Follow the Procedure of STEP 3.
2. Click Union Matching tab to display all the matching columns.
3. Click CANCEL to go back to the Create linked cube page.
4. Click BACK to go back to the previous page.
5. Click OK.
The system displays the Create linked cube – Dimensions/measures selection page.
STEP 5
Dimension/measures selection
You can specify the dimensions and measures from the available cube columns. You can also specify the time dimension map to determine the level of the time series for the cube.

Procedure
1. Follow the Procedure of STEP 4.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. The information about the dimension time map is displayed in the TIME DIMENSION MAP section. You can create the time dimension as per the Procedure of STEP 5 Dimension/measures selection under Using JOIN section.
4. In the Create linked cube – Dimensions/measures selection page, click OK. The system displays a dialog box showing the process of creating linked cube.
5. Click CANCEL to go back to the Create linked cube page.
6. Click BACK to go back to the previous page.
7. STEP 5
8. Dimension/measures selection
CREATE LINKED CUBE: CUBE DATA WRITING PROCESS

9. If the linked cube is created successfully, a prompt mentioning the same is displayed.
10. Click CANCEL to go back to the Create linked cube page.

CUBE CREATED SUCCESSFULLY MESSAGE

11. Click GO TO CUBE REPOSITORY to go to the cube repository.
9 Rebuild Cube (with/without Incremental Update)

You need to use the cube rebuild process to refresh a cube with the latest data. This process runs a predefined extraction query on data sources defined and updates the cube as per parameters specified.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process

9.1 Rebuild Cube Using Graphical User Interface

You can rebuild the following types of cubes:

- Using Database Profile
- Using CSV Profile

To rebuild cube:

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Cube repository.
   The system displays the Cube repository page.

9.1.1 Using Database Profile

If the data source for a specific cube is a database, the rebuild cube using database profile option is used to refresh cube data.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from Database

STEP 1
Cube Selection
You can select a cube and rebuild it.

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Cube repository.
   The system displays the Cube repository page.

3. Select the checkbox adjacent to the cube you want to rebuild.
4. Click the Rebuild icon.
5. From the **Data source profile** section, select an option.
   The following options are available:
   a. **From scratch**: Select this option if you want to rebuild a cube from scratch.
   b. **Incremental**: Select this option if you want to rebuild a cube with incremental update.
6. From the drop-down list, select a cube.
7. **In the Email notification for cube rebuild process** field, select a radio button to specify when the email notification will be sent for the cube rebuild process. You can specify whether to send notification email if the event is successful, failure, both, or none.
8. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set the fetch size.
9. Select the checkbox **Store drill through data** to write drill through data.
10. Click **NEXT** to open the **Cube rebuild – Query** page.
11. Click **CANCEL** to go back to the **Cube repository** page.

   **Note:**
   Store to drill through option is disabled for Incremental option

**STEP 2**
Cube rebuild query
You need to specify the query that will be executed to update or refresh the cube.

**Procedure**
1. Follow the **Procedure** of **STEP 1**.
2. From the **SQL query** section, enter a query.
3. Click **NEXT** to open the **Cube rebuild – Query** page.
4. Click **CANCEL** to go back to the **Cube repository** page.
5. Click **BACK** to go back to the previous page.
STEP 3
Dimension/measures selection
You can specify the dimensions and measures to be used for mapping the cubes. You can also specify the time series map to determine the level the date format will be mapped for both cubes. You can define the time series map up to various levels, such as year, month, week, day, hour, minute, and second.

Procedure
1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
4. Under the TIME DIMENSION MAP section,
   - Click the Add icon.
     The system displays the Add time dimension map dialog box.
   - From the Date column drop-down list, select a column name.
   - From the Level drop-down list, select level.
   - Select the Use week of Year checkbox if you want to use week of the year in time series hierarchy.
   - Select the Use day of Year checkbox if you want to use day of the year in time series hierarchy.
   - Select the checkbox against Calendar Year and Financial Year for generating time dimension for specified year.
   - Click OK to add a time dimension map.
   - Click CANCEL to go back to the Cube rebuild – Dimensions/measures selection page.
5. In the Cube rebuild – Dimensions/measures selection page, click OK.
6. The system displays a dialog box showing the process of creating a linked cube.
7. Click CANCEL to go back to the Cube repository page.
8. Click BACK to go back to the previous page.
REBUILD CUBE: DATABASE PROFILE: DIMENSIONS / MEASURES SELECTION

REBUILD CUBE: DATABASE PROFILE: SELECT DATA OPERATIONS
If the cube rebuild is successful, a prompt mentioning the same is displayed.

9. Click **CANCEL** to go back to the **Cube repository** page.
CUBE REBUILD SUCCESSFULLY MESSAGE

10. Click **GO TO CUBE REPOSITORY** to go to the cube repository.
9.1.2 Using CSV profile

If the data source for a specific cube is CSV profile, the rebuild cube using CSV profile option is used to refresh cube data of objects.

Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Cube Generation Process > Extraction from CSV or flat files

STEP 1
Cube selection
You can select a cube and rebuild it.

Procedure
1. In the Navigation Panel, click Cube Management.
2. In the Cube Management menu, click Cube repository.
   The system displays the Cube repository page.

3. Select the checkbox adjacent to the cube you want to rebuild.
4. Click the Rebuild icon.
   The system displays the Cube rebuild – options page.

5. From the Data source profile section, select an option.
   The following options are available:
   a. From scratch: Select this option if you want to rebuild cube from scratch.
   b. Incremental: Select this option if you want to rebuild cube with incremental update.
6. From the drop-down list, select a cube.
7. **In the Email notification for cube rebuild process** field, select a radio button to specify when the email notification will be sent for the cube rebuild process. You can specify whether to send notification email if the event is successful, failure, both, or none.
8. In the **Cube rebuild process fetch size** field, enter a number of records per iteration to be processed for cube aggregation and indexing process. Enter 0 or any negative value to automatically set the fetch size.
9. Select the checkbox **Store drill through data** to write drill through data.
10. Click **NEXT** to open the **Cube rebuild – Query** page.
11. Click **CANCEL** to go back to the **Cube repository** page.

**Note:**
Store to drill through option is disabled for Incremental option.

**STEP 2**
**Cube rebuild – cube column selection**
You need to select columns that will be used for rebuilding the cube within the **Cube rebuild – cube column selection** page.

This step will be available only if you have selected the “**From scratch**” option for the cube rebuilding process.

**Procedure**
1. Follow the **Procedure** of **STEP 1**.
2. From the **Available cube columns** list, you can drag and drop the columns to the **Selected columns** list. You can deselect the selected columns by moving the columns back from the **Selected columns**. You can delete a column by clicking on the **Delete** button adjacent to a column within the **Selected columns** section.
3. Click **NEXT** to open the **Cube rebuild – Dimensions/measures selection** page.
4. Click **CANCEL** to go back to the **Cube repository** page.
5. Click **BACK** to go back to the previous page.

**STEP 3**
**Dimension/measures selection**
You can specify the dimensions and measures to be used for mapping the cubes. You can also specify the time series map to determine the level the date format will be mapped for both cubes.
You can define the time series map up to various levels, such as year, month, week, day, hour, minute, and second.

Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Dimension
Reference: Concept Manual > Designing the Data Model > Cube Meta Data > Measure
Reference: Concept Manual > Designing the Data Model > Smarten Cubes > Time Dimensions

Procedure
1. Follow the Procedure of STEP 2.
2. From the Available cube columns list, you can drag and drop the columns to the Dimension columns list and Measure columns list. You can deselect the selected columns by moving the columns back from the Dimension columns and Measure columns.
3. Click on SELECT DATA OPERATIONS to select pre-defined data operations for selected measures
4. For TIME DIMENSION MAP section, refer to STEP 3 Dimension/measures selection of Using Database Profile section.
5. In the Cube rebuild – Dimensions/measures selection page, click OK. The system displays a dialog box showing the process of creating a linked cube.
6. Click CANCEL to go back to the Cube repository page.
7. Click BACK to go back to the previous page.
REBUILD CUBE: CSV PROFILE: SELECT DATA OPERATIONS

DIMENSIONS/MEASURES SELECTION: ADD TIME DIMENSION MAP
REBUILD CUBE: DATABASE PROFILE: WRITING CUBE DATA
If the cube rebuild is successful, a prompt mentioning the same is displayed.

8. Click **CANCEL** to go back to the **Cube repository** page.

9. Click **GO TO CUBE REPOSITORY** to go to the cube repository.
10 Working with Repository

The Repository is a centralized database that stores and maintains all Smarten objects, such as crosstab, tabular, dashboard, graphs, GeoMap and KPI.

Repository (/) is the main folder. A list of all folders will be shown under Repository in the Navigation Panel. You can view all folders and BI objects saved in Repository (/) by users. You can click on the folder name from the Navigation Panel to view details. You cannot delete or copy this Repository (/) folder.

To view the repository details:

Procedure
In the Smarten Navigation Panel, click Repository. The system displays the Repository page.

10.1 Repository List

Repository (/) shows a list of all BI objects, such as dashboards, KPI, crosstab, graph, GeoMap and tabular. It shows object name, cube name, created date, updated date, and object ID for different objects, such as Crosstab, Graph, GeoMap, Tabular, KPI, and Dashboard.

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. From the Page list, select an option to navigate to the selected page number. You can sort the objects based on the object name, cube name, the date they were created, and the date they were last modified by selecting an option from the list adjacent to the Page list.
REPOSITORY: OBJECT TOOLBAR MENU

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon name</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Add folder icon]</td>
<td>Add folder</td>
</tr>
<tr>
<td>![Edit folder icon]</td>
<td>Edit folder</td>
</tr>
<tr>
<td>![Move folder icon]</td>
<td>Move folder</td>
</tr>
<tr>
<td>![Manage permissions icon]</td>
<td>Manage permissions</td>
</tr>
<tr>
<td>![Delete folder icon]</td>
<td>Delete folder</td>
</tr>
<tr>
<td>![Import object icon]</td>
<td>Import object</td>
</tr>
<tr>
<td>![Export folder icon]</td>
<td>Export folder</td>
</tr>
</tbody>
</table>

FOLDER MENU: TOOLBAR OPTIONS

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon name</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Refresh object list icon]</td>
<td>Refresh object list</td>
</tr>
<tr>
<td>![Edit object icon]</td>
<td>Edit object</td>
</tr>
<tr>
<td>![Manage permissions icon]</td>
<td>Manage permissions</td>
</tr>
<tr>
<td>![Delete object icon]</td>
<td>Delete object</td>
</tr>
<tr>
<td>![Copy object icon]</td>
<td>Copy object</td>
</tr>
<tr>
<td>![Move object icon]</td>
<td>Move object</td>
</tr>
<tr>
<td>![Export object icon]</td>
<td>Export object</td>
</tr>
<tr>
<td>![Export object permissions icon]</td>
<td>Export object permissions</td>
</tr>
<tr>
<td>![Import object permissions icon]</td>
<td>Import object permissions</td>
</tr>
<tr>
<td>![Set the object as home page icon]</td>
<td>Set the object as home page</td>
</tr>
<tr>
<td>![Associate cube icon]</td>
<td>Associate cube</td>
</tr>
</tbody>
</table>

OBJECT MENU: TOOLBAR OPTIONS
10.1.1 Add a New Folder

Add Folder is used to add a folder and subfolder for objects repository. Added folders will be accessible to users as per access rights granted to the users by the administrator. User can also add n level hierarchy of subfolders and save various Smarten objects in these folders.

To add a new folder in Repository:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. Click the Settings. The system displays the Settings menu.
3. In the Settings menu, click Add Folder. The system displays the Add Folder dialog box.
4. In the **Name** field, enter a name for the folder.
5. In the **Description** box, enter a description for the folder.
6. From the **Select folder** section, select the folder under which you want to add the folder.
7. Click **OK** to add the folder.

### 10.1.2 Edit a folder

**To edit a folder in Repository:**

**Procedure**

1. In the Smarten Navigation Panel, click **Repository**.
   The system displays the **Repository** page.
2. Click the **Settings**.
   The system displays the Settings menu.
3. In the Settings menu, click **Edit Folder**.
   The system displays the **Edit Folder details** dialog box.
4. In the **Name** field, change the name of the folder.
5. In the **Description** box, change the description of the folder.
6. Select the **Visible (for users)** checkbox to make the folder visible to other users.
7. Click **OK** to save the changes.

**Note:** You cannot change the name of the **Repository** or make it invisible, as it is a main root folder in the system.

### 10.1.3 Move a folder

**To Move a folder in Repository:**

**Procedure**
1. In the Smarten Navigation Panel, click **Repository**. The system displays the **Repository** page.
2. Click the **Settings**. The system displays the Settings menu.
3. In the Settings menu, click **Move Folder**. The system displays the **Move folder** dialog box.

4. From the **Repository** folder structure, locate the folder where you want to paste the moved object.
5. Click **OK** to move the folder within the selected folder.
Note: Entire folder is moved (including its objects and subfolders) from one location to another location.

10.1.4 Permissions to Access a Folder

You can grant permissions to roles and individual users to access a folder and what activities they can perform on the folder.

To grant permissions to access a folder:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. Click the Settings. The system displays the Settings menu.
3. In the Settings menu, click Manage Permissions. The system displays the Permissions dialog box.
4. In the **Roles** tab, manage view, write, delete, and export permissions for roles as required.

5. Select the **VIEW, WRITE, DELETE, or EXPORT** check boxes for the roles for which you want to grant the view or export permission.

   You can filter roles by searching for a specific role using the **Search** field.

6. In the **Users** tab, manage view, write, delete, or export permissions for users as required.

7. Select the **VIEW, WRITE, DELETE, or EXPORT** check boxes for the users for which you want to grant the view or export permission. For example, in the image below, you can select the **VIEW, WRITE, DELETE, and EXPORT** boxes to allow “kartik” to view, modify, delete, or export the data source.
8. Click **Apply permissions to other folders** to grant the same permissions which you have granted to roles and users in the previous step to other folders.

This option allows you to grant the same set of permissions you have granted to a role for other folders instead of granting the same set of permissions to the role for each folder separately. For example, if you have granted view and export permissions to Role 1 and want to grant the same permissions for Folder1, Folder2, and Folder3. You can use the **Apply permissions to other folders** option to grant the view and export permissions to Role 1 for Folder1, Folder2, and Folder3.

9. Click the plus sign adjacent to the folders for which you want to grant the permissions you have granted to the roles in the earlier step.
10.1.5 Delete a Folder

To delete a folder in Repository:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. Click the Settings. The system displays the Settings menu.
3. In the Settings menu, click Delete. The system displays the Delete dialog box.
4. Click OK to confirm or click Cancel.

10.1.6 Import Objects to a Folder

To import objects into a folder:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. Click the Settings. The system displays the Settings menu.
3. In the Settings menu, click Import Object. The system displays the Import Object dialog box.
4 Click **BROWSE** to select a file you want to import.
5 Click **OK** to import the selected file.
6 Click **CANCEL** to go back to **Repository** dialog box.

### 10.1.7 Export Objects from a Folder

To export objects from a folder:

**Procedure**

1. In the Smarten Navigation Panel, click **Repository**. The system displays the **Repository** page.
2. Click the **Settings**. The system displays the Settings menu.
3. In the Settings menu, click **Export**. All the objects within the current folder and subfolders are exported and downloaded to the default download location you have set for the browser.
10.1.8 Edit Object Details

To edit object details:

Procedure

1. In the Smarten Navigation Panel, click **Repository**. The system displays the **Repository** page.
2. From the **Repository** folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to edit.
4. In the Object Toolbar menu, click **Edit**. The system displays the **Edit object details** dialog box.
5 In the **Name** field, change the name of the folder.
6 In the **Description** box, change the description of the folder.
7 Select the **Visible (for users)** checkbox to make the folder visible to other users.
8 Select **Enable managed memory** checkbox as per your need.
9 Select **Refresh object on cube rebuild** checkbox to refresh the object automatically after its cube is rebuilt.
10 Select the **Auto refresh** checkbox to auto refresh object after specified interval.
11 In the **Refresh Interval**, enter a value.
12 Click **OK** to save the changes.

### 10.1.9 Permissions to Access an Object

You can grant permissions to roles and individual users to access an object and what activities they can perform on the object.

**To grant permissions to access an object:**

**Procedure**

1 In the Smarten Navigation Panel, click **Repository**.
   The system displays the **Repository** page.
2 From the **Repository** folder structure, locate the object.
3 Click the checkbox adjacent to the object you want to edit.
4 In the Object Toolbar menu, click **Permissions**.
   The system displays the **Permissions** dialog box.
In the **Roles** tab, manage view, write, delete, and export permissions for roles as required.

Select the **VIEW**, **WRITE**, **DELETE**, or **EXPORT** check boxes for the roles for which you want to grant the view or export permission.

You can filter roles by searching for a specific role using the **Search** field.
7 In the Users tab, manage view, write, delete, or export permissions for users as required.

8 Select the VIEW, WRITE, DELETE, or EXPORT check boxes for the users for which you want to grant the view or export permission. For example, in the image below, you can select the VIEW, WRITE, DELETE, and EXPORT boxes to allow “kartik” to view, modify, delete, or export the data source.

9 Click Apply permissions to other objects to grant the same permissions which you have granted to roles and user in the previous step to other objects.

This option allows you to grant the same set of permissions you have granted to a role for other
objects instead of granting the same set of permissions to the role for each object separately. For example, if you have granted view and export permissions to Role 1 and want to grant the same permissions for Object1, Object2, and Object3. You can use the **Apply permissions to other folders** option to grant the view and export permissions to Role 1 for Object1, Object2, and Object3.

**OBJECT PERMISSION: APPLY PERMISSIONS TO OTHER OBJECTS**

10 Click the plus sign adjacent to the objects for which you want to grant the permissions you have granted to the roles in the earlier step.

11 Click **OK** to grant the selected permissions for roles and users.

**10.1.10 Delete an Object**

To delete an object:

**Procedure**

1 In the Smarten Navigation Panel, click **Repository**. The system displays the **Repository** page.

2 From the **Repository** folder structure, locate the object.

3 Click the checkbox adjacent to the object you want to edit.

4 In the Object Toolbar menu, click **Delete**.

5 Click **OK** to confirm or click **Cancel**.
10.1.11 Copy an Object

To copy an object:

Procedure

1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. From the Repository folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to edit.
4. In the Object Toolbar menu, click Copy. The system displays the Copy dialog box.
5 From the **Repository** folder structure, locate the folder where you want to paste the copied object.

6 Click **OK** to copy the object within the selected folder.
10.1.12 Move an Object

To move an object:

Procedure

1. In the Smarten Navigation Panel, click Repository.
   The system displays the Repository page.
2. From the Repository folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to edit.
4. In the Object Toolbar menu, click Move.
   The system displays the Move dialog box.
5. From the Repository folder structure, locate the folder where you want to paste the moved object.
6. Click OK to move the object within the selected folder.

10.1.13 Export an Object

To export an object:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. From the Repository folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to export.
4. In the Object Toolbar menu, click Export object.
   The selected object is downloaded to the default download location you have set for the browser.

10.1.14 Export Object Permissions

To export object permissions:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. From the Repository folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to export object permissions.
4. In the Object Toolbar menu, click Export object permissions.
   The system displays a dialog box to save the file.
5. Object permissions are exported in XLS file. This file can be used to import object permissions using Import Object Permissions.

10.1.15 Import Object Permissions

To import object permissions:

Procedure
1. In the Smarten Navigation Panel, click Repository. The system displays the Repository page.
2. From the **Repository** folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to import object permissions.
4. In the Object Toolbar menu, click Import object permissions.
   The system displays the **Import object permissions** dialog box.

![Import object permission dialog box](image)

**IMPORT OBJECT PERMISSIONS**

**To Append Object Permissions:**

1. In the **Select file** field, browse the file.
2. Select **Append** radio option, to import new permissions from the file.
3. Click OK

**To Delete & Import Object Permissions:**

1. In the Select file field, browse the file.
2. Select **Delete & import** radio option, to delete all existing permissions and import new permissions from the file.
3. Click OK

**Note:**
Sample Import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

### 10.1.16 Set Object as Home Page

You can set an object to be displayed on the home page. The object can be Crosstab, Graph, GeoMap, KPI, KPI Group, Tabular, or Dashboard. After an object is set as home page, the object is displayed within the right pane of the home page as the default logged in home page for users.

**To set an object as home page:**

**Procedure**

1. In the Smarten Navigation Panel, click **Repository**.
   The system displays the **Repository** page.
2. From the **Repository** folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to edit.
4. In the Object Toolbar menu, click **Set as Home page**.
   The system displays a prompt mentioning that the selected object is set as home page.
5. Click **OK**.
### 10.1.17 Associate cube with an object

You can assign an object created from a cube to another matching cube. Columns in cubes will be matched as per the matching criteria.

**Reference:** Concept Manual > Designing the Data Model > Cube & Object Management > Matching Cube Criteria

To associate a cube with an object:

**Procedure**

1. In the Smarten Navigation Panel, click **Repository**. The system displays the **Repository** page.
2. From the **Repository** folder structure, locate the object.
3. Click the checkbox adjacent to the object you want to edit.
4. In the Object Toolbar menu, click **Associate cube**. The system displays the **Associate cube** dialog box. The columns displayed will be based on the type of object and data type of cube column associated with that object.
5 Click the New Cube Name list to select the cube you want to associate an object to. The system shows the matching columns from a new cube against all cube columns used in the object.
6 Select an appropriate matching column from the list of columns shown from the new cube.
7 Click OK to save the settings.

**Note:**
You can associate object created from one type of cube with any other type of cube. For example, you can associate a crosstab created from cache cube with real-time or MDX cube.

### 11 Using Scheduler

Scheduler is a service that monitors execution of tasks based on available computing resources as per scheduling policy.

Scheduler is used to create and manage cube rebuild tasks and delivery and publishing agent tasks.

#### 11.1 General Settings

General Settings is used to manage common settings for all tasks.

**To configure general settings:**

**Procedure**

1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click General Settings.
   The system displays the General Settings page.
The **General Settings** page displays the following information about the scheduler:

- **Status**: This displays the status of the scheduler. The scheduler can be running or stopped. If the scheduler is running, you click the **STOP** button to stop the scheduler. If the scheduler is stopped, you can click the **RUN** button to start the scheduler.

### 11.2 Cube Rebuild Tasks

You can create and manage scheduler tasks for **Cube rebuild tasks**. You can view a list of all cube rebuild tasks from the scheduler tasks.

**Reference**: [Concept Manual > Designing the Data Model > Smarten Cubes > Cube Update Process > Through Automatic Scheduler](#)

To manage cube rebuild tasks:

**Procedure**

1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   
   The system displays the **Cube rebuild tasks** page.

#### 11.2.1 Task List

The scheduler task list shows all the available Cube rebuild task profile(s). From the scheduler task list, you can view name, cubes, scheduler frequency, and other options.

To view task list:

**Procedure**

1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the Scheduler, click **Cube rebuild tasks**.
   
   The system displays the **Cube rebuild tasks** page with the task list.
3. From the Page list, you can select an option to navigate to the selected page number.
4. You can sort the groups based on the role name, the date they were created, and the date they were last modified by selecting an option from the list adjacent to the **Page** list.
### 11.2.2 Add a New Cube Rebuild Task

The New Cube Rebuild Task is added to rebuild cube from its data source with the latest data at a predefined schedule and frequency.

**To add a new cube rebuild task:**

**Procedure**

1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**. The system displays the **Cube rebuild tasks** page.
3. Click the **Add** icon. The system displays the **Add cube rebuild task** dialog box.
4. In the **Name** field, enter a name for the task.
5. You can select the **Active** checkbox if you want to make the task active.
6. You can select the **Send notification email** checkbox if you want to send notification email to the administrator when the task is complete.
7. From the **Cube** list, select a cube.
8. Select the **From scratch** button if you want to rebuild cube from scratch.
   Or,
   Select the **Incremental** button if you want to rebuild cube with incremental update.

9. Click **ADD** to add the task.
   The system displays the added task in the **Selected cubes** section.
   You can repeat the above process to add multiple cubes to the task. You can delete a task by clicking the **Delete** button adjacent to the task within the **Selected cubes** section.
10. From the **Rebuild process** section, select an option.
    The following options are available:

    a. **Serial**: Select this option if you want to execute cube update process sequentially. Only one cube update process will be executed at a time. In case there is more than one process, all cube update processes will be executed one by one; the next process will start after the previous cube update process is completed.
    b. **Parallel**: Select this option if you want to execute all cube update processes simultaneously.

11. Click the **Scheduler frequency** option to expand the section.
12. Select an option from the list to specify the frequency for task execution.
    Based on the option selected, relevant fields will be displayed.
    The following options are available:

    c. **One time**
d. Hourly
e. Daily
f. Weekly
g. Monthly
h. Yearly
i. Run this task after: You can select this process for chain execution of the cube update process. You can select predecessor task using the option.

13. Click the **Start time & Duration** option to expand the section.
14. From the **Start time** lists, select an option to specify the hour and minute the cube rebuild task will start.
15. In the **Duration** section, click the **Calendar** options to specify the start date and end date of the duration for this task.
16. In the **Reoccurrence** section, select the Never ends option if you want the cube rebuild task to repeat endlessly as per frequency and other configuration parameters.
17. Or,
18. In the **End after occurrence** field, enter a value to specify the number of times the cube rebuild task will be repeated as per frequency and other configuration parameters.
19. Click **OK** to save the cube rebuild task.
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>One time</td>
<td>A calendar option is displayed that allows you to set the date the cube update process will be performed.</td>
</tr>
<tr>
<td>Hourly</td>
<td>The Hourly box is displayed that allows you to specify the hourly frequency for the cube update process.</td>
</tr>
<tr>
<td>Daily</td>
<td>The Daily box is displayed that allows you to specify the daily frequency for the cube update process.</td>
</tr>
<tr>
<td>Weekly</td>
<td>The Weekly option allows you to specify the weekly frequency for the cube update process. The checkbox for each day of the week is displayed that allows you to select the day(s) of the week when the cube update process will be executed.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Options</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>Monthly</strong></td>
<td>The Monthly option allows you to specify the monthly frequency for the cube update process.</td>
</tr>
<tr>
<td><strong>Yearly</strong></td>
<td>The Yearly option allows you to specify the yearly frequency for the cube update process.</td>
</tr>
</tbody>
</table>

**Run this task after**
The list allows you to specify a task after which the current task will be performed.
11.2.3 Edit a Cube Rebuild Task

You can edit a cube rebuild task using this procedure.

To edit a cube rebuild task:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Cube rebuild tasks.
   The system displays the Cube rebuild tasks page.
3. Select the checkbox adjacent to the cube rebuild task you want to edit.
4. Click the Edit icon.
   The system displays the Edit cube rebuild task dialog box.

5. Make the required change in the given fields.
6. Click OK to save the changes.
7. Click CANCEL to go back to Cube rebuild tasks dialog box without saving any changes.

11.2.4 Run a Cube rebuild task Immediately (Run Now)

You can run a specific cube rebuild task immediately by using this option.

To run a cube rebuild task immediately:
Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   The system displays the **Cube rebuild tasks** page.
3. Select the checkbox adjacent to the cube rebuild task you want to run.
4. Click **Run now**.

11.2.5 **Activate a Cube Rebuild Task**

You can change the state of a specific cube rebuild task by making the cube rebuild task **Active** or **Inactive**.

To activate a cube rebuild task:

Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   The system displays the **Cube rebuild tasks** page.
3. Select the checkbox adjacent to the cube rebuild task you want to activate.
4. Click **Activate**.

11.2.6 **Deactivate a Cube Rebuild Task**

You can change the state of a specific cube rebuild task by making the cube rebuild task **Active** or **Inactive**.

To deactivate a cube rebuild task:

Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   The system displays the **Cube rebuild tasks** page.
3. Select the checkbox adjacent to the cube rebuild task you want to deactivate.
4. Click **Deactivate**.
11.2.7 Import Cube Rebuild Tasks from File

You can import cube rebuild tasks from files by clicking on the **Import** button from the **Cube rebuild tasks** dialog box. The **Import cube tasks from file** dialog box opens.

To import cube rebuild tasks from File:

**Procedure**

1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**. The system displays the **Cube rebuild tasks** page.
3. Click **Import**. The system displays the **Import cube tasks from file** dialog box.

4. Click **BROWSE** to select a file you want to import.
5. Click **OK** to import the selected file.
6. Click **CANCEL** to go back to **Cube rebuild tasks** dialog box.

**Note:** Sample import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

11.2.8 Delete Cube Rebuild Tasks

You can delete cube rebuild tasks using this procedure.

To delete cube rebuild tasks:
Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   The system displays the **Cube rebuild tasks** page.
3. Select the checkbox adjacent to the cube rebuild task you want to delete.
4. Click **Delete**.
5. Click **OK** to confirm or click **Cancel**.

### 11.2.9 Export Cube Rebuild Tasks

You can export a cube rebuild task using this procedure.

**To export cube rebuild tasks:**

**Procedure**
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Cube rebuild tasks**.
   The system displays the **Cube rebuild tasks** page.
3. Select the checkbox adjacent to the cube rebuild task you want to export.
4. Click **Export**.
   The selected cube rebuild task is downloaded to the default download location you have set for the browser.

### 11.3 Delivery and Publishing Agent Tasks

You can create a scheduler task for Delivery and Publishing Agent.

**To view Task details:**

**Procedure**
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Delivery & publishing agent tasks**.
   The system displays the **Delivery & publishing agent tasks** page.
11.3.1 Task List

The Scheduler task list shows all the available Delivery and publishing agent task profile(s). From the scheduler task list, you can view name, cubes, scheduler frequency, and option.

To view task list:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks. The system displays the Delivery & publishing agent tasks page.
3. From the Page list, you can select an option to navigate to the selected page number.
4. You can sort the groups based on the role name, the date they were created, and the date they were last modified by selecting an option from the list adjacent to the Page list.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Frequency</th>
<th>Start Time &amp; Duration</th>
<th>Delivery Method &amp; Recipients</th>
<th>Last Execution</th>
<th>Status</th>
<th>Created</th>
<th>Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Overview</td>
<td>Daily</td>
<td>11:00</td>
<td>By email</td>
<td>Event has not been executed yet</td>
<td>Active</td>
<td>2015/05/21 05:57:45</td>
<td>2015/05/21 05:57:45</td>
</tr>
<tr>
<td>Sales Performance</td>
<td>Monthly</td>
<td>11:00</td>
<td>By email, Export to table</td>
<td>Event has not been executed yet</td>
<td>Active</td>
<td>2015/05/21 05:57:53</td>
<td>2015/05/21 05:57:53</td>
</tr>
</tbody>
</table>
11.3.2 Add a New Publishing Agent Task

The New Publishing Agent Task is added to deliver and publish object(s) with the latest data at a predefined schedule and frequency.

Reference: Concept Manual > Delivery & Publishing Agent

To add a new publishing agent task:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks.
   The system displays the Delivery & publishing agent tasks page.
3. Click the Add icon.
   The system displays the Add publishing agent task dialog box.
SCHEDULER: ADD A NEW PUBLISHING AGENT TASK

4. In the Name field, enter a name for the task.
5. You can select the Active checkbox if you want to make the task active.
6. You can select the Send notification email checkbox if you want to send notification email to the owner of the task when the task is complete.
7. In the Select folder section, expand the Repository folder structure.
   The system displays the objects within the selected folder in the Selected cubes section.
8. Select the object you want to add for publishing agent task.
9. Click the checkbox adjacent to an option to specify the format in which the object will be exported.

<table>
<thead>
<tr>
<th>Name</th>
<th>Export Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution - Category (Radar)</td>
<td>PDF</td>
</tr>
<tr>
<td>Contribution - City (Bar)</td>
<td></td>
</tr>
<tr>
<td>Contribution - State (Doughnut)</td>
<td></td>
</tr>
<tr>
<td>Contribution - State (Stacked Bar)</td>
<td></td>
</tr>
<tr>
<td>Growth Analysis</td>
<td>PDF,XLS</td>
</tr>
</tbody>
</table>

Delivery method & recipients
Scheduler frequency
Start time & Duration
Message
For XLS & XLSX
10. Click ADD.
11. The system displays the object in the **Selected objects** section.
   You can repeat the above process to add multiple objects to the task. You can delete an object by clicking the Delete button adjacent to the object in the **Selected objects** section.
12. Click **Delivery method & recipients** to expand that section.
   a. Click the By email checkbox to send email notification.
   b. Click the To folder checkbox to publish object in a system folder defined by Administrator.
13. From the Select recipients list, select an option
14. You can narrow down the list of users by selecting an option from the Groups list. You can also select an option from the alphabets list to narrow down the list of users based on the selected option.
15. From the Available users list, you can drag and drop the users to the Selected users list or deselect the selected users by moving the users back from the Selected users.
   Repeat the above step to add multiple users.
16. Click the Scheduler frequency option to expand the section.
17. Select an option from the list to specify the frequency for task execution.
   Based on the option selected, relevant fields will be displayed.
   The following options are available:
   a. One time
   b. Hourly
   c. Daily
   d. Weekly
   e. Monthly
   f. Yearly
   g. Run this task after: You can select this process for chain execution of the publishing agent task. You can select predecessor task using the option.
18. Click the Start time & Duration option to expand the section.
19. From the Start time lists, select an option to specify the hour and minute the publishing agent task will start.
20. In the Duration section, click the Calendar options to specify the start date and end date of the duration for this task.
21. In the Reoccurrence section, select the Never ends option if you want the publishing agent task to repeat endlessly as per frequency and other configuration parameters.
   Or,
   In the End after occurrence field, enter a value to specify the number of times the publishing agent task will be repeated as per frequency and other configuration parameters.
22. Click the Message to expand that section.
   a. Enter the message you want to send with the email.
   b. You can click the email button to add the tags to be used in the message.
23. Click For XLS & XLSX to expand that section.
24. Click the Apply grouping checkbox to apply grouping.
25. Click **Merge all objects** in one file checkbox to merge objects in one file.
26. Click **OK** button to save the publishing agent task.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$USER_NAME$</td>
<td>Enables you to include the name of the recipient in the message of the email.</td>
</tr>
<tr>
<td>$SCHEDULER_NAME$</td>
<td>Enables you to include the name of the current scheduler task in the message of the email.</td>
</tr>
<tr>
<td>$OBJECTS$</td>
<td>Enables you to include name of the objects that will be sent along with the email.</td>
</tr>
<tr>
<td>$PUBLISH_TIME$</td>
<td>Enables you to include the current publishing Date and time of the publishing task.</td>
</tr>
<tr>
<td>$TODAY$</td>
<td>Enables you to include the current date in the message of the email. You can use the variable as $TOAY-1$, to include date of the previous day.</td>
</tr>
<tr>
<td>$LASTREFRESH&lt;OBJECT ID&gt;$</td>
<td>Enables you to include the date and time when the data for the object was last refreshed. You must replace the &lt;OBJECT ID&gt; in the variable with the actual ID of the object you have selected. Separate variable is available for all the objects that you have selected in Step 8. The time is included for the object variables that you add in the message of the email.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Options</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>One time</td>
<td>A calendar option is displayed that allows you to set the date the cube update process will be performed.</td>
</tr>
<tr>
<td>Hourly</td>
<td>The Hourly box is displayed that allows you to specify the hourly frequency for the cube update process.</td>
</tr>
<tr>
<td>Daily</td>
<td>The Daily box is displayed that allows you to specify the daily frequency for the cube update process.</td>
</tr>
<tr>
<td>Weekly</td>
<td>The Weekly option allows you to specify the weekly frequency for the cube update process. The checkbox for each day of the week is displayed that allows you to select the day(s) of the week when the cube update process will be executed.</td>
</tr>
<tr>
<td>Monthly</td>
<td>The Monthly option allows you to specify the monthly frequency for the cube update process.</td>
</tr>
</tbody>
</table>
The Yearly option allows you to specify the yearly frequency for the cube update process.

The list allows you to specify a task after which the current task will be performed.
11.3.3 Edit a Publishing Agent Task

You can edit a publishing agent task using this procedure.

To edit a publishing agent task:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks.
   The system displays the Delivery & publishing agent tasks page.
3. Select the checkbox adjacent to the publishing agent task you want to edit.
4. Click the Edit icon.
   The system displays the Edit publishing agent task dialog box.
5. Make the required change in the given fields.
6. Click OK to save the changes.
7. Click CANCEL to go back to Delivery & publishing agent tasks dialog box without saving any changes.
11.3.4 Run a Publishing Agent task Immediately (Run Now)

You can run a specific publishing agent task immediately by using this option.

To run a publishing agent task immediately:

Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Delivery & publishing agent tasks**.
   - The system displays the **Delivery & publishing agent tasks** page.
3. Select the checkbox adjacent to the publishing agent task you want to run.
4. Click **Run now**.

11.3.5 Activate a Publishing Agent Task

You can change the state of a specific publishing agent task by making the publishing agent task **Active** or **Inactive**.

To activate a publishing agent task:

Procedure
1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Delivery & publishing agent tasks**.
   - The system displays the **Delivery & publishing agent tasks** page.
3. Select the checkbox adjacent to the publishing agent task you want to activate.
4. Click **Activate**.
11.3.6 Deactivate a Publishing Agent Task

You can change the state of a specific publishing agent task by making the publishing agent task Active or Inactive.

To deactivate a publishing agent task:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks.
   The system displays the Delivery & publishing agent tasks page.
3. Select the checkbox adjacent to the publishing agent task you want to deactivate.
4. Click Deactivate.

11.3.7 Import Publishing Agent Tasks from File

To import publishing agent tasks from File:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks.
   The system displays the Delivery & publishing agent tasks page.
3. Click Import.
   The system displays the Import cube tasks from file dialog box.
4. Click **BROWSE** to select a file you want to import.
5. Click **OK** to import the selected file.
6. Click **CANCEL** to go back to Delivery & publishing agent tasks dialog box.

   Note: Sample import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

### 11.3.8 Delete Publishing Agent Tasks

You can delete Publishing agent tasks using this procedure.

To delete publishing agent tasks:

**Procedure**

1. In the Smarten Navigation Panel, click **Scheduler**.
2. In the **Scheduler**, click **Delivery & publishing agent tasks**.
   
   The system displays the Delivery & publishing agent tasks page.
3. Select the checkbox adjacent to the publishing agent task you want to delete.
4. Click **Delete**.
5. Click **OK** to confirm or click **Cancel**.

![Delivery & publishing agent tasks](image)

**SCHEDULER: DELETE PUBLISHING AGENT TASKS**
11.3.9 Export Publishing Agent Tasks

You can export publishing agent tasks in xls format using this procedure.

To export publishing agent tasks:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Delivery & publishing agent tasks.
   The system displays the Delivery & publishing agent tasks page.
3. Select the checkbox adjacent to the publishing agent task you want to export.
4. Click Export.
   The selected publishing agent task is downloaded to the default download location you have set for the browser.

11.4 Scheduler Gantt

You can view the schedules of Delivery and Publishing Agent tasks and Rebuild Cube tasks in the form of a Gantt chart.

To view Scheduler Gantt:

Procedure
1. In the Smarten Navigation Panel, click Scheduler.
2. In the Scheduler, click Scheduler Gantt.
   The system displays the Scheduler Gantt Chart.
12 Managing Security & Permissions

Security & Permissions features can be used to set up users, groups, synchronize directory users and Groups, set access rights for Objects, and control what data a user can access.

You can define the security of the application from Security & Permissions. You can set the access permission of folders, cubes, crosstab, tabular, graphs, GeoMap, KPIs and other objects, and set the directory server environment.

12.1 Security Mechanism

Security Mechanism selection provides selection of option for security mechanism. You can set the type of security by selecting Default built-in or Directory server options for Security Provider.

To select security provider:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Security provider configuration.
   The system displays the Security provider configuration page.

12.1.1 Default Built-In Security

The Default built-in option is selected to set the default security provider for the application.

To set the default security provider:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Security provider configuration.
   The system displays the Security provider configuration page.
3. Click the Default built-in radio button to set the default security settings.
4. Click SAVE to set the security type.
12.1.2 Directory Server Environment

The Directory Server option is selected to set security provided by LDAP or Active Directory servers. A directory service organizes computerized content and runs on a directory server computer. The directory service is the interface to the directory and provides access to the data that is contained in that directory. You can set the environment for directory server from Directory Server Environment by selecting Generic or Active Directory.

To set security provided by LDAP or Active Directory servers:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Security provider configuration.
   The system displays the Security provider configuration page.
3. Click the Directory Server radio button to set the Directory server security type.
   The system displays the fields to set Directory server configuration.
4. From the Directory server drop-down list, select an option.
   The following options are available:
   - **Generic**: This option allows you to set the directory environment and access rights by configuring LDAP parameters.
   - **Active directory**: This option allows you to set the directory environment and access rights by configuring Active Directory parameters.
   The system displays the fields to set Directory server configuration based on the option selected.
5. Enter the details in the relevant fields based on the option selected for Directory server.
   If you have selected the Generic option from the Directory server list, refer following topic.
If you have selected the **Active directory** option from the **Director server** list, refer following topic.

### 12.1.2.1 AD Configuration

To implement security provided by **Active Directory** configuration, select the option in **Directory Server** environment and set AD configuration parameters.

**To set AD configuration:**

**Procedure**

1. Follow the **Procedure of Directory Server Environment**.
2. From the **Directory server** drop-down list, select **Active directory**.
   The system displays the fields to configure the active directory.

![Security provider configuration](image)

3. In the **Server name** field, enter the name of the server.
4. In the **Port number** field, enter the port number of the server.
5. In the **Root** field, enter the root name for the directory.
6. In the **Username** field, enter the username to be used to log on to the server.
7. In the **Password** field, enter the password to be used to log on to the server.
8. In the **BaseDN** field, enter the base distinguished name.
9. In the **Query** field, enter the active directory query.
10. Click **TEST CONNECTION** to test the connection with the server.
11. Click **SAVE** to set the security type.
12. Click **SYNCHRONISE** to get the latest information of users from the directory server.
12.1.2.2 LDAP Configuration

You can set the directory server environment for authentication and access rights storage by setting all LDAP configuration parameters.

To set LDAP configuration:

Procedure
2. From the Directory server drop-down list, select Generic. The system displays the fields to configure LDAP configuration.

3. In the Server name field, enter the name of the server.
4. In the Port number field, enter the port number of the server.
5. In the Root field, enter the root name for the directory.
6. In the Username field, enter the username to be used to log on to the server.
7. In the Password field, enter the password to be used to log on to the server.
8. In the BaseDN field, enter the base distinguished name.
9. In the Query field, enter the active directory query.
10. In the Roles label field, enter a role label.
11. In the Group label field, enter a group label.
12. In the User attribute field, enter a user attribute.
13. In the Email attribute field, enter an email attribute.
14. In the Role attribute field, enter a role attribute.
15. In the Group attribute field, enter a group attribute.
16. Click TEST CONNECTION to test the connection with the server.
17. Click SAVE to set the security type.
18. Click **SYNCHRONISE** to get the latest information of users from the directory server.

### 12.2 Access Rights Policy

The Access rights policy section allows you to specify the default access rights that will be assigned to the newly created users and objects. The access rights specified for the user or object are set as the default access rights.

The newly created user or the object will have full access rights or no access rights based on the option selected.

**To assign access rights:**

#### Procedure

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Access rights policy**.
   
   The system displays the **Default access rights policy** page.

3. Select an option to specify the access rights policy for new users.
   
   The following options are available:
   
   - **No access rights**: Select this option if you do not want to provide any access rights to the newly created users.
   
   - **All access rights**: Select this option if you want to provide full access rights to the newly created users.

4. You can select an option to specify the access rights to the newly created objects.
   
   The following options are available:
   
   - **Access only to creator of the object**: Select this option if you want to provide access to the object only to the creator of the object.
   
   - **Access to all users as per access rights of the folder**: Select this option if you want to provide access to all users as per the access rights defined for the folder.

5. You can select an option to grant column access permissions
   
   The following option is available:
   
   - **Access to all cube columns**: Select this option if you want to provide all cube columns access to the role(s) or user(s). Role(s) or user(s) will be granted access to all cube columns whenever cube permission is granted to specific role(s) or user(s).

6. You can select an option to specify access rights policy for editing object created by other user or not.
The following option is available:

**Object can be edited by creator only**: Select this option if you want to restrict other users to edit and save any BI object. If this policy is enabled, only the user who has created a particular BI object can edit and save that object. Creator of an object and administrator can change this permission for an object by setting appropriate permission within object property.

7. You can select an option to specify user listing displayed in Delivery and publishing.
   The following options are available:
   - **All users**: Select this option if you want to provide list of all active users.
   - **Users in my group**: Select this option if you want to provide list of users from the logged-in user’s own group.
   - **My self**: Select this option if you want to display only logged-in user.

8. Click **SAVE** to set the security type.

### 12.3 Roles

The action or access rights to be assigned to a user or user group is Role. Access permission to create, view, and delete can be given to objects, such as crosstab, graphs, GeoMap, KPI, dashboard, or tabular and folders repository. One user may have multiple roles, and one role may be assigned to multiple users.

**To manage roles:**

**Procedure**

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Roles**.
   The system displays the **Roles** page.

### 12.3.1 Role List

The Role list shows all the available role(s) in the application. From the role list, you can view and edit role name and description.

**To view role list:**

**Procedure**

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Roles**.
   The system displays the **Roles** page.
3. From the **Page** list, you can select an option to navigate to the selected page number.
4. You can sort the groups based on the role name, the date they were created, and the date they were last modified by selecting an option from the list adjacent to the **Page** list.
12.3.2 Add a New Role

To add a new role:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Roles.
   The system displays the Roles page.
3. Click Add.
   The system displays the Add role dialog box.
4 In the **Name** field, enter a name for the role.
5 In the **Description** field, enter a description for the role.
6 Select the checkbox for the permissions you want to add for the role.
7 Click **OK** to save the role.

### 12.3.3 Edit Role

**To edit role:**

**Procedure**

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Roles**.
   The system displays the **Roles** page.
3. Select the checkbox adjacent to the role you want to edit.
4. Click the **Edit** icon.
   The system displays the **Edit role** dialog box.
5 Make the required changes in the given fields.
6 Click OK to save the changes.
7 Click Cancel to go back to the Roles dialog box without saving any changes.
12.3.4 Import Roles from File

You can import roles from files by clicking on the **Import** button from the Roles dialog box. **Import roles from file** dialog box opens.

To import roles from file:

**Procedure**
1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Roles**.
   The system displays the **Roles** page.
3. Click the **Import** icon.
   The system displays the **Import roles from file** dialog box.
4. Click **BROWSE** to select a file you want to import.
5. Click **OK** to import the selected file.
6. Click **CANCEL** to go back to **Roles** dialog box.

   ![Import roles from file dialog box]

   **ROLE: IMPORT ROLES FROM FILE**

   4. Click **BROWSE** to select a file you want to import.
   5. Click **OK** to import the selected file.
   6. Click **CANCEL** to go back to **Roles** dialog box.

   **Note:** Sample import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

12.3.5 Delete Roles

To delete roles:

**Procedure**
1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Roles**.
   The system displays the **Roles** page.
3. Select the checkbox adjacent to the role you want to delete.
4. Click the **Delete** icon.
5. Click **OK** to confirm or click **Cancel**.
12.4 User Groups

**Group** is a collection of users who can share access rights, and groups can be used to classify users by group.

**To add groups:**

**Procedure**
1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Users groups**.
   The system displays the **Users groups** page.

12.4.1 Group List

The Group list shows all the available group(s). From the group list, you can manage user groups.

**To view group list:**

**Procedure**
1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Users groups**.
   The system displays the **Users groups** page.
3. You can search for a group by entering the value in the **Search** box within the **User groups** dialog box.
4. You can select an option from the **Page** list to navigate to the selected page number.
5. You can sort the groups based on their name, date they were created, and the date they were last modified by selecting an option from the list adjacent to the **Page** list.
12.4.2 Add a New Group

To add a new group:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users groups.
   The system displays the Users groups page.
3. Click Add.
   The system displays the Add user group dialog box.

4. In the Name field, enter a name for the role.
5. In the Description field, enter a description for the role.
6. From the Add users drop-down list, select an option to specify the list of users to be displayed within the Available users section.
   Or,
   You can enter a value in the Search box and search for the user based on the value provided.
7. From the Available users list, you can drag and drop the users to the Selected users list or deselect the selected users by moving the users back from the Selected users.
8. Repeat the above step to add multiple users.
9 From the **Logged – in home page**, set any Smarten object (e.g., a dashboard or crosstab or graph or GeoMap or KPI) from Smarten repository as home page. Selected object will be shown as homepage for all the users in the group by default. If any individual user has configured personal logged in homepage, priority will be given to personal homepage over the group homepage.

10 Click **OK** to complete the operation.

11 Click **Cancel** to go back to the **User groups** dialog box without saving the changes.

### 12.4.3 Edit Group

To edit group:

**Procedure**

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Users groups**. The system displays the **Users groups** page.
3. Select the checkbox adjacent to the group you want to edit.
4. Click the **Edit** icon. The system displays the **Edit user group** dialog box.
5 Make the required change in the given fields.
6 Click OK to save the changes.
7 Click CANCEL to go back to the User groups dialog box without saving any changes.
### 12.4.4 Import Groups from File

You can import groups from file by clicking on the Import button from the User groups dialog box. The Import groups from file dialog box opens.

**To import groups from file:**

**Procedure**

1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users groups. The system displays the Users groups page.
3. Click the Import icon. The system displays the Import groups from file dialog box.

![Import groups from file](image)

4. Click BROWSE to select a file you want to import.
5. Click OK to import the selected file.
6. Click CANCEL to go back to Groups dialog box.

Note: Sample import formats are available in `<Smarten Installation Dir>/Docs/Sample files`.

### 12.4.5 Delete Group

To delete group:

**Procedure**

1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users groups. The system displays the Users groups page.
3. Select the checkbox adjacent to the role you want to delete.
4. Click the Delete icon.
5. Click OK to confirm or click Cancel.

![User groups](image)
12.5 Users

To add and manage users:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users.
3. The system displays the Users page.

12.5.1 User List

User list shows all the available user(s) for the application. From the user list, you can view names of all users and groups.

To view user list:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users.
   The system displays the Users page.
3. You can search for a group by entering the value in the Search box within the User groups dialog box.
4. You can select an option from the Page list to navigate to the selected page number.
5. You can sort the groups based on the user name, person name, group, status, date they were created, and the date they were last modified by selecting an option from the list adjacent to the Page list.
6. You can activate or deactivate an existing user.
7. You can view profile of an existing user.

<table>
<thead>
<tr>
<th>User Name</th>
<th>Add</th>
<th>Edit</th>
<th>Import</th>
<th>Export</th>
<th>Activate</th>
</tr>
</thead>
<tbody>
<tr>
<td>User1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Icon: USER LIST**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Icon name</th>
</tr>
</thead>
<tbody>
<tr>
<td>✍️</td>
<td>Add</td>
</tr>
<tr>
<td>✏️</td>
<td>Edit</td>
</tr>
<tr>
<td>🔄</td>
<td>Import</td>
</tr>
<tr>
<td>📎</td>
<td>Export</td>
</tr>
<tr>
<td>🔥</td>
<td>Activate</td>
</tr>
</tbody>
</table>
12.5.2 Add a New User

To add a new user:

Procedure
1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users.
   The system displays the Users page.
3. Click Add.
   The system displays the Add user dialog box.
4 In the **Username** field, enter a username for the user.
5 In the **Password** field, enter a password for the user.
6 In the **Confirm password** field, reenter the password for the user.
7 In the **Email id** field, enter the email id of the user.
8 In the **Person name** field, enter the name of the user.
9 In the **Department name** field, enter the name of the department the user belongs to.
10 From the **Group name** list, select an option to specify the group the user will belong to.
11 From the **User types** section, select an option to specify the type for the user.

**Note:**
Administrator rights section is only visible when Administrator option is selected in User types

**Reference:** Administrator Manual > Managing Security & Permissions > User Types

12 You can select the **Active** checkbox to activate the user immediately after it is created.
13 You can select the **Send welcome email** checkbox to send a welcome email to the newly created user.
14 Click **OK** to complete the operation.
15 Click **CANCEL** to go back to the **Users** dialog box without saving the changes.

### 12.5.3 Edit User

**To edit user:**

**Procedure**
1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **Users**.
   - The system displays the **Users** page.
3. Select the checkbox adjacent to the user you want to edit.
4. Click the **Edit** icon.
   - The system displays the **Edit user management** dialog box.
5. Make the required change in the given fields.
6. Click OK to save the changes.
7. Click CANCEL to go back to the Users dialog box without saving any changes.
12.5.4 Import Users from File

You can import users from files by clicking on the Import button from Users dialog box. The Import users from file dialog box opens.

To import users from file:

Procedure

1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users.
   The system displays the Users page.
3. Click the Import icon.
   The system displays the Import users from file dialog box.
4. Click BROWSE to select a file you want to import.
5. Click OK to import the selected file.
6. Click CANCEL to go back to Users dialog box.

Note: Sample import formats are available in <Smarten Installation Dir>/Docs/Sample files.

12.5.5 Delete User

To delete user:

Procedure

1. In the Navigation Panel, click Security & Permissions.
2. In the Security & Permissions menu, click Users.
   The system displays the Users page.
3. Select the checkbox adjacent to the user you want to delete.
4. Click the Delete icon.
5. Click OK to confirm or click Cancel.
12.6 User Types

User Types are used to set base user type for BI and BSC modules.

There are four types of users:

**Super Administrator User**: Super Administrator user, the default user of this system, is assigned full rights to perform and manage all the system activities, and can create and manage access rights for other Administrator users. Super Administrator rights cannot be changed or modified and this user can add and manage all types of users, including Administrator users.

**Administrator User**: Administrator users will be created and managed by Super Administrator user, and can have full or partial rights to perform and manage various system activities. This user can add and manage all other types of users in the system, except Super Administrator user.

**Power users**: Power users can create and modify front-end objects, such as dashboards, crosstab, graphs, GeoMap, key performance indicators (KPI), and tabular. Power users can develop and modify various objects and perform advanced analytics and ad hoc analysis.

**Users**: Depending upon their access rights, end users can view and interact with front-end objects, such as crosstab, tabular, graphs, Geomap, KPI, and dashboards. End users can also perform basic drill-down, filtering, and other analytic functions.

**Publish only user**: These users cannot log in to the system and can only receive BI objects via email as per the publishing and delivery agent configuration set by other users.

To set the user type and modules access rights:

**Procedure**

1. In the Navigation Panel, click **Security & Permissions**.
2. In the **Security & Permissions** menu, click **User Types**.
   The system displays the **User Types** page.
3. Select the radio button adjacent to user under the BI section to assign the role to that user. You can assign Administrator, Power User, User, and Publish Only User role to a user.
4. Select the checkbox for BSC if you want to assign BSC module rights to a particular user.
5. Click **Save** to save the changes.
13 Configuring TeamUp

Configuring the TeamUp database is a prerequisite for using TeamUp. You can configure and test the connection to the database, take backup, archive data and view dashboard through this option.

13.1 General configuration

To configure TeamUp:

Procedure
1. In the Smarten Navigation Panel, click TeamUp.
2. In the TeamUp menu, click General configuration.
   The system displays the General configuration page.
3. In the **Enable TeamUp** field, select either **Yes** to enable TeamUp or **No** to disable TeamUp.

4. In the **Database** field, select the type of database from the drop-down list. The options are: MySQL, Oracle and SQL Server.

5. In the **Host name** field, enter the host name of the server on which the database is hosted.

6. In the **Port number** field, enter the port number of the server on which the database is hosted.

7. In the **Database name** field, enter the name of database for TeamUp.

8. In the **Username** field, enter the name of the user to access the database.

9. In the **Password** field, enter the password of the user.

10. In the **Other connection parameters** field, enter any other connection parameters. It is optional to enter.

11. Click **TEST CONNECTION** to check the connection to the database.

12. In the **Backup directory** field, enter the path for backup of the database.

13. Click **Default** to enter the default path for backup.

14. Click **SAVE** to save the settings.
13.2 TeamUp analytics

Predefined dashboards are available so that administrators can analyze social BI activities for important insights, such as popular data, reports or dashboards, and popular conversation spots and the overall trend and activities of users in Smarten. These dashboards do not reflect the data that has been archived from the database.

The following predefined dashboards are available:

- **Social Overview**
  This dashboard provides overall insight on the total number of conversations that have taken place within Smarten. It also displays the total number of likes and comments that were posted for these conversations. This analysis enables an administrator to study monthly trends of conversations for the last 12 months, which can be further drilled down to days of each month.

![TeamUp Analytics - Social Overview](image)

- **Social Popularity**
  This dashboard provides information on the most popular cubes and objects (such as dashboard, crosstab, KPI, graphs, and tabular) by taking into consideration their average ratings as well as the number of likes and comments received for their conversations.

![TeamUp Analytics - Social Popularity](image)
13.3 Backup

To take backup of TeamUp database:

**Procedure**

1. In the Smarten Navigation Panel, click **TeamUp**.
2. In the **TeamUp** menu, click **Backup**.
   The system displays the **Backup** page.
3. Select either All data to take backup of all the data in the database or Last data to take backup of data belonging to a particular duration.
4. Select the duration from the drop-down list. The durations are:
   - 1 Month
   - 3 Months
   - 6 Months
   - 9 Months
   - 12 Months
5. Click BACKUP NOW to start the process of taking the backup.

   **Note:**
   The backup will be stored in the path specified through General configuration in the form of a CSV file.

### 13.4 Archive

To delete data permanently from the TeamUp database:

**Procedure**

1. In the Smarten Navigation Panel, click TeamUp.
2. In the TeamUp menu, click Archive.
   The system displays the Archive page.
3. In the **Delete data older than** field, select the duration from the drop-down list. The durations are:
   - 1 Month
   - 3 Months
   - 6 Months
   - 9 Months
   - 12 Months
4. Click **DELETE NOW** to remove the data which is older than the selected duration from the database.

### 13.5 TeamUp analytics data refresh scheduler

You can create a scheduler to refresh TeamUp data at specified interval of time, so that latest data is displayed in predefined dashboards for TeamUp analytics.

**Procedure**

1. In the Smarten Navigation Panel, click TeamUp.
2. In the TeamUp menu, click **TeamUp analytics data refresh scheduler**.
The system displays the **TeamUp analytics data refresh scheduler** page.

### TEAMPUP – TEAMUP ANALYTICS DATA REFRESH SCHEDULER

3. In the **Scheduler frequency** field, select an option from the list to specify the frequency to refresh data. Based on the option selected, relevant fields will be displayed. The following options are available:

   a. **Daily**
   b. **Weekly**
   c. **Monthly**
   d. **Yearly**

4. From the **Start time** list, select an option to specify the hour and minute to refresh the data.
5. You can select the **Active** checkbox if you want to make the task active.
6. Click **OK** to save the schedule.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>The Daily box is displayed that allows you to specify the daily frequency to refresh the data.</td>
</tr>
<tr>
<td>Weekly</td>
<td>The Weekly option allows you to specify the weekly frequency to refresh the data. The checkbox for each day of the week is displayed that allows you to select the day(s) of the week when the data will be refreshed.</td>
</tr>
</tbody>
</table>
### Frequency Options

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly</td>
<td>The Monthly option allows you to specify the monthly frequency to refresh the data.</td>
</tr>
<tr>
<td>Yearly</td>
<td>The Yearly option allows you to specify the yearly frequency to refresh the data.</td>
</tr>
</tbody>
</table>

#### 14 Working with Logs

Log files keep track of various events. Audit logs, Events logs, and Scheduler event log files are generated as below.

#### 14.1 Audit Log

You can analyse user activities with details of users, objects, timelines, trends and KPIs using audit log analytics predefined dashboards. You can also export audit log data and create your custom reports and dashboards from the audit logs data.
14.1.1 Viewing Audit Log

The Audit Log is used to view user access logs.

To view audit log details:

Procedure

1. In the Administration Navigation Panel, click Logs.
2. In the Logs menu, click Auditlogs.
   The system displays the Auditlogs page.

3. In the Calendar field, specify the date you want to view the logs for.
4. Click navigation arrows to navigate between the log pages.
5. Click the Refresh icon to get the latest updates.
6. Click the Delete icon to delete the log file.
   Click OK to confirm or click Cancel.
7. Click the Download icon to download the log detail in a semicolon-separated text file.

14.1.2 Audit Logs Analytics

Audit logs analytics provides predefined dashboards to help you analyse audit log activities.
Following dashboards are provided: Overview, Usage, Users, Objects, Usage Report.

To view Audit Logs analytics:

Procedure

1. In the administration navigation panel, click Logs.
2. In the Logs menu, click Auditlogs analytics.
   The system displays the Auditlogs analytics page with these tabs: Overview, Usage, Users, Objects and Usage Report.
14.1.2.1 Configuring Rebuild Scheduler for Audit Logs Analytics Dataset

Smarten provides pre-configured audit logs datasets for audit logs analytics. Administrator can configure its rebuild scheduler.

Procedure:
1. In the administration navigation panel, click Scheduler.
2. In the Scheduler, click Dataset rebuild tasks.
   - The system displays the Dataset rebuild tasks page.
3. Search dt_AuditLogs dataset.
   - The list of dataset related to Audit Logs is displayed.
4. Select the checkbox adjacent to the dataset dt_AuditLogs to edit the rebuild task for the dataset.
5. Click the Edit icon.
   - The system displays the Edit Dataset rebuild task dialog box.
6. You can select the **Active** checkbox if you want to make the task active.
7. You can select the **Send notification email** checkbox if you want to send notification email to the creator when the task is complete.
8. Select an option from the **Scheduler frequency** to specify the frequency for task execution:
   a. **One time**: Set a specific Date for the dataset update process.
   b. **Hourly**: Set the Hourly basis update process for the dataset. Insert the hour(s) to update the dataset based on the inserted hour.
   c. **Daily**: Set the Daily basis update process for the dataset. Insert the day(s) to update the dataset based on the inserted days.
   d. **Weekly**: Set the Weekly basis update process for the dataset. Insert the no. of weeks and select the days of the week.
   e. **Monthly**: Set the Monthly basis update process for the dataset. Insert the days & month to update the dataset within the inserted days and month.
   f. **Yearly**: Set the Yearly basis update process for the dataset. Insert the month and the day of that month.
### 14.1.2.2 Audit Logs Analytics Data sources & Datasets

Smarten provides predefined audit logs data sources and datasets. Audit logs data sources will read audit log files generated in the Smarten logs folder. Please refer below list of Data sources and datasets for more details.

**Note:**
Administrator cannot modify predefined datasources and datasets.

#### Data sources

<table>
<thead>
<tr>
<th>Datasource Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS_Auditlog</td>
<td>Audit logs data source that loads audit logs data from the logs folder</td>
</tr>
<tr>
<td>DS_Auditlog_DailyObjectCount</td>
<td>Data source to load Object statistics from logs folder</td>
</tr>
<tr>
<td>DS_Auditlog_DailyUserCount</td>
<td>Data source to load User statistics from logs folder</td>
</tr>
</tbody>
</table>

#### Data sets

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT_AuditLog</td>
<td>This is the main audit logs analytics dataset. It contains data of user access logs and objects related information.</td>
</tr>
<tr>
<td>DT_AuditLog_LoginLogout</td>
<td>Dataset for Login and Logout for each session of the users.</td>
</tr>
<tr>
<td>DT_AuditLog_ObjectCreator</td>
<td>Dataset for object wise creator user ID.</td>
</tr>
<tr>
<td>DT_AuditLog_DailyUserCount</td>
<td>It contains data of total number of daily users.</td>
</tr>
<tr>
<td>DT_AuditLog_LastLogin</td>
<td>It contains data of last login date and time of every user.</td>
</tr>
<tr>
<td>DT_AuditLog_DailyUserInfo</td>
<td>It contains user details such as name, email ID, role and user type.</td>
</tr>
</tbody>
</table>

#### Datasets Column information

DT_AuditLogs is the main dataset and all audit logs analytics dashboards are created from this dataset. Below is the list of columns of this dataset with brief description.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ActionDate</td>
<td>Date time of action performed by the user</td>
</tr>
<tr>
<td>SessionID</td>
<td>Session ID for the user session</td>
</tr>
<tr>
<td>UserName</td>
<td>Username of the user</td>
</tr>
<tr>
<td><strong>Action</strong></td>
<td><strong>Action Performed by user. E.g. Open Object, Login, Create Object etc.</strong></td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td><strong>Module</strong></td>
<td><strong>Module name E.g. Crosstab, Dataset, Graph, Dashboard etc.</strong></td>
</tr>
<tr>
<td><strong>ObjectName</strong></td>
<td><strong>Name of the object</strong></td>
</tr>
<tr>
<td><strong>ObjectId</strong></td>
<td><strong>ID of the Object</strong></td>
</tr>
<tr>
<td><strong>CubeName</strong></td>
<td><strong>Name of the Cube or dataset</strong></td>
</tr>
<tr>
<td><strong>Cubeld</strong></td>
<td><strong>Id of Cube or dataset</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td><strong>Stored Path or IP or any other information</strong></td>
</tr>
<tr>
<td><strong>Object_Creation_Cnt</strong></td>
<td><strong>Count of the Objects created</strong></td>
</tr>
<tr>
<td><strong>Open_Object_Cnt</strong></td>
<td><strong>Count of Objects opened</strong></td>
</tr>
<tr>
<td><strong>ActionDate_HOUR</strong></td>
<td><strong>Hour extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>LastLoggedIn</strong></td>
<td><strong>Last Login date time of the user</strong></td>
</tr>
<tr>
<td><strong>Login</strong></td>
<td><strong>Login time of the session</strong></td>
</tr>
<tr>
<td><strong>Logout</strong></td>
<td><strong>Logout time of the session</strong></td>
</tr>
<tr>
<td><strong>LoggedinTime</strong></td>
<td><strong>Number of minutes of the user session</strong></td>
</tr>
<tr>
<td><strong>Duration_HRS</strong></td>
<td><strong>Number of Hours of the user session</strong></td>
</tr>
<tr>
<td><strong>ActionDate_MONTH</strong></td>
<td><strong>Month extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>Creator</strong></td>
<td><strong>User name of the creator of the object</strong></td>
</tr>
<tr>
<td><strong>Object_type</strong></td>
<td><strong>Type of the Object. E.g. Crosstab, Graph, Dashboard etc.</strong></td>
</tr>
<tr>
<td><strong>ActionDate_DAYOFMONTH</strong></td>
<td><strong>Day of Month extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>ActionDate_WEEKDAYNAME</strong></td>
<td><strong>Weekday name extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>ActionDate_WEEKOFMONTH</strong></td>
<td><strong>Week of Month extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>ActionDate_YEAR</strong></td>
<td><strong>Year extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>Date</strong></td>
<td><strong>Date extracted from Date time</strong></td>
</tr>
<tr>
<td><strong>User_Count</strong></td>
<td><strong>Total Registered Users</strong></td>
</tr>
<tr>
<td><strong>Day_Today</strong></td>
<td><strong>No. of Days since action is Performed by user</strong></td>
</tr>
<tr>
<td><strong>Days_Bucket</strong></td>
<td><strong>It contains days bucket like 1-30 Days, 31-90 Days etc. and derived from No. of Days since Action is performed by the user</strong></td>
</tr>
<tr>
<td><strong>Id</strong></td>
<td><strong>Object, Dataset or Cube ID</strong></td>
</tr>
<tr>
<td><strong>Email_id</strong></td>
<td><strong>Email id of User</strong></td>
</tr>
<tr>
<td><strong>Person_Name</strong></td>
<td><strong>Person name of the User</strong></td>
</tr>
<tr>
<td><strong>Department_name</strong></td>
<td><strong>Department Name of the User</strong></td>
</tr>
<tr>
<td><strong>Group_id</strong></td>
<td><strong>Group Id in for the Group user belongs to</strong></td>
</tr>
<tr>
<td><strong>SSDP</strong></td>
<td><strong>If SSDP access is given to the user</strong></td>
</tr>
<tr>
<td><strong>Predictive_Power</strong></td>
<td><strong>If Predictive power user access is given to the user</strong></td>
</tr>
</tbody>
</table>
### Predictive View

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictive_View</td>
<td>If Predictive view user access is given to the user</td>
</tr>
<tr>
<td>Role_id</td>
<td>Role access given to that user</td>
</tr>
<tr>
<td>Active</td>
<td>If User is active or not</td>
</tr>
<tr>
<td>Admin_Rights</td>
<td>If administrator module access is given to the user</td>
</tr>
<tr>
<td>Today</td>
<td>Today's date</td>
</tr>
<tr>
<td>TotalDays</td>
<td>No. of days for which data is available</td>
</tr>
<tr>
<td>SinceDate</td>
<td>Date since audit log data is available</td>
</tr>
<tr>
<td>PersonName_UserName</td>
<td>Column containing Username and Person Name</td>
</tr>
</tbody>
</table>

### 14.1.2.3 Creating Custom Reports

Administrators can create the custom reports like crosstab, tabular, graph, dashboard etc. as per their requirement from `dt_AuditLogs` dataset.


### 14.1.3 Archive Logs

Administrator can enable the automatic archive of logs by specifying the period for archiving data. System will delete the older log data based on specified parameter. Administrator can also enable option to take back up of the audit logs before deleting the logs.

To archive the Logs permanently:

**Procedure**

1. In the administration navigation panel, click **Logs**.
2. In the **Logs** menu, click **Archive**.
3. To enable automatic archive of logs, select **Yes**.
4. In the Delete logs older than field, select the duration from the drop-down list. The durations are:
   a. **3 Months**: logs will be deleted which is older than last 3 months.
   b. **6 Months**: logs will be deleted which is older than last 6 months.
   c. **9 Months**: logs will be deleted which is older than last 9 months.
   d. **12 Months**: logs will be deleted which is older than last 1 year.
5. Check the checkbox of “Take a backup before archive action” to take the Audit Logs backup before archiving the logs.
6. Select the path in “Backup directory” option to save the Audit Logs backup in that location. The backup file will be saved in the CSV text format in this location. To restore the backup, user can manually copy the audit logs backup files from backup location to the Logs folder.
7. In” Daily scheduler start time”, select a specific time to run archive scheduler. System will run daily scheduler on specified time for archive process.
8. Click on the **Save** button to save the archive the logs configuration and system will run archival process on daily basis are per saved configurations.
14.2 Application Events Log

The **Application Events Log** is used to view server-side event logs. This file will be generated date-wise.

**To view application events:**

**Procedure**

3. In the Smarten Navigation Panel, click **Logs**.
4. In the **Logs** menu, click **Application logs**.
   The system displays the **Application logs** page.

   ![Application logs screenshot](image)

   **LOGS: APPLICATION LOGS**

   - In the **Calendar** field, specify the date you want to view the logs for.
   - Click navigation arrows to navigate between the log pages.
   - Click the **Refresh** icon to get the latest updates.
   - Click the **Delete** icon to delete the log file.
     - Click **OK** to confirm or click **Cancel**.
   - Click the **Download** icon to download the log detail in a text file.

14.3 Scheduler Events Log

The **Scheduler Events Log** is used to view the log file generated by scheduler actions or events. This file will be generated date-wise.

**To view scheduler events:**

**Procedure**
1. In the Smarten Navigation Panel, click **Logs**.
2. In the **Logs** menu, click **Scheduler logs**. The system displays the **Scheduler logs** page.

   ![Scheduler logs](image)

3. In the **Calendar** field, specify the date you want to view the logs for.
4. Click navigation arrows to navigate between the log pages.
5. Click the **Refresh** icon to get the latest updates.
6. Click the **Delete** icon to delete the log file.
   - Click **OK** to confirm or click **Cancel**.
7. Click the **Download** icon to download the log detail in a text file.
14.4 Cube Log

The **Cube Log** is used to keep trail of any changes to cube meta data and other important updates related to cubes.

Cube logs cover following important events.

- Add/Remove dimension
- Add/Remove Custom cube columns
- Add/Remove ‘Perform aggregation’ option
- Add/Remove ‘Store drill through data’ option
- Dimension converted into Measure and vice a versa
- Add/Remove Data operations
- Starting Month change for Financial year
- Cube query edited for ‘From Scratch’ or ‘Incremental’ update

**To view cube logs:**

**Procedure**

1. In the Smarten Navigation Panel, click **Logs**.
2. In the **Logs** menu, click **Cube logs**.
   The system displays the **Cube logs** page.

3. Click navigation arrows to navigate between the log pages.
4. Click the **Refresh** icon to get the latest updates.
5. Click the **Delete** icon to delete the log file.
   Click **OK** to confirm or click **Cancel**.
6. Click the **Download** icon to download the log detail in a text file.
14.5 Active sessions

The Active sessions is used to view a list of users who are currently using the system.

To view active sessions:

Procedure

1. In the Smarten Navigation Panel, click Logs.
2. In the Logs menu, click Active sessions.
   The system displays the Active sessions page.

<table>
<thead>
<tr>
<th>Active sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>USERNAME</td>
</tr>
<tr>
<td>admin</td>
</tr>
<tr>
<td>guest</td>
</tr>
<tr>
<td>user1</td>
</tr>
<tr>
<td>user2</td>
</tr>
<tr>
<td>user3</td>
</tr>
</tbody>
</table>

3. Click the Refresh icon to get the latest updates.
4. Click the Delete icon to kill the session of selected user(s).
   Click OK to confirm or click Cancel.
15 Managing Administrator Profile

You can edit your login profile, customize date and time format, change your password, and change the home page settings.

15.1 Changing user preferences

Procedure

1. In the Header pane, click the drop-down menu and click **Edit profile**.
   The system displays the **Edit profile** dialog box.
2. Under the **Personal detail** section, in the **Name** field, enter the new name.
3. Click **BROWSE** to select an image file from the desired directory path. This image will be displayed as an icon in all the TeamUp conversations posted by you.
4. In the **Status Line** field, enter the status line. This status line will be displayed when anyone hovers over your image in TeamUp conversations.
5. In the **E-mail ID** field, enter the new email ID.
6. Click the **Preferences** option to expand the section.
7. Under the Preferences section, in the Date format field, select a date format.
8. In the Time format field, select a time format.
9. To set the home page, click any one of the radio buttons to select either Set by admin, or Set by me, or TeamUp. If Set by admin is selected, the home page will be set to the one selected by the administrator. If Set by me is selected, you can select an object from its folder to set that object as your home page. If TeamUp is selected, the TeamUp page will be set as your home page.
10. If you have set the objects on the Home page, click Delete icon to delete the current home page.
11. Click the Change password option to expand the section.
12. Under the **Change password** section, in the **Current password** field, enter the current password.
13. In the **New password** field, enter the new password.
14. In the **Confirm password** field, re-enter the new password.
15. Click **OK**.
16  Taking Backup

Administrator can take a backup at regular intervals and restore it later if required.

Folders for backup

For taking a backup of your cube and objects—crosstab, graphs, GeoMap, tabular, KPI & dashboard, etc.—follow the steps below:

Procedure
1. Stop the application server if the server is running.
2. Go to the Application Server deployment directory containing `smarten.war`.
3. Take a backup of the existing application data directory to your backup location.
   You will find the `/data` directory under the `smarten.war` directory in the application server. This directory will contain all your cubes and object repository–related data.

Data Directory structure & description

Each folder in the `/data` directory under the `smarten.war` directory is explained below:

- `/cubes` = This folder consists of all the cubes created in the system
- `/DB` = This folder consists of Smarten metadata database files
- `/logs` = This folder consists of all the log files
- `/temp` = This folder consists of object cache files
- `/uploadedfiles` = This folder consists of all CSV files uploaded for creating cube
- `/uploadedimages` = This folder consists of subfolder `/banner` and `/logo`
- `/uploadedimages/banner` = This folder consists of uploaded frontpage banners that are to be used in the login page of the application
- `/uploadedimages/logo` = This folder consists of uploaded images that are to be used throughout the application by users for various purposes, such as background images for various BI objects, images within dashboards, header, and footers for PDF exports
17 Product and Support Information

Find more information about Smarten and its features at www.smarten.com
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