



### Master Guide

- SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward 4.1 Support Package 1 (14.1.1.0)

2012-11-16

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2012-11-16

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# Getting Started

## 1.1 Products Overview

SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward are part of the Enterprise Information Management suite of products that target the Information Management personas: the administrator, the designer, and the subject matter experts in charge of data stewardship and data governance.

SAP BusinessObjects Data Services delivers a single enterprise-class solution for data integration, data quality, data profiling, and text data processing that:

- Allows you to integrate, transform, improve, and deliver trusted data to critical business processes.
- Provides development user interfaces, a metadata repository, a data connectivity layer, a run-time environment, and a management console—enabling IT organizations to lower total cost of ownership and accelerate time to value.
- Enables IT organizations to maximize operational efficiency with a single solution to improve data quality and gain access to heterogeneous sources and applications.

SAP BusinessObjects Information Steward provides business analysts, data stewards, and IT users with a single environment to discover, assess, define, monitor, and improve the quality of their enterprise data assets through the various modules:

- Data Insight: Profile data, create and run validation rules, and monitor data quality through scorecards.
- Metadata Management : Catalog the metadata across their system landscape, analyze and understand the relationships of their enterprise data.
- Metapedia: Define business terms for data and organize the terms into categories.
- Cleansing Package Builder: Define cleansing packages to parse and standardize data.
- Match Review: Review results of automated matching on a regular basis and make any necessary corrections. Match Review maintains a list of records in the "My Worklist" tab that involves reviewers' actions for match decisions.

## 1.2 SAP information resources

A global network of SAP technology experts provides customer support, education, and consulting to ensure maximum information management benefit to your business.

Useful addresses at a glance:

Address	Content
Customer Support, Consulting, and Education services <a href="http://service.sap.com/">http://service.sap.com/</a>	Information about SAP Business User Support programs, as well as links to technical articles, downloads, and online discussions.
Product documentation <a href="http://help.sap.com/bois/">http://help.sap.com/bois/</a>	User Guide, Administration Guide, and other documentation for SAP Information Steward.
Supported platforms (Product Availability Matrix) <a href="https://service.sap.com/PAM">https://service.sap.com/PAM</a>	Information about supported platforms for SAP Information Steward with a search function to quickly find information related to your platform.
Product tutorials <a href="http://scn.sap.com/docs/DOC-8751">http://scn.sap.com/docs/DOC-8751</a>	Tutorials that have been developed to help you find answers to the most common questions about using SAP Information Steward.
Forums on SCN (SAP Community Network ) <a href="http://scn.sap.com/community/businessobjects-information-steward">http://scn.sap.com/community/businessobjects-information-steward</a>	Discussions that include information and comments from other SAP users and the means to share your knowledge with the community.
EIM Wiki page on SCN <a href="http://wiki.sdn.sap.com/wiki/display/EIM/EIM+Home">http://wiki.sdn.sap.com/wiki/display/EIM/EIM+Home</a>	The means with which to contribute content, post comments, and organize information in a hierarchical manner to so that information is easy to find.

# Landscape and Components

## 2.1 Components overview

In the typical SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward landscape, you must first install one of the following products. These products provide platform services such as security, scalability, and high availability for Data Services and Information Steward.

- SAP BusinessObjects Information Platform Services (IPS) If you only want to use features of Data Services or Information Steward
- SAP BusinessObjects Business Intelligence platform (BI platform) if you also want to use Business Intelligence clients such as Web Intelligence documents or Crystal Reports

This guide uses the terms “server” and “service” with the following meanings:

- “Server” is used to describe an operating system level process (on some systems, this is referred to as a daemon) hosting one or more services. For example, the following diagram shows the Enterprise Information Management Adaptive Processing Server and Information Steward Job Server which each hosts multiple services. A server runs under a specific operating system account and has its own process id (PID).
- A “service” is a server subsystem that performs a specific function. The service runs within the memory space of its server under the PID of the parent container (server). For example, the following diagram shows that the Data Services Metadata Browsing Service is a subsystem that runs within the EIM Adaptive Processing Server.

The following diagram shows the order that the products should be installed.

1. Install BI platform or IPS, and select the servers and services shown on the left side of the diagram. The diagram shows only the servers and services in IPS that are relevant to Data Services and Information Steward. For a description of these servers and services and how Data Services and Information Steward use them, see [BI platform components usage](#).
2. Install Data Services, which installs the servers and services shown in the middle of the diagram. The components marked with a yellow star are used by the Data Insight module of Information Steward. For a description of these servers and services, see [Data Services components](#).

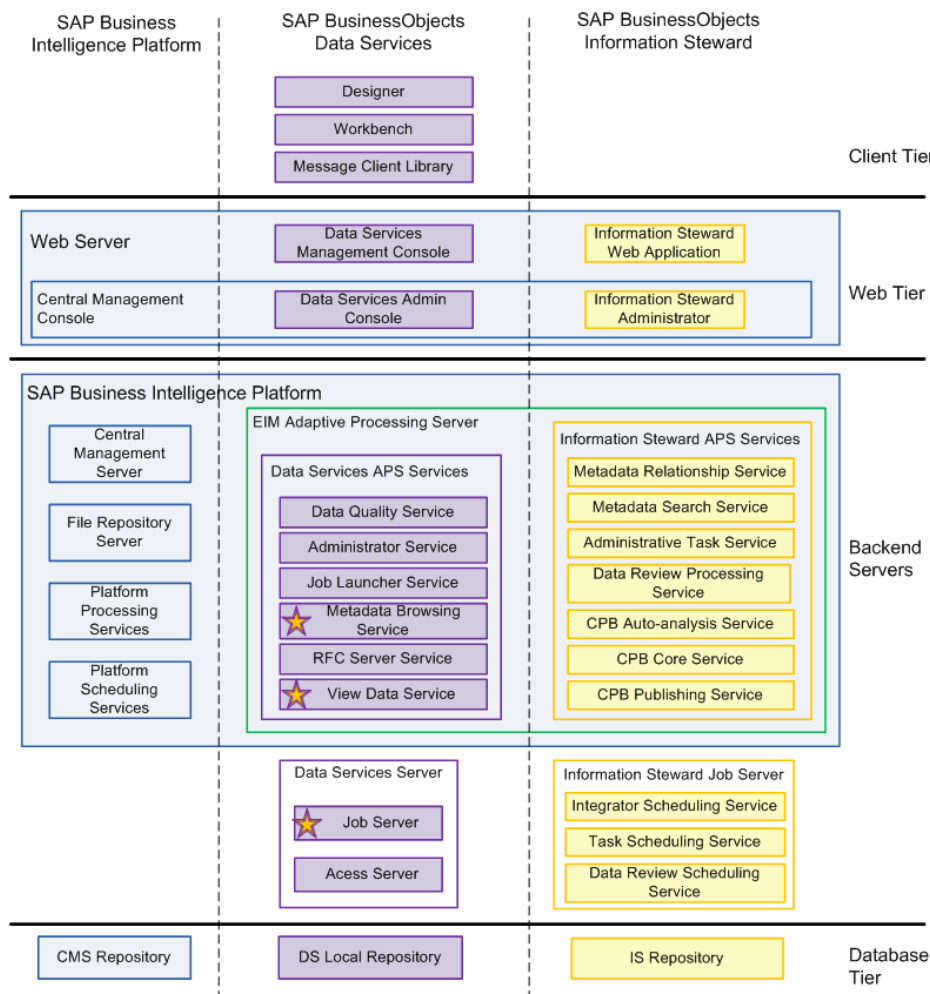
**Note:**

For requirements for database connectivity, connections to SAP applications, and installing reference data for the Address Cleanse transform, see [Implementation resources](#).

3. Install Information Steward, which installs the servers and services shown on the right side of the diagram. For a description of these servers and services, see [Information Steward components](#).

**Note:**

For requirements for database connectivity and reference data for Cleansing Package, see [Implementation resources](#).



## 2.1.1 Data Services architecture overview

This section outlines the overall platform architecture, system, and service components that make up the SAP BusinessObjects Data Services platform. The information helps administrators understand the system essentials and help to form a plan for the system deployment, management, and maintenance.

SAP BusinessObjects Data Services is designed for high performance across a broad spectrum of user and deployment scenarios. For example:

- Developers can integrate SAP BusinessObjects Data Services into your organization's other technology systems by using web services, Java, or .NET application programming interfaces (APIs).



- End users can access, create, edit, and interact with Data Services projects and reports using specialized tools and applications that include:
  - Data Services Designer
  - Data Services Workbench
  - Data Services Management Console
    - Administrator
    - Impact and Lineage Analysis
    - Operational Dashboard
    - Auto Documentation
    - Data Validation
    - Data Quality
- IT departments can use data and system management tools that include:
  - BI platform Central Management Console (CMC)
  - Data Services Management Console
  - Data Services Server Manager
  - Data Services Repository Manager
  - License Manager

License Manager lets you manage your product activation keycodes—the alphanumeric codes that are referred to each time that you run certain software. By using License Manager, you can view, add, and remove product activation keycodes for SAP BusinessObjects Data Services. See the *Data Services Administrator's Guide* for more information.

To provide flexibility, reliability, and scalability, SAP BusinessObjects Data Services components can be installed on one or across many machines.

Server processes can be “vertically scaled” (where one computer runs several, or all, server-side processes) to reduce cost, or “horizontally scaled” (where server processes are distributed between two or more networked machines) to improve performance. It is also possible to run multiple, redundant versions of the same server process on more than one machine, so that processing can continue if the primary process encounters a problem.

## 2.1.2 Information Steward architecture overview

SAP Information Steward uses SAP Business Intelligence platform (formerly known as SAP BusinessObjects Enterprise) and SAP Data Services and inherits the scalable architecture that these two platforms provide. This architecture allows deployment of different server components of Business Intelligence platform, Data Services, and Information Steward on different machines for flexibility, reliability, scalability, and better performance.

Information Steward requires SAP Business Intelligence platform for the following functionality:

- User and group security management
- Schedule and run on-demand services for the following modules:

- Metadata Management integrator sources and utilities
- Data Insight profiling and rule tasks and utilities
- The Central Management Console (CMC) through which you perform the above administrative tasks for Information Steward
- Scalability by load balancing and high availability

Information Steward is deployed on a web application server through which you access these modules:

- Data Insight
- Metadata Management
- Metapedia
- Cleansing Package Builder
- Worklist for Match Review

**Note:**

The Information Steward web application must be installed on the same web application server as that of the SAP Business Intelligence platform.

For specific version compatibility, refer to the *Product Availability Matrix* available at <http://service.sap.com/PAM>.

Information Steward requires the following components of SAP Data Services:

- The Data Services Job Server installed on the primary computer. The Data Services Job Server provides the following system management tools that are required during the first installation of Information Steward:

System management tool	Description
Repository Manager	The Repository Manager creates the required Data Insight objects in the Information Steward repository. The Information Steward installer invokes the Repository Manager automatically when creating the repository the first time the installer is run.
Server Manager	The Server Manager creates the Information Steward job server group and job servers and associates them to the Information Steward repository.  To add job servers to the Information Steward job server group, you must manually invoke the Server Manager.

- The Data Services Job Server provides the engine processes that perform the Data Insight data profiling and validation rule tasks. The engine processes use parallel execution and in-memory processing to deliver high data throughput and scalability.
- The Data Services Metadata Browsing Service provides the capabilities to browse and import the metadata from Data Insight connections.
- The Data Services View Data Service provides the capabilities to view the source data from Data Insight connections.

**Note:**

When you install Data Services, ensure that you select the following components:

- **Job Server** under the **Server** category
- **Data Services APS Services** which contain the Data Services Metadata Browsing Service and Data Services View Data Service.

## 2.1.3 Repository database

A database is required to operate Data Services and Information Steward. We recommend that you use a pre-installed enterprise database for your Data Services and Information Steward repositories. However, you can also use the bundled database available in BI platform and Information platform services to get started with Data Services and Information Steward.

For more information about configuring your database repositories, including the bundled database, see the Data Services and Information Steward *Installation Guides*.

## 2.2 BI platform components usage

The following table describes how SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward use each pertinent SAP BusinessObjects Business Intelligence platform (BI platform) component or SAP BusinessObjects Information Platform Services (IPS) if you are not using Business Intelligence clients such as Web Intelligence documents or Crystal Reports.

BI platform or IPS component	Usage for Data Services	Usage for Information Steward
Web Tier	Deploys Data Services on the Central Management Console (CMC) through which administrative tasks for Data Services are performed.	Deploys Information Steward on: <ul style="list-style-type: none"><li>• The Central Management Console (CMC) through which administrative tasks for Information Steward are performed.</li><li>• A web application server through which you access the Information Steward modules</li></ul>

BI platform or IPS component	Usage for Data Services	Usage for Information Steward
Central Management Console (CMC)	<p>Used by IT administrator to manage:</p> <ul style="list-style-type: none"><li>• Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) and services</li><li>• User security (authentication and authorization)</li><li>• Manage repository and application settings</li></ul>	<p>Used by IT administrator to manage:</p> <ul style="list-style-type: none"><li>• Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) and services</li><li>• Information Steward Job Server (ISJobServer) and services</li><li>• Metadata Management module</li><li>• Data Insight module</li><li>• Cleansing Package Builder module</li><li>• Data Review connections and tasks</li><li>• Information Steward utilities</li><li>• User security (authentication and authorization)</li><li>• Repository and application settings</li></ul>

BI platform or IPS component	Usage for Data Services	Usage for Information Steward
Central Management Server (CMS)	<p>Maintains a database of information about your BI platform system. The data stored by the CMS includes information about users and groups, security levels, schedule information, BI platform content, and servers. For more information about the CMS, see the <i>SAP BusinessObjects Business Intelligence Platform Administrator's Guide</i>. If you installed IPS, see the <i>SAP BusinessObjects Information platform services Administrator's Guide</i>.</p> <p>Data Services relies on the CMS for:</p> <ul style="list-style-type: none"> <li>• Centralized user and group management</li> <li>• Flexible authentication methods</li> <li>• Password enforcement policies</li> </ul>	<p>Maintains a database of information about your BI platform system. The data stored by the CMS includes information about users and groups, security levels, schedule information, BI platform content, and servers. For more information about the CMS, see the <i>SAP BusinessObjects Business Intelligence Platform Administrator's Guide</i>. If you installed IPS, see the <i>SAP BusinessObjects Information platform services Administrator's Guide</i>.</p> <p>The following objects in the Metadata Management module of Information Steward are stored in the CMS.</p> <ul style="list-style-type: none"> <li>• Integrator Source configurations</li> <li>• Source groups</li> <li>• Utilities configurations</li> <li>• Data Insight connections</li> <li>• Projects</li> <li>• Tasks</li> </ul> <p><b>Note:</b> Because integrator source configurations and source group definitions are stored in the CMS, you can use the Upgrade management tool to move them from one version of the CMS to another. The schedules and rights information are considered dependencies of these configurations. For details, see the <i>SAP BusinessObjects Information Steward Upgrade Guide</i>.</p>
Platform Scheduling Services	<p>The Platform Scheduling Services is not required to run Data Services. If you will not install Information Steward, you can stop the Platform Scheduling Services.</p>	<p>Information Steward Job Server uses the Platform Scheduling Services for executing profiling tasks and integrator tasks.</p> <p>The server may host the following services for Information Steward:</p> <ul style="list-style-type: none"> <li>• Task Scheduling Service</li> <li>• Integrator Scheduling Service</li> <li>• Data Review Scheduling Service</li> </ul>

BI platform or IPS component	Usage for Data Services	Usage for Information Steward
<p>Platform Processing Services</p>	<p>Required during Data Services installation to create the Enterprise Information Management (EIM) Adaptive Processing Server .</p> <p>The EIM Adaptive Processing Server uses the Platform Processing Services to host the following services:</p> <ul style="list-style-type: none"> <li>• RFC Server Service, which Data Services requires for connectivity with SAP NetWeaver Business Warehouse</li> <li>• Job Launcher Service, which Data Services uses to send batch jobs to the appropriate Data Services Job Server for execution.</li> <li>• Data Services Metadata Browsing Service, which is used by other applications such as Information Steward to browse and import metadata from Data Insight connections</li> <li>• Data Services View Data Service, which is used by other applications such as Information Steward to view data in Data Insight connections</li> </ul> <p>The Data Services Workbench requires the Enterprise Information Management Adaptive Processing Server for operations such as testing connections and all communication with the repository to deploy object, run jobs, and so forth.</p> <p><b>Note:</b> The Platform Processing Service can be stopped after installation because on the Enterprise Information Management Adaptive Processing Server is required for Data Services to run.</p>	<p>Required during Information Steward installation to create the Enterprise Information Management Adaptive Processing Server .</p> <p>The EIM Adaptive Processing Server uses the Platform Processing Services to host the following services:</p> <ul style="list-style-type: none"> <li>• Metadata Relationship Service</li> <li>• Metadata Search Service</li> <li>• Metadata Integrator Service</li> <li>• Data Services Metadata Browsing Service</li> <li>• Data Services View Data Service</li> <li>• Information Steward Administrator Task Service</li> <li>• Cleansing Package Builder Core Service</li> <li>• Cleansing Package Builder Auto-analysis Service</li> <li>• Cleansing Package Builder Publishing Service</li> <li>• Data Review Processing Service</li> </ul>

BI platform or IPS component	Usage for Data Services	Usage for Information Steward
File Input Repository Server and File Output Repository Server	Stores input and output files associated with: <ul style="list-style-type: none"> <li>A published cleansing package. The stored information can be accessed by Data Services</li> </ul>	Stores files associated with: <ul style="list-style-type: none"> <li>A published cleansing package. The stored information can be accessed by Data Services</li> <li>History logs for Data Insight task and metadata integrator execution</li> <li>Search index for metadata integrator objects</li> </ul>

## 2.3 Data Services components

You can choose to install SAP BusinessObjects Data Services components on one or more computers based on available resources and your deployment planning.

The following table shows the components that you can choose on the "Select Features" window of the Data Services installer. For information about how SAP BusinessObjects Information Steward uses each Data Services component, see [Information Steward architecture overview](#).

Data Services category and component	Description
<b>Data Services Server &gt; Job Server</b>	<p>The Job Server starts engine processes to perform data extraction, transformation, and movement. The Job Server is available on Windows, Linux, and UNIX platforms.</p> <p><b>Note:</b> Job Servers can also be configured after installation.</p>
<b>Data Services Server &gt; Access Server</b>	<p>The Access Server is a real-time, request-reply message broker that collects requests, routes them to a real-time service, and delivers a reply. The Access Server is available on Windows, Linux, and UNIX platforms.</p> <p><b>Tip:</b> An Access Server is required only for real-time processing. If you need only batch processing, you do not need to configure an Access Server.</p> <p><b>Note:</b> Access Servers can also be configured after installation.</p>

Data Services category and component	Description
<b>Data Services Client &gt; Designer</b>	<p>The Designer is a graphical development tool that enables developers to define data management applications that consist of data mappings, transformations, and control logic.</p> <p><b>Note:</b> The Designer can be installed only on supported Windows platforms.</p>
<b>Data Services Client &gt; Workbench</b>	<p>The Workbench provides a graphical user interface (GUI) development environment in which you define data application logic to migrate data and database schema information between different databases in a data warehousing environment.</p> <p><b>Note:</b> The Workbench can be installed only on supported Windows platforms.</p>
<b>Data Services Management Console</b>	<p>The Management Console includes web applications that provide browser-based administration, analysis, and reporting capabilities for Data Services.</p>



Data Services category and component	Description
<b>Data Services APS Services</b>	<p>Provides the following services:</p> <ul style="list-style-type: none"> <li>• RFC Server Service Used for BW loading and reading via Open Hub</li> <li>• Administrator Service Used for cleaning up log files and AL_HISTORY based on log retention period.</li> <li>• Metadata Browsing Service Used by external tools (for example, Information Steward, BW, and so on) to leverage Data Services' connectivity to browse and import metadata from a data source</li> <li>• View Data Service Used by external tools (for example, Information Steward, BW, and so on) to leverage Data Services' connectivity to view data from a source</li> <li>• Job Launcher Service Used to execute jobs from the Workbench or other tools that call the AL_RWJobLauncher (for example, scheduled jobs).</li> <li>• Data Quality Service Used to to handle all Data Quality-related requests from the Management Console, such as viewing Data Quality reports.</li> </ul>
<b>Data Services Message Client</b>	The Message Client API provides C++ and Java APIs that allow you to connect to Data Services real-time services with external applications.
<b>Text Data Processing Languages</b>	<p>Supports processing of unstructured text in multiple languages.</p> <p><b>Note:</b> Text Data Processing support for English is installed by default and cannot be uninstalled. Select additional languages if you want to process unstructured text in other languages.</p>
<b>DataDirect ODBC Drivers</b>	The DataDirect drivers allow Data Services to connect to ODBC data source on UNIX and Windows platforms.

Data Services category and component	Description
Cleansing Package	<p>The SAP-supplied person and firm cleansing package is used by SAP BusinessObjects Information Steward and the Data Cleanse transform in Data Services.</p> <p><b>Note:</b> The cleansing package .zip file must already be copied to the correct location. For details, see the <i>SAP BusinessObjects Data Services Installation Guide</i>. If the cleansing package data is not found by the installation program in the expected location, the option is disabled.</p>
Data Services Documentation	<p>Installs the complete Data Services documentation set. Documentation is also available on the SAP Business User Support site at <a href="http://help.sap.com/bods">http://help.sap.com/bods</a>.</p>

## 2.4 Information Steward components

You can choose to install SAP BusinessObjects Information Steward components on one or more computers based on available resources and your deployment planning. For prerequisites for each component, see [Component installation prerequisites](#).

The following table shows the Information Steward components that you can choose on the "Select Features" window of the installer.

Component in feature tree	Description
Information Steward Web Application	<p>Provides web applications that:</p> <ul style="list-style-type: none"> <li>• Administer Information Steward in the Central Management Console (CMC)</li> <li>• Display the Information Steward user interface</li> </ul> <p><b>Note:</b> If the BI platform web applications were manually deployed, manually deploy the Information Steward web application with WDeploy after installation.</p>
Information Steward Task Server	Processes profile and rule tasks for the Data Insight module of Information Steward.
Information Steward Data Review Server	Processes match review tasks for the Data Review module of Information Steward.

Component in feature tree	Description
<b>Metadata Relationship Service</b>	Processes object relationships (for example, impact and lineage).
<b>Metadata Search Service</b>	Provides search capability on the Metadata Management module of Information Steward.
<b>Information Steward Cleansing Package Builder Service</b>	Provides the capability to create and refine cleansing packages using the Cleansing Package Builder module of Information Steward.
<b>Information Steward Data Review Service</b>	Checks if the input table contains new match groups and whether the match results are ready for review, and creates match review tasks for the Data Review module of Information Steward.
<b>SAP BusinessObjects Enterprise Metadata Integrator</b>	Collects information from an SAP BusinessObjects Business Intelligence platform repository that includes metadata objects such as SAP Crystal Reports, Web Intelligence documents, and universes.
<b>SAP NetWeaver Business Warehouse Metadata Integrator</b>	Collects information from a NetWeaver Business Warehouse system that includes metadata objects such as Queries, InfoProviders, InfoObjects, Transformations, and DataSources.
<b>Common Warehouse Model (CWM) Metadata Integrator</b>	Collects information from the CWM Relational Package that includes definitions of metadata objects such as catalogs, schemas, and tables.
<b>Relational Databases (RDBMS) Metadata Integrator</b>	Collects information from an RDBMS that includes definitions of metadata objects such as catalogs, schemas, stored procedures, and aliases.  Supported relational databases include DB2, MySQL, Oracle, SQL Server, Teradata, or a Universe connection using JDBC or ODBC. For more information, see the Product Availability Matrix <a href="https://service.sap.com/PAM">https://service.sap.com/PAM</a> .
<b>SAP HANA Metadata Integrator</b>	Collects information from an SAP HANA database that includes definitions of metadata objects such as databases, schemas, tables, and views.
<b>SAP BusinessObjects Data Services Metadata Integrator</b>	Collects information from an SAP BusinessObjects Data Services repository that includes definitions of metadata objects such as source tables and columns for ETL jobs, datastores and configurations, and flat files.
<b>SAP BusinessObjects Data Federator Metadata Integrator</b>	Collects information from an SAP BusinessObjects Data Federator repository that includes definitions of metadata objects such as projects, catalogs, datasources, and mapping rules.

Component in feature tree	Description
<b>Meta Integration Metadata Bridge (MIMB) Metadata Integrator</b>	<p>Collects the following metadata from other sources:</p> <ul style="list-style-type: none"> <li>• Data Modeling metadata such as Sybase Power Designer, Embarcadero ER/Studio, and Oracle Designer</li> <li>• ETL metadata such as Oracle Warehouse Builder and Microsoft SQL Server Integration Services (SSIS)</li> <li>• OLAP and BI metadata such as IBM DB2 Cube Views, Oracle OLAP, and Cognos 8 BI Reporting</li> </ul> <p>For more information, see <a href="http://www.metaintegration.net/Products/MIMB/Documentation/">http://www.metaintegration.net/Products/MIMB/Documentation/</a>.</p>

### Related Topics

- [Components overview](#)
- [Information Steward distributed deployment scenarios](#)
- [SAP BusinessObjects Information Steward Installation Guide: Deploying web applications with WDeploy](#)

## 2.4.1 Component installation prerequisites

In general, all Information Steward components require that the Information Steward repository has already been created or will be created during the installation process.

### Note:

To create the Information Steward repository, you must perform the primary installation of Information Steward on the same computer as the SAP BusinessObjects Data Services Job Server component. The SAP BusinessObjects BI platform Central Management Server (CMS) must be in the landscape (not necessarily on the same computer).

The BI platform landscape must have the Central Management Server and File Repository Servers running when you install SAP BusinessObjects Information Steward.

Component-specific prerequisites are described in the following table:

Information Steward Component	Host system prerequisites
Information Steward Web Application	BI platform Web Tier  <b>Note:</b> If you are manually installing the web application, you must copy a .war file. For more information, see “Deploying web applications with WDeploy”.
Information Steward Task Server Information Steward Data Review Server	BI platform Platform Processing Services BI platform Platform Scheduling Services SAP BusinessObjects Data Services Job Server
Metadata Relationship Service Metadata Search Service Cleansing Package Builder Service Information Steward Data Review Service	BI platform Platform Processing Services
All Metadata Integrators	BI platform Platform Scheduling Services BI platform Platform Processing Services  <b>Note:</b> All Metadata Integrators can be installed only on supported Windows platforms.

### Related Topics

- [Component run-time dependencies](#)
- [Component installation prerequisites](#)
- [SAP BusinessObjects Information Steward Installation Guide: Deploying web applications with WDeploy](#)

## 2.4.2 Component installation results

Installing an SAP BusinessObjects Information Steward component creates one or more services or applications on the target host system.

The services and applications created by each component in the Information Steward installation program feature tree are described in the following table:

Feature tree component	Installation result
<b>Information Steward Web Application</b>	<p>Deploys Information Steward on the following user interfaces:</p> <ul style="list-style-type: none"> <li>• A web application through which you access the Information Steward application: <ul style="list-style-type: none"> <li>• Data Insight</li> <li>• Metadata Management</li> <li>• Metapedia</li> <li>• Cleansing Package Builder</li> <li>• Worklist for Data Reviewer</li> </ul> </li> <li>• The CMC features through which administrative tasks for Information Steward are performed</li> </ul>
<b>Information Steward Task Server</b>	<p>Creates the following services under the Information Steward Job Server (ISJobServer):</p> <ul style="list-style-type: none"> <li>• Information Steward Task Scheduling Service</li> <li>• Information Steward Integrator Scheduling Service (required for utilities)</li> </ul> <p>Creates the following service under the Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) :</p> <ul style="list-style-type: none"> <li>• Information Steward Administrative Task Service</li> <li>• Information Steward Data Review Task Service</li> </ul>
<b>Information Steward Data Review Server</b>	<p>Creates the following services under the Information Steward Job Server (ISJobServer) :</p> <ul style="list-style-type: none"> <li>• Information Steward Data Review Task Scheduling Service</li> </ul>
<b>Information Steward Data Review Service</b>	<p>Creates the following service under the Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) :</p> <ul style="list-style-type: none"> <li>• Information Steward Data Review Service</li> </ul>
<b>Metadata Relationship Service</b>	<p>Creates the following service under the Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) :</p> <ul style="list-style-type: none"> <li>• Information Steward Metadata Relationship Service</li> </ul>

Feature tree component	Installation result
<b>Metadata Search Service</b>	Creates the following service under the Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer) : <ul style="list-style-type: none"> <li>• Search Service</li> </ul>
<b>Cleansing Package Builder Service</b>	Creates the following services under the Enterprise Information Management Adaptive Processing Server (EIMAdaptiveProcessingServer): <ul style="list-style-type: none"> <li>• Cleansing Package Builder Core service</li> <li>• Cleansing Package Builder Auto-analysis service</li> <li>• Cleansing Package Builder Publishing service</li> </ul>
All Metadata Integrators	Creates the following services under the Information Steward Job Server (ISJobServer) : <ul style="list-style-type: none"> <li>• Information Steward Integrator Scheduling Service</li> <li>• Information Steward Integrator Service</li> </ul>

### 2.4.3 Component run-time dependencies

This section describes other components in the landscape that must be running for SAP BusinessObjects Information Steward modules to function correctly.

**Note:**

The BI platform landscape must have the Central Management Server and File Repository Server running at all times.

Component-specific dependencies are described in the following table:

Information Steward Component	Additional dependencies
<b>Metadata Search Service</b>  <b>Cleansing Package Builder Service</b>  All Metadata Integrators	The BI platform File Repository Server must be available and running in the landscape.

Information Steward Component	Additional dependencies
<b>SAP BusinessObjects Enterprise Metadata Integrator</b>	<p>SAP BusinessObjects Business Intelligence platform (BI platform ) must be installed. The will not collect SAP BusinessObjects Enterprise Metadata Integrator objects from SAP BusinessObjects Information platform services (IPS).</p> <p>For Web Intelligence documents, the BI platform client tools must be installed on the host system.</p> <p>To collect metadata from an SAP BusinessObjects Enterprise XI 3.x system, you must install the Remote Job Server (see “Remote Job Server Installation” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>). In addition, for Crystal Reports or universes whose sources are SAP BusinessObjects NetWeaver BW objects, you must install BusinessObjects XI Integration for SAP Solutions on Enterprise XI 3.x.</p> <p>The BI platform client tools requirement is for reports that were created with the <b>Refresh on Open</b> option because when the Metadata Integrator collects the metadata from the Enterprise XI 3.x system, the Enterprise XI 3.x system will connect to the source BW system to refresh the data automatically.</p> <p>The BusinessObjects Business Intelligence platform Metadata Integrator supports two drivers: SAP BW MDX Query and SAP Operational Data Store.</p> <p>The BusinessObjects XI Integration for SAP Solutions has prerequisites that you must install. For more information, see the <i>BusinessObjects XI Integration for SAP Installation Guide</i>.</p>
Information Steward web application	<p>To view the Information Steward web application, you must have the latest Adobe Flash player installed.</p> <p>To browse and view data, the Data Insight module of Information Steward requires the following services in the Data Services APS Service:</p> <ul style="list-style-type: none"> <li>• Metadata Browsing Service</li> <li>• View Data Service</li> </ul>

### Related Topics

- [Information Steward components](#)
- [Component installation prerequisites](#)



## 2.5 Implementation resources

Before you begin planning for installation and configuration, consult the following documentation.

### Installation

For information about	See
Installation scenario instructions and selecting components of SAP BusinessObjects Business Intelligence platform that are required for SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward	<i>SAP BusinessObjects Business Intelligence Platform Installation Guide</i> if you want to install the BusinessObjects Enterprise Metadata Integrator component of Information Steward  <i>SAP BusinessObjects Information platform services Installation Guide</i>
Installation scenario instructions for SAP BusinessObjects Data Services	<i>SAP BusinessObjects Data Services Installation Guide</i>
Installation scenario instructions for SAP BusinessObjects Information Steward	"Installation scenarios" in the <i>SAP BusinessObjects Information Steward Installation Guide</i>
Installation instructions for reference data that the Address Cleanse transform uses	"Directory data" in the <i>SAP BusinessObjects Data Services Installation Guide</i>
Installation instructions for SAP-supplied cleansing packages	"Installing SAP-supplied cleansing packages" in the <i>SAP BusinessObjects Information Steward Installation Guide</i>
Deployment instructions to install SAP BusinessObjects Business Intelligence Platform, SAP BusinessObjects Data Services, and SAP BusinessObjects Information Steward all on one computer	<a href="#">Scenario 1: Deploying all on one machine</a>
Distributed deployment scenarios and installation scenario instructions	<a href="#">Planning your Information Steward deployment</a> <a href="#">Data Services Deployment</a>

## Configuration

For information about	See
Web application deployment	<ul style="list-style-type: none"> <li>• “Deploying web applications” in the <i>SAP BusinessObjects Data Services Installation Guide</i></li> <li>• “Deploying web applications with WDeploy” in the <i>SAP BusinessObjects Information Steward Installation Guide</i></li> </ul>
Security configuration	<ul style="list-style-type: none"> <li>• “Security” and “User and rights management” in the <i>SAP BusinessObjects Data Services Administrator Guide</i></li> <li>• “Securing SAP BusinessObjects Information Steward” and “Users and Groups Management” in the <i>SAP BusinessObjects Information Steward Administrator Guide</i></li> </ul>
Tuning and performance	<ul style="list-style-type: none"> <li>• <i>Data Services Performance and Optimization Guide</i></li> <li>• “Performance and Sizing Considerations” in the <i>SAP BusinessObjects Information Steward Administrator Guide</i></li> </ul>
Connectivity configuration to access other database systems as sources and targets in your Data Services jobs.  For supported database clients, see the <i>Product Availability Matrix</i> available at <a href="http://service.sap.com/PAM">http://service.sap.com/PAM</a> .	<ul style="list-style-type: none"> <li>• “Configuring additional database connectivity” in the <i>SAP BusinessObjects Data Services Administrator Guide</i></li> <li>• “Connection to SAP applications” in the <i>SAP BusinessObjects Data Services Supplement for SAP</i></li> </ul>
Connectivity configuration for Metadata Management integrators sources and Data Insight connections (data sources to profile and databases to store data that failed validation rules)	<ul style="list-style-type: none"> <li>• “Configuring sources for Metadata Integrators” in the <i>SAP BusinessObjects Information Steward Administrator Guide</i></li> <li>• “Data Insight Connections” in the <i>SAP BusinessObjects Information Steward Administrator Guide</i></li> <li>• “Extra requirements for Oracle, SAP HANA, and MySQL” in the <i>SAP BusinessObjects Information Steward Installation Guide</i></li> </ul>
Configuration for Metadata Management integrator to collect metadata from SAP BusinessObjects Enterprise XI 3.x	“To modify the configuration of a Remote Job Service” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>

## 2.6 Deployment checklist

This table provides a checklist for the steps you need to perform when planning your SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward deployment.

Checklist item	Reference	Com- plete? (Y/N)
Understand the Data Services and Information Steward components and how they interact with the BI platform.	<a href="#">Components overview</a>	Y__/N__
Understand the workflows (how information travels through the architecture).	"Information workflows" in the <i>SAP BusinessObjects Information Steward Administrator Guide</i>	Y__/N__
Identify the operating system and product dependencies to which you are deploying each component.	<i>Product Availability Matrix</i> available at <a href="http://service.sap.com/PAM">http://service.sap.com/PAM</a>	Y__/N__
Choose the database servers you will be accessing.	"Repository database requirements and preparation" in the <i>SAP BusinessObjects Information Steward Installation Guide</i>  "Preparing the repository database" in the <i>SAP BusinessObjects Data Services Installation Guide</i>	Y__/N__
Choose a web application server.	"Web Application Server" in the <i>SAP BusinessObjects Information Steward Administrator Guide</i>	Y__/N__
Identify and plan your security requirements (authentication, SSL, firewalls, reverse proxy).	"Securing SAP BusinessObjects Information Steward" in the <i>Administrator Guide</i>  "Security" in the <i>SAP BusinessObjects Data Services Administrator's Guide</i>	Y__/N__
Identify performance requirements.	<ul style="list-style-type: none"> <li><i>Data Services Performance and Optimization Guide</i></li> <li>"Performance and Sizing Considerations" in the <i>Information Steward Administrator Guide</i></li> </ul>	Y__/N__
Choose whether or not to design for high availability support.	<a href="#">Scenario 6: High availability</a>	Y__/N__

Checklist item	Reference	Complete? (Y/N)
If you are using System Landscape Directory (SLD), identify your SLD server.	"Support for SAP System Landscape Directory (SLD)" in the <i>Information Steward Installation Guide</i>	Y__/N__
Plan your system landscape to meet your chosen deployment scenario.	<a href="#">Planning your Information Steward deployment</a>	Y__/N__
Identify firewall ports that need to be opened between the application server, clients, databases, and so forth.	"Port assignments" in the <i>Data Services Installation Guide</i>	Y__/N__

**Related Topics**

- [Repository database](#)

**2.7 Scenario 1: Deploying all on one machine**

This scenario installs all components of SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward on one Windows computer which does not currently have the prerequisite components of SAP BusinessObjects Business Intelligence platform (BI platform).

Table 2-7: Installation order and steps for single machine scenario

Order	Software product	Description
1.	BI platform  This can be either SAP BusinessObjects Business Intelligence platform or SAP BusinessObjects Information platform services (IPS)	<ol style="list-style-type: none"> <li>Follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i> to start the installation.</li> <li>Select the Full installation type. If you know which components you want to install, you can select the Custom installation type.  If you choose to do a custom installation, you must have, at a minimum, the following components checked:               <ul style="list-style-type: none"> <li><b>Central Management Server</b></li> <li><b>File Repository Server</b></li> <li><b>Web Tier</b> category of components</li> <li><b>Platform Processing Services</b></li> <li><b>Platform Scheduling Services</b></li> </ul> </li> <li>Enter administrator-level connection information for the CMS that you created in the previous step.  <b>Note:</b> Keep this connection information. You will need it for the Data Services installation and the Information Steward installation.</li> </ol>
2.	SAP BusinessObjects Data Services	On the same machine: <ol style="list-style-type: none"> <li>Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide for Windows</i>.</li> <li>Enter administrator-level connection information for the CMS that you created when you installed your BI platform.</li> <li>Ensure that the following components are selected:               <ul style="list-style-type: none"> <li><b>Job Server</b> under <b>Data Services Server</b></li> <li><b>Data Services APS Server</b></li> <li><b>Data Services Management Console</b></li> </ul> </li> <li>After Data Services installation completes, you must restart the computer.</li> </ol>

Order	Software product	Description
	SAP BusinessObjects Information Steward	<p><b>Note:</b></p> <p>This installation requires that you stop and start the Server Intelligence Agent (SIA). Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users.</p> <ol style="list-style-type: none"><li>1. Follow the procedure in “Standard installation” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li><li>2. For install type, select <b>Primary Install</b>.</li><li>3. Enter administrator-level connection information for the CMS that you created when you installed your BI platform.</li><li>4. Keep the default of all components selected on the "Select Features" window.</li><li>5. After Information Steward installation completes, configure the Data Services Job Server for Information Steward. For details, see “Configuring a Data Services Job Server for Data Insight” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li><li>6. To verify that the servers and services are running after installation completes, see “Verifying Information Steward servers are running” and “Verifying Information Steward services” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li></ol>

# Data Services Deployment

SAP BusinessObjects Data Services uses SAP BusinessObjects Business Intelligence platform (or SAP BusinessObjects Information platform services) and inherits the scalable architecture that this platform provided. This architecture allows deployment of Business Intelligence platform and Data Services server components on separate machines to enhance flexibility, reliability, scalability, and performance. Server processes can be “vertically scaled” (where one computer runs several, or all, server-side processes) to reduce cost, or “horizontally scaled” (where server processes are distributed between two or more networked machines) to improve performance. You can also run duplicate instances of a server process across several networked machines to ensure high availability. For example, you can install multiple Data Services job servers or BI platform web applications on separate computers to distribute the workload and improve performance.

## 3.1 Planning your Data Services deployment

This section provides guidelines for assessing your organization's needs, and suggestions for deployment scenarios. By evaluating your needs before you deploy your Data Services system, you can keep troubleshooting to a minimum.

The section includes examples and suggestions for deployment, but it is important to note that each deployment is unique. The flexibility of the Data Services service-based architecture allows you to tailor the deployment to serve your organization's requirements as precisely as possible.

Planning your deployment involves the following steps:

1. Decide which components of Data Services you want to install and determine the basic software and hardware requirements and dependencies for them. For more information, see the related topics and the Supported Platforms document (Product Availability Matrix) at: <https://service.sap.com/PAM>.
2. Determine your web application server needs and whether you want to deploy the default Tomcat Java web application server, provided by the BI platform.

**Note:**

A Java web application server is required to host Information platform services web application (Central Management Console) and the Data Services Management Console and web services.

3. Determine your database needs and whether you want to deploy the database bundled with the BI platform.

**Note:**

It is recommended that you use a separately installed enterprise database for the Data Services repositories, but database bundled with the BI platform (and Information platform services) is supported for getting started with Data Services.

4. Review the key concepts you need to consider for your deployment, including operating system, database, and application server considerations, in addition to security, performance and scalability, and high availability. See "Assessing your organization's environment" in the *SAP BusinessObjects Business Intelligence Platform Planning Guide*.
5. Choose an initial deployment architecture. Which deployment architecture will serve your needs within the limits of your resources? For suggestions and common configurations, see [Deployment scenarios](#).

**Related Topics**

- [Data Services components](#)
- [BI platform components usage](#)

## 3.2 Deployment guidelines

Ideally, you should deploy SAP BusinessObjects Data Services components across multiple computers based on the anticipated amount of processing and time of day when the processing will occur. The following are some general deployment guidelines.

1. When using a distributed environment, enable and run only the servers that are necessary. For more information, see the *Business Intelligence platform Administrator Guide*.
2. Use dedicated servers for resource intensive servers like the Data Services Job Server.
3. Make sure that the database server for the Data Services repository is tuned and has enough resources.
4. Allocate enough memory and hard disk space to individual servers as needed.
5. Follow good scheduling practices to make sure that resource intensive tasks do not overlap each other. Schedule them to run during non-business hours so that on-demand request performance is not affected.

## 3.3 Deployment scenarios

This section describes sample scenarios for administrators planning an installation of SAP BusinessObjects Data Services. The administrator should plan the installation and landscape using as input the sample scenarios below and performance and security requirements to optimize machine usage. It is important to note that the optimal configuration for your deployment will depend on many factors: hardware configuration, database software, reporting requirements, operating system, clock speed, hyperthreading, disk speed, application server configuration, load frequency, and so on.



The following table shows a summary of the most common deployment scenarios of Data Services (DS) and the prerequisite components of SAP BusinessObjects Business Intelligence platform (BI platform).

**Note:**

None of the listed scenarios include a Data Services client (Designer) installation. A client installation should be done on a separate machine.

- Single-machine deployment: The simplest deployment scenario is a full installation on a single machine.
- Multiple-server deployment: For more complex deployments of Data Services, you can distribute the workload across multiple servers.

**Note:**

Every organization has unique requirements. These scenarios are provided only as guidelines for planning your own implementation.

Server	Scenario 2: Separate BI platform and DS	Scenario 3: Standalone DS components	Scenario 4: Distributed DS (server groups)	Scenario 5: Scaling for web application users
Server 1	BI platform (CMS)	<ul style="list-style-type: none"> <li>• BI platform (CMS/CMC)</li> <li>• DS EIM APS services</li> <li>• DS Management Console</li> </ul>	<ul style="list-style-type: none"> <li>• BI platform (CMS/CMC)</li> <li>• DS EIM APS services</li> <li>• DS Management Console</li> </ul>	BI platform (CMS)
Server 2	<ul style="list-style-type: none"> <li>• BI platform (local SIA/CMC using remote CMS)</li> <li>• Job Server</li> <li>• Access Server</li> <li>• DS EIM APS services</li> <li>• DS Management Console</li> </ul>	<ul style="list-style-type: none"> <li>• Job Server</li> <li>• Access Server</li> </ul>	<ul style="list-style-type: none"> <li>• Job Server (server group)</li> <li>• Access Server</li> </ul>	<ul style="list-style-type: none"> <li>• BI platform (local SIA/CMC using remote CMS)</li> <li>• Job Server (server group)</li> <li>• Access Server</li> <li>• DS EIM APS services</li> </ul>
Server 3			<ul style="list-style-type: none"> <li>• Job Server (server group)</li> <li>• Access Server</li> </ul>	<ul style="list-style-type: none"> <li>• BI platform (CMC) (web components)</li> <li>• DS Management Console</li> </ul>
Server 4...Server n			<ul style="list-style-type: none"> <li>• Job Server (server group)</li> <li>• Access Server</li> </ul>	

### 3.3.1 Scenario 2: Separate Data Services and BI platform installations

This scenario installs all Data Services related components on a different machine. It can be used for those who want to separate all EIM servers from their core BI servers. Some EIM components, however, need to be part of the BI cluster; therefore, this scenario will require you to install some BI components on the Data Services server (server 2) to add this server to the BI cluster.

Table 3-2: Installation order and steps

Order	Software product	Computer	Description
1	BI platform	Server 1	<ol style="list-style-type: none"> <li>1. To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>2. Select the <b>Custom/Expand</b> installation type.  Ensure that, at a minimum, the following components are selected: <ul style="list-style-type: none"> <li>• <b>Central Management Server</b></li> <li>• <b>File Repository Server</b></li> </ul> </li> <li>3. Enter administrator-level connection information for the CMS server that you created in the previous step.</li> </ol>
2	BI platform	Server 2	<ol style="list-style-type: none"> <li>1. To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>2. Select the <b>Custom/Expand</b> installation type.</li> <li>3. Select the <b>Web Tier</b> category of components.</li> </ol>

Order	Software product	Computer	Description
3	Data Services	Server 2	<ol style="list-style-type: none"> <li>Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>Ensure that, at a minimum, the following components are selected: <ul style="list-style-type: none"> <li><b>Job Server</b> under <b>Data Services Server</b></li> <li><b>Access Server</b> under <b>Data Services Server</b></li> <li><b>Data Services APS Services</b></li> <li><b>Data Services Management Console</b></li> </ul> The other Data Services components are optional.</li> <li>After Data Services installation completes, you must restart the computer.</li> </ol>

### 3.3.2 Scenario 3: Standalone Data Services components

This scenario is for those who want to have Data Services servers on a separate machine than the BI platform.

Table 3-3: Installation order and steps

Order	Software product	Computer	Description
1	BI platform	Server 1	<ol style="list-style-type: none"> <li>To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>Select the <b>Custom/Expand</b> installation type. Ensure that, at a minimum, the following components are selected: <ul style="list-style-type: none"> <li><b>Central Management Server</b></li> <li><b>File Repository Server</b></li> <li><b>Platform Processing Services</b></li> </ul> </li> <li>Enter administrator-level connection information for the CMS server that you created in the previous step.</li> </ol>

Order	Software product	Computer	Description
2	Data Services	Server 1	<ol style="list-style-type: none"> <li>1. Follow the procedure “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Select the following components: <ul style="list-style-type: none"> <li>• <b>Data Services APS Services</b></li> <li>• <b>Data Services Management Console</b></li> </ul> </li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>
3	Data Services	Server 2	<ol style="list-style-type: none"> <li>1. Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Ensure that the following components are selected: <ul style="list-style-type: none"> <li>• <b>Job Server</b> under <b>Data Services Server</b></li> <li>• <b>Access Server</b> under <b>Data Services Server</b></li> </ul> The other Data Services components are optional. </li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>

### 3.3.3 Scenario 4: Distributed Data Services (Server groups)

This scenario is an expanded version of scenario 3, and provides you with a way to set up multiple Data Services servers and server groups to further increase performance.

Table 3-4: Installation order and steps

Order	Software product	Computer	Description
1	BI platform	Server 1	<ol style="list-style-type: none"> <li>1. Follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i> to start the installation.</li> <li>2. Select the <b>Full</b> installation type. If you know which components you want to install, you can select the <b>Custom</b> installation type.  If you choose to do a custom installation, you must have, at a minimum, the following components checked: <ul style="list-style-type: none"> <li>• <b>Central Management Server</b></li> <li>• <b>File Repository Server</b></li> <li>• <b>Web Tier category of components</b></li> </ul> </li> <li>3. Enter administrator-level connection information for the CMS server that you created in the previous step.</li> </ol>
2	SAP BusinessObjects Data Services	Server 1	<ol style="list-style-type: none"> <li>1. Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Ensure that the following components are selected: <ul style="list-style-type: none"> <li>• <b>Data Services APS Services</b></li> <li>• <b>Data Services Management Console</b></li> </ul> The other Data Services components are optional. </li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>

Order	Software product	Computer	Description
3	SAP BusinessObjects Data Services	Server 2, Server 3 ...Server n	<p>Ensure that the additional computers (in this example, Server 2 to Server n) have the same hardware and software so that the Data Services Job Servers are running on identical systems.</p> <ol style="list-style-type: none"> <li>1. Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Ensure that the following components are selected: <ul style="list-style-type: none"> <li>• <b>Job Server</b> under <b>Data Services Server</b></li> <li>• <b>Access Server</b> under <b>Data Services Server</b></li> </ul> <p>The other Data Services components are optional.</p> </li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>

### 3.3.4 Scenario 5: Scaling servers for web application users

This scenario expands the number of computers to handle a large number of web application users. Use this scenario to help provide high availability and load balancing for web applications

Table 3-5: Installation order and steps

Order	Software product	Computer	Description
1	BI platform	Server 1	<ol style="list-style-type: none"> <li>1. To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>2. Select the <b>Custom/Expand</b> installation type.</li> </ol> <p>Ensure that, at a minimum, the following components are selected:</p> <ul style="list-style-type: none"> <li>• <b>Central Management Server</b></li> <li>• <b>File Repository Server</b></li> </ul>

Order	Software product	Computer	Description
2	BI platform	Server 2	<ol style="list-style-type: none"> <li>1. To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>2. Select the <b>Custom/Expand</b> installation type.</li> <li>3. Under <b>Servers &gt; Platform Services</b>, select <b>Platform Processing Services</b>.</li> <li>4. On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li> <li>5. On the "Existing CMS Deployment Information" screen, enter the connection information for the CMS that you created on Server 1.</li> </ol>
3	Data Services	Server 2	<ol style="list-style-type: none"> <li>1. Follow the procedure in "To run an interactive installation" in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Ensure that the following components are selected: <ul style="list-style-type: none"> <li>• <b>Job Server</b> under <b>Data Services Server</b></li> <li>• <b>Access Server</b> under <b>Data Services Server</b></li> <li>• <b>Data Services APS services</b></li> </ul> The other Data Services components are optional.</li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>
4.	BI platform	Server 3	<ol style="list-style-type: none"> <li>1. To start the installation, follow the procedure in the <i>SAP BusinessObjects Information platform services Installation Guide</i>.</li> <li>2. Select the <b>Custom/Expand</b> installation type.</li> <li>3. Select the <b>Web Tier</b> category of components.</li> </ol>
5.	Data Services	Server 3	<ol style="list-style-type: none"> <li>1. Follow the procedure in "To run an interactive installation" in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Select the <b>Data Services Management Console</b> component. The other Data Services components are optional.</li> <li>3. After Data Services installation completes, you must restart the computer.</li> </ol>

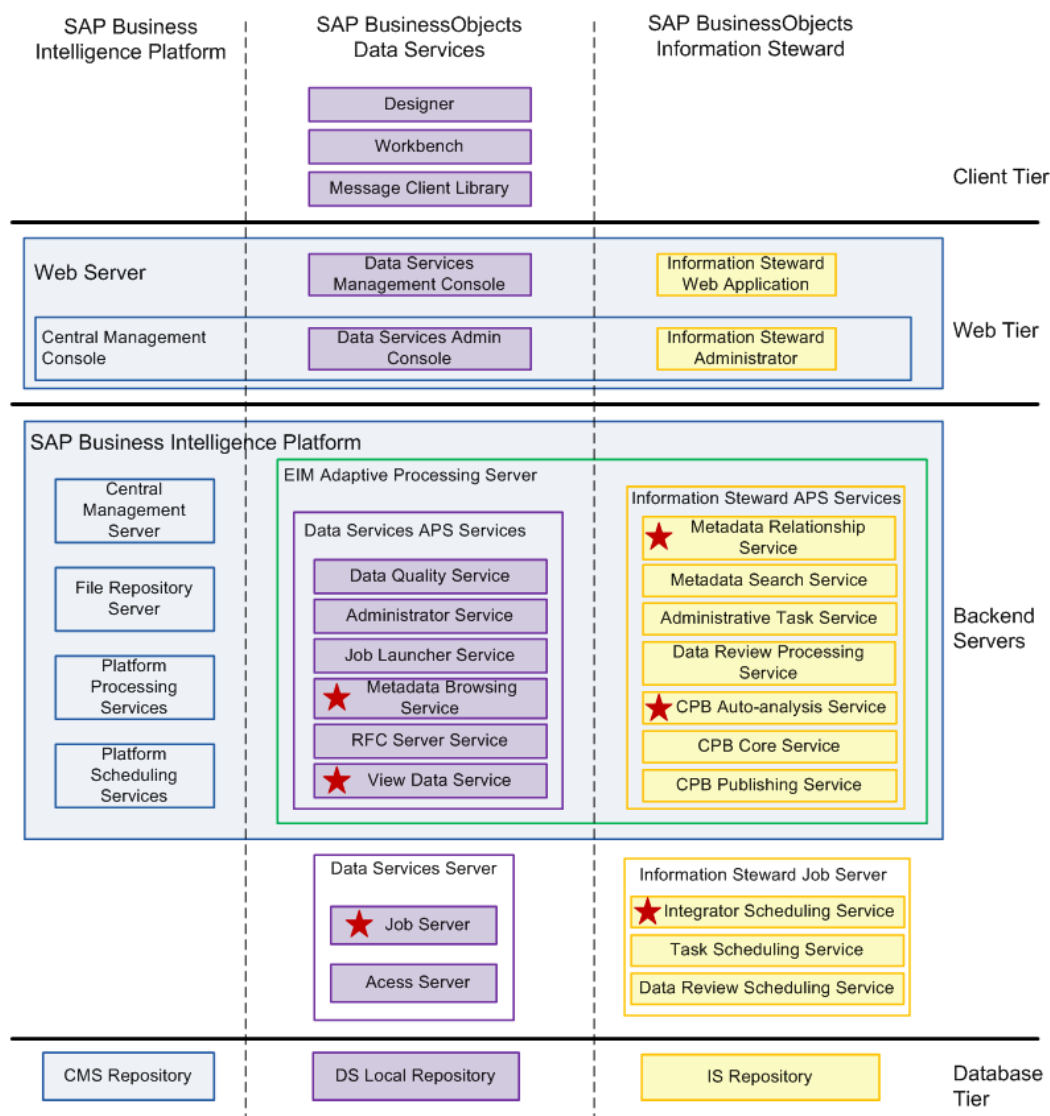




## Information Steward Deployment

SAP BusinessObjects Information Steward inherits the scalable architecture provided by the SAP BusinessObjects Business Intelligence platform and SAP BusinessObjects Data Services. This architecture allows deployment of different server components of Business Intelligence platform, Data Services, and Information Steward on different machines for flexibility, reliability, scalability, and better performance. You can also run duplicate instances of a server process across several networked machines for high availability.

The services with a red star in the following diagram can be process intensive, and might require more computing resources and times. The remainder of this section describes guidelines and deployment scenarios to deploy these services on different machines in a distributed environment to improve performance.



### Related Topics

- [Planning your Information Steward deployment](#)
- [Information Steward deployment guidelines](#)
- [Information Steward distributed deployment scenarios](#)

## 4.1 Planning your Information Steward deployment

The section includes examples and suggestions for distributed deployment, but it is important to note that each deployment is unique. The flexibility of the Business Intelligence platform service-based architecture allows you to tailor the deployment to serve your organization's requirements as precisely as possible.

Planning your deployment involves the following steps:

1. Decide which components of Information Steward you want to install and determine the basic software and hardware requirements for them. For more information, see the related topics and the Product Availability Matrix at <http://service.sap.com/PAM>.
2. Review the key concepts you need to consider for your deployment, including operating system, database, and application server considerations, in addition to security, performance and scalability, and high availability. See "Assessing your organization's environment" in the *SAP BusinessObjects Business Intelligence Platform Planning Guide*.
3. Choose an initial deployment architecture that will serve your needs within the limits of your resources.

For suggestions and common configurations, see [Information Steward distributed deployment scenarios](#).

#### **Related Topics**

- [Information Steward components](#)
- [Component installation prerequisites](#)
- [Component run-time dependencies](#)

## **4.2 Information Steward deployment guidelines**

This section provides guidelines for assessing your organization's needs and suggestions for distributed deployment scenarios. By evaluating your needs before you deploy your SAP BusinessObjects Information Steward system, you can keep troubleshooting to a minimum.

### **4.2.1 Information Steward general deployment guidelines**

Ideally, you should deploy SAP BusinessObjects Information Steward components across multiple computers based on the expected amount of processing and expected time of day when the processing will occur. The following are some general deployment guidelines.

1. When using a distributed environment, enable and run only the servers that are necessary. For more information, see the *Business Intelligence Platform Administrator Guide*.
2. Use dedicated servers for resource intensive servers like the Data Services Job Server, Metadata Integrators, and the Cleansing Package Builder Auto-Analysis service.

3. Install the Information Steward Web Application on a separate server. The Business Intelligence platform Web Tier must be installed on the same computer as the Information Steward Web Application. If you do not have Tomcat, you need to manually deploy the Information Steward Web Application.
4. If you have many concurrent users, you can use multiple Information Steward web applications with a load balancer.
5. The Information Steward repository should be on a separate computer but in the same sub-network as the Information Steward Web application, Enterprise Information Management Adaptive Processing Server, Information Steward Job Server, and Cleansing Package Builder to obtain a higher throughput.
6. Make sure that the database server for the Information Steward repository is tuned and has enough resources.
7. Allocate enough memory and hard disk space to individual servers as needed.
8. Follow good scheduling practices to make sure that resource intensive tasks do not overlap each other. Schedule them to run during non-business hours so that on-demand request performance is not affected.

### Related Topics

- [Administrator Guide: Performance and Scaling Considerations, General best practices](#)
- [Installation Guide: Deploying web applications with WDeploy](#)
- [SAP BusinessObjects Business Intelligence platform Web Application Deployment Guide: Failover and load balancing](#)
- [Installation Guide: Data Insight deployment guidelines for profile and rule tasks](#)
- [Installation Guide: Metadata Management deployment guidelines](#)
- [Installation Guide:](#)

## 4.2.2 Data Insight deployment guidelines for profile and rule tasks

Guidelines to deploy the Data Insight module of Information Steward components include the following:

1. If you expect your Data Insight profiling and rule tasks to consume a large amount of processing, deploy the Data Services Job Server on a separate computer.
2. To improve the execution of Data Insight profiling tasks, the Data Services Job Server can be on multiple computers that are separate from the web application server to take advantage of Data Services job server groups and parallel execution. You must access the Data Services Server Manager on each computer to do the following tasks:
  - Add a Data Services Job Server and associate it to the Information Steward repository. For more information, see “Adding Data Services Job Servers for Data Insight” in the *Information Steward Administrator Guide*.
  - Specify the path of the pageable cache that will be shared by all job servers in the **Pageable cache directory** option.

3. For a predictable distribution of tasks when using multiple Data Services Job Servers, try to ensure that the hardware and software configurations are homogeneous. This means that they should all have similar CPU and RAM capacity.
4. Irrespective of using Degree of Parallelism (DOP) or multiple Data Services Job Servers, set the pageable cache directory on high speed and high capacity disk. For more information, see “Specifying a pageable cache directory” in the *Data Services Performance Optimization Guide*.
5. If you are processing flat files, store them on a high speed disk so that read performance is good.
6. For high availability on a cluster, duplicate SAP BusinessObjects Business Intelligence platform CMS server, Business Intelligence platform Web Tier, Information Steward web application, Data Services Job Server and Information Steward Task Server. For more information, see [Scenario 6: High availability](#) and “Clustering Central Management Servers” in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

### Related Topics

- [Administrator Guide: Performance and Scaling Considerations, Data Insight best practices](#)

## 4.2.3 Metadata Management deployment guidelines

Guidelines to deploy the Metadata Management module of Information Steward components include the following:

1. Metadata integrators for BusinessObjects Enterprise, Data Services, and SAP Business Warehouse should be installed on their own dedicated servers if they require large processing time or they run in overlapping time periods with other metadata integrators or Data Insight tasks.
2. The Metadata Relationship Service and Metadata Search Service can be combined.
3. Additional guidelines to consider for Metadata Relationship Service :
  - Should be on a separate computer than the web application server to obtain higher throughput.
  - Can be combined with any Metadata Integrator, or it can be on its own computer. The rationale for this combination is that Metadata Integrators usually run at night or other non-business hours, and the Metadata Relationship Service runs during normal business hours when users are viewing relationships (such as impact and lineage) on the Information Steward web application.
4. Additional guidelines to consider for Metadata Search Service include:
  - Can be combined with any Metadata Integrators, or it can be on its own computer. The rationale for this combination is that Metadata Integrators usually run at night or other non-business hours, and the Search Server runs during normal business hours when users are searching on the Metadata Management tab of Information Steward.
5. The File Repository Servers should be installed on a server with a high speed and high capacity disk.
6. For high availability on a cluster, duplicate the SAP BusinessObjects Business Intelligence platform CMS server, Business Intelligence platform Web Tier and Information Steward web application, and Metadata Integrators. For more details, see [Scenario 6: High availability](#) and “Clustering Central Management Servers” in the *SAP BusinessObjects Business Intelligence Platform Administrator Guide*.

**Related Topics**

- [Administrator Guide: Performance and Scaling Considerations, Metadata Management best practices](#)

## 4.2.4 Cleansing Package Builder deployment guidelines

Guidelines to deploy the Cleansing Package Builder module of Information Steward components include the following:

1. The Cleansing Package BuilderAuto-analysis service should be on a dedicated server to obtain higher throughput.
2. For high availability on a cluster, duplicate SAP BusinessObjects Business Intelligence platform, Business Intelligence platform Web Tier and Cleansing Package Builder Service .

**Related Topics**

- [Administrator Guide: Performance and Scaling Considerations, Cleansing Package Builder best practices](#)

## 4.3 Information Steward distributed deployment scenarios

This section describes sample scenarios for administrators planning a distributed installation of SAP BusinessObjects Information Steward to scale to specific workloads. The administrator should plan the installation and landscape using as input the sample scenarios below and performance and security requirements, trying to optimize the machine usage. It is important to note that the optimal configuration for your deployment will depend on many factors: hardware configuration, database software, reporting requirements, operating system, clock speed, hyperthreading, disk speed, application server configuration, load frequency, and so on.

The following table shows a summary of the most common deployment scenarios of Information Steward (IS) and the prerequisite components of SAP BusinessObjects Business Intelligence platform (BI platform) and SAP BusinessObjects Data Services (DS).

**Tip:**

For guidelines about deploying Information Steward and Data Services on the same instance or a separate instance of SAP Business Intelligence platform, see <http://wiki.sdn.sap.com/wiki/x/0YiLEg>.

**Note:**

Every deployment is unique, and these examples are provided only as guidelines.

Server	Scenario 1: All on one machine	Scenario 2: Scaling for Data Insight	Scenario 3: Scaling for Metadata Management	Scenario 4: Scaling for Cleansing Package Builder	Scenario 5: Scaling for web application users
Server 1	BI platform DS Job Server DS EIM APS IS web application IS Task Server Search Relationship Integrators CPB Services	BI platform DS Job Server DS EIM APS IS web application IS Task Server Search Relationship Integrators CPB Services	BI platform DS Job Server DS EIM APS IS web application IS Task Server Relationship CPB Services	BI platform DS Job Server DS EIM APS IS web application IS Task Server Search Relationship Integrators	BI platform DS Job Server DS EIM APS IS Task Server Search Relationship Integrators CPB Services
Server 2			Integrator Search  BI platform Processing Server  BI platform Scheduling Server	CPB Auto-analysis Service	<ul style="list-style-type: none"> <li>• BI platform (CMC) (web components)</li> <li>• IS web application</li> </ul>
Server 3				CPB Core Service  CPB Publishing Service	

The following topics provide the steps to deploy each of the scaling scenarios above, plus the following additional scenarios:

- High availability
- Mixed operating systems

**Note:**

The steps to deploy scenario 1 are in [Scenario 1: Deploying all on one machine](#).

**Related Topics**

- [Scenario 2: Scaling Data Insight servers](#)

- [Scenario 3: Scaling for Metadata Management](#)
- [Scenario 4: Scaling for Cleansing Package Builder](#)
- [Scenario 5: Scaling servers for web application users](#)
- [Scenario 6: High availability](#)
- [Scenario 7: Mixed operating systems](#)

### 4.3.1 Scenario 2: Scaling Data Insight servers

This scenario expands the number of computers to run profile and rule tasks. To enable grid computing for profile tasks, see the “Performance and Sizing Considerations” section in the *SAP BusinessObjects Information Steward Administrator Guide*.

Use this scenario to provide load balancing and parallel execution for Data Insight profile and rule tasks.

The following diagram shows the components to install on each computer and the table lists the recommended order of installing prerequisite software, installing Information Steward, and post-installation steps required for this scenario.

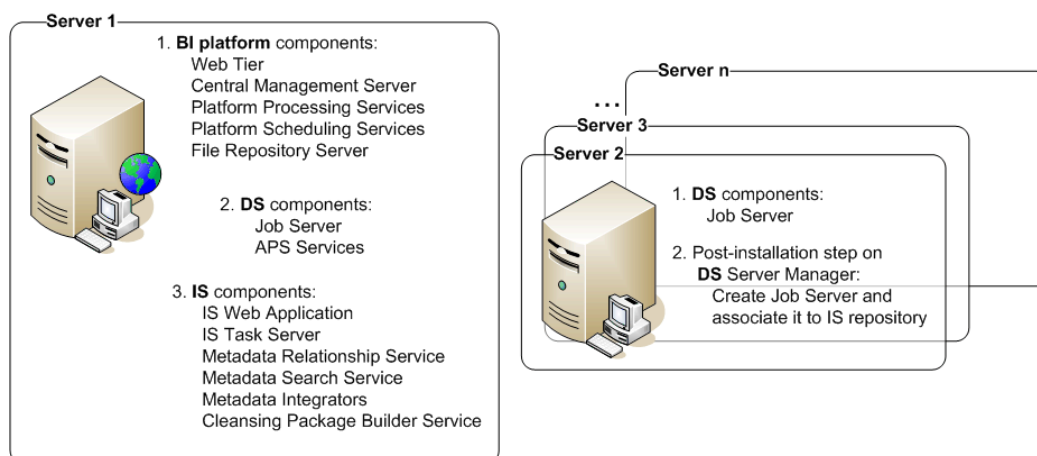




Table 4-2: Installation order and steps for large amount of profile or rule task processing

Computer	Software product	Description
Server 1	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)  SAP BusinessObjects Data Services  SAP BusinessObjects Information Steward	Follow the same steps as in Scenario 1: Single machine deployment.
Server 2 , Server 3, ... Server n	SAP BusinessObjects Data Services	<p><b>Note:</b> Ensure that the additional computers (in this example, Server 2 to Server n) have the same hardware and software so that the Data Services Job Servers are running on identical systems.</p> <ol style="list-style-type: none"> <li>1. Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>. Ensure that the following component is selected: <ul style="list-style-type: none"> <li>• Data Service Job Server</li> </ul> </li> <li>2. After installation completes, invoke the Data Services Server Manager on this computer to create a Data Services Job Server and associate it with the Information Steward repository. For details, see “Configuring a Data Services Job Server for Data Insight” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li> </ol>

### 4.3.2 Scenario 3: Scaling for Metadata Management

This scenario expands the number of computers to handle Metadata Management integrator sources.

Use this scenario to provide high availability when running integrator sources that consume a lot of resources and might take hours to collect metadata for the Metadata Management module of Information Steward.

The following diagram shows the components to install on each computer and the table lists the recommended order to install prerequisite software and which components to select for each product.

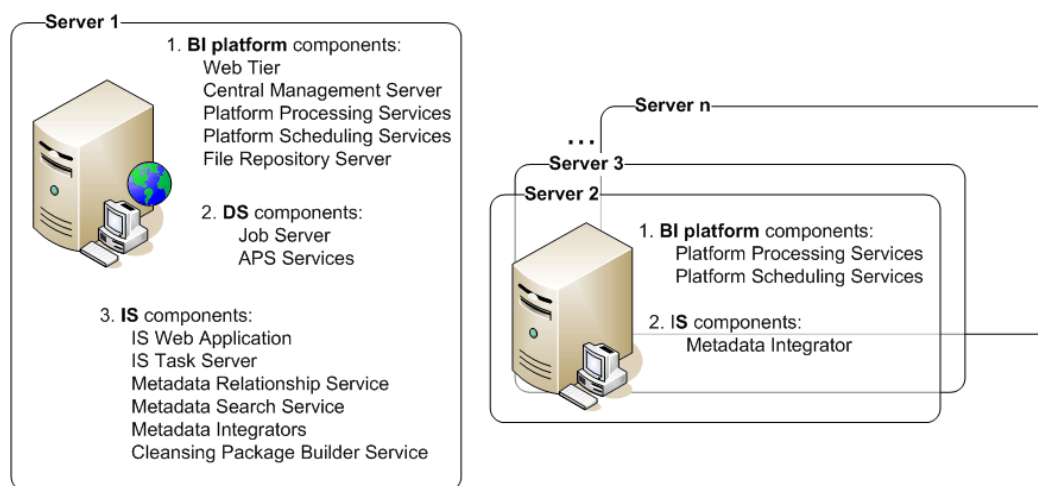


Table 4-3: Installation order and steps for a large amount of integrator source processing

Computer	Software product	Description
Server 1	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)  SAP BusinessObjects Data Services  SAP BusinessObjects Information Steward	Follow the same steps as in Scenario 1: Single machine deployment.

Computer	Software product	Description
Server 2, Server 3, ... Server n	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)	<p><b>Note:</b> Ensure that the additional computers to run the integrator sources have the Windows operating system. Ideally, the integrator source system should exist on this computer.</p> <p>To start the installation, follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Installation Guide for Windows</i>, and specify the following options for this deployment:</p> <ul style="list-style-type: none"> <li>For install type, select <b>Custom/Expand</b>.</li> <li>On the "Select Features" screen, clear the check marks for <b>Web Tier</b> and <b>Servers</b>, and select the following components under <b>Servers &gt; Platform Services</b>: <ul style="list-style-type: none"> <li>Platform Processing Services</li> <li>Platform Scheduling Services</li> </ul> </li> <li>On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li> <li>On the "Existing CMS Deployment Information " screen, enter the connection information for the CMS that you created on Server 1.</li> </ul>
	SAP BusinessObjects Information Steward	<p><b>Note:</b> The Information Steward installation requires that you stop and start the Server Intelligence Agent (SIA). Users cannot access the Central Management System (CMS) while the SIA is stopped. Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users.</p> <ol style="list-style-type: none"> <li>Follow the Standard installation procedure in the <i>Installation Guide</i>.</li> <li>For install type, select <b>Expanded Install</b>.</li> <li>Enter administrator-level connection information for the CMS that you created on Server 1.</li> <li>Skip the repository creation.</li> <li>Select the Metadata Integrator component that you want to install.</li> </ol>

#### Related Topics

- [Installation Guide: Standard installation](#)

### 4.3.3 Scenario 4: Scaling for Cleansing Package Builder

This scenario expands the number of computers to handle a large amount of Cleansing Package Builder processing. The Cleansing Package Builder Auto-analysis Service is the most resource-intensive service of the Cleansing Package Builder module of Information Steward.

Use this scenario to separate the most resource-intensive service of the Cleansing Package Builder onto its own computer.

The following diagram shows the components to install on each computer and the table lists the recommended order to install prerequisite software and which components to select for each product.

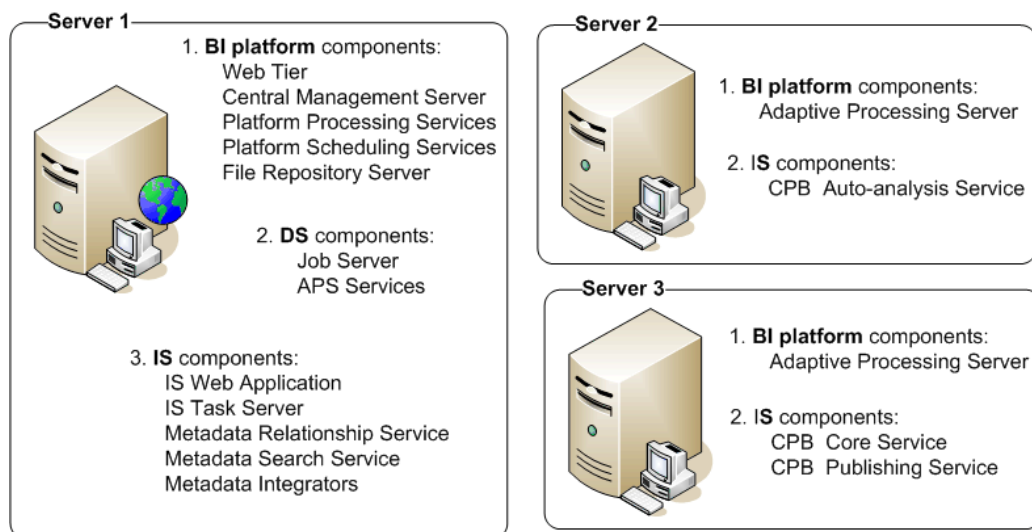


Table 4-4: Installation order and steps for a large amount of Cleansing Package Builder processing

Computer	Software product	Description
Server 1	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS) SAP BusinessObjects Data Services SAP BusinessObjects Information Steward	Follow the same steps as in Scenario 1: Single machine deployment.

Computer	Software product	Description
Server 2	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)	<p>To start the installation, follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Installation Guide for Windows</i>, and specify the following options for this deployment:</p> <ul style="list-style-type: none"> <li>For install type, select <b>Custom/Expand</b>.</li> <li>On the "Select Features" screen, clear the check marks for <b>Web Tier</b> and <b>Servers</b>, and select the following components under <b>Servers &gt; Platform Services</b>: <ul style="list-style-type: none"> <li>Platform Processing Services</li> <li>Platform Scheduling Services</li> </ul> </li> <li>On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li> <li>On the "Existing CMS Deployment Information" screen, enter the connection information for the CMS that you created on Server 1.</li> </ul>
	SAP BusinessObjects Information Steward	<ol style="list-style-type: none"> <li>Follow the Standard installation procedure in the <i>Installation Guide</i>. <b>Note:</b> The Information Steward installation requires that you stop and start the Server Intelligence Agent (SIA). Users cannot access the Central Management System (CMS) while the SIA is stopped. Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users. <ul style="list-style-type: none"> <li>For install type, select <b>Expanded Install</b>.</li> <li>Enter administrator-level connection information for the CMS that you created on Server 1.</li> <li>For the Information Steward repository, enter the same connection information as on Server 1 and skip the repository creation.</li> <li>Select the Cleansing Package Builder component.</li> </ul> </li> <li>After Information Steward installation completes, enable only the Cleansing Package Builder Auto-analysis Service on this computer. <ul style="list-style-type: none"> <li>From the CMC Home page, go to the "Servers" management area.</li> <li>Expand the <b>Service Categories</b> node and select <b>Enterprise Information Management Services</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Stop Server</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Select Services</b>.</li> <li>From the list on the right, select Cleansing Package Builder Core service and Cleansing Package Builder Publishing service, click <b>&lt;</b> to remove them, and then click <b>OK</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Start Server</b>.</li> </ul> </li> </ol>

Computer	Software product	Description
Server 3	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)	Follow the same steps as in Server 2.
	SAP BusinessObjects Information Steward	<ol style="list-style-type: none"> <li>Step 1 is the same as in Server 2 for SAP BusinessObjects Information Steward.</li> <li>Enable only the Cleansing Package Builder Core Service and Cleansing Package Builder Publishing Service on this computer: <ul style="list-style-type: none"> <li>From the CMC Home page, go to the "Servers" management area.</li> <li>Expand the <b>Service Categories</b> node and select <b>Enterprise Information Management Services</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Stop Server</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Select Services</b>.</li> <li>From the list on the right, select Cleansing Package Builder Auto-analysis service, click &lt; to remove it, and click <b>OK</b>.</li> <li>Right-click "EIMAdaptiveProcessingServer" and click <b>Start Server</b>.</li> </ul> </li> </ol>

#### Related Topics

- [Installation Guide: Standard installation](#)

### 4.3.4 Scenario 5: Scaling servers for web application users

This scenario expands the number of computers to handle a large number of web application users.

Use this scenario to provide high availability and load balancing for web applications.

#### Note:

If you distribute the Information Steward Web Application on multiple computers, you will need to install a load balancer (software or hardware) to distribute the users among the web servers.

The following diagram shows the components to install on each computer and the table lists the recommended order to install prerequisite software and which components to select for each product.

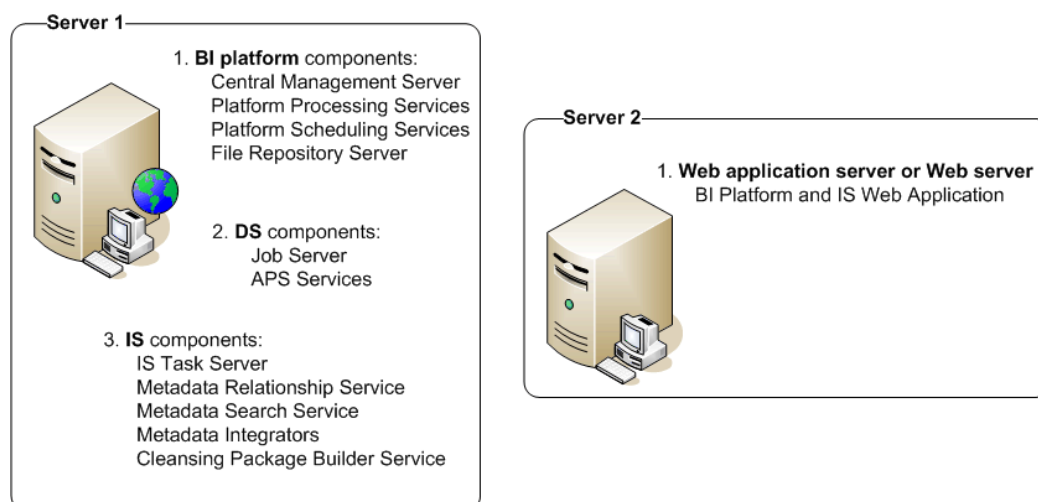


Table 4-5: Installation order and steps for a large number of web application users

Computer	Software product	Description
Server 1	BI platform Data Services Information Steward	<ol style="list-style-type: none"> <li>1. Follow the same steps as in Scenario 1: Single machine deployment.</li> <li>2. After installation, generate a deployment file using WDeploy for manual deployment. For more information, see "Deploying web applications with WDeploy" in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li> </ol>
Server 2	Web Application Server or Web Server	<ol style="list-style-type: none"> <li>1. Install the WDeploy file generated on Server 1 onto this Web Application Server or Web Server. For more information, see "To deploy or undeploy components" in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li> </ol>

### 4.3.5 Scenario 6: High availability

This scenario expands the single machine scenario to deploy more than one complete Information Steward installation on different machines forming a cluster environment.

Use this scenario to provide high availability and load balancing of the Information Steward components.

**Note:**

This load balancing scenario requires a hardware or software load balancer to cluster the Web Application Servers for Information Steward.

**Restriction:**

You cannot use this load balancing scenario for Data Services.

The following diagram shows the components to install on each computer and the table lists the recommended order to install prerequisite software and which components to select for each product.

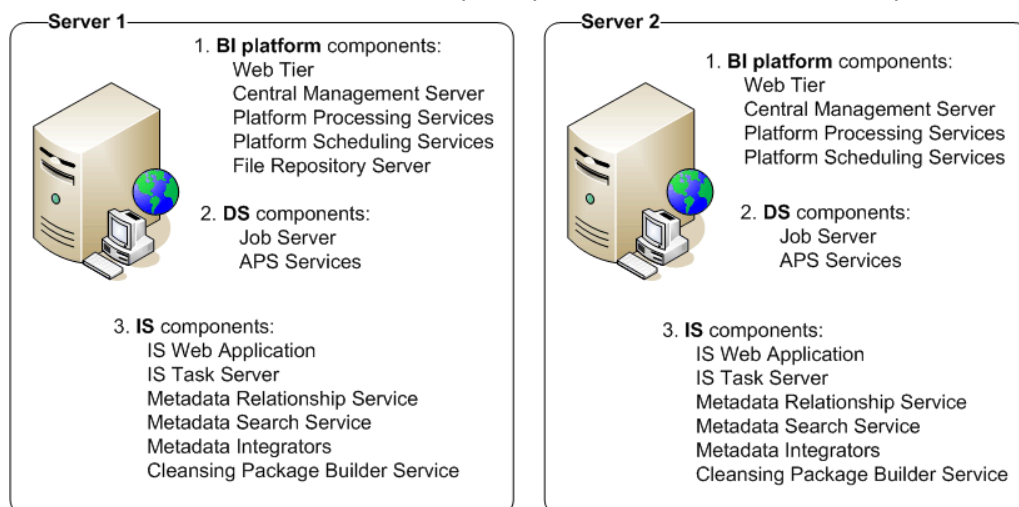


Table 4-6: Installation order and steps for high availability

Computer	Software product	Description
Server 1	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS) SAP BusinessObjects Data Services SAP BusinessObjects Information Steward	Follow the steps as in <a href="#">Scenario 1: Deploying all on one machine.</a>



Computer	Software product	Description
Server 2	SAP BusinessObjects Business Intelligence platform (BI platform) or SAP BusinessObjects Information platform services (IPS)	<p>To set up a cluster of Central Management Servers (CMSs), follow the procedure in “Adding a CMS to a cluster” in the <i>SAP BusinessObjects Information Platform Services Administrator Guide</i> or <i>SAP BusinessObjects Business Intelligence Platform Administrator Guide</i>, and specify the following options for this deployment:</p> <ul style="list-style-type: none"> <li>• For install type, select <b>Expanded</b>.</li> <li>• On the "Select Features" screen, under <b>Servers &gt; Platform Services</b>, clear the check marks for <b>Central Management Server</b> and <b>File Repository Services (FRS)</b>.</li> <li>• On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li> <li>• On the "Existing CMS Deployment Information " screen, enter the connection information for the CMS that you created on Server 1.</li> <li>• After BI platform installation completes, follow the procedure in <a href="#">Configuring the File Repository Server (FRS) in a cluster environment</a> so that Server 1 and Server 2 will use a common FRS.</li> </ul>
	SAP BusinessObjects Data Services	<p>For load balancing the Data insight and Data Review modules of Information Steward, set up another Data Services Job Server.</p> <ol style="list-style-type: none"> <li>1. Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide</i>.</li> <li>2. Ensure that the following components are selected: <ul style="list-style-type: none"> <li>• <b>Job Server</b> under <b>Data Services Server</b></li> <li>• <b>Data Services APS Services</b> which contain the Metadata Browsing Service and Data Services View Data Service.</li> </ul> </li> </ol> <p>The other Data Services components are optional.</p>
	SAP BusinessObjects Information Steward	

Computer	Software product	Description
		<p><b>Note:</b></p> <p>The Information Steward installation requires that you stop and start the Server Intelligence Agent (SIA). Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users.</p> <ol style="list-style-type: none"> <li>1. Follow the Standard installation procedure in the <i>Information Steward Installation Guide</i>.</li> <li>2. For install type, select <b>Expanded</b>.</li> <li>3. Enter administrator-level connection information for the CMS that you created on Server 1.</li> <li>4. For the CMS, you must enter the administrator-level connection information for the CMS that you created on Server 1.</li> <li>5. For the Information Steward repository, enter the same connection information as on Server 1 and skip the repository creation.</li> <li>6. Keep the default of all components selected on the "Select Features" window.</li> <li>7. When the installation finishes, configure the Data Services Job Server for Information Steward. For more information, see "Configuring a Data Services Job Server for Data Insight" in the <i>Information Steward Installation Guide</i>.</li> </ol>

### Related Topics

- [Installation Guide: Standard installation](#)

#### 4.3.5.1 Configuring the File Repository Server (FRS) in a cluster environment

In a BI platform cluster environment, you can use a Network File System (also called Network Attached Storage (NAS)) to share one File Repository Server (FRS) across multiple server computers.

**Note:**

The BI platform 4.1 Server Intelligence Agent (SIA) ID(account)/Password and NAS ID/Password must be the same. For example,

- **BI platform 4.1 SIA ID:** boadmin **password:** 12345
- **NAS ID:** boadmin **password:** 12345

To configure the FRS to point to the NAS:

1. Create the New ID(account) at BI platform Server and NAS Server.

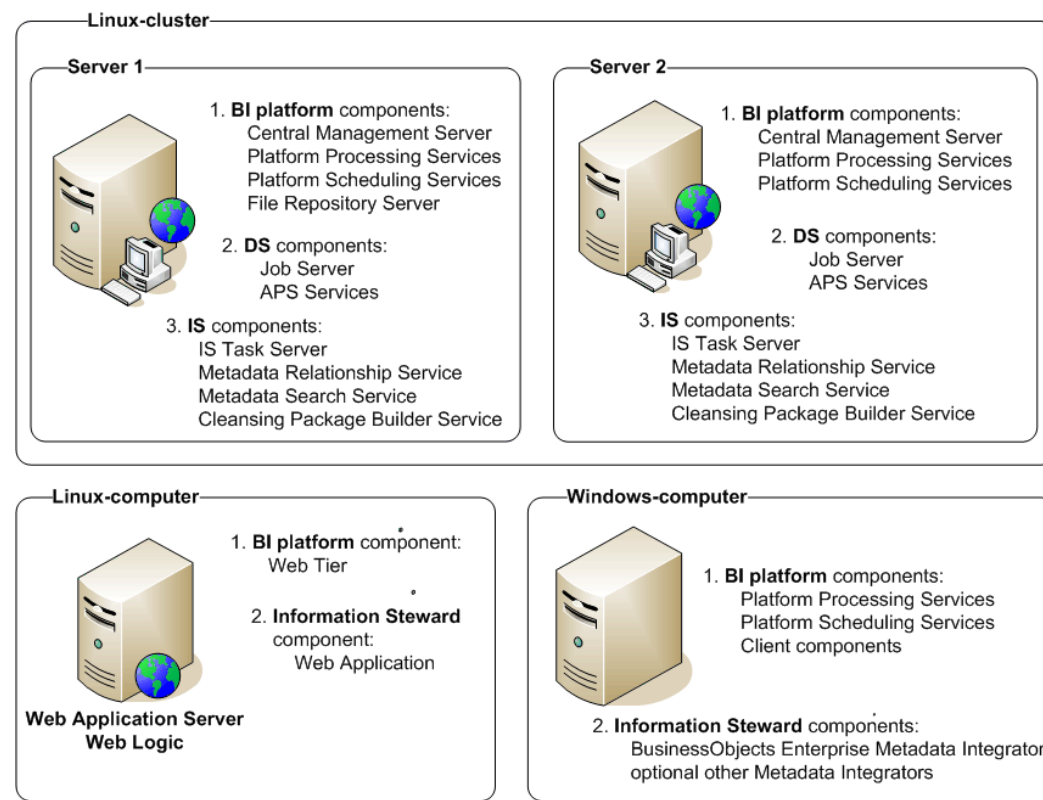
- a. Click **Start > Control Panel > Administrative Tools > Computer Management**.
  - b. Expand **Local Users and Groups**.
  - c. Right-click **Users > New User...** from shortcut menu.
  - d. Create the new user and add the user to Administrators group.
2. Create the FileStore\Input and FileStore\Output folders on the NAS Server.
3. Register the NAS Server host name and IP address in C:\WINDOWS\system32\drivers\etc\hosts on the BI platform Server.
4. Change the SIA ID(account).
  - a. Click **Start > Run** and type Services.msc to open the Services page.
  - b. Stop the SIA Service.
  - c. Open its "Properties" window, click the "Log On" tab, and select **This account**.
  - d. Enter the user account name and password created in step 1 and click **Apply**.
  - e. Start the SIA service.
5. Change the directories for Input/Output File Repository Server.
  - a. Log on to Central Management Console (CMC).
  - b. Click **Servers > Servers List**.
  - c. From the list in the right pane, double click "Input/Output File Repository Server" and change the **Temporary Directory** and **File Store Directory** to the folder on the NAS Server. Use the UNC path. For example, \\boedb\FRS\Output\temp.
  - d. Click **Save & Close**.
  - e. Right-click "Input/Output File Repository Server" and click **Restart**.

### 4.3.6 Scenario 7: Mixed operating systems

This scenario illustrates a situation in which you want to add SAP BusinessObjects Information Steward in a mixed operating system environment. For example, suppose you have the following environment:

- Linux on two 64-bit computers clustered with SAP BusinessObjects Enterprise 4.1
- Linux for Web Logic on a third computer for the web applications
- Windows with SAP BusinessObjects Enterprise 4.1 on a fourth computer

The following diagram shows this environment after you install the prerequisite components of SAP BusinessObjects Business Intelligence platform and SAP BusinessObjects Data Services, and then Information Steward. The table after the diagram lists the recommended order that the software components should be installed to ensure that the prerequisite software is installed before you start installing Information Steward.



Order	Task	Notes
1. (a)	Install SAP BusinessObjects Business Intelligence platform (BI platform) on Server 1 of the clustered Linux 64-bit computers.	<ol style="list-style-type: none"> <li>1. Follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Installation Guide for UNIX</i> to start the installation.</li> <li>2. Select the Custom installation type.</li> <li>3. On the "Select Features" window, unselect the Web Tier component.</li> <li>4. After installation, generate a deployment file using WDeploy for manual deployment. For more information, see "Deploying web applications with WDeploy" in the <i>Information Steward Installation Guide</i>.</li> <li>5. After the installation completes, verify that communication is working for the BI platform components: <ol style="list-style-type: none"> <li>a. Go to the "Servers" management area of the CMC to ensure that the following servers are enabled in the "Servers List": <ul style="list-style-type: none"> <li>• <code>computernameAdaptiveProcessingServer</code></li> <li>• <code>computernameAdaptiveJobServer</code></li> <li>• <code>computernameCentralManagementServer</code></li> <li>• <code>computernameInputFileRepository</code></li> <li>• <code>computernameOutputFileRepository</code></li> </ul> </li> <li>b. Invoke the Central Configuration Manager to ensure that the services associated with the above servers are enabled.</li> </ol> </li> </ol>

Order	Task	Notes
1. (b)	Install BI platform on Server 2 of the clustered Linux 64-bit computers.	<p>To set up a cluster of Central Management Servers (CMSs), follow the procedure in "Adding a CMS to a cluster" in the <i>SAP BusinessObjects Information Platform Services Administrator Guide</i> or <i>SAP BusinessObjects Business Intelligence Platform Administrator Guide</i>, and specify the following options for this deployment:</p> <ul style="list-style-type: none"><li>• For install type, select <b>Custom/Expand</b>.</li><li>• On the "Select Features" screen, under <b>Servers &gt; Platform Services</b>, clear the check marks for <b>Central Management Server</b> and <b>File Repository Services (FRS)</b>.</li><li>• On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li><li>• On the "Existing CMS Deployment Information " screen, enter the connection information for the CMS that you created on Server 1.</li><li>• After BI platform installation completes, follow the procedure in <a href="#">Configuring the File Repository Server (FRS) in a cluster environment</a> so that Server 1 and Server 2 will use a common FRS.</li></ul>

Order	Task	Notes
2. (a)	Install SAP BusinessObjects Business Intelligence platform and the SAP BusinessObjects Enterprise Client Tools on the Windows computer.	<p>You must install SAP BusinessObjects Business Intelligence platform on the Windows computer before you install SAP BusinessObjects Information Steward.</p> <ol style="list-style-type: none"> <li>1. Backup the CMS database and SAP BusinessObjects Business Intelligence platform (BI platform) filestore that currently exists on Linux.</li> <li>2. To start the installation, follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Installation Guide for Windows</i>, and specify the following options for this deployment: <ul style="list-style-type: none"> <li>• For install type, select <b>Custom/Expand</b>.</li> <li>• On the "Select Features" window, clear the check marks for <b>Web Tier</b> and <b>Servers</b>, and select the following components under <b>Servers &gt; Platform Services</b>: <ul style="list-style-type: none"> <li>• Platform Processing Services</li> <li>• Platform Scheduling Services</li> </ul> </li> <li>• On the "Configure Server Intelligence Agent (SIA)" screen, enter the node name for this computer.</li> <li>• On the "Existing CMS Deployment Information " screen, enter the connection information for the CMS that you created on Server 1.</li> </ul> </li> <li>3. To verify that communication is working for the BI platform components: <ol style="list-style-type: none"> <li>a. Go to the "Servers" management area of the CMC to ensure that the following servers are enabled in the "Servers List": <ul style="list-style-type: none"> <li>• <code>computernameAdaptiveProcessingServer</code></li> <li>• <code>computernameAdaptiveJobServer</code></li> <li>• <code>computernameCentralManagementServer</code></li> </ul> </li> <li>b. Invoke the Central Configuration Manager to ensure that the services associated with the above servers are enabled.</li> </ol> </li> <li>4. To start the installation of BI platform client components (such as SAP Crystal Reports), follow the procedure "To run an interactive installation of Client Tools" in the <i>SAP BusinessObjects Business Intelligence platform Installation Guide for Windows</i>.</li> </ol>

Order	Task	Notes
2. (b)	Install SAP BusinessObjects Data Services on Server 2 of the Linux cluster.	<p>You must install SAP BusinessObjects Data Services on the computer before you perform the first installation of SAP BusinessObjects Information Steward.</p> <ol style="list-style-type: none"> <li>Follow the procedure in “To run an interactive installation” in the <i>SAP BusinessObjects Data Services Installation Guide for UNIX</i>.</li> <li>You must enter the Administrator connection information for the CMS that you created when you installed your BI platform (do not choose the Skip option).</li> <li>Ensure that the following components are selected: <ul style="list-style-type: none"> <li>Job Server under Data Services Server</li> <li>Data Services Metadata Browsing Service</li> <li>Data Services View Data Service</li> </ul> <p>The other components are optional.</p> </li> <li>After Data Services installation completes, you must restart the computer.</li> </ol>
2. (c)	Install SAP BusinessObjects Information Steward on Server 2 of the Linux cluster.	<p><b>Note:</b> This installation requires that you stop and start the Server Intelligence Agent (SIA). Users cannot access the Central Management System (CMS) while the SIA is stopped. Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users.</p> <ol style="list-style-type: none"> <li>Follow the procedure in “Standard installation” in the <i>SAP BusinessObjects Information Steward Installation Guide for UNIX</i>.</li> <li>For install type, select <b>Primary</b>.</li> <li>For the CMS, you must enter the same administrator-level connection information for the CMS that you created when you installed your BI platform.</li> <li>If you want to deploy the following components on a separate machine than the Metadata Integrators, select them: <ul style="list-style-type: none"> <li>Metadata Relationship Service</li> <li>Metadata Search Service</li> </ul> </li> <li>If you will use the Data Insight module, select the following component: <ul style="list-style-type: none"> <li>Information Steward Task Server</li> </ul> </li> <li>If you will use the Cleansing Package Builder module, select the following component: <ul style="list-style-type: none"> <li>Cleansing Package Builder Service</li> </ul> </li> <li>To verify that the servers and services are running after installation completes, see “Verifying Information Steward servers are running” and “Verifying Information Steward services” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li> </ol>

Order	Task	Notes
3.	Install SAP BusinessObjects Information Steward on the Windows computer.	<p><b>Note:</b> This installation requires that you stop and start the Server Intelligence Agent (SIA). Users cannot access the Central Management System (CMS) while the SIA is stopped. Therefore, it is recommended that you perform this installation during scheduled down time to limit the effect on your users.</p> <ol style="list-style-type: none"> <li>1. Follow the procedure in “Standard installation” in the <i>SAP BusinessObjects Information Steward Installation Guide for Windows</i>.</li> <li>2. For install type, select <b>Expanded Install</b>.</li> <li>3. For the CMS, you must enter the same administrator-level connection information for the CMS that you created when you installed your BI platform.</li> <li>4. Select the following components for the Metadata Management module: <ul style="list-style-type: none"> <li>• Metadata Integrator for each source system that you want to collect metadata from to obtain impact and lineage relationships</li> </ul> </li> <li>5. To verify that the servers and services are running after installation completes, see “Verifying Information Steward servers are running” and “Verifying Information Steward services” in the <i>SAP BusinessObjects Information Steward Installation Guide</i>.</li> </ol>
4. (a)	Install the Web Application component of SAP BusinessObjects Business Intelligence platform on the Linux computer.	<ol style="list-style-type: none"> <li>1. Follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Installation Guide for UNIX</i> to start the installation.</li> <li>2. Select the <b>Custom</b> installation type.</li> <li>3. On the “Select Features” window, select the Web Tier component.</li> <li>4. Follow the procedure in the <i>SAP BusinessObjects Business Intelligence Platform Web Application Deployment Guide for UNIX</i> to deploy the web application with the WDeploy tool.</li> </ol>
4. (b)	Install the Information Steward Web Application on the Linux computer.	<ol style="list-style-type: none"> <li>1. Follow the procedure in “Deploying web applications with WDeploy” in the <i>SAP BusinessObjects Information Steward Installation Guide for UNIX</i> to deploy the Information Steward web applications to the computer where Web Logic is installed.</li> <li>2. Use the <code>wdeploy</code> tool to prepare the web application server components (WAR files) on the Linux computer.</li> <li>3. Copy the WAR files to the Linux computer.</li> </ol>



# Upgrading the landscape

## 5.1 Planning information

Use the information in this Master Guide to plan and implement your upgrade or migration. This section provides a list of the key resources mentioned in this guide.

Information	Content
Product documentation Information Steward: <a href="http://help.sap.com/bois/">http://help.sap.com/bois/</a> Data Services: <a href="http://help.sap.com/bods/">http://help.sap.com/bods/</a>	User Guide, Administrator Guide, Installation Guides, Upgrade Guide, and other documentation for SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward.
Supported Platforms (Product Availability Matrix) <a href="https://service.sap.com/PAM">https://service.sap.com/PAM</a>	Information about supported platforms for SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward with a search function to quickly find information related to your platform.

### Related Topics

- [Planning information](#)
- [Data Services architecture overview](#)
- [Information Steward architecture overview](#)
- [Overall upgrade sequence](#)
- [Business scenarios for upgrading](#)

## 5.2 Overall upgrade sequence

To upgrade SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward, you need to perform the following tasks.

**Note:**

When migrating to a new machine, follow the instructions in [Migrating to a new machine](#)

**1. Installing**

- Install the most current version of SAP BusinessObjects Intelligence platform or SAP BusinessObjects Information platform services that is compatible with this version of Data Services and Information Steward. See the *Product Availability Matrix* located at <http://service.sap.com/PAM> and *SAP BusinessObjects Intelligence Platform Upgrade Guide* or *SAP BusinessObjects Intelligence Platform Installation Guide*.
- Install the most current version of SAP BusinessObjects Data Services. See the *SAP BusinessObjects Data Services Upgrade Guide* or *SAP BusinessObjects Data Services Installation Guide*.
- Install the most current version of SAP BusinessObjects Information Steward. See the *SAP BusinessObjects Information Steward Upgrade Guide* or *SAP BusinessObjects Information Steward Installation Guide*.

**2. Upgrading content**

- After installing the latest version of Data Services and Information Steward, import the Data Services and repository content and configuration information from the previous installation. See the *SAP BusinessObjects Data Services Upgrade Guide* and the Upgrading Information Steward section of the *SAP BusinessObjects Information Steward Upgrade Guide*.
- Update the Data Services-supplied SAP transport files and SAP authorizations on the SAP server. For more information, see the *SAP BusinessObjects Data Services Supplement for SAP*

**3. Configuring**

- Web application deployment. See the *SAP BusinessObjects Data Services Installation Guide* and the *SAP BusinessObjects Information Steward Installation Guide*.
- Security configuration. See the *SAP BusinessObjects Data Services Administrator Guide* and the *SAP BusinessObjects Information Steward Administrator Guide*.
- Authentication. See the *SAP BusinessObjects Data Services Administrator Guide* and the *SAP BusinessObjects Information Steward Administrator Guide*.
- Tuning and performance. See the *SAP BusinessObjects Data Services Performance Optimization Guide* and the *SAP BusinessObjects Information Steward Administrator Guide*.

**Related Topics**

- [Prerequisites](#)
- [Business scenarios for upgrading](#)

## 5.3 Prerequisites

Before upgrading to the most current version of the software, complete the following tasks.

**Data Services**

1. Back up configuration files and repositories.

2. Ensure that SAP BusinessObjects Business Intelligence platform or SAP BusinessObjects Information platform services have been upgraded.
3. Uninstall previous versions of Data Services XI 3.x or Data Integrator 11.7. If you are upgrading from Data Services 4.0, you do not need to uninstall your 4.0 version.

For more information, see the *Data Services Release Notes* and *Data Services Upgrade Guide*.

### **Information Steward**

1. Back up the repository.
2. Ensure that Business Intelligence platform or Information platform services and Data Services have been upgraded.

For more information, see the *Information Steward Release Notes* and *Information Steward Upgrade Guide*.

### **Related Topics**

- [Overall upgrade sequence](#)
- [Business scenarios for upgrading](#)

## **5.4 Business scenarios for upgrading**

There are many reasons for upgrading to the most current versions SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward. Two of the most common scenarios are for upgrading from a previous version and for migrating to a new machine.

These scenarios are provided as a guideline for planning your own upgrade or migration. For details about other upgrade scenarios, see the *Data Services Upgrade Guide* and the *Information Steward Upgrade Guide*.

### **Related Topics**

- [Overall upgrade sequence](#)
- [Upgrading from previous releases](#)
- [Migrating to a new machine](#)

### **5.4.1 Upgrading from previous releases**

After completing the prerequisite work, you are ready to get started on the upgrade process.

### Upgrading Data Services

Upgrading from Data Services 4.x consists of the following:

- Installing the current version of Data Services
- Upgrading the repository
- Migrating objects (Only for versions prior to Data Services 4.0)
- (Optional) Install any additional objects such as the SAP-supplied cleansing package for Data Cleanse.

Upgrading from Data Quality: use the Data Quality Migration Utility.

See the *Data Services Installation Guide* and the *Data Services Upgrade Guide*.

### Upgrading Information Steward

The upgrade process consists of the following:

- Installing the current version of Information Steward
- (Optional) Install any additional objects such as SAP-supplied cleansing packages for Cleansing Package Builder. If you have existing public and private cleansing packages, open them to update the schemas.
- (Optional) Install any additional new features such as the Data Review Server and the Data Review Service for Match Review or SAP HANA Metadata Integrator. In a distributed environment, ensure that you modify each server that hosts the additional components.

See the *Information Steward Installation Guide* and the *Information Steward Upgrade Guide*.

### Related Topics

- [Prerequisites](#)

## 5.4.2 Migrating to a new machine

At times your hardware may need to be upgraded or expanded. You can install and migrate SAP BusinessObjects Data Services and SAP BusinessObjects Information Steward objects on the new system. Begin with following the prerequisites, install SAP BusinessObjects Business Intelligence platform (or IPS) and Data Services landscape on the new machine, and then follow these guidelines.

### Migrating Data Services

Follow these guidelines to migrate your objects to the new machine.

- Restore the backup of your Data Services repository database.
- If you are migrating from Data Services 3.x or Data Integrator 11.7, use the Upgrade Manager to migrate user and repository configuration information. Upgrade Manager can migrate all objects at once, or one object at a time.

**Note:**

When upgrading from Data Services 4.x, you do not need to use the Upgrade Manager to migrate user and repository configuration information.

- Re-configure access server instances using Server Manager.
- Migrate real-time configurations.

For more information, see the *Data Services Installation Guide* and *Data Services Upgrade Guide*.

**Migrating Information Steward**

Follow these guidelines to migrate your objects to the new machine.

- Restore the backup of your Information Steward repository database.
- Install Information Steward.
- Use the Promotion Management tool to move all Information Steward objects to the new landscape. You can also use this tool to move existing users and groups.

For more information, see the *Information Steward Installation Guide* and *Information Steward Upgrade Guide*.

**Related Topics**

- [Prerequisites](#)



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