



**PUBLIC**

SAP BusinessObjects Profitability and Cost Management

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# **SAP BusinessObjects Profitability and Cost Management Master Guide**

# Content

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>Typographic conventions.</b>  | <b>4</b>  |
| <b>2</b> | <b>History of this document.</b>   | <b>6</b>  |
| <b>3</b> | <b>Getting started.</b>  | <b>8</b>  |
| 3.1      | About this document.   | 8         |
|          | Audience.  | 8         |
| 3.2      | Related Information.   | 8         |
|          | Planning Information.  | 8         |
|          | Useful Further Links.  | 9         |
| 3.3      | List of SAP Notes.   | 9         |
| <b>4</b> | <b>Application overview.</b>   | <b>11</b> |
| 4.1      | SAP BusinessObjects Profitability and Cost Management overview.                  | 11        |
| 4.2      | Installation with Other SAP BusinessObjects Products.                            | 13        |
| 4.3      | Software components in SAP BusinessObjects Profitability and Cost Management.    | 15        |
|          | Database server.   | 17        |
|          | Application server.  | 18        |
|          | Web server.  | 19        |
|          | Terminal / Citrix server.  | 19        |
|          | Work Manager server.   | 20        |
|          | Report Manager server.   | 20        |
|          | Clients.   | 20        |
|          | Protocols in SAP BusinessObjects Profitability and Cost Management architecture. | 22        |
| 4.4      | Software component matrix.   | 23        |
|          | Prerequisite Software Installed by the Product.                                  | 23        |
|          | Prerequisite Software Not Installed by the Product.                              | 23        |
| 4.5      | System Architecture.   | 24        |
| 4.6      | System landscape.  | 26        |
|          | Hardware and software recommendations.   | 26        |
| 4.7      | Overall implementation sequence.   | 37        |
| <b>5</b> | <b>Solution-Wide Topics.</b>   | <b>39</b> |
| 5.1      | Localization.  | 39        |
| 5.2      | SAP Solution Manager.  | 39        |
|          | SAP Solution Manager System Landscape.   | 40        |
|          | Implementation and Upgrade of SAP Solutions.                                     | 41        |
|          | Service Desk.  | 42        |

|          |                                       |           |
|----------|---------------------------------------|-----------|
|          | Solution Monitoring. . . . .          | 42        |
|          | Change Management. . . . .            | 43        |
|          | Delivery of SAP Services. . . . .     | 44        |
|          | Root Cause Analysis. . . . .          | 44        |
| 5.3      | System Landscape Directory. . . . .   | 46        |
| 5.4      | SAP MMC Snap-in. . . . .              | 47        |
| <b>6</b> | <b>References. . . . .</b>            | <b>48</b> |
| 6.1      | List of documents. . . . .            | 48        |
| 6.2      | The main documentation types. . . . . | 48        |

# 1 Typographic conventions

Typographic conventions used in SAP BusinessObjects Profitability and Cost Management documentation

| Type Style                               | Represents   | Example   |
|--|--|---|
| <i>Example text</i>                      | Name of an interface element with which the user interacts, such as buttons, options, lists, boxes, menus, and icons | To save the file, type a filename in the <i>Name</i> box and click <i>Save</i> .  |
| <code>EXAMPLE</code>                     | Single keyboard action   | Press <code>F1</code> to access Help.   |
| <code>EXAMPLE</code> + <code>TEXT</code> | Keyboard combination action  | You can select multiple items using <code>CTRL</code> + <code>SHIFT</code>  |
| ► <i>Example</i> ► <i>text</i> ►         | A nested menu command  | Select ► <i>File</i> ► <i>Import</i> ►  |
| <i>Example text</i>                      | Name of a window, dialog box, or screen  | The <i>Import</i> dialog box opens.   |
|  | Terminology specific to the product  | In the application, security descriptors are used to assign security access levels to groups.   |
| <code>Example\text</code>                | A file path  | The files are in the following directory: Program Files\SAP BusinessObjects\PCM.  |
| <code>Example text</code>                | A file or folder name  | Save the <code>MyModel.xml</code> file in the <code>Models</code> folder.   |
|  | Name of a command or method  | Use the <code>NEWMODEL</code> command to create a new model.  |
|  | Name of a:<br>function<br>Book object or control<br>grid value   | For basic Capacity Rules where Alerts are required, you must insert the predefined <code>RaiseCapacityAlert</code> function in your file.<br>The <code>DataManager</code> object is connected to the <code>Keys</code> object.<br>The <code>LineItemValue</code> grid value is primarily used to represent general ledger values. |
|  | Code fragments   | All rule structures start with <code>Function</code> .  |
|  | System messages  | The following message displays: <code>Incorrect username and password</code> .  |
|  | Text inputted by the user  | Type <code>localhost</code> in the <i>Server</i> box and click <i>OK</i> .  |
|  | System messages  | A confirmation dialog box displays the following:<br><br><code>Are you sure you want to add the following sibling?:MyVersion</code>   |
| <code>Example text</code>                | An example of code, longer than a code fragment  | <pre>Function CellValue CellValue=x End Function</pre>  |

| Type Style     | Represents                                    | Example  |
|----------------|---|--|
| <Example text> | Name of a parameter                           | The LOADVOLUMEDATA command has the <LoadID> parameter.   |
| <Example text> | Name of a child item in a dimension hierarchy | The <Fixed Cost Line Item> attribute identifies <Line Items> that you wish to treat as fixed costs.              |
| Example text   | The name of a document                        | For more information, see the <i>SAP BusinessObjects Profitability and Cost Management Modeling User Guide</i> . |

## 2 History of this document

The current version of this document is version 1.6. The following table provides an overview of the most important changes to prior and current versions of this document:

| Version             | Important Changes   |
|---------------------|---|
| 1.0 (May-10-2011)   | The master guide is created to offer a starting point for the technical implementation of the application.  |
| 1.1 (November-2011) | As part of the release of Support Package 02, the following topics are updated:<br><br>"Installation with BusinessObjects Enterprise"<br>"Installation with Other SAP BusinessObjects Products"   |
| 1.2 (May-2012)      | As part of the release of Support Package 03, the document contains the following changes: <ul style="list-style-type: none"><li>• The 64-bit version of MDX ODBO Connector is now compatible with SAP BusinessObjects EPM Add-in for Microsoft Office, and it is no longer necessary to install the 32-bit version. Obsolete text is removed as follows:<ul style="list-style-type: none"><li>◦ In "MDX ODBO Connector: Supported Software", Note 3 is removed.</li><li>◦ In "Support for SAP BusinessObjects EPM Add-in", paragraph 2 is removed.</li></ul></li><li>• In Chapter 4, a new topic "Reducing Network Latency", is added under "Clients", explaining the type of problems that can be manifested as a result of network latency, and how to reduce it.</li><li>• In the following topics, any server sizing recommendations are removed and references to the <i>Sizing Guide</i> are added:<ul style="list-style-type: none"><li>◦ "Application server"</li><li>◦ "Database server recommendations"</li><li>◦ "Application server recommendations"</li><li>◦ "Web server recommendations"</li></ul></li><li>• In the topic "List of SAP Notes", a link is added to SAP Note 62988, which contains a statement that later Service Packs for Microsoft SQL Server are supported. The topic "Database server recommendations" refers the reader to links regarding support for later support packages.</li><li>• A caution note is included in the topic "Application server", giving advice on the use of processor hyper-threading.</li></ul> |
| 1.3 (August-2012)   | As part of the release of Support Package 04, the following topics are updated to support SAP BusinessObjects Business Intelligence platform 4.0 SP4:   |

| Version             | Important Changes  |
|---------------------|--|
|                     | <ul style="list-style-type: none"> <li>• “SAP BusinessObjects Profitability and Cost Management overview”</li> <li>• “Installation with Other SAP BusinessObjects Products”</li> <li>• “System landscape” - the diagram is amended</li> <li>• “Connectivity Pack: Supported Software” (renamed from “MDX ODBO Connector: Supported Software”)</li> </ul>   |
| 1.4 (May 2013)      | The <i>Database Server Recommendations</i> topic has been corrected to remove the statement that Oracle Standard Edition is supported. This version is not supported.  |
| 1.5 (July 2013)     | <p>As part of the release of Support Package 07, the following topics are updated:</p> <ul style="list-style-type: none"> <li>• “Supported server operating systems” - support for Microsoft Windows Server 2012</li> <li>• “Supported client operating systems” - support for Microsoft Windows 8</li> <li>• “Database server recommendations” - support for Microsoft SQL Server 2012</li> <li>• “Web server recommendations” - support for Microsoft Internet Information Server (IIS) 8.0</li> <li>• “Web client recommendations” - support for Microsoft Windows Internet Explorer 9 &amp; 10</li> </ul>  |
| 1.6 (November 2013) | <p>As part of the release of Support Package 08, the following topics are updated:</p> <ul style="list-style-type: none"> <li>• The “Application Overview ”topics are updated with the new features that support write-back from the EPM add-in and export of model results and data to an SAP HANA database.</li> <li>• “System Architecture” - an error in the diagram is corrected and the diagram has been updated for support for write-back from the EPM add-in.</li> <li>• “Support for Export to HANA” - a new topic has been added to describe this feature.</li> <li>• “Support for SAP BusinessObjects” EPM Add-in - this topic has been updated for the new write-back feature from the EPM add-in to the Profitability and Cost Management feature</li> </ul> |

## 3 Getting started

### 3.1 About this document

The *SAP BusinessObjects Profitability and Cost Management Master Guide* is the starting point for the technical implementation of SAP BusinessObjects Profitability and Cost Management. It provides an overview of the application from a technical perspective and describes the system components architecture. The guide lists hardware and software requirements and offers an overall implementation sequence. This document also refers you to the required detailed documentation available for the product and includes a reference section.

When designing your system, use this document as a planning tool to assist in setting schedules and planning hardware resources and project staffing.

#### **i Note**

Any example infrastructures and business scenarios presented here serve as examples of how to deploy the application. They are intended as models only and may not run as described here in a specific customer environment. Each SAP BusinessObjects Profitability and Cost Management system is unique to the requirements of the customer. We recommend you discuss with your SAP consultant how to purchase software that best suits the existing topology and infrastructure of your organization, as well as expectations of future growth. We also recommend that you consult the latest configuration, and installation documents, which are available at <http://help.sap.com>.

#### 3.1.1 Audience

The primary target audience for this document are system administrators and architects involved in the technical setup of SAP BusinessObjects Profitability and Cost Management. The target audience also includes:

- Technology consultants
- Decision makers and project teams for implementations

### 3.2 Related Information

#### 3.2.1 Planning Information

For more information about planning topics not covered in this guide, see the following content on the SAP Service Marketplace or the SAP Help Portal.



| Content  | Location  |
|--|---|
| Latest versions of installation and upgrade guides           | <a href="http://service.sap.com/instguides">http://service.sap.com/instguides</a>       |
| Network security   | <a href="http://service.sap.com/securityguide">http://service.sap.com/securityguide</a> |
| Information about support packages                           | <a href="http://service.sap.com/support">http://service.sap.com/support</a>             |
| Information about maintenance and services                   | <a href="http://service.sap.com/support">http://service.sap.com/support</a>             |
| Latest version of user guides and access to technical guides | <a href="http://help.sap.com">http://help.sap.com</a>                                   |
| Product Availability Matrix                                  | <a href="http://service.sap.com/pam">http://service.sap.com/pam</a>                     |
| Product sizing recommendations                               | <a href="http://service.sap.com/sizing">http://service.sap.com/sizing</a>               |

## 3.2.2 Useful Further Links





The following tables lists further useful links on the SAP Service Marketplace:

| Content  | Location on SAP Service Marketplace   |
|--|---|
| Information about reporting product errors                     | <a href="http://service.sap.com/message">http://service.sap.com/message</a>             |
| SAP Notes search   | <a href="http://service.sap.com/notes">http://service.sap.com/notes</a>                 |
| SAP BusinessObjects Support                                    | <a href="http://service.sap.com/bosap-support">http://service.sap.com/bosap-support</a> |
| SAP Software Distribution Center (download and order software) | <a href="http://service.sap.com/swdc">http://service.sap.com/swdc</a>                   |

## 3.3 List of SAP Notes

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation. Make sure you have the up-to-date version of each SAP Note, which you can find on the SAP Service Marketplace at <http://service.sap.com/notes>.

| SAP Note Number       | Title   | Description   |
|-----------------------|---|---|
| <a href="#">62988</a> | Note 62988 - Service Packs for Microsoft SQL Server | You operate your SAP BusinessObjects Profitability and Cost Management system with Microsoft SQL Server. You have installed the minimum Microsoft SQL Server version (Build) that is required and you want to implement a more recent Service Pack or update. You want to make sure that this version is released and supported by the product. |

| SAP Note Number   | Title   | Description  |
|---|---|--|
| <a href="#">797147</a>   | Note 797147 - Wily Introscope Installation for SAP Customers    | The procedure to install CA Wily Introscope  |
| <a href="#">1368413</a>  | Note 1368413 - Inst. 7.20/7.12 - Diagnostics Agent Installation | Diagnostics Agent Installation based on SAP Netweaver 7.0  |
| <a href="#">1265134</a>  | Note 1265070 - Diagnostics - Setup of Managed Systems           | Describes how to set up a managed system and connect it to the SAP Solution Manager system and use the Diagnostics capabilities for these systems. |
| <a href="#">1265134</a>  | Note 1265134 - DBA Cockpit: Connecting to a remote database     | How to set up remote monitoring of a managed system database from within SAP Solution Manager  |

## 4 Application overview

### 4.1 SAP BusinessObjects Profitability and Cost Management overview

SAP BusinessObjects Profitability and Cost Management is a software product that provides a multi-user, multilanguage, and multicurrency environment that enables financial analysts, reporters, and end users to create financial models of their organizations, and to analyze the data in a flexible and responsive manner. The main 32-bit and 64-bit Microsoft Windows application supports the following model types:

Profitability and Costing - supports various forms of financial analysis modeling

Bill of Materials - an extension of an activity-based costing model that costs at a lower level than that of the finished product, this model type can calculate the manufacturing costs of the assemblies and subassemblies that make up finished goods.

Objectives and Metrics - supports various approaches to performance management

Transactional Costing - combines multidimensional modeling features with very large database volumes

Each modeling type has an extensive feature set. Data in the application can be entered and displayed in multidimensional grids, which you can design to show various views. These views and other elements can be included in interactive web pages known as Books. Books can be viewed over the web in the Web Client or by using the Book Viewer. Books can be used for data input, data display, and reporting. In addition, SAP BusinessObjects Profitability and Cost Management includes the following ancillary applications:

Data Bridge - data import

Report Manager - automated reporting

Work Manager - workflow design

The software enables you to:

- Measure the drivers that impact on the cost and profitability of customers, products, and channels and other aspects of your company's business.
- Identify business process costs, improve your understanding of company-wide expenses, and reveal problem areas so you can eliminate bottlenecks or wasteful activities, reduce costs, and optimize profitability.
- Accurately determine costs and invoice cross-charging for shared services.
- Determine cost-to-serve on a transaction by transaction basis.
- Track the performance and objectives and responsible individuals to ensure that they are in line with those of the organization as a whole.

The main applications are based on a ROLAP (Relational Online Analytical Processing) concept and use a relational database as the primary storage mechanism for raw data. Connected to the database is the Application (or Model) server, which extracts and calculates data on demand. Model calculations are performed by the Calculation Engine, which uses all available processing power when running calculations. As a result, the number and size of the models your organization is expected to need must be taken into consideration when planning Model server resources. For more information on the Calculation Engine and the factors that affect its performance see the *SAP BusinessObjects Profitability and Cost Management Modeling User Guide*. For more information on resource planning, see the *Sizing Guide*, which is found on the SAP

Service Marketplace at <http://www.service.sap.com/sizing> followed by selecting ► *Hardware Sizing* ► *Sizing Guidelines* ► *Solutions & Platform* ► *SAP BusinessObjects* ►.

A remote web server or directly linked clients are configured to attach to the Model server for users to view Books via the Web Client or the Book Viewer.

All access is governed by security settings configured in the main application.

SAP BusinessObjects Profitability and Cost Management can run as a standalone application or as part of an SAP BusinessObjects Business Intelligence platform (Enterprise) environment. The software has an OLE/DB for OLAP (Object Linking and Embedding/Database for Online Analytical Processing) or ODBO connector called MDX ODBO Connector which provides MDX (Multidimensional Expressions) access to a number of applications, including the following:

- Microsoft Excel 2003
- Microsoft Excel 2007
- Microsoft Excel 2010
- BI Launchpad (InfoView) (see Note)
- SAP BusinessObjects Web Intelligence (see Note)

#### **i Note**

To communicate with BI Launchpad (InfoView) and Web Intelligence, the product must be integrated with SAP BusinessObjects Business Intelligence platform (BusinessObjects Enterprise). See the "Installation with Other SAP BusinessObjects Products" topic for supported versions.

In addition, the application provides the MDX XMLA Provider, a web service that provides an XMLA (Extensible Markup Language for Analysis) interface that supports the enquiry of model results. For example, SAP BusinessObjects Xcelsius and SAP BusinessObjects Analysis, edition for OLAP can query model results via the SAP BusinessObjects EPM Connector, which uses XMLA to communicate with Profitability and Cost Management. You can install the MDX XMLA Provider when you need to provide XMLA support or to create a standalone XMLA server.

The connectors also enable the software to support the SAP BusinessObjects EPM Solutions, add-in for Microsoft Office (EPM add-in), which provides access to model data from within the following applications:

- Microsoft Excel
- Microsoft Word
- Microsoft PowerPoint

For SAP BusinessObjects Profitability and Cost Management 10.0 Support Package 08 and later, write-back from the EPM add-in to the Profitability and Cost Management system is supported. For more information, see the relevant SAP BusinessObjects EPM Solutions, add-in for Microsoft Office documentation on the SAP Help Portal at <http://sap.help.com>

SAP BusinessObjects Profitability and Cost Management can also be configured to communicate with SAP BusinessObjects Financial Information Management. For more information, see the *SAP BusinessObjects Financial Information User Guide* and the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

For SAP BusinessObjects Profitability and Cost Management 10.0 Support Package 08 and later, model data and results can be exported at an SAP HANA database using the Export to HANA feature.

### **i Note**

For more information on modeling types, ancillary applications, and integration with SAP BusinessObjects Enterprise, see the following:

*SAP BusinessObjects Profitability and Cost Management Modeling User Guide*  
*SAP BusinessObjects Profitability and Cost Management Data Bridge User Guide*  
*SAP BusinessObjects Profitability and Cost Management Report Manager User Guide*  
*SAP BusinessObjects Profitability and Cost Management Work Manager User Guide*  
*SAP BusinessObjects Profitability and Cost Management Integration Guide*  
*SAP BusinessObjects Profitability and Cost Management MDX Connector Guide*

## **Related Information**

[Installation with BusinessObjects Enterprise \[page 34\]](#)

## **4.2 Installation with Other SAP BusinessObjects Products**

SAP BusinessObjects Profitability and Cost Management 10.0 supports integration with SAP BusinessObjects Business Intelligence platform (Enterprise). Depending on the integration scenario, a number of SAP BusinessObjects applications can be configured to communicate with Profitability and Cost Management to query model data and results. The following scenarios are supported:

Integration with SAP BusinessObjects Business Intelligence platform (Enterprise)

| <b>Integration Scenario</b>   | <b>Supported Applications and Versions</b>  |
|---|---|
| Integration with BusinessObjects Enterprise XI 3.1 SP4<br>Prerequisite software: BusinessObjects User Management Client (12.1.0.165) (see Note) | <ul style="list-style-type: none"><li>• Authentication via SAP BusinessObjects User Management Client (12.1.0.165)</li><li>• SAP BusinessObjects Voyager 3.1</li><li>• SAP BusinessObjects Web Intelligence 3.1</li><li>• SAP BusinessObjects InfoView 3.1</li><li>• SAP BusinessObjects Extended Analytics 7.5</li><li>• Integration with SAP BusinessObjects Xcelsius 2008 Support Package 02 or higher via the SAP BusinessObjects Profitability and Cost Management XMLA provider</li></ul> |

### **i Note**

Communication with SAP BusinessObjects Financial Information Management is not supported in this scenario.

| Integration Scenario  | Supported Applications and Versions  |
|---|--|
| Integration with SAP BusinessObjects Business Intelligence platform 4.0 SP4       | <ul style="list-style-type: none"> <li>• Authentication via SAP BusinessObjects User Management Client 10.0</li> <li>• Publishing books and launching the Model Builder application in BI Launchpad</li> <li>• SAP BusinessObjects Financial Information Management 10.1</li> <li>• SAP BusinessObjects EPM Solutions, add-in for Microsoft Office 10.0 (EPM add-in)</li> <li>• SAP BusinessObjects Analysis, edition for OLAP 4.0 SP4</li> <li>• SAP BusinessObjects Web Intelligence 3.1</li> <li>• Integration with SAP BusinessObjects Xcelsius 2008 Support Package 02 or higher via the SAP BusinessObjects Profitability and Cost Management XMLA provider</li> </ul> |
| Prerequisite software: SAP BusinessObjects User Management Client 10.0 (see Note) |  |

### Note

Depending on the integration scenario you choose to support, you must install the prerequisite version of the User Management Client prior to installing of the product. For more information, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

For information on integration with SAP BusinessObjects Business Intelligence platform (Enterprise), see the *SAP BusinessObjects Integration Guide*. For information on configuration and installation of the listed SAP BusinessObjects products, see the product documentation on the SAP Help Portal at <http://help.sap.com>.

SAP BusinessObjects Profitability and Cost Management 10.0 also supports SAP BusinessObjects EPM solutions, add-in for Microsoft Office 10.0 and the export of model data and results to an SAP HANA database. For more information, see the relevant documentation on the SAP Help Portal.

## Related Information

[Installation with BusinessObjects Enterprise \[page 34\]](#)

[Installation with SAP BusinessObjects Business Intelligence Platform \[page 34\]](#)

[Communication with SAP BusinessObjects Financial Information Management \[page 35\]](#)

[Support for SAP BusinessObjects EPM Add-in \[page 35\]](#)

[Support for Export to HANA \[page 37\]](#)

[Prerequisite Software Installed by the Product \[page 23\]](#)

## 4.3 Software components in SAP BusinessObjects Profitability and Cost Management

A three-tier SAP BusinessObjects Profitability and Cost Management installation requires the following components:

- Database server
- Application server
- Web server
- Clients (workstation, web, and terminal clients)

### **i** Note

More Model and Web servers can be added for scalability.

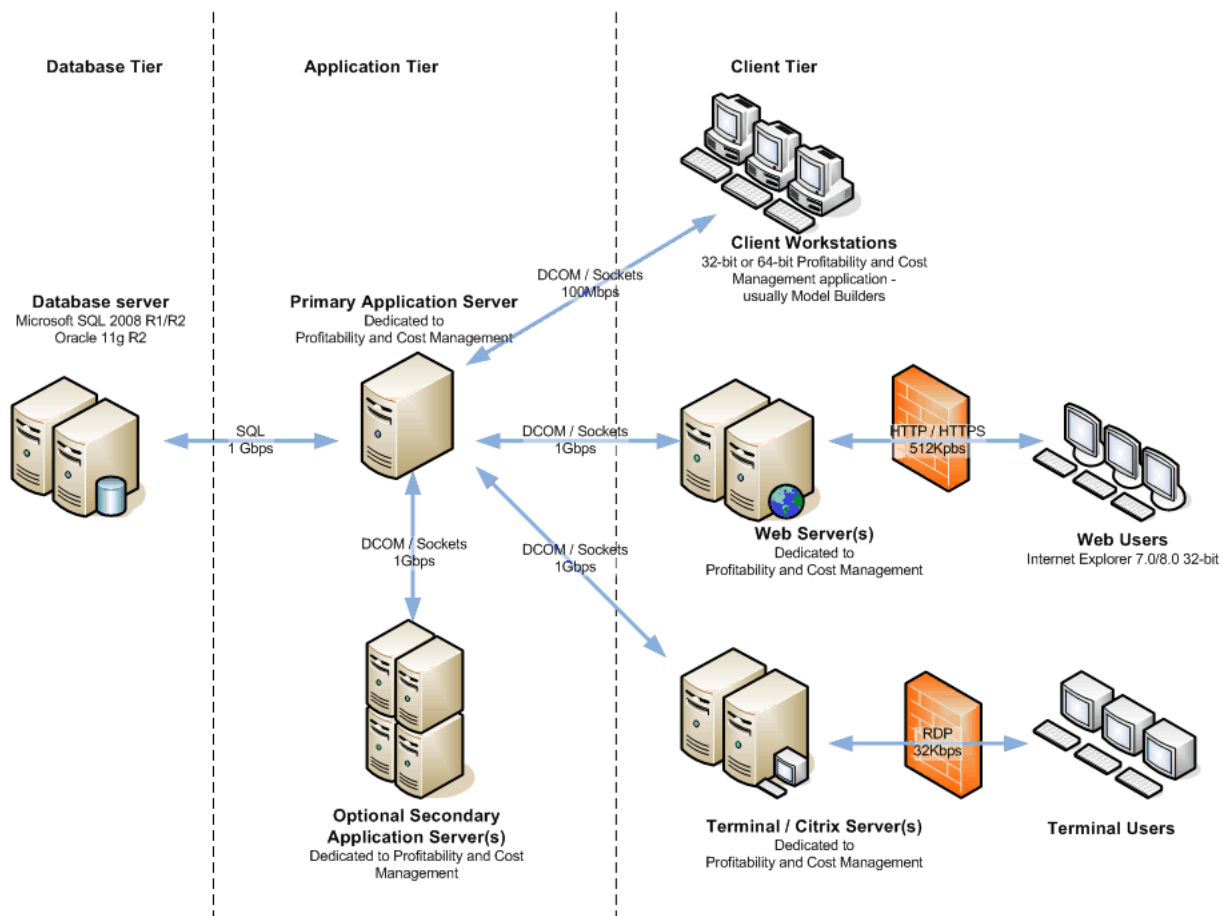
Optional components:

- Terminal/Citrix server
- Work Manager server
- Report Manager server

Separating the functions into tiers ensures that the hardware resources can be allocated to a specific task and are dedicated to responding appropriately to requests. The first tier consists of the Database server, the second tier consists of the Application server, and the third tier consists of workstation clients, web clients, and/or terminal clients. The optimal architecture for performance is a dedicated server for each task. When functions are combined on a server, contention for resources causes a significant degradation in system performance. Ideally, servers are connected by a fast network link and are on the same network subnet, in order to minimize communication time between servers and reduce network traffic. Networks that support TCP/IP (Transmission Control Protocol/Internet Protocol) are suitable for supporting SAP BusinessObjects Profitability and Cost Management. Servers and clients communicate via either DCOM (Distributed Component Object Model) or Windows Sockets.

The diagram that follows shows an example of a typical SAP BusinessObjects Profitability and Cost Management system infrastructure:

### Example



## Multi-domain environment

In an environment in which the Web server is communicating across a domain to the Application server, you should use an account that has privileges that span the domain. The default IUSR account is specific to the Web server machine and may not have the required domain privileges.

Where several Web servers exist on an SAP BusinessObjects Profitability and Cost Management system, different domain users must be used to avoid conflict of access permissions between Web servers.

For a multi-domain environment, consider an account that can span the domains and ensure the domains participate in a trust relationship.

## Standalone setup

It is possible to install the system on a single machine that acts as all three server components. This may be necessary for a demonstration machine, for example, or for when models are developed off site. In a standalone installation, only the smallest models should be developed and the number of models must be kept



to a minimum, to allow for the limited resources and the inevitable degree of CPU and RAM contention that will occur.

## Virtualization software

SAP BusinessObjects Profitability and Cost Management is fully compatible with VMware virtual software. The use of virtual servers such as VMware ESX Server is supported. Specific implementations using these virtualization products with the software should be discussed with your consultant to confirm that the resources available in the VMware session meet the needs of your specific implementation.

### 4.3.1 Database server

The database server handles the storage and retrieval of model data, which is passed to the Application (Model) server for consolidation or calculation. The database server communicates with the Application server via SQL (Structured Query Language) and supports Microsoft SQL Server and Oracle. Refer to the “Hardware and Software Recommendations” chapter to check which versions are supported for your software release.

We recommend that the database server has the following:

- A large amount of disk space to store database transaction log files
- Powerful processors to deal with multiple data requests
- A large amount of memory to allow for the largest possible request cache space
- Regular backups

If you intend to use a Transaction Costing model, be aware the loading on the relational database server is significantly higher for Transactional Costing models than for other model types. For this reason, we recommend that production systems contain only one Transactional Costing model for optimal performance and ease of configuration.

For more information on hardware requirements for all system components, see the section on hardware and software recommendations. For more information on backing up the database, see the *SAP BusinessObjects Profitability and Cost Management Administrator's Guide*.

Although the Profitability and Cost Management database can be installed on a shared database server, we recommend using a dedicated database server for the application.

If you are using a dedicated database server, you may be able to install the web server on the same server, but be aware that this could possibly have a serious impact on performance.

For more information on database installation, maintenance, and management, see the *SAP BusinessObjects Profitability and Cost Management Database Administrator's Guide*.

## 4.3.2 Application server

The Application or Model server performs model calculations and is the business logic part of the software. Application servers support Microsoft Windows operating systems. Refer to the “Hardware and Software Recommendations” chapter to check which versions are supported for your software release.

In a single server installation, the Application server is also responsible for validating user security, and is designated as the Primary Model server. In a multiple server installation, only one Application server can be configured as the Primary Model server. The other servers are dedicated solely to model calculations and are called Secondary Model servers. A Primary Model server, therefore, runs the following services:

`PCMMain` - controls the interaction of model data and model security between the application and the Application server.

`PCMModel` - services required to calculate models.

`PCMServer` - controls the security access of the overall system and balances the load of model servers.

Secondary model servers run only `PCMMain` and `PCMModel`. For more information on the application services, see the *SAP BusinessObjects Profitability and Cost Management Administrator's Guide*.

In an installation with only two Application servers, we recommend that the Primary server does not have any models assigned to it. This is because when a model is calculated on the Primary server and the CPUs are stressed, the `PCMServer` service struggles. As a result, the performance of the Secondary server, even though the server is apparently idle, can be seriously degraded.

By default, an Application server uses DCOM (Distributed Component Object Model) to communicate with Web servers, Terminal/Citrix servers, and workstation clients. Windows Sockets is available as an alternative simplified transport layer protocol. For more information on configuring the DCOM or Sockets transport mechanisms see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

Because Application servers perform model calculations, we recommend that the following:

Application servers have multiple powerful CPUs.

Each server has a large amount of disk space to store temporary model results, although space requirements vary significantly depending on the size of individual models. (For Application Server sizing guidelines, refer to the *Sizing Guide*, which is found on the SAP Service Marketplace at <http://www.service.sap.com/sizing> followed by selecting **Hardware Sizing** > **Sizing Guidelines** > **Solutions & Platform** > **SAP BusinessObjects**.)

Application servers are always dedicated servers.

Application servers do not host other Profitability and Cost Management tiers.

We do not recommend that the Application server is run on a virtual machine because 100% of the processors are required during model calculation. If these processors are virtual, and therefore shared, the performance and reliability of the software will be compromised.

An Application server stores only model results, which can be recalculated after a system failure. For this reason, you do not need to perform backups for Application servers.

### Note

A Transactional Costing production environment benefits if the system contains only one model. This is because Transactional Costing models can contain huge volumes of data, so having a single model only can improve performance and make configuration easier.

#### ⚠ Caution

Processor hyper-threading should be approached with caution for the Model servers. Modern CPUs such as the Intel Xeon 55xx, 65xx and 75xx families will give the best performance for the application if hyper-threading is enabled. Older processors may exhibit poorer performance if hyper-threading is enabled.

A further complexity that needs to be taken into consideration is that calculation can deteriorate when too many processors are made available to a given model. This is a result of the calculation processes switching between processors and the resultant delay with regards to memory latency.

The best solution to this situation can be addressed by limiting the number of processors made available to the model through the available Model Calculation Options.

### 4.3.3 Web server

The Web server allows web or intranet users to view Books and generate reports via a web browser. Web servers support Microsoft Windows operating systems. Refer to the “Hardware and Software Recommendations” chapter to check which versions are supported for your software release. The supported web server is Microsoft Internet Information Server (IIS). An alternative proprietary web server is offered for testing and demonstration purposes only. For more information on configuring IIS see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

Web servers communicate with clients via HTTP (Hypertext Transfer Protocol) or HTTPS (HTTP Secure Protocol).

Because processing requests and streaming data are the primary functions of a Web server, we recommend the following:

- Web servers have multiple powerful CPUs.

- Web servers have a large amount of memory.

- Web servers are dedicated servers.

- Web servers do not host other Profitability and Cost Management tiers - Web server performance has a direct impact on the performance of the user interface and any additional load on the web server is highly visible to users.

Web server processors can experience very high usage, so we do not recommend running the Web server on a virtual machine because the virtual processors are shared processors. If web server performance is likely to be a matter of concern, it is possible to create a web server farm supported by load balancing technology.

The web server stores only cached web content, so you do not need to perform backups for web servers.

### 4.3.4 Terminal / Citrix server

The Terminal / Citrix server is dedicated to the SAP BusinessObjects Profitability and Cost Management system and supports Microsoft Terminal Services or the Citrix servers Citrix XenServer, Citrix Presentation Server, and Metaframe Presentation Server.

Microsoft Terminal Services offers a potential solution to bandwidth and speed issues related to long-distance connectivity - clients who connect via a WAN (Wide Area Network) link. Citrix XenServer, Citrix Presentation

Server, and Metaframe Presentation Server also offer a solution for remote clients seeking to overcome bandwidth and speed issues.

Remote connection software can overcome some of the problems associated with limited network bandwidth for remote users. You must take into account, however, any additional resources required to support multiple clients when the application is used over remote connections, because each client has an impact on the network bandwidth and the CPU and RAM usage of the remote server.

Terminal / Citrix servers communicate with terminal clients via RDP (Remote Desktop Protocol).

## **4.3.5 Work Manager server**

Work Manager is a workflow design and management application. The Work Manager server controls the management of Work Manager process instances. The Work Manager application and services are usually installed on the Application server.

## **4.3.6 Report Manager server**

The Report Manager server manages Report Manager tasks. When a reporting task is initiated, the Report Manager service renders the Book that forms the basis of the report and sends the data to a printer as a print job or an Adobe Acrobat **PDF** document. The Report Manager application and services are usually installed on the Application server.

## **4.3.7 Clients**

There are three types of SAP BusinessObjects Profitability and Cost Management clients.

### **Client workstations**

Client workstations have the Model Builder application installed, which allows full access to model building tasks.

### **Web clients**

The Web client allows users to access and view Books via a web browser.

## Terminal clients

Terminal clients connect directly to a dedicated Terminal/Citrix server.

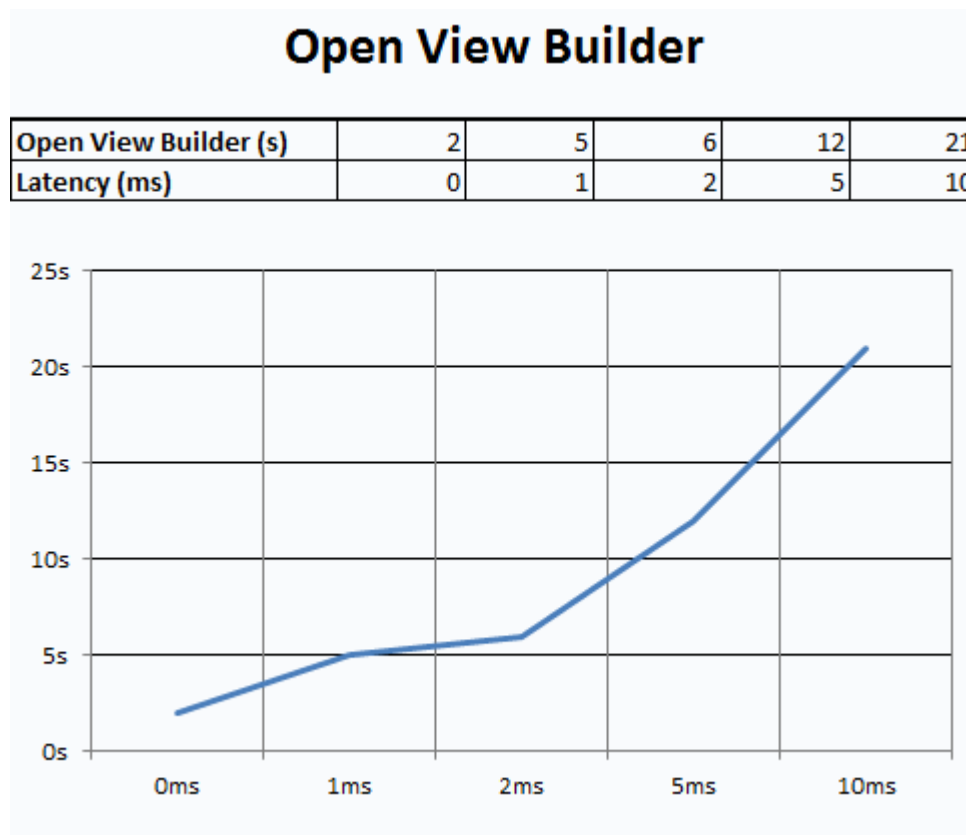
Take into consideration network latency requirements for clients when planning your network setup. For more information, see “Reducing Network Latency”.

For more information on client system requirements see the “Hardware and Software Recommendations” chapter. For information on installation, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

### 4.3.7.1 Reducing Network Latency

When clients are physically located at a distance from the Applications server and using a WAN (Wide Area Network) link, the effect of any network latency becomes exaggerated and can cause noticeable delays at the start of communications. For example, a minimum of 20ms latency on the WAN link causes a delay of about 20 seconds before an empty View Builder opens in Model Builder, an operation that normally takes less than 2 seconds. Many other operations also suffer from latency introduced by a WAN link.

The graph below shows the effect of network latency on times to open View Builder.



Network latency can manifest with the following symptoms:

- Opening View Builder in Model Builder takes 20+ seconds.

- Performing assignments in Model Builder is slow.
- Creating a new version in Model Builder is slow.
- Generally, the Model Builder interface is sluggish.

We recommend taking the following actions to reduce network latency:

1. Install a Terminal/Citrix server with a direct LAN (Local Area Network) connection to the Applications server. Model Builder users then use the Terminal/Citrix server to conduct Model Builder sessions with no latency to the Applications server.
2. Reconfigure the environment to reduce the latency between the Applications server and the workstation running Model Builder. This can include relocating the Applications server physically closer to the user community.

## 4.3.8 Protocols in SAP BusinessObjects Profitability and Cost Management architecture

The following table describes the protocols and communication mechanisms used in an SAP BusinessObjects Profitability and Cost Management system.

| Protocol / Mechanism | Description   |
|----------------------|---|
| HTTP                 | A protocol that uses TCP to transfer requests and information between web servers and browsers.   |
| HTTPS                | The secure version of HTTP in which security is ensured by the encrypted SSL (Secured Sockets Layer) protocol.  |
| SQL                  | A database language used by relational databases to query, manage, and modify data.   |
| DCOM                 | A network distributed object protocol that defines the procedure call that enables objects to be run remotely over a network regardless of the objects exact location.  |
| Sockets              | A simpler implementation of the transport layer, in that it works across domains, firewalls and through NAT (Network Address Translation) with the minimum of configuration. Unlike DCOM, the sockets layer installs additional SAP BusinessObjects Profitability and Cost Management sockets services to relay communications between clients and servers, and these services have default global settings that do not require security configuration. |
| RDP                  | Remote Desktop Protocol - The protocol that allows clients and a Terminal server to communicate.  |
| TCP/IP               | The basic communication protocol of the Internet, which is also used in private networks, TCP/IP uses a client/server model in which a client requests a service from another computer (the server) in the network.   |
| CORBA                | Common Object Request Broker Architecture - a standard that support multiple platforms by enabling software components written in different languages and running on multiple machines to communicate. CORBA enables the  |

| Protocol / Mechanism | Description  |
|----------------------|--|
|                      | application to cross boundaries of different machines, operating systems, and programming languages. For example, the application uses CORBA to integrate with BusinessObjects Enterprise. |
| RFC                  | Remote Function Call - An SAP interface protocol that simplifies the programming of communication between systems by allowing functions to be called and executed on remote systems.       |

## 4.4 Software component matrix

For a detailed list of software components that are installed with the product, refer to the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

### 4.4.1 Prerequisite Software Installed by the Product

For a detailed list of prerequisite software components that are installed with the product, refer to the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

#### Related Information

[Installation with Other SAP BusinessObjects Products \[page 13\]](#)

[Installation with SAP BusinessObjects Business Intelligence Platform \[page 34\]](#)

[Installation with BusinessObjects Enterprise \[page 34\]](#)

### 4.4.2 Prerequisite Software Not Installed by the Product

For a detailed list of prerequisite software components that are not installed with the product, refer to the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

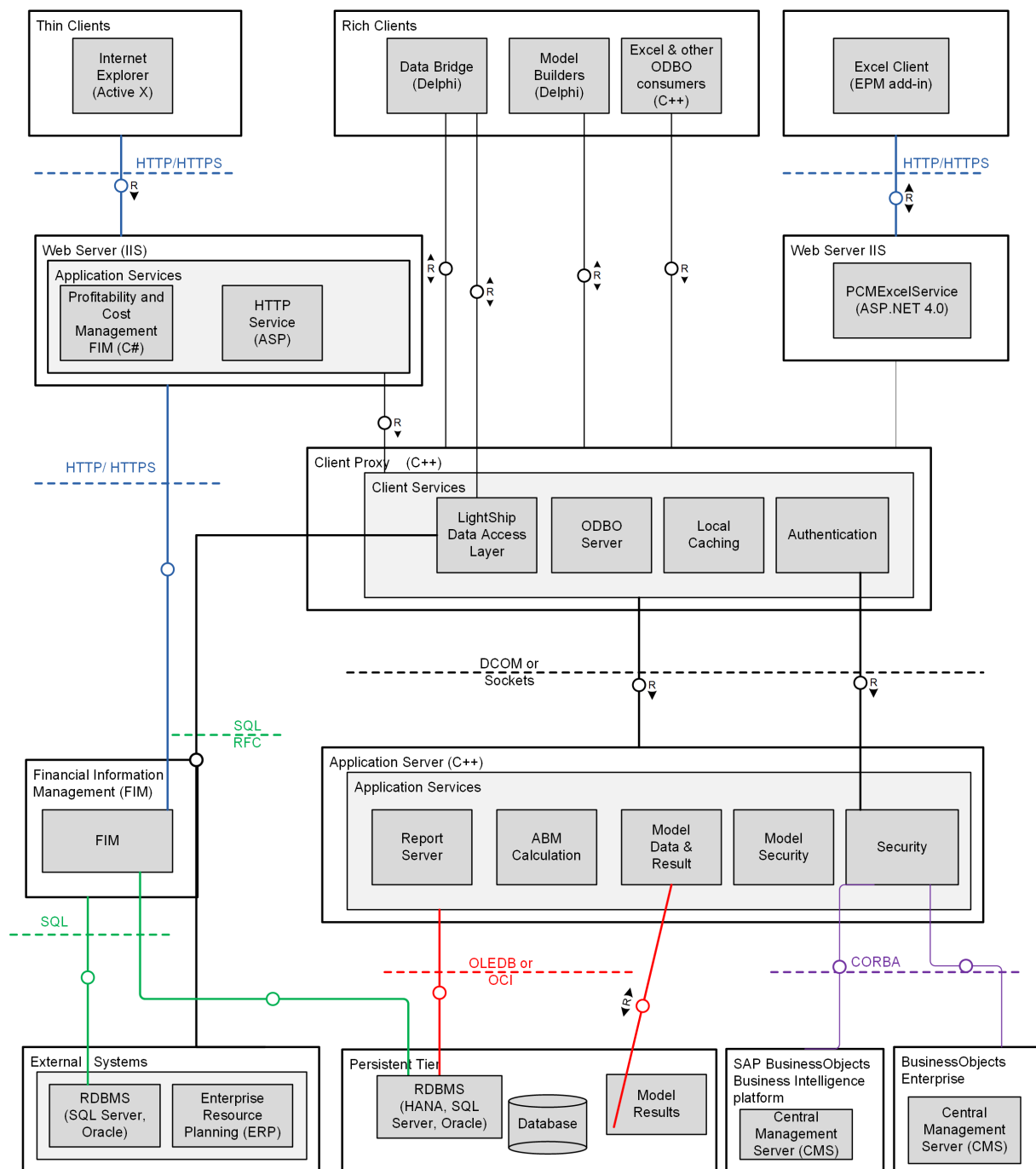
#### Related Information

[Application server recommendations \[page 31\]](#)

[Database server recommendations \[page 29\]](#)

## 4.5 System Architecture

The following system architecture diagram illustrates how the software components are deployed in the system and the protocols that they use for communication.





The three-tier architecture comprises the following:

- Database tier

The database layer comprises a fixed schema that contains the following:

- Tables for the base model data

- Tables to store results

- Stored procedures for updating the contents of the tables

- Stored procedures for the bulk loading of data into models

- Server tier

`PCMServer` is a Windows DCOM (Distributed Component Object Model) service that controls user authentication via Single Sign On (SSO), and also user access to models. One instance of this DCOM service exists per deployment.

`PCMMain` is the Windows DCOM service that controls the model-level security for all models on the Application server.

`PCMModel` is the Windows DCOM server that hosts each model in a deployment. It is a call-centric, in-memory calculation engine that supports both the standard ABM (activity-based management) methodology and business user-defined rules-based cubes. All application servers and services are written in C/C++ for both 32-bit and 64-bit Microsoft Windows

`PCMWebService` is an ASP (Active Server Pages) page running in Microsoft IIS (Internet Information Server) that manages the HTTP/HTTPS communications from instances of the Profitability and Cost Management ActiveX. The Web Server communicates to the application services via the shared C/C++ proxy.

PCM FIM is a .NET2 application hosted by IIS and written in C#, which provides a service for the Financial Information Management application to consume. PCM FIM communicates to the application services via the C/C++ proxy.

- Client tier

Model Builder is a rich client, written in Delphi, that allows business consultants to build and maintain both the data and metadata of SAP BusinessObjects Profitability and Cost Management. Model Builder is also used to build Books, which allow rich web screens to be displayed.

Data Bridge is a rich client, written in Delphi, that allows business consultants to import data and metadata into a model from files or external systems via RFC (Remote Function Call), SQL, or MDX using LSDAL (Lightship Data Access Layer).

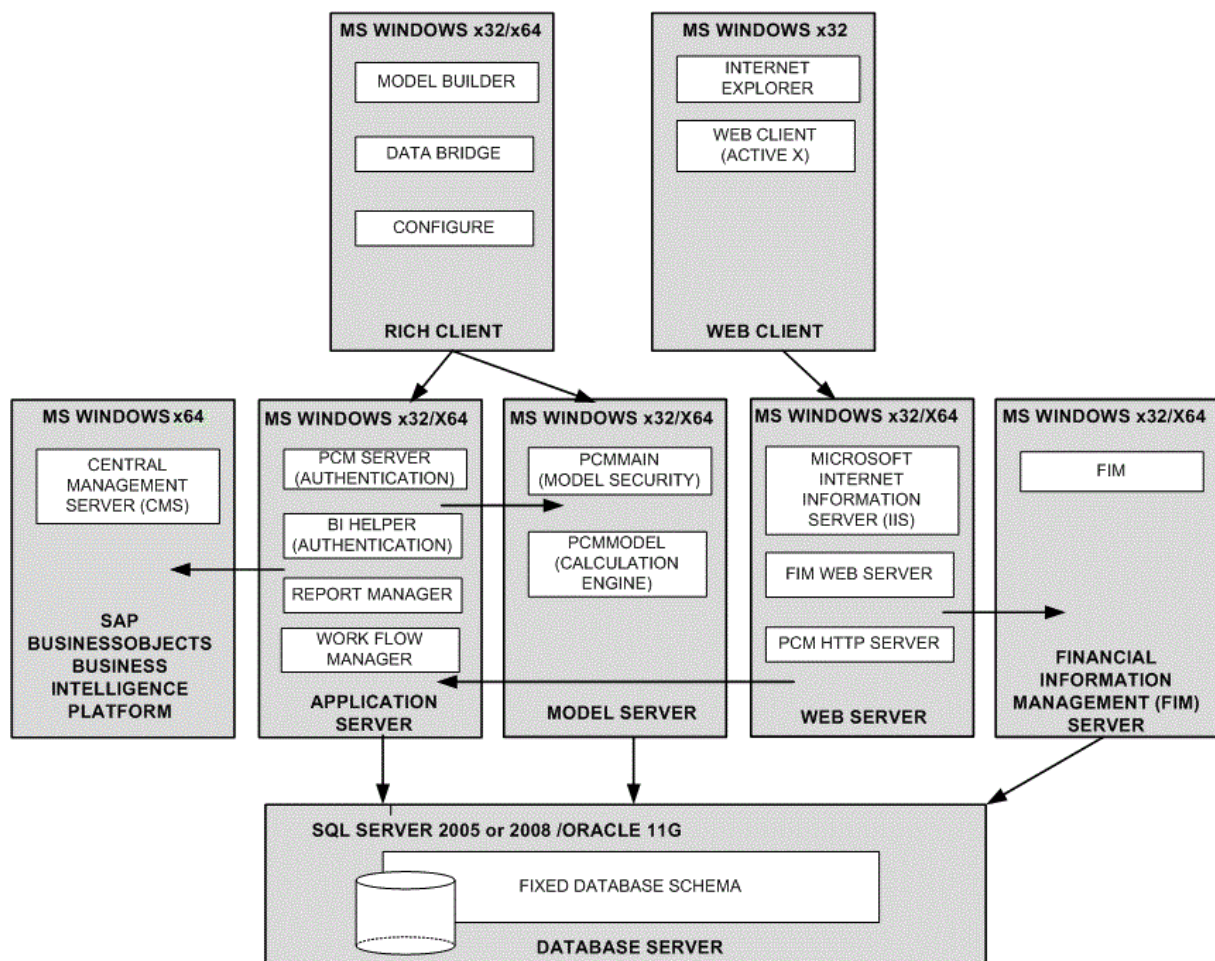
PCM OCX (ActiveX Control File) is a thin ActiveX client, written in Delphi, that allows end users to view Books over the Internet or intranet. From within Books, users can view and update data in a model.

PCM ODBO (OLE DB for OLAP) is an ODBO/XMLA (XML for Analysis) access layer written in C/C++ that allows consumers such as Microsoft Excel, SAP BusinessObjects Voyager, and BusinessObjects Web Intelligence (WebI) read access to the data and metadata in a Profitability and Cost Management model .

All clients access the application layer through a shared C/C++ proxy that supports authentication via SSO (Single Sign On) and also local caching to reduce unnecessary round-tripping. As well as supporting integration with a BusinessObjects Enterprise environment, the application also supports SSO authentication against the central management server of SAP BusinessObjects Business Intelligence platform. Note that communication to the Application server layer is via DCOM or via a Profitability and Cost Management client/server TCP/IP stub layer.

## 4.6 System landscape

The diagram that follows illustrates the component deployment in a typical system landscape for SAP BusinessObjects Profitability and Cost Management. In this case, the system is configured to authenticate against the Central Management Server (CMS) of the SAP BusinessObjects Business Intelligence platform and to communicate with SAP BusinessObjects Financial Information Management.



### 4.6.1 Hardware and software recommendations

The tables in the following sections list the hardware and software recommendations for *SAP BusinessObjects Profitability and Cost Management* system components, including the operating systems and software versions we support. We also recommend that you consult the Product Availability Matrix (PAM) for the product, which is available on the [SAP Support Portal](#). The Product Availability Matrix bundles technical and release planning information, and includes detailed information product availability and maintenance, as well as supported database and operating systems.

These recommended system requirements are a general guide, as each implemented system is unique, and may need to be tailored to your environment.

The first step in any preparation for installation, whether it is a new installation, an upgrade, expansion, or patch, is to read the *What's New in SAP BusinessObjects Profitability and Cost Management 10.0* document. We also recommend you refer to the *SAP BusinessObjects Profitability and Cost Management Upgrade Guide*. These documents are in Adobe Portable Document Format (PDF), and are accessible from the SAP Help Portal.

It should be noted that the concept of a minimum level of hardware is the absolute minimum required for the software to operate, and should not be used as a guide as to the level of hardware required for the application to operate efficiently.

When considering what level of hardware you may need to run the software, consider the future expansion requirements of your system, and the possible number and size of models that may be required. Also consider that the parallel usage of operations (for example, running two models at the same time) affects the efficiency of your servers. We recommend that you contact us for the appropriate documentation to assist you in determining the best hardware for your purposes, both now and in the future.

All installations are based around either two or three dedicated servers depending on whether you are going to be using the Web capabilities of the product. These are a Database server, an Application server, and optionally a Web server. Other configurations of servers are not recommended, except where we have defined that standard requirements can be changed.

#### **i Note**

These are only very generalized recommendations for minimum requirements. SAP will work with you both before and after the sales process to tailor a recommendation that is suitable for your organization, and the needs of the models being created. For more information, contact your SAP consultant.

## **4.6.1.1 Supported operating systems**

The following sections describe which operating systems are supported on both server and client machines in SAP BusinessObjects Profitability and Cost Management version 10.

### **4.6.1.1.1 Supported server operating systems**

The following operating systems are supported on server machines:

| Component       | Supported Operating Systems   |
|-----------------|---|
| Database Server | Any supported operating system that supports the database technology. |

| Component                  | Supported Operating Systems  |
|----------------------------|--|
| Application Server         | <p>The software supports the Standard, Enterprise, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2003 SP2 x86</li> <li>Microsoft Windows Server 2003 SP2 x64 (See Note 1)</li> <li>Microsoft Windows Server 2003 R2 SP2 x86</li> <li>Microsoft Windows Server 2003 R2 SP2 x64 (See Note 1)</li> <li>Microsoft Windows Server 2008 x86</li> <li>Microsoft Windows Server 2008 x64 (See Note 1)</li> <li>Microsoft Windows Server 2008 R2 x64 (See Note 1)</li> </ul> <p>The software supports the Essentials, Standard, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2012 x64 (See Note 1)</li> </ul>  |
| Web Server<br>(See Note 3) | <p>The software supports the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2003 SP2 Web Edition</li> </ul> <p>The software supports the Standard, Enterprise, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2003 SP2 x86</li> <li>Microsoft Windows Server 2003 SP2 x64 (See Note 2)</li> <li>Microsoft Windows Server 2003 R2 SP2 x86</li> <li>Microsoft Windows Server 2003 R2 SP2 x64 (See Note 2)</li> <li>Microsoft Windows Server 2008 x86</li> <li>Microsoft Windows Server 2008 x64 (See Note 2)</li> <li>Microsoft Windows Server 2008 R2 x64 (See Note 2)</li> </ul> <p>The software supports the Essentials, Standard, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2012 x64 (See Note 2)</li> </ul>      |
| Windows and Web Clients    | <p>The software supports the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2003 SP2 Web Edition</li> </ul> <p>The software also supports the Standard, Enterprise, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2003 SP2 x86</li> <li>Microsoft Windows Server 2003 SP2 x64 (See Note 2)</li> <li>Microsoft Windows Server 2003 R2 SP2 x86</li> <li>Microsoft Windows Server 2003 R2 SP2 x64 (See Note 2)</li> <li>Microsoft Windows Server 2008 x86</li> <li>Microsoft Windows Server 2008 x64 (See Note 2)</li> <li>Microsoft Windows Server 2008 R2 x64 (See Note 2)</li> </ul> <p>The software supports the Essentials, Standard, and Datacenter editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2012 x64 (See Note 2)</li> </ul> |

### Note

1. The software is supported running as a 32-bit process, or running as a native 64-bit process on the x64 editions of the Microsoft Windows operating system.
2. The Windows or Web client and Web Server software is only supported running as a 32-bit process on the 64-bit operating system.

3. SAP BusinessObjects Profitability and Cost Management / IIS Web servers are NOT supported on the Terminal Services or Citrix platforms when running Terminal Services in Application Mode. The use of the limited Remote Administration mode to manage these servers is supported.

### ! Restriction

SAP BusinessObjects Profitability and Cost Management servers are NOT supported on the Terminal Services or Citrix platforms (Citrix XenServer, Citrix Presentation Server, and Metaframe Presentation Server), when running Terminal Services in [Application Mode](#). The use of the limited [Remote Administration](#) mode to manage these servers is supported.

## 4.6.1.1.2 Supported client operating systems

The software can be installed on the following versions of Microsoft Windows on Windows and Web client machines:

| Operating System   | Windows Client | Web Client |
|--|----------------|------------|
| Microsoft Windows XP SP3 32/64-bit Professional Edition                              | Yes            | Yes        |
| Microsoft Windows Vista SP2 32/64-bit Ultimate/<br>Business/Enterprise editions      | Yes            | Yes        |
| Microsoft Windows 7 32/64-bit Ultimate/Professional/<br>Enterprise editions          | Yes            | Yes        |
| Microsoft Windows 8 / Windows 8 Pro / Windows 8<br>Enterprise editions for 32/64-bit | Yes            | Yes        |

### i Note

1. For Microsoft Terminal Services and Citrix Metaframe, only the following types of Windows clients are supported:
  - Model Builder
  - Book Builder
  - Book Viewer
  - Data Bridge
  - Work Manager
  - Report Manager

## 4.6.1.2 Database server recommendations

| Category  | Description   |
|-----------|---|
| Processor | Recommendation: Powerful, multiple processors to deal with multiple data requests |

| Category   | Description  |
|------------|--|
| RAM        | Recommendation: Sufficient memory to allow for largest possible request space (For sizing recommendations, refer to the <i>Sizing Guide</i> located on the SAP Service Marketplace - see Note below)   |
| Disk space | Recommendation: Disk space should allow for extension as well as storing server transaction logs (For sizing recommendations, refer to the <i>Sizing Guide</i> located on the SAP Service Marketplace - see Note below)  |
| Software   | <p>The software supports the WorkGroup, Standard, and Enterprise Editions of the following:</p> <ul style="list-style-type: none"> <li>Microsoft SQL Server 2005 SP4 32/64-bit</li> <li>Microsoft SQL Server 2008 R1 32/64-bit</li> <li>Microsoft SQL Server 2008 R2 32/64-bit</li> </ul> <p>The software supports the Enterprise, Business Intelligence, and Standard editions of the following:</p> <ul style="list-style-type: none"> <li>• Microsoft SQL Server 2012 32/64-bit</li> </ul> <p>The software supports the Enterprise Edition of the following:</p> <ul style="list-style-type: none"> <li>• Oracle Database 11g R2 32/64-bit</li> </ul> <div> <p><b>i Note</b></p> <p>If you are using an Oracle database, you must download and install the Oracle Instant Client on all primary and secondary Application servers. For more information, see "Prerequisite Software Not Installed by the Product".</p> </div> <p>The product does not support the following database editions of Microsoft SQL Server or Oracle for production use:</p> <ul style="list-style-type: none"> <li>SQL Server 2005 Express Edition</li> <li>SQL Server 2008 Express Edition</li> <li>SQL Server 2008 Compact 3.5</li> <li>Oracle Express Lite</li> <li>Oracle Express Personal</li> <li>Oracle Standard Edition</li> </ul> <p>For information on supported service packs, refer to the links provided in "Related Information" and "List of SAP Notes".</p> |

### i Note

The *Sizing Guide* is found on the SAP Service Marketplace at <http://www.service.sap.com/sizing> followed by selecting ► *Hardware Sizing* ► *Sizing Guidelines* ► *Solutions & Platform* ► *SAP BusinessObjects*.

## Related Information

[Application server recommendations \[page 31\]](#)

[Prerequisite Software Not Installed by the Product \[page 23\]](#)

[Related Information \[page 8\]](#)

[List of SAP Notes \[page 9\]](#)

### 4.6.1.3 Application server recommendations

| Category              | Description  |
|-----------------------|--|
| Processor             | Minimum: Dual Intel/AMD Xeon class processor or equivalent   |
| Disk space            | Requirements vary depending on your installation. For disk space sizing recommendations, refer to the <i>Sizing Guide</i> located on the SAP Service Marketplace (see Note below).   |
| Software              | <p>Prerequisites:</p> <ul style="list-style-type: none"><li>Microsoft Windows Installer 3.1</li><li>Microsoft Windows Scripting Host 5.6</li><li>Microsoft XML Parser 6.0 SP1</li><li>Microsoft SQL Native Client SQL 2008 10.00.2531 (optional)</li><li>Microsoft SQL Command SQL 2008 (optional)</li><li>Oracle Instant Client 11g R2 (11.2.0.1.0 or 11.2.0.2.0) - required if using an Oracle database. For more information, see "Prerequisite Software Not Installed by the Product".</li></ul> |
| Software architecture | <p>Supported:</p> <ul style="list-style-type: none"><li>32-bit (setup.exe) on 32-bit operating system</li><li>32-bit (setup.exe) on 64-bit operating system</li><li>64-bit (setup.exe) on 64-bit operating system</li></ul>  |

#### i Note

The application setup program installs these files if they are absent, or overwrites them if the existing versions are below the required minimum.

#### i Note

The *Sizing Guide* is found on the SAP Service Marketplace at <http://www.service.sap.com/sizing> followed by selecting ► *Hardware Sizing* ► *Sizing Guidelines* ► *Solutions & Platform* ► *SAP BusinessObjects*.

## Related Information

[Prerequisite Software Not Installed by the Product \[page 23\]](#)

### 4.6.1.4 Web server recommendations

| Category              | Description  |
|-----------------------|--|
| Processor             | Dual Intel/AMD Xeon class processor or equivalent  |
| Disk space            | Requirements vary depending on your installation. For disk space sizing recommendations, refer to the <i>Sizing Guide</i> located on the SAP Service Marketplace (see Note below).   |
| Software              | <p>Prerequisites:</p> <p>Microsoft .NET Framework 3.5 - mandatory to support SAP BusinessObjects Information Platform Services 4.0 , as well as the SAP BusinessObjects Financial Information Management software.</p> <p>Microsoft Internet Information Server (IIS) 6.0, 7.0 , 7.5 or 8.0.</p> |
| Software architecture | <p>Supported:</p> <ul style="list-style-type: none"><li>• 32-bit (setup.exe) on 32-bit operating system</li><li>• 32-bit (setup.exe) on a 64-bit operating system</li></ul>  |

#### i Note

If the server is running Windows Server 2008 with IIS 7, the following prerequisites must be installed for the .NET Web Service to work:

- ASP.NET
- ASP
- IIS 6 Management Compatibility

For information on installing these prerequisites, see the *Pre-installation tasks* section of the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

#### i Note

The *Sizing Guide* is found on the SAP Service Marketplace at <http://www.service.sap.com/sizing> followed by selecting ► *Hardware Sizing* ► *Sizing Guidelines* ► *Solutions & Platform* ► *SAP BusinessObjects* ►.



## 4.6.1.5 Windows clients recommendations

| Category              | Description  |
|-----------------------|--|
| Processor             | Intel/AMD P4 class processor or equivalent   |
| Disk Space            | Minimum 20 GB  |
| Software              | Prerequisites:<br>Adobe Acrobat Reader version 9.0 or X  |
| Software architecture | Supported:<br>32-bit (setup.exe) on 32-bit operating system<br>32-bit (setup.exe) on 64-bit operating system |

## 4.6.1.6 Web client recommendations

| Category   | Description   |
|--|---|
| Processor  | Intel/AMD P4 class processor or equivalent  |
| Software   | Prerequisites:<br>Microsoft Internet Explorer 7 32-bit<br>Microsoft Internet Explorer 8 32-bit (native mode only)<br>Microsoft Internet Explorer 9 32-bit (native mode only)<br>Microsoft Internet Explorer 10 32-bit (native mode only)<br>Adobe Acrobat Reader version 9.0 or X |
| <div><b>i Note</b><br/>We support only the 32-bit version of Microsoft Internet Explorer on x64-based operating systems.</div> |   |
| Software architecture  | Supported:<br>32-bit (setup.exe) on 32-bit operating system<br>32-bit (setup.exe) on 64-bit operating system  |

## 4.6.1.7 Connectivity Pack: Supported Software

The Connectivity Pack enables you to query SAP BusinessObjects Profitability and Cost Management data in Microsoft Excel and a number of SAP applications by providing the following components:

- MDX ODBO Connector
- MDX XMLA Provider

For details of which versions of software are currently supported, refer to the *SAP BusinessObjects Profitability and Cost Management MDX Connector Guide*.

## 4.6.1.8 End To End Root Cause Analysis Requirements

If you intend to install SAP Solution Manager in your landscape and to implement the End To End (E2E) Root Cause Analysis scenario, you need to install the following:

- SAP Solution Manager 7.0 SP26 - this is the minimum requirement
- Solution Manager Diagnostics (SMD) Agent 7.20 - this is the version of the agent supported by SAP Solution Manager 7.0 SP26 . This is the minimum requirement.

### i Note

The SMD Agent is available in 32-bit and 64-bit versions. Install the SMD Agent on an operating system that can support it, as follows:

- 32-bit SMD Agent on a 32-bit operating system
- 32-bit SMD Agent on a 64-bit operating system
- 64-bit SMD Agent on a 64-bit operating system

SAP BusinessObjects Profitability and Cost Management can communicate with both versions of the SMD Agent regardless of whether the version of the application itself is 32-bit or 64-bit.

- CA Wily Introscope 8.1

For more information, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

## Related Information

[SAP Solution Manager \[page 39\]](#)

## 4.6.1.9 Installation with BusinessObjects Enterprise

SAP BusinessObjects Profitability and Cost Management can be integrated with BusinessObjects Enterprise. The following versions are supported:

| Profitability and Cost Management Version                  | BusinessObjects Enterprise Version   |
|--|--|
| SAP BusinessObjects Profitability and Cost Management 10.0 | BusinessObjects Enterprise XI 3.1 Service Pack 4<br>Prerequisite software: SAP BusinessObjects User Management Client 12.1.0.165 |

## 4.6.1.10 Installation with SAP BusinessObjects Business Intelligence Platform

The software can be integrated for security authentication purposes with the following SAP BusinessObjects Business Intelligence platform environments:

SAP BusinessObjects Business Intelligence platform 4.0

SAP BusinessObjects Business Information Platform Services 4.0

Prerequisite software: SAP BusinessObjects User management Client 10.0

For more information on configuring the authentication and synchronizing user data, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide* and the *SAP BusinessObjects Profitability and Cost Management Integration Guide*.

## 4.6.1.11 Communication with SAP BusinessObjects Financial Information Management

SAP BusinessObjects Profitability and Cost Management can be configured to communicate with the following:

SAP BusinessObjects Financial Information Management 10.0 Support Package 01 or later

The communication enables drill-to-origin functionality, which allows you to track and locate data.

### i Note

SAP BusinessObjects Financial Information Management 10.0 requires SAP BusinessObjects Data Services 4.0 patch 3 or later.

For more information on configuration, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide* and the relevant SAP BusinessObjects Financial Information Management documentation on the SAP Help Portal . For information on the drill-to-origin feature, see the *SAP BusinessObjects Profitability and Cost Management Modeling User Guide*.

## 4.6.1.12 Support for SAP BusinessObjects EPM Add-in

When SAP BusinessObjects Profitability and Cost Management 10.0 is integrated with SAP BusinessObjects Business Intelligence platform 4.0 SP4, the following versions are supported for reporting purposes:

- SAP BusinessObjects EPM Solutions, add-in for Microsoft Office 10.0 Support Package 01 (EPM add-in) or later.

For SAP BusinessObjects Profitability and Cost Management 10.0 Support Package 08, the following versions support write-back from the EPM add-in to Profitability and Cost Management:

- SAP BusinessObjects EPM Solutions, add-in for Microsoft Office 10.0 Support Package 16 - the .NET 4 version (the `EPM Add-in_NET40.exe` setup file) or later.

The write-back feature allows data to be exchanged between the EPM add-in and Profitability and Cost Management. Updates made to model data via the EPM add-in can be pushed to the Profitability and Cost Management system. For example, suppose a user accesses model data via EPM add-in in Microsoft Excel. The user creates a report in a spreadsheet and then alters some editable values in the model data. When the user clicks [Submit Data](#) in Excel, those changes are pushed to the Profitability and Cost Management system and would be visible in a grid, for example.

The service that accepts requests from the EPM add-in and also applies updates from the add-in to the Profitability and Cost Management system is `PCMExcelService`. The add-in connects to `PCMExcelService`

via the PCM REST Connection. It is the the PCM REST Connection that enables write-back from the add-in to Profitability and Cost Management.

From SAP BusinessObjects Profitability and Cost Management 10.0 Support Package 08 onward, users must select *PCM REST Connection* in the *Create Connection* dialog box in Excel to connect to the Profitability and Cost Management system:

**Create Connection**

Connection Type

Local

PCM REST Connection

Planning and Consolidation, version for SAP NetWeaver

Planning and Consolidation, version for the Microsoft platform

Local

SAP HANA (INA Provider)

SAP BW (INA Provider)

Next button to continue.

Connection Name

Web Server URL

<- Back

Next ->

OK

Cancel

Clear Metadata Cache

### i Note

Pre-requisites for the EPM add-in write-back feature are as follows:

- Microsoft .NET Framework 4.0 Full or later
- ASP.NET
- Internet Information Services (IIS)

For more information on see the following:

- For information on prerequisites and installation, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

- For more information on integration with SAP BusinessObjects Business Intelligence platform 4.0 SP4, see the *SAP BusinessObjects Profitability and Cost Management Integration Guide*.
- For more information on using the EPM add-in, see the relevant documentation on the [EPM add-in page of the SAP Help Portal](#).

### 4.6.1.13 Support for Export to HANA

For versions SAP BusinessObjects Profitability and Cost Management 10.0 Support Package 08 and later, the export of model data to an SAP HANA SPS6 or later database is supported for 64-bit versions of the product.

#### i Note

*Export to HANA* is supported only when accessing a 64-bit SAP Profitability and Cost Management server. If you install a 32-bit server and try to use *Export to HANA*, you get a standard Microsoft Error Code: 0x80004001 (E\_NOTIMPL), meaning this feature is not implemented on a 32-bit server.

Users can use the *Export to HANA* feature in Model Builder to export model results and dimension data to an SAP HANA database. For more information, see the *SAP BusinessObjects Profitability and Cost Management Modeling User Guide*.

### 4.6.1.14 Supported networks

Networks that support the TCP/IP protocol are usually suitable for supporting SAP BusinessObjects Profitability and Cost Management traffic. Most common network solutions are therefore supported.

If you are in any doubt about the suitability or potential performance of your network, then consult your SAP representative to determine suitability before proceeding with an installation.

## 4.7 Overall implementation sequence

Before installing SAP BusinessObjects Profitability and Cost Management, ensure that the minimum system requirements are met and any prerequisite software is installed. For more information, see the relevant topics in this guide.

System components must be installed and configured in a specific order because certain components depend on the presence and configuration of others. Components are installed in the following order:

#### 1. Database server

We do not support the installation and configuration of the RDBMS database. We recommend that you consult the documentation of your chosen database software vendor and that the installation is performed by a Database Administrator, who should then install the database schema, the instructions for which can be found in the *SAP BusinessObjects Profitability and Cost Management DataBase Administrator's Guide*.

2. Application server
3. Web server
4. Clients

After installing and configuring the components, you must also perform the following tasks:

- Configure Internet Information Services (IIS) - If the Web server is configured as IIS, you must perform the following tasks:
  - Configure IIS Active Server Pages
  - Configure the default web service
  - Perform additional configuration to enhance model accessibility, which includes configuring the home directory and timeout settings
  - If required, configure IIS to access large models
- Configure DCOM security on the following:
  - Primary Application server
  - Secondary Application server - if your deployment includes a secondary server
  - Web server
- Perform installation checks:
  - Login security basic checks
  - Model creation basic checks

For detailed information on pre-installation, installation, and post-installation tasks, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

## Related Information

[Software component matrix \[page 23\]](#)

[Hardware and software recommendations \[page 26\]](#)

## 5 Solution-Wide Topics









### 5.1 Localization

SAP BusinessObjects Profitability and Cost Management is distributed as a standard version and does not include localized reporting and consolidation functionality. However, you can run the application in a number of languages and, with the appropriate configuration, the application supports customized planning and consolidation processes. For more information see *SAP BusinessObjects Profitability and Cost Management Modeling User Guide* or the Model Builder application help.

### 5.2 SAP Solution Manager

Application life-cycle management (ALM) in SAP relies on efficient integration and collaboration of multiple SAP and non-SAP tools. SAP Solution Manager provides this integration and collaboration because it is a centralized platform that provides tools, access to information, and a gateway to the SAP support organization. This enables you to implement, operate, monitor, and optimize your SAP solution.

The sections that follow provide a brief overview of Solution Manager. For more detailed information, see the following content:

| Content  | Location  |
|--|---|
| <i>Master Guide for SAP Solution Manager &lt;Latest Version&gt;</i>  | <a href="https://service.sap.com/instguides">service.sap.com/instguides</a>              |
| <i>Security Guide for SAP Solution Manager &lt;Latest Version&gt;</i>  | <a href="https://service.sap.com/instguides">service.sap.com/instguides</a>              |
| <i>Master Guide for SAP Netweaver 7.0</i>  | <a href="https://service.sap.com/installNW70">service.sap.com/installNW70</a>            |
| General information about SAP Solution Manager   | <a href="https://service.sap.com/solutionmanager">service.sap.com/solutionmanager</a>    |
| Help on application use for SAP Solution Manager   | <a href="https://help.sap.com">help.sap.com</a>   |
| Information on the System Landscape Directory  | <a href="https://service.sap.com/sld">service.sap.com/sld</a>                            |
| Information on Diagnostics   | <a href="https://service.sap.com/diagnostics">service.sap.com/diagnostics</a>            |
| <i>SAP BusinessObjects Profitability and Cost Management Installation Guide</i> - how to configure SAP Solution Manager components to work in an SAP BusinessObjects Profitability and Cost Management environment                 | <a href="https://service.sap.com/bosap-instguides">service.sap.com/bosap-instguides</a>  |
| <i>SAP BusinessObjects Profitability and Cost Management Administrator's Guide</i> - how to operate the supported SAP Solution Manager tools and scenarios in an SAP BusinessObjects Profitability and Cost Management environment | <a href="https://service.sap.com/bosap-instguides">service.sap.com/bosap-instguides</a>  |

## i Note

Make sure that you read the SAP Notes on CA Wily Instroscope and the Diagnostics Agent. See the “List of SAP Notes”.

SAP Solution Manager supports the following scenarios:

- Implementing and Upgrading SAP Solutions
- Service Desk
- Change Management
- Solution Monitoring
- Delivery of SAP Services and Support
- Root Cause Analysis

These scenarios are described in the sections that follow. Before installing Solution Manager, you need to decide which scenarios the system will use. This decision is vital because it influences the sizing and configuration of Solution Manager. You also need to plan which scenario to use at the start of an implementation and which scenarios you are likely to use at a later stage.

For this version of SAP BusinessObjects Profitability and Cost Management, the following scenarios are available:

- Service Desk
- Solution Monitoring
- Change Management
- Root Cause Analysis

For more information on implementing and operating these scenarios, see the *SAP BusinessObjects Profitability and Cost Management Administrator's Guide*.

## Related Information

[List of SAP Notes \[page 9\]](#)

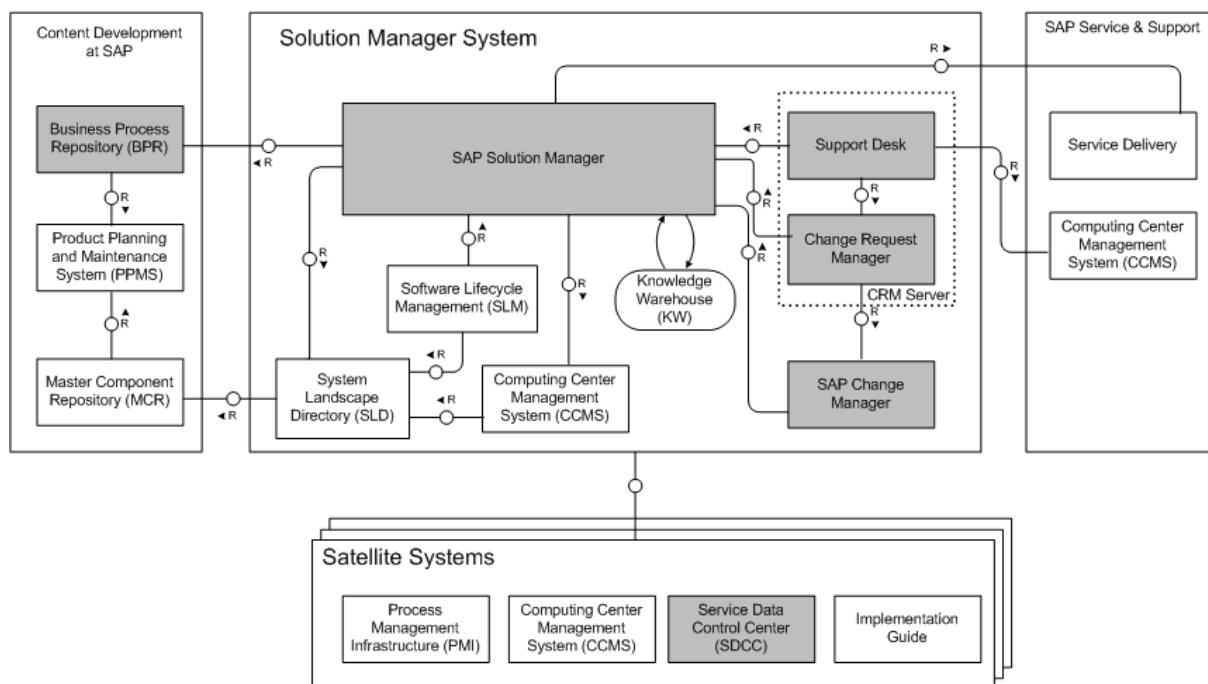
### 5.2.1 SAP Solution Manager System Landscape

SAP Solution Manager works with the Advanced Business Programming Application (ABAP) stack and the Java stack (Solution Manager Diagnostics only) and runs on an SAP CRM-50 server. To use Solution Manager, you must install at least one Solution Manager server in your system landscape and have SAP GUI or a web browser, in order to use the interfaces, workstations, and dashboards.

Solution Manager runs in your solution landscape and forms part of a separate central system, to which all other SAP systems, including SAP Support Portal, are connected. This facilitates technical support of your distributed systems. Systems that are administrated using SAP Solution Manager are called “satellite” systems.

Solution Manager communicates with other systems using remote function call (RFC) technology and via Web Services. The following diagram illustrates the system landscape for SAP Solution Manager:





## 5.2.2 Implementation and Upgrade of SAP Solutions

Implementation in this case refers to the specific act of installing and configuring a software system. SAP Solution Manager provides central access to all tools, methods, and documents, and other data required in the implementation environment.

The Implementation and Upgrade scenarios support the implementation and upgrade of software by supporting the definition of templates. Templates can contain scenarios, documents, and configurations that can be re-used, for example to support the global roll-out of software.

Predefined content, such as documents, scenarios, processes, and configuration structures, is delivered with SAP Solution Manager and regularly updated. You can use this content and adjust it to your requirements.

The Implementation and Upgrade scenarios also include the following:

- Roadmaps
- An editor for creating and maintaining business blueprints
- Access to Implementation Guides (IMG)
- Tools for testing, monitoring, and distributing customization settings
- Functions to describe, document, and test business scenarios and business processes

At the end of an implementation project, the implemented business scenarios, processes, and system information are transferred into a customer-specific repository, where they can be used in later stages of the software life-cycle, for example, production.

Solution Manager provides the same level of support for upgrades as it does for implementations, in addition to providing content and functions specific to upgrades. For example, Solution Manager provides a comparison tool that identifies changes and deletions specific to a software release, as well as an upgrade roadmap and upgrade-specific business scenario and process content. SAP Solution Manager supports both of the following:

- Restarting an upgrade project
- Performing an upgrade project based on an implementation project

At the end of an upgrade project, the content relevant to the upgrade, such as the upgrade roadmap and upgrade-specific business processes, are stored in the customer repository, where they are available for later use.

### 5.2.3 Service Desk

The Service Desk is an interface between you and SAP Service and Support. Service Desk offers an infrastructure for organizing and operating support for your entire software system at your site. Service Desk enables you to provide support to users from your own internal support organization and from SAP.

At all stages in the software life-cycle, users can create and send support messages. You can process these support messages centrally in the SAP Solution Manager Support Desk.

When users create messages, data about the system in which the message was created, such as the operating system and installed software components, is automatically captured. Messages are automatically assigned appropriate support levels, and can be processed centrally in SAP Solution Manager, which can, for example, display customer data, the problem description, the problem priority, any attachments forwarded with the message, and Service Level Agreements (SLA). Support teams can use SAP Solution Manager Service Desk to do the following:

- Assign a processor to a message
- Forward messages to other processors or support units
- Create documents and URLs
- Attach documents to support messages
- Assign and monitor message status
- Create worklists
- Work with SAP Notes

This scenario also allows you to create your own internal solution database, which you can populate with symptoms and solutions.

### 5.2.4 Solution Monitoring

Solution Monitoring helps to manage landscapes efficiently by allowing you to monitor systems and business processes in one tool, for which SAP Solution Manager provides predefined views and values.

Tools and functionalities in the Solution Monitoring scenario include the following:

- Early Watch Alert Reporting  
This is implemented by the Diagnostics Tools and CA Wily Introscope.
- User-defined alerts
- Central System Administration
- Service Level Reporting  
Service Level Reporting guarantees continuous monitoring and reporting of all systems in a solution, based on a weekly Early Watch Alert Report from SAP.

- **Job Scheduling Management**  
Job Scheduling Management manages and documents the background processing in an entire system landscape.
- **System Monitoring**  
System Monitoring guarantees the real-time monitoring of all systems in a solution, based on the Computer Center Management System (CCMS).
- **Business Process Monitoring**  
Business Process guarantees the real-time monitoring of all business processes, based on a graphical overview. Like System Monitoring, Business Process Monitoring is based on the CCMS.

### 5.2.4.1 DBA Cockpit

The DBA Cockpit is a platform-independent tool that you use to monitor and administer your database. It provides a graphical user interface (GUI) for actions and aspects involved in handling a database system landscape. You can access databases that are not linked to an SAP system using the remote database connection.

The Profitability and Cost Management database needs to be configured for remote access from within SAP Solution Manager by using DBA Cockpit.

For more information on configuring and installing DBA Cockpit, read the relevant SAP Note listed in the “List of SAP Notes” topic and see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

### 5.2.4.2 AppSight Console

AppSight Console is a third party solution management software application that allows remote troubleshooting of client machines. If a client experiences operational problems, one of the functions of the software is to record information about running software programs, (including SAP BusinessObjects Profitability and Cost Management programs). This type of remote recording is performed through an AppSight Console server that communicates with AppSight Console client software installed on the remote client machine. For more information, see the *SAP BusinessObjects Profitability and Cost Management Administrator's Guide*.

## 5.2.5 Change Management

Change Management in SAP Solution Manager is aligned to the processes in the IT Infrastructure Library (ITIL), in practice, the standard for service management. Change Management aims to perform changes economically, quickly, and with minimum risk. The features of the Change Management scenario include the following:

- **Maintenance Optimizer** - The Maintenance Optimizer leads you through planning, download, and implementation of support packages and patches for a satellite system. You can also install enhancement packages with the Maintenance Optimizer.

- Change Request Management as part of SAP Solution Manager integrates SAP Service Desk functionality for managing change requests, and extends project control by integrating planning with the CProjects application into a transport workflow control.

## 5.2.6 Delivery of SAP Services

SAP Solution Manager is a point of access to SAP support services, which include remote services, on-site services, self services, and Best Practice documents, that help you monitor and optimize the performance and availability of your system operation.

SAP Solution Manager is a platform for the delivery of services for the following areas:

- Risk minimization
- Optimization of SAP Solutions
- Knowledge Transfer

Based on your system configuration, recommendations for services are triggered dynamically. The reports that result from each service are stored in SAP Solution Manager and you can use them as a reference for future efficient operation of your system.

This scenario also includes the creation of a Service Plan to optimize production business processes, issue tracking and service connections for SAP Support.

## 5.2.7 Root Cause Analysis

A key requirement for safe and efficient support of IT solutions is the ability to perform root cause analysis with speed and efficiency. This is especially true for non-ABAP solutions such as SAP BusinessObjects Profitability and Cost Management. Diagnostics in SAP Solution Manager provides standardized tools for the support of customer solutions, including third party components, such as Wily Introscope.

The tools provide a systematic and targeted approach across all components to locate the root cause of IT problem. This centralized approach avoids a situation in which multiple experts need to investigate multiple components to find a single root cause.

For more information on setting up a diagnostics solution for SAP BusinessObjects Profitability and Cost Management, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide*.

### 5.2.7.1 Solution Manager Diagnostics

SAP Solution Manager Diagnostics provides root cause analysis of customer solutions and can help to monitor operating systems, databases, Java applications activities, performance, and logs. It supports the reporting of software and configuration changes that can lead to malfunctions and errors.

You must run Solution Manager Diagnostics within your solution landscape. An agent - the Solution Manager Diagnostics Agent (or Diagnostics Agent) - delivers data from productive hosts in your system landscape to the Solution Manager Diagnostics system. The agent is the remote component for Root Cause Analysis. It enables

a connection between SAP Solution Manager and the managed system and then gathers information from the system and reports it to SAP Solution Manager system. You must install a Diagnostics Agent on each server to be managed. For more information, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide* and the *Diagnostics Agent Setup Guide*.

For non-ABAP applications, Solution Manager Diagnostics also contains CA Wily Introscope (Display, Server, and Agent) for measuring performance and for troubleshooting problems. SAP has signed a distribution agreement for CA Wily Introscope; SAP customers are allowed to use this tool in a preconfigured way.

For more information on Solution Manager Diagnostics, see the [SAP Service Marketplace](#) .

## 5.2.7.2 CA Wily Introscope

CA Wily Introscope is an application management product that allows you to detect, triage, and diagnose performance problems in complex, enterprise, and Service Oriented Architecture (SOA) environments.

SAP has an agreement with CA Wily that allows you to use Introscope with SAP-developed dashboards and instrumentation as part of SAP Solution Manager. The table that follows describes the Introscope components.

| CA Wily Introscope Component  | Description   |
|-------------------------------|---|
| Introscope Enterprise Manager | The Enterprise Manager acts as a central repository for all Introscope performance data and metrics collected in an application environment. The Enterprise Manager processes performance data and makes it available to users for production monitoring. The Enterprise Manager is typically installed on the Solution Manager host but you can install it on a separate host.   |
| Agents                        | <p>Introscope Agents collect performance metrics from inside the running application and the application server, and performance and availability data from the surrounding computing environment. The agents then report these metrics to the Enterprise Manager.</p> <p>The agent is installed once per host, for example on the Profitability and Cost Management application servers and web servers. It runs as part of the Solution Manager Diagnostics (SMD) Agent to collect data on the operating system level. The SMD Agent transfers performance and scoping information from the Profitability and Cost Management instance of NCS (Native Component Supportability) to a single instance of CA Wily Introscope or SAP Solution Manager.</p> |
| Introscope Workstation        | Users control Introscope and assess performance through the Introscope Workstation. In the Workstation, users can set alerts for individual metrics or logical metric groups; view performance metrics; or customize views to represent their unique environment.   |

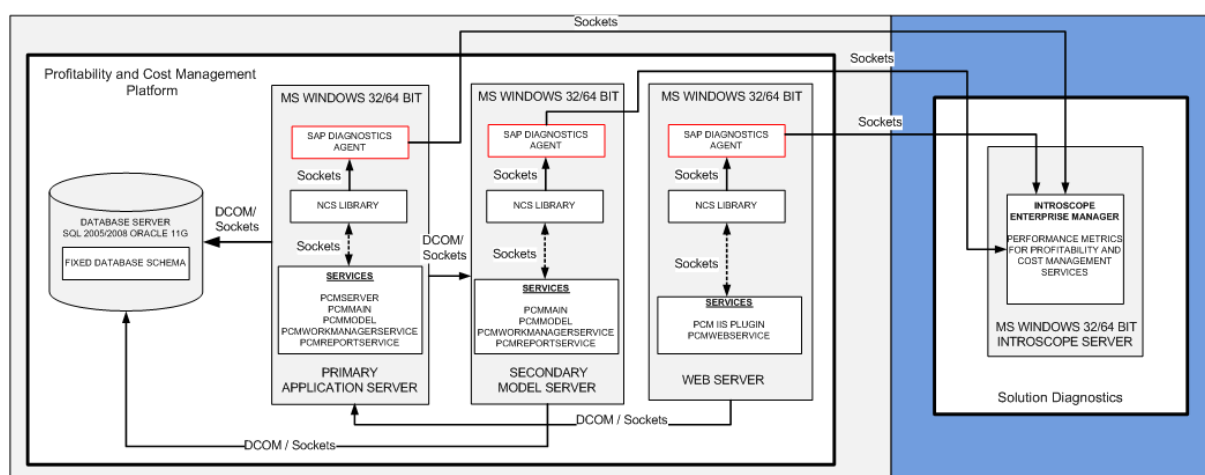
## CA Wily Introscope Component

## Description

Introscope WebView

Introscope WebView presents a web-based graphical user interface to display performance data. Introscope has customizable dashboards and tree views for authorized users, which run in a browser interface, so that critical information can be viewed anywhere, anytime.

The following diagram shows how the SMD Agent and CA Wily Introscope communicate in an SAP BusinessObjects Profitability and Cost Management environment:



## 5.3 System Landscape Directory

The System Landscape Directory (SLD) is a container for all the relevant properties and information required to manage a system landscape. It acts as a central information provider inside the landscape and for external clients. Various SAP tools use the information in the SLD, for example, for planning and performing upgrades and finding destination information for Web Services.

The SLD gathers information from the landscape and includes the following features:

- The SLD stores information about all installation and installed components of a system landscape and their host systems based on the standard Common Information Model (CIM)
- A Web-based UI for interactive access and client APIs for programmatic access in ABAP and Java.
- SLD provides up-to-date information about installable SAP software and their dependencies on SAP Service Marketplace to be imported into the SLD
- The SLD allows name reservation such as Java package names.

If the solution landscape contains non-ABAP components, the SLD is mandatory.






The SLD offers a number of topology options. To learn more about the strategy that meets your requirements, see the *Planning Guide - System Landscape Directory* available on [SAP Developers Network](#). To learn more about configuring the application to communicate with the SLD and send the SLD the required information, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide* and the *SAP BusinessObjects Profitability and Cost Management Administrator's Guide*.

## 5.4 SAP MMC Snap-in

SAP BusinessObjects Profitability and Cost Management can generate detailed application event logs, for which you can control the level of information tracked from day to day for a component. The log files are in **GLF** (Generic Log File) format and can be viewed in the SAP Snap-in for Microsoft Management Console or SAP MMC Snap-in.

The SAP MMC Snap-in provides a user-friendly graphical user interface to view log files. Only versions 7.20 patch level 71 and later are supported by SAP BusinessObjects Profitability and Cost Management. For more information on the SAP MMC Snap-in, see the *SAP BusinessObjects Profitability and Cost Management Installation Guide* and the following table:

Related Information for the SAP MMC Snap-in

| Description   | Location  |
|---|---|
| Download the latest version of the SAP MMC Snap-in from the SAP Service MarketPlace | <a href="http://service.sap.com/swdc">http://service.sap.com/swdc</a>      |
| SAP MMC documentation in the SAP Library  | <a href="http://help.sap.com">http://help.sap.com</a>   |
| Information about the SAP MMC on the SAP Community Network                          | <a href="http://www.sdn.sap.com">http://www.sdn.sap.com</a>                |
| SAP Note 877795: Problems with sapstartsrv as of Release 7.00 and 6.40 patch 169    | <a href="http://service.sap.com/notes">http://service.sap.com/notes</a>  |
| SAP Note 927637: Web service authentication in sapstartsrv as of Release 7.00       | <a href="http://service.sap.com/notes">http://service.sap.com/notes</a>  |
| SAP Note 995116: Backward porting of sapstartsrv for earlier release                | <a href="http://service.sap.com/notes">http://service.sap.com/notes</a>  |

## 6 References

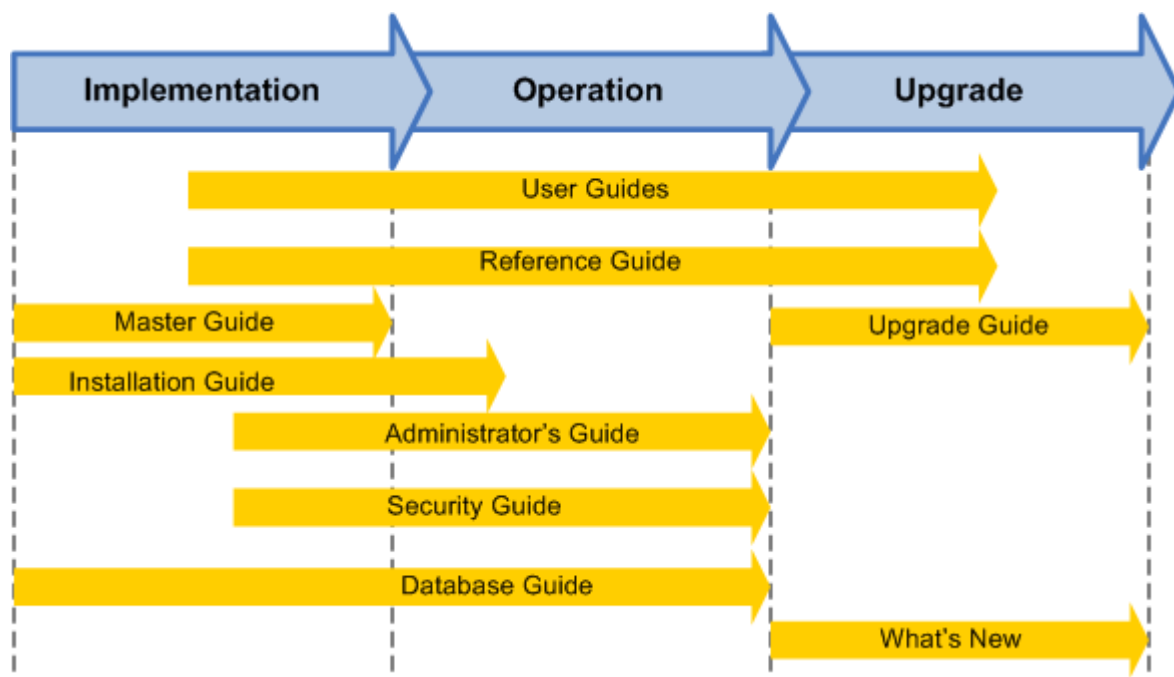
### 6.1 List of documents

The following documents are mentioned in the master guide and are available on the *BusinessObjects* page on the SAP Help Portal at <http://help.sap.com>:

*SAP BusinessObjects Profitability and Cost Management Installation Guide*  
*SAP BusinessObjects Profitability and Cost Management Database Administrator's Guide*  
*SAP BusinessObjects Profitability and Cost Management Administrator's Guide*  
*SAP BusinessObjects Modeling User Guide*  
*SAP BusinessObjects Data Bridge User Guide*  
*SAP BusinessObjects Report Manager User Guide*  
*SAP BusinessObjects Work Manager User Guide*

### 6.2 The main documentation types

The following is an overview of the document types that you will need in the various phases of life cycle of an SAP BusinessObjects Profitability and Cost Management solution.





## Cross-Phase Documentation

### User Guides

The SAP BusinessObjects Profitability and Cost Management user guides are function- and workflow-oriented documentation for the various SAP BusinessObjects Profitability and Cost Management applications and supported model types such as Model Builder, Data Bridge, Work Manager, Report Manager, Objectives and Metrics modeling, Transactional Costing modeling, and others.

Target group:

- Administrators
- Model Builders
- Book Builders
- End Users
- Consultants

### Reference Guides

The SAP BusinessObjects Profitability and Cost Management reference guides describe in detail the definition, purpose, function, and usage of grid values, functions, Book scripting, and Workflow properties relevant to the various supported model types.

Target group:

- Administrators
- Model Builders
- Book Builders
- Consultants

### Installation Guide

The *SAP BusinessObjects Profitability and Cost Management Installation Guide* describes the installation and configuration of the software.

Target group:

- System Architects
- System Administrators
- Technology consultants
- Decision makers and project teams for implementations

### Administrator's Guide

The *SAP BusinessObjects Profitability and Cost Management Administrator's Guide* is the starting point for administrating the system. It describes the administrative tools and tasks such as model administration, user monitoring, and backup and restore.

Target group:

- System Administrators
- Model Builders
- Consultants

### Security Guide

The *SAP BusinessObjects Profitability and Cost Management Security Guide* describes how to manage application, user, and model security. It includes detailed definitions of all security descriptors used in the application.

Target group:

- System Administrators
- Technology Consultants

Database Guide

The *SAP BusinessObjects Profitability and Cost Management Database Administrator's Guide* describes system database requirements and offers detailed installation, management, and maintenance procedures. Detailed descriptions of database procedures and tables are also provided.

Target group:

- Database Administrators
- System Administrators
- Consultants

## Implementation documentation

Master Guide

The *SAP BusinessObjects Profitability and Cost Management Master Guide* is the starting point for the technical implementation of SAP BusinessObjects Profitability and Cost Management. It provides an overview of the application from a technical perspective, describes the system architecture, lists hardware and software requirements, and offers an overall implementation sequence as well as pointing to important documentation.

Target group:

- System Architects
- System Administrators
- Consultants
- Decision makers and project teams for upgrades

## Upgrade documentation

What's New

The *What's New* document contains brief descriptions of new features or changes in the product since the previous release.

Target group:

- System Architects
- System Administrators
- Consultants
- Decision makers and project teams for upgrades

## Upgrade Guide

This document describes the technical upgrade and migration of SAP BusinessObjects Profitability and Cost Management.

### Target group:



- System Architects
- System Administrators
- Consultants
- Decision makers and project teams for upgrades

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