

PUBLIC
SAP Information Steward
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Installation Guide for Windows

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THE BEST RUN SAP

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1 Preparation

For a successful installation of SAP Information Steward, ensure that you complete all preparatory steps.

Process Flow

Follow the processes listed in the following process flow to prepare for Information Steward installation.

1. Review the "Deployment" section in the SAP Data Services and Information Steward *Master Guide*.
   - Determine which product components to install on each host system.
   - Consider how to prepare your infrastructure and set up your environment, including server locations.

   For information on the compatibility of Data Services with SAP BusinessObjects Business Intelligence (BI) platform or Information Platform Services (IPS) versions, see KBA 3197694.
   For information about BI Platform user licenses, see SAP Note 2176896.

   > **Note**
   >
   > When you install Data Services and Information Steward on top of BI Platform, the system uses the BI Platform licensing model. When you connect to the Central Management Server (CMS), the number of licenses you purchase determines your use of CMS. For example, if you have 10 BI Platform named user licenses, these user licenses are shared with Data Services and Information Steward. Therefore, you can create only 10 users in the CMS and at any point in time have 10 CMS sessions. To take advantage of unlimited user licenses when connecting to the CMS, install Data Services and Information Steward on top of IPS.
2. Ensure that your network and host systems meet the basic requirements for an Information Steward installation.
3. Ensure that sufficient disk space is available before you install. Allow for both the operating system and the software to grow over time as patches or new components become available.
4. Ensure that the user who runs the installation program has administrative privileges.
5. Download the latest release and any patches or service packs from the support portal at https://support.sap.com/en/my-support/software-downloads.html.
6. Decide which database server to use for the Information Steward repository and prepare the database.

   > **Note**
   >
   > To use SAP SQL Anywhere, the bundled database server, you must have chosen to install it when you installed BI Platform or IPS.
7. Decide which options to change during the installation process.
   In most cases, you can accept the default values. More advanced installations require that you plan the installation process. The installation program prompts for the following information:
   - License key

     > **Note**
     >
     > You must obtain a new 4.3 product key the first time you install, upgrade, or update Data Services and Information Steward 4.3. The 4.3 product keys are not backwards compatible and do not work

with older versions of the product. You will not be asked to enter the new product key for future 4.3 upgrades or updates.

- Administrator-level connection information for the CMS.
- Repository database connection information, including type, connection, and authentication details.

> ⚠ Caution
>
> The installation program restarts the Server Intelligence Agent (SIA), which could affect all users currently logged into the CMS. Plan for this downtime to minimize the disruption for your users.

1.1 System requirements

Before you install SAP Information Steward, check that your system meets the specific requirements for installing on a local drive.

Consider the following information before you decide to install Information Steward to a local drive:

- Make sure that the destination partition has enough room for Information Steward to expand. For example, the deployment expands when you install new versions and updates that include new features.
- Make sure that, for installing on an operating system partition, you have enough room for both operating system and Information Steward.
- Understand that, if you have previously installed SAP products on your local drive, the installer uses the existing installation directory.

For a complete list of supported operating systems and hardware requirements, consult the Product Availability Matrix (PAM).

For more information about system requirements, see the *Data Services and Information Steward Master Guide*.

1.2 Software dependencies

Before you install SAP Information Steward, ensure that your host systems meet all software dependency requirements.

For complete information about the software environment requirements, see the Product Availability Matrix (PAM).

Choose the following components when you install either SAP Business Intelligence (BI) platform or Information Platform Service (IPS):

- Adaptive Job Server
- Adaptive Processing Server
- File Repository Server for Metadata Integrators

Correctly configure these components before you install Information Steward.

For additional information about runtime software dependencies for each Information Steward component, see "Deployment" in the *Data Services and Information Steward Master Guide*.

> **Note**
>
> Information Steward uses the same Web application server and Java 2 Software Development Kit (JDK) that the BI platform or IPS uses.

> **Note**
>
> If you want to use IPS to provide the BI platform components required by Information Steward, use `InstallIPS.exe` instead of `setup.exe` to launch the IPS installation program.

For more information, see “Component installation prerequisites” in the *Data Services and Information Steward Master Guide*.

1.3 Prerequisite software

The SAP Information Steward installer checks that the required software components are already installed on the computer.

After the installer runs the prerequisite check, it displays a list of the prerequisites and if you passed the check, or if you are missing something.

- If a dependency prerequisite is critical, the installation program does not allow the installation to proceed.
- If the installer finds an expired keycode for either SAP BusinessObjects BI platform or SAP BusinessObjects Information platform services (IPS):
  - The installer issues an error message
  - The error message provides steps to update the keycode
  - The installer enables you to update the expired keycode in the CMC and continue with the installation
- If the software finds a valid keycode for either SAP BusinessObjects BI platform or SAP BusinessObjects Information platform services (IPS), but the keycode is not valid for a required server for the integrator feature:
  - The installer issues a warning message
  - The warning message allows you to continue installing without the integrator feature
  - The installer enables you to add a valid keycode in the CMC and continue with the installation including the integrator feature

The installation program checks if you have a previous version of Information Steward on your system.

- If there isn't a previous version, the installation program runs a fresh install.
- If there is a previous version, the installation program updates the existing program to the new version.

1.4 Verifying prerequisite software

To ensure a successful SAP Information Steward installation, verify that the required BI platform or IPS servers and services are running and enabled.

1. Select *Start* > *SAP Business Intelligence* > *Central Management Console*.
2. Log on to the Central Management Console (CMC).
3. Select *Servers* from the CMC dropdown list at top left.
4. Select *Servers List* in the node tree at left.

   The servers names appear in the main pane.
5. Make sure that the *State* column lists "Running" and the *Enabled* column lists "Enabled" for the following servers:
   - `<SIANodeName.>`AdaptiveProcessingServer
   - `<SIANodeName.>`AdaptiveJobServer
   - `<SIANodeName.>`CentralManagementServer
   - `<SIANodeName.>`InputFileRepository
   - `<SIANodeName.>`OutputFileRepository

   If these servers are missing, see your BI platform documentation for information about how to install and configure them.
6. Log out of the CMC.
7. Select *Start* > *SAP Business Intelligence* > *Central Configuration Manager*.
8. Make sure that the following services list "Running" under the *Status* column:
   - Apache Tomcat for BI 4
   - Server Intelligence Agent
9. Close the Central Configuration Manager.

1.5 SAP NetWeaver BI version and applicable support package for BW integrator

If you run the SAP NetWeaver BW integrator, Metadata Management will collect metadata objects from NetWeaver BI. For the SAP NetWeaver BW integrator to have authorization rights to read metadata objects from SAP NetWeaver BI, you must install the correct support package based on the version of SAP NetWeaver BI you are running.

Before you implement any of the SAP Notes in the table below, you must read SAP Note 875986, which provides information about Note Assistant, which allows you to automatically implement note corrections in your ABAP systems.

The table below lists the SAP NetWeaver BI version and the applicable support package related to the version. It also references an SAP Note number that you should read before installing the support package.

To provide information in advance, the SAP Notes mentioned in the table below may already be available before the Support Package is released. In this case, the short text of the SAP Note contains the words "Preliminary version". In urgent cases, you can implement the correction instructions as an advance correction.

SAP NW BI version	Support package	SAP Note title	SAP Note
7.00	23	SAPBINews NW BI 7.0 ABAP SP23	1367799
7.01 (Enhancement Package 1)	06	SAPBINews NW BI 7.01 ABAP SP06	1369212
7.02 (Enhancement Package 2)	02	SAPBINews NW BI 7.02 ABAP SP02	1367863
7.10	08	SABINews NW BI 7.10 ABAP SP08	1260071
7.11	05	SAPBINews NW BI 7.11 ABAP SP05	1392433
7.20	02	SAPBINews NW BI 7.20 ABAP SP02	1387280

1.6 Disable SSL on the Central Management Server (CMS)

The Information Steward installation program does not support the Secure Sockets Layer (SSL) protocol during the installation process.

Before installing Information Steward, check if your Central Management Server (CMS) has SSL enabled. If so, disable the SSL protocol on your CMS while you install Information Steward.

For more information about disabling the SSL protocol, see the appropriate sections in the *SAP BusinessObjects Information platform services Administrator Guide* and the *SAP BusinessObjects BI platform Administrator Guide*.

1.7 Account permissions

To install SAP Information Steward, a user must have the following permissions:

Category	Required permissions
Operating System	Local administrator privileges. **Note** If you are installing Information Steward on a Windows host system that has User Account Control (UAC) enabled, you should run the installation program with the host system's built-in administrator account. If you use a normal account, a UAC prompt will appear.
Network	TCP/IP access to all host systems where you want to install components - all specified ports must be available.

Category	Required permissions
Database	Permission for the SAP user account to create and drop tables, and read, write, and edit table rows.
SAP BusinessObjects BI platform	Administrator privileges.

In addition, it's recommended that you use the same user account for installing Information Steward and your web application server.

1.8 Network requirements

When you install SAP Information Steward on multiple host systems, ensure that your deployment meets the following network requirements:

- Each host system must be able to communicate with the Central Management Server (CMS).
- All host systems in the deployment must be able to communicate with each other.

Related Information

Port assignments [page 9]

1.8.1 Port assignments

On each host system, verify that all ports to be used by SAP Information Steward components are available and not in use by other programs.

For a development system, you can install many components on the same host. Installing on a single host simplifies many connections between components (the host name is always the same), but you must still define connections based on the TCP/IP protocol.

This table details the default ports used by Information Steward components:

Default Port	Description
5005	Remote Job Server port that receives commands to run an integrator on a previous version.
8080	Default web application server port that listens to HTTP requests from web browsers.

Default Port	Description
6576	Default port used by the Data Cleansing Advisor repository. For information about editing this port number, see "Viewing and editing Data Cleansing Advisor repository information" in the *Information Steward Administrator's Guide*.

Connections to databases also require access to a port that is defined when the database is set up. For details, see the *SAP BusinessObjects Business Intelligence platform Administrator Guide*.

1.9 Repository database requirements and preparation

Before installing SAP Information Steward, decide what database management system to use.

Choose from several supported third-party databases, or use SAP SQL Anywhere. SAP SQL Anywhere is the bundled database that you can choose to install during BI Platform or IPS installation.

Your Information Steward repository database stores the following information:

- Profile results and sample records for all profiling attributes.
- Rule results and sample data that failed the rules.
- Scorecard results that Data Insight users and the Calculate Scorecard utility generates.
- Metadata that the Metadata Integrators collect so that the Metadata Management module can display relationships between objects, such as impact and lineage between objects.
- Categories and terms that Metapedia users create.
- Private and published cleansing packages that Cleansing Package Builder users create or refine.

See the Product Availability Matrix (PAM) for a list of approved third-party databases and versions.

You can either create a new database for the repository or use an existing repository. The Information Steward installation process either creates new tables or upgrades the existing tables within the repository.

Related Information

Setting up a new database [page 18]
Settings to control repository size

1.9.1 Requirements for third-party databases

Gather the required information for your database type before you install SAP Information Steward.

Third-party databases are those that are approved for the version of SAP Information Steward that you install. For an up to date list of supported third-party databases and versions, see the Product Availability Matrix (PAM).

The following table describes the requirements for each database for use as a repository.

Database	Requirements
DB2	• Connection Type: DB2 v9 • Machine Name: Default is localhost • Port Number: Default is 50000 • Database Name • User Name • Password • ODBC Data Source (appears when upgrading) If you create a new DB2 9.x database, make the following settings: • Set the code to UTF-8 or UTF-16 • Set the default buffer pool and table space page size to 32K

Database	Requirements

Oracle	• Machine Name
	• Port Number: Default port number is 1521
	• SID
	• Database Connection Name: TNSNAMES connect identifier
	
	Note
	This parameter appears if you are upgrading from Information Steward version 4.1.x.
	
	• Login credentials used to access the database
	• JDBC Driver Files:
	  • Connection Type: Oracle `<version>`
	  • Machine Name: Default is localhost
	  • Port Number: Default is 1521
	• Oracle JDBC driver for the database
	Download the Oracle JDBC driver before installation. The Information Steward installation program will ask you to provide its location during the installation process.
	
	If you create a new Oracle RAC database, create a property file to contain the connection string. Use the following format for each connection string you specify within the property file: `<Oracle_RAC_connection_string>` where `<Oracle_RAC_connection_string>` is the connection string itself, and it must be on one line.
	
	• Connection String
	• Database Connection Name
	• For Linux users, create a property file to contain the connection string, and indicate its location in the Information Steward repository connection portion of the installation.
	• For Windows users, enter the string directly into the text box in the Information Steward Repository Connection portion of the installation.
	
	Specify the location of the Oracle RAC connection string. The connection string should contain the complete connection string for your configuration.
	
	For example, for both Windows and Linux, use this connection string:

Database	Requirements
	`(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=hostname1)(PORT=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=hostname2)(PORT=1521))(LOAD_BALANCE=yes)(CONNECT_DATA=(SERVICE_NAME=name)))`

SAP HANA	• Machine Name: SAP HANA
	• Port Number: Default is 30015
	• ODBC Data Source: SAP HANA
	Note
	This parameter appears if you are upgrading from Information Steward version 4.1.x.
	• Login credentials used to access the database
	• JDBC Driver Files:
	  • Connection Type: SAP HANA
	  • Machine Name: Default is Localhost
	  • Port Number: Default is 30015
	  • User Name
	  • Password
	• You must have a JDBC driver.
	While Information Steward includes a bundled JDBC driver for SAP HANA, you can also choose to use a newer driver version, if available.
	The SAP Information Steward installation program asks you to provide the JDBC driver location during the installation process.
	Note
	Starting with SAP Information Steward version 4.3.02.01, you can apply SSL/TLS protection for the connection to the SAP HANA database. Configure SSL/TLS after installation. For more information, see Configuring SSL/TLS for SAP HANA repository.

SAP SQL Anywhere	• Connection Type: SAP SQL Anywhere `<version>` • Machine Name: Default is Localhost • Port Number: Default is 2638 • Database Name • User Name • Password

Database	Requirements
Bundled database	You can use the default database that is bundled with SAP Business Intelligence (BI) platform and Information Platform Service (IPS) as the Information Steward repository host. The bundled database is SAP Sybase SQL Anywhere. **Note** • For Windows, if you use the bundled database as your Information Steward repository, you must use the database client tools to manage database backup and restore. Be sure to back up your repository before uninstalling the BI platform. • If you are migrating from a previous version of Information Steward to version 4.2 SP1, and if you are using the bundled database SQL Express or DB2 Workgroup for your repository, you do not have to switch to SAP SQL Anywhere.
Microsoft SQL Server	Login credentials used to access the database. **Note** Starting with SAP Information Steward version 4.3.02.03, you can apply SSL/TLS protection for the connection to the Microsoft SQL Server database. Configure SSL/TLS after installation. For more information, see Enabling Windows authentication and SSL/TLS for Microsoft SQL Server repositories.

Database	Requirements

SAP ASE	The following is an overview of what needs to be done to set up SAP ASE as an Information Steward repository.
	
	Create an Adaptive Processing Server with the following settings:
	
	• Page size at least 16K.
	• Use UTF-8 character set.
	• Disable SAP Control Center.
	
	Required additional items to set include:
	
	• Set client code page to UTF-8
	
	Example
	In Open Client, set the value for the language environment variables LANG and LC_ALL to UTF-8. For example, `LC_ALL=us_english.utf8`. The value that you use for the language variables must match the values in the Adaptive Processing Server `locales.dat` file.
	
	• For Unicode, set the Data Services locale to UTF-8
	• Schedule and run update statistics for tables
	• Set the maximum memory to at least 800,000
	
	Example
	`sp_configure “max memory”, 800000`
	
	• Set the number of connections to a value that is greater than the default
	
	Example
	`sp_configure “number of user connections”, 250`
	
	• Set the default data cache to at least 100M
	
	Example
	`sp_cacheconfig 'default data cache',"100M"`
	
	• Increase the log size using SQL
	
	Example
	`alter database <databasename> log on <devicename> = ‘100M’`
	
	• Define server-wide lock scheme as datapages

Database	Requirements

> **Example**
>
> ```
> sp_configure "lock scheme", 0,
> datapages
> ```

- Set the number of locks to at least 800,000

> **Example**
>
> ```
> sp_configure "number of locks",
> 800000
> ```

- Schedule an automated dump log process to use as a backup strategy
- Set up automatic database and log backups to prevent log file overflow (see SAP Note 1588316)
- Use TCP to define the Sybase configuration file `sql.ini`
- Match the name of the connection to the name of the Adaptive Processing Server.

> **Note**
>
> The installers for Data Services and Information Steward use the SAP ASE connection string. In Windows, the connection name can be found in the `sql.ini` file (for example, WIN2K12). In Linux, the connection name can be found in the interface file.

- Database device should have 4GB available for data and 1GB for log (Sybase ASE 15.7 and 16) and cached IO (Sybase ASE 16 only).
- Create a user and a database for the Information Steward repository. Match the default owner name for your database to the user name. This name matching ensures that all the tables in the Information Steward repository belong to the right owner.
- The Information Steward repository user enables the *Command Status* for *Create Table* and *Create View*.

For information errors when using schema names or when trying to create Information Steward repositories on Sybase ASE, see SAP Note 2167096.

Performance tuning information

Sybase ASE uses a cost based query optimizer to choose the best plan for a particular query. To do this, the optimizer relies on statistics about tables, indexes, partitions, and columns referenced in a query for estimating the cost in terms of I/O and CPU time of different possible query plans. As a result, inaccurate statistics could lead to a sub-optimal choice of plans and result in slower performance.

Database	Requirements

	It is a DBA responsibility to schedule and run update statistics. The update statistics command updates column-related statistics such as histograms and densities. For Information Steward tables such as `MMT_Relationship` and `MMT_Data_Element` have much more rows than the rest, which causes slow performance for SQL query.
	
	To solve this, do the following:
	
	1. Run update statistics:
	`update statistics <schema_owner>.MMT_Relationship`
	`update statistics <schema_owner>.MMT_Data_Element`
	2. Run update index statistics:
	`update index statistics <schema_owner>.MMT_Relationship`
	`update index statistics <schema_owner>.MMT_Data_Element`
	3. Use 'sampling' with update statistics to reduce resource requirements and allow more flexibility when running this task. Instead of reading the column values for the entire table, only a percentage of the table will be read.
	
	Note
	When using sampling, there is always a possibility that the histogram contains less accurate information than when the full table was read.
	
	For example, `update index statistics big_table with sampling=10 //` tells you that 10 percent of the table is read.
	4. When should you run update [index] statistics?
	The new built-in function, `datachange(table_name, partition_name, column_name)`, measures the amount of change in the table (or partition) since the last time update [index] statistics was run.
	`select datachange('<schema_owner>.MMT_Relationship', null, null) //`
	The output represents the percentage of changes to the table `MMT_Relationship`. This indicates if it is a good candidate to run update [index] statistics on.

Database	Requirements

	5. Configure automatic update statistics. The following is sample code for `MMT_Relationship` using Job Scheduler to update statistics:
	Sample Code
	`declare @datachange float`
	`select @datachange = datachange("<schema_owner>.MMT_Relationship",null, null)`
	`PRINT 'MMT_Relationship change percentage 1 = %1! ', @datachange`
	`if @datachange > 40`
	`begin`
	`update statistics <schema_owner>.MMT_Relationship`
	`update index statistics <schema_owner>.MMT_Relationship`
	`PRINT 'MMT_Relationship update statistics done '`
	`end`
	`go`

Related Information

Extra requirements for Oracle, SAP HANA, and MySQL [page 48]

1.9.2 Setting up a new database

This procedure creates a SAP Information Steward repository database and configures it for the user who will connect to it. The installation process will create the tables within the Information Steward repository.

1. Create a new database on your database server.

   For the most current list of supported database software and version requirements, see the Product Availability Matrix (PAM).
2. Create a new user and assign a secure password.
3. Ensure that the new user has permission to create, modify, and delete database objects so that Information Steward can modify the database as required.

   If you are not the owner of the database, you must have permissions to perform the necessary operations.

1.10 Configuring the bundled database for the repository

To prepare the SQL Anywhere database server for the Information Steward repository, first connect to the BI4 server and then create a repository database.

If you have installed SAP Data Services, you have established a Data Services repository in SQL Anywhere. The following steps are the same as for the Data Services repository. The Data Services *Installation Guide* contains information about preparing SQL Anywhere client and using it to create the repository.

> **Note**
>
> BI4 and the BI4_CMS are for the Central Management Server (CMS) system database. The BI Platform or IPS installation automatically creates them when your administrator selects to use the bundled database server.

1. Open SQL Central and select *Connections* > *Connect with SQL Anywhere*`<version>`.

   The *Connect* dialog box opens.
2. Make the following entries:

Option	Setting
Authentication	Select *Database*.
User ID	Type **dba**.
Password	Type the password that you or your administrator used to set up the user "dba" during BI or IPS installation.
Action	Select *Connect to a running database on this computer*.
Server name	Type **BI4**.
Database name	Type **BI4_CMS**.

3. Click *Connect*.

   If the connection is not successful, read the error message and remedy the problem. When the connection is successful, the *Connect* dialog box closes. The BI4_CMS database opens in the main pane.
4. In SQL Central, click the *Context* dropdown arrow under the tool bar and click *BI4 on* `<computer name>`. The *Context* text box now contains *Sybase Central/SQL Anywhere/BI4 on* `<computer name>`. The program opens BI4 in the main pane.
5. Select *Tools* > *SQL Anywhere*`<version>` > *Create Database.*

   The *Create database Wizard* dialog box opens.
6. Read the message on the first page of the Wizard and click *Next*.

   Optional. Check the box to disable the message page so it won't appear when you create another database. If you selected not to show the dialog when you created the Data Services repository, the window does not appear for these steps.

7. In the *Select a Location* dialog box, select *Create a database on the following server computer* and select *BI4* from the table. Click *Next*.
8. In the *Specify a Database File* dialog box, click *Browse* next to the *Save the main database file to the following file* text box.
9. Browse to `<INSTALL_DIR>\sqlanywhere\database\`. Enter `IS_REPO` in *File Name* and click *Save*.
10. Click *Next*. Continue through the Wizard as instructed in the following table. Each step contains information about the option that helps you make your settings.

Dialog box	Action
Specify the Transaction Log File	Accept the default or make applicable settings and click *Next*.
Specify the Transaction Log File Mirror File	Accept the default or make applicable settings and click *Next*.
Specify DBA User and Password	The DBA is the user that logs into the database after creation. It does not have to be the same user name and password that you use to access the BI4_CMS database. Note this information because you need it during SAP Information Steward installation for the repository database connection dialog. • Enter a user name and password. • Enter the password again to confirm. • Click *Next*.
Install jConnect Support	Accept the default or make applicable settings and click *Next*.
Encryption Settings	Accept the default or make applicable settings and click *Next*.
Specify the Page Size	Select a page size based on how much disk space you plan to use. Click *Next*.
Specify Additional Settings	• Accept the default or make applicable settings. • If you select the default, also select accent options as applicable. • Click *Next*.
Specify a Collation Sequence	This selection is required for the repository. • Select *Use the following supplied collation*. • Select *UTF8BIN* for multibyte characters. • Click *Next*.

Dialog box	Action
Specify a Collation Sequence for NCHAR data	This selection is required for the repository. • Select *Use the following supplied collation*. • Select *UTF8BIN*. • Click *Next*.
Specify Collation Tailoring Options	Accept the defaults or: • Select an option from the *Case sensitivity* dropdown list for CHA collation. • Select options for NCHAR collation. • Click *Next*.
Choose the Security Model for the System Procedures	Accept the default or make applicable settings. Click *Next*.
Connect to the Database	• Select *Connect to the new database*. • Review the database information for correctness. • Uncheck the option *Stop database after last disconnect*. If you don't uncheck this option and you disconnect from the server, you have to reconnect to the repository database before you log into Information Steward. • Click *Next*.
Summary	• Review your settings. • Click *Back* to change any settings. • Click *Finish* to complete the *Create Database Wizard*. • Click *Close* to close the Wizard.

The program creates the `IS_REPO` database and displays it in the main pane of SQL Central.

When you have completed all other preparation tasks, continue with installing SAP Information Steward.

1.11 DSN-less and TNS-less connections

DSN-less and TNS-less (Oracle) connections are also known as server name connections.

SAP Information Steward provides server name connections to databases that you use as an Information Steward repository, profiling source, or storage for data that failed validation rules. Server name connections eliminate the need to configure the same DSN (TNS for Oracle) entries on every machine in a distributed environment.

The Information Steward repository supports server name connections for the databases described in the following table.

> **Note**
>
> For supported versions and the most updated list of supported databases for the repository, see the PAM.

Repository database required information

Database	Information required
Microsoft SQL Server	• CMS registration name • Database name • Server name • Port number (default is 1433)
SAP HANA	• CMS registration name • Server name • Port number (default is 30015)
SAP ASE	• CMS registration name • Database name • Server name • Port number
IBM for DB2	• CMS registration name • Database name • Server name: DB2 database alias • Port number
Oracle	• CMS registration name • Server: TNSNAMES connect identifier • Port number • SID (instead of TNS name)
SAP SQL Anywhere	Database server that is bundled with the BI or IPS installation. • CMS registration name • Database name • Server name • Port number

For Data Insight profiling sources and failed data storage, the following database types are supported for server name connections:

- DB2 UDB
- Informix
- MySQL
- Netezza
- Oracle
- SAP HANA
- SQL Anywhere
- Sybase IQ

- Teradata

> **Note**
>
> For the most current list of supported databases for server name connections, see the *Release Notes*.

1.12 Support for SAP System Landscape Directory (SLD)

SAP System Landscape Directory (SLD) is a directory service that maintains a list of installed SAP and (optionally) non-SAP software. SLD provides two main categories of information:

- Software already installed
- Software that could be installed at a later time

SAP systems come with a data supplier (DS) component that automatically updates the landscape directory. Non-SAP software that supports SLD registers through an open API. The information gathered on installed software includes:

- Version
- Host information
- Connection information

To use SLD support, ensure that SAP Host Agent is installed and working on the system(s) that host SAP Information Steward. SAP Host Agent may be installed and configured before or after installing Information Steward.

1.13 Installation scenarios

The following installation methods are available to you for installing SAP Information Steward on Windows:

- Standard installation — Installs from the installation wizard.
- Silent installation — Installs from the command line.
- Upgrade — Upgrades an existing SAP Metadata Management XI 3.x repository to an SAP Information Steward repository during installation. For information about upgrading your Metadata Management objects (such as integrator source configurations, source groups, and security information), see the *Information Steward Upgrade Guide*.
- Update — Updates your current installation of Information Steward, if it is older than the current version. For example, if you have version 4.2 installed and you run the installation for version 4.3, the installer updates your current version to the newer version.
- Remote Job Server installation — Installs a Remote Job Server component for a Metadata Integrator to collect metadata from an SAP BusinessObjects Enterprise XI 3.x system.
- Distributed deployment — Installs a subset of Information Steward components on each computer that has the prerequisite software.

→ Tip

The release notes that accompany a release generally contain a link to SAP Notes, which contain information about the current installation. Find release notes on the customer portal.

ⓘ Note

There is an upgrade installation if you are upgrading Information Steward to a new version. Refer to the *Information Steward Upgrade Guide* for complete information.

See also "Information Steward Deployment" in the *Data Services and Information Steward Master Guide*.

Related Information

Standard installation [page 25]

1.14 License keys

You purchase a license key for the SAP Information Steward features that you want.

To purchase license keys, contact your SAP Account Executive.

For information about BI Platform user licenses, see SAP Note 2176896.

Related Information

Updating the license key [page 47]

2 Installation

You can run the installation program several ways:

- Interactive installation
  An interactive wizard prompts for all information related to the installation. Use this option to select individual options from a series of screens. This is the default installation method.
- Silent installation
  Installation options are given on the command line, which override the installation program's default values. The command line can be used to give some or all installation options. When an installation option is not given on the command line, the installation program uses a default value.
  Installation options can be given in a response file rather than directly on the command line. This type of silent installation uses the `-r` command line parameter to read installation options from the response file. Use this option if you want to install multiple machines with the same configuration. Installation options stored in the response file can be overridden by giving them on the command line.
  When the `-q` (quiet mode) switch is used, the installation program does not prompt for any user input during the installation.

When the installation program detects an identical previously-installed version, it will enter maintenance mode, allowing you to remove, repair, or modify the software.

2.1 Standard installation

When you install Data Services using the default configuration, you can accept the default settings for most options. (Windows).

To install Information Steward, use an account with administrative privileges. The installation program saves the installation log file to `<INSTALL_DIR>\InstallData\logs\<DATE>\setupengine.log`.

When the installation program starts, the software performs a series of prerequisite checks. The results of these checks are displayed for your information. If your host system does not meet the minimum requirements, the installer does not install Information Steward.

This installation stops and starts the Server Intelligence Agent (SIA). Users cannot access the Central Management Server (CMS) with the SIA stopped. To avoid inconvenience, perform this installation during scheduled down time to limit the effect on your users.

Access the installation program by logging in to the console or use a Microsoft Remote Desktop connection (minimum dialog box resolution of 1024 x 768).

- If you are installing from physical media, look for `setup.exe` in the top-level folder.
- If you are installing from a compressed download, extract it and locate `setup.exe`.

> **Note**
>
> If you are running the installation program from a network location, use a mapped drive and not an UNC path.

1. Double-click `setup.exe` Windows Explorer or run it from a command line.
   The installer starts.

   > **Note**
   >
   > A message appears asking if you want to view an overview video about installation planning.

2. Review the items in the prerequisites dialog box. If there are no critical conditions, click *Next*.

   If a dependency prerequisite condition is critical, the installation program stops and cancels the installation. If the missing or unsupported component is optional, you may to continue with the installation or stop and correct the condition. The installation program provides information about how to correct the condition at the bottom of the dialog box.

   > **Note**
   >
   > During silent installation, the installer does not display the results of dependency prerequisites. If a critical component or supported version is not available, the installer writes an error to the installation log file and stops. If an optional component or supported version is not available, the installer includes the missing or unsupported component in the installation log file.

3. Review the welcome message and click *Next*.
4. Read and accept the License Agreement. Click *Next*.
5. Enter your product keycode and click *Next*.

   > **→ Tip**
   >
   > Store the keycode and registration information in a safe place in case you have to reinstall the software.

6. Review and accept the location for Information Steward. Click *Next*.

   > **Note**
   >
   > If you have other SAP products already installed on the host system, you cannot change the destination folder.

7. Select additional language packs if applicable. The software displays the Information Steward interface in the language or languages that you choose.

   The installation program automatically selects the current language used by the operating system. You cannot deselect the English language because the software uses English when a problem is detected with an individual language.

   For a complete list of supported languages, see the Product Availability Matrix (PAM).

8. Specify the installation type:

Option	Description
Primary	Configures the repository during installation. Typical scenarios include the following: • Create a repository to overwrite an existing repository. • Create a new repository on a system with no existing repository. • Connect to an existing repository. • Upgrade an existing repository.

Option	Description
	Note Ensure that the Data Services Job Server component is already installed on the local system.
Expanded	Installs Information Steward without configuring the repository. Select this option if you already have an up-to-date version of the Information Steward repository. If the repository is not valid, an error occurs. When an error occurs, select *Primary*. If you choose *Expanded*, the repository database connection and repository configuration option prompts do not appear later in the installation process.

9. Specify the administrator-level Central Management Server (CMS) connection information.
   - If your CMS has multiple Server Intelligence Agent (SIA) nodes configured, choose the SIA node to use with Information Steward.
   - If you are using Oracle or SAP HANA as the database source for your repository, you need the JDBC driver information for a later step.

   Note
   - Information Steward supports only the Enterprise authentication mode during installation.
   - If the installer detects an expired keycode for BI platform or IPS, an error message appears. The message contains the steps to update the keycode. The installation continues only after you update the keycode in the CMC.
   - If the installer detects a keycode for BI platform or IPS, but the server that is required for installing the integrator features is not enabled with this keycode, a warning message appears. The warning message states that the integrator cannot be installed with this keycode, and then asks if you want to continue. If you choose to continue, and you want to install the integrator features, provide a valid keycode.
   - The Information Steward installer does not support SSL for the CMS connection. If you have not disabled SSL in the CMS before you started the installation, cancel the installation now and disable SSL in the CMS. After installation, re-enable SSL in your CMS.
10. The installer asks if it can stop and restart the Server Intelligence Agent (SIA) servers.
    - *Yes*: Select if there are not any users who are currently accessing the CMS
    - *No*: Select if there are users who are currently accessing the CMS. Selecting No stops the installation. Start the Information Steward installation again when there are no users accessing the CMS.
11. Review the Information Steward components to install. Make changes if applicable.

    Note

    If you deselect the Application Service, ensure that it is already installed on at least one computer in your enterprise deployment. The Application Service is required for:
    - The Information Steward Web application to access the Information Steward repository.
    - The Metadata Management feature to process relationships (such as impact and lineage) of metadata objects.
    - The Data Cleansing Advisor feature in Data Insight.

More information about the Application Service

Additional information	Notes
The Information Steward Web application option is available if you have installed the Web Application option in the SAP BI platform software.	The Web application installation method is the same in both the BI platform and Information Steward. Therefore, the installer checks whether you have manually or automatically installed Web applications and automatically chooses the same installation option in Information Steward.
The BI platform Web applications may be deployed manually.	Use WDeploy to manually deploy the Information Steward Web applications after installation if you have manually deployed the BI platform Web applications.
The Data Cleansing Advisor feature within Data Insight relies on the cleansing package being installed.	If you expand *Information Steward Services* and deselect *Cleansing Package*, you cannot use the Data Cleansing Advisor.

> → Tip
>
> To verify whether you have sufficient disk space for the selected components, click *Disk Cost*.

12. Choose the Information Steward repository database type from the list.
    - If you choose a Microsoft SQL Server database that uses an instance, enter the instance name in the format **`server_name\instance_name`**.
    - If you choose Oracle, specify the location of the database JDBC driver files.
    - If you choose SAP HANA, choose *Use bundled SAP HANA JDBC driver*, or enter the location of a different JDBC driver file. Choose a different driver to use a different version than what is bundled with the installation.
13. Enter the remaining connection information for the Information Steward repository.

> ⓘ Note
>
> If the installer detects an existing repository that is connected to the Central Management Server (CMS), the repository information populates automatically. You can change this information if necessary.

14. Choose one of the following options:
    - Click *Create* to create a new Information Steward repository.
    - Click *Upgrade* to upgrade an existing repository to a new version if available.

      > ⓘ Note
      >
      > If you choose *Upgrade*, see the *Information Steward Upgrade Guide* for additional information about upgrading your current installation.

    - Click *Skip* to skip repository creation. For example, choose *Skip* to use an existing repository that has already been updated to the newest version.
15. Review the confirmation message and press `Enter` to begin installation.
    If there are errors with the repository configuration during installation, a message appears that lists the errors and corrective actions.
    - *OK*: You fix the errors and retry the installation.
    - *Cancel*: Skips the repository configuration and continues the installation.

> **Note**
>
> The installer lists the errors that you choose not to fix, along with corrective actions, in the *Post Installation Steps* window at the end of the installation. The installer also saves a log file in `<IS_COMMON_DIR>\log\PostInstallationInstructions.txt`.

16. Click *Next* to close the *Post Installation Steps* window and complete the installation.

Related Information

Extra requirements for Oracle, SAP HANA, and MySQL [page 48]
Deploy web applications [page 46]
Installation troubleshooting [page 40]

2.1.1 When installation is complete

When the installation is complete, a *Post Installation Steps* window opens that lists any installation errors and post installation steps. The items listed in the window may contain:

- Errors and corrective actions (such as repository configuration or addNode command errors) that need to be fixed to complete the repository configuration and installation, and the name and location of the `postinstallinstructions.txt` log file.
- Message that tells you that, if you did not automatically deploy the bundled Tomcat web application server during installation, you must deploy the web applications with the WDeploy web application deployment tool.
- Message that tells you that, if you will run Data Insight profiling and rule tasks or Data Cleansing Advisor, you must access the SAP Data Services Server Manager to create a job server and associate it to the Information Steward repository.
- Message that tells you that, if you uninstalled Information Steward and installed it again to recreate the Information Steward repository, you must restart the Enterprise Information Management servers.

Related Information

Deploy web applications [page 46]
Restarting Enterprise Information Management Servers [page 72]
Configuring a Data Services Job Server for Data Insight [page 45]

2.2 Silent installation

Every option in the installation wizard can be given from the command line. This type of installation is known as a silent install.

Installation options can be given directly on the command line as a parameter, or can be stored in a response file.

Giving installation options on the command line

Installation options can be passed directly to the installation program from the command line as a parameter. For example, the installation option `ISCMSPort=6401` can be given on the command line as a parameter when running the installation program to set the Central Management Server (CMS) port number to 6401, instead of the default value of 6400.

In the following example of giving the `ISCMSPort` parameter on the command line, ellipses (`[...]`) indicate where other installation options would normally be present:

```
setup.exe [...] ISCMSPort=6401 [...]
```

Giving installation options in a response file

Installation options can be stored in a response file, which is a text file containing installation option parameters in key-value format. When using a response file to give installation options, the installation program is run from the command line with the `-r <RESPONSE_FILE>` parameter, where `<RESPONSE_FILE>` is the name of the response file.

The response file contains multiple installation options, with one installation option per line. In the following example, the response file is given as a parameter:

```
setup.exe [...] -r C:\response.ini [...]
```

For example, the installation option `ISCMSPort=6401` can be given on a line in the response file to set the Central Management Server (CMS) port number to 6401, instead of the default value of 6400.

In the following example of giving the `ISCMSPort` parameter in a response file, ellipses (`[...]`) indicate where other installation options would normally be present:

```
[...]
ISCMSPort=6401
[...]
```

> **Note**
>
> The installation program returns the cursor to the command line prompt when it starts. To run the installation program from a script, or force the installation program to wait until it has completed before returning to the command line, use the Windows Command Interpreter `start /wait` command to invoke `setup.exe`.

For example:

```
start /wait setup.exe [<COMMAND_LINE_OPTIONS>]
```

Related Information

Installation option parameters [page 33]
Response file example [page 39]

2.2.1 Command line switch parameters

The following table lists the switch parameters that can be given to the installation program on the command line to perform a silent installation.

Switch parameter	Description	Example
`-w <FILENAME>`	Writes a response file to `<FILENAME>` , containing the options selected from the installation wizard.	`setup.exe -w "C:\response.ini"`
`-r <FILENAME>`	Reads installation options from a response file named `<FILENAME>`.	`setup.exe -r "C:\response.ini"`
`-q`	Installs with no console output or prompting. If a problem is encountered, the installation program will write a message to the installation log file and exit.	`setup.exe -q -r "C:\response.ini"`

2.2.1.1 Using a response file

To use a response file, run the installation program with the `-r <RESPONSE_FILE>` parameter. The installation program reads all installation options from the response file, and no further input is required.

For example, the following command reads installation options from the response file `C:\response.ini`:

```
setup.exe -r C:\response.ini
```

To override an installation option in a response file, include that option in the command line. Installation options given in the command line take precedence over the options in the response file. For a complete list of installation options, see “Installation option parameters”.

If an unexpected condition is encountered, the installation program writes an error message to the installation log file and exits. Installation activity, warnings, and errors are written to the installation log file in the folder:

`<INSTALL_DIR>\InstallData\logs\<DATE>\setupengine.log`

If the <INSTALL_DIR> folder has not been created by the time the installation program exits, look for `setupengine.log` in the temporary folder specified by the system `TEMP` environment variable.

Related Information

Installation option parameters [page 33]

2.2.1.1.1 Writing a response file

To create a response file, run the installation program with the `-w <RESPONSE_FILE>` parameter and select the desired installation options with the installation wizard. When the wizard completes, the installation program exits and the response file is created. The response file can then be used for future installations.

For example, the following command creates the response file `C:\response.ini`:

```
setup.exe -w C:\response.ini
```

Once created, the response file can be updated with a text editor.

> ⚠ Caution
>
> When you specify passwords in the installation program, they are stored in the response file in plain text. For security reasons, it is recommended that you remove the passwords from the response file and specify the parameters on the command line instead.
>
> For example, locate `ISCMSPassword=<password>` in the response file, remove the password, and then specify it on the command line:
>
> ```
> setup.exe -r C:\response.ini ISCMSPassword=<password>
> ```

2.2.1.1.2 Reading a response file

A response file installation is started on the command line, but installation options are read from an ASCII text file with the options stored in key-value format. A response file installation is useful when setting up a cluster, or for creating development or test environments with standardized options.

When an option is given both on the command line and in a response file, the command line options take precedence over the response file options. This feature allows an administrator to override an option in a response file when required, and provides three levels of precedence for installation options:

1. Installation options given on the command line take highest precedence, and will always override response file and default values.
2. Installation options given in a response file are used when not given on the command line, and overrides default values.

3. Installation option default values are used when not given on the command line or in a response file.

For example, the following command reads installation options from the response file `C:\response.ini` , but overrides the response file's setting for the installation destination folder:

```
setup.exe -r C:\response.ini InstallDir="C:\SAP\SAP BusinessObjects Information
Steward\"
```

2.2.1.2 Quiet mode installations

A quiet mode installation is a command line installation that does not prompt for installation options. Installation options must be provided on the command line or in a response file. Any installation options not provided on the command line or in a response file will be left at their default values.

The `-q` switch bypasses the installation program's installation wizard, and allows an installation to be performed with no human input and no console output.

For example, the following command installs the web tier and overrides the installation destination folder (set to `C:\SAP\InformationSteward\` instead of the default folder).

```
setup.exe -q InstallDir="C:\SAP\InformationSteward\" features=WebTier
productkey=XXXXX-XXXXXXX-XXXXXXX-XXXX selectedlanguagepacks=en setupuilanguage=en
```

If an unexpected condition is encountered, an error message is written to the installation log file and the installation program exits. Installation activity, warnings, and errors are written to the installation log file in the folder:

`<INSTALL_DIR>\InstallData\logs\<DATE>\setupengine.log`

If the `<INSTALL_DIR>` folder has not been created by the time the installation program exits, look for `setupengine.log` in the temporary folder specified by the system `<TEMP>` environment variable.

> **Note**
>
> If you are installing SAP Information Steward on a Windows 7 or Vista system that has User Account Control (UAC) enabled, you should run the installation program with the system's built-in administrator account. If you use a normal account, a UAC prompt will appear.

2.2.2 Installation option parameters

The following table lists the parameters that can be used to select installation options both on the command line and in response files.

Parameter	Description
`CMSAuthentication=<TYPE>`	Authentication type used by the Central Management Server (CMS). Substitute `<TYPE>` with the authentication type. Currently the only supported type is Enterprise authentication: `secEnterprise` **Note** This value must match the value specified for `ISCMSAuth`.
`CMSPassword=PASSWORD`	Password for the CMS administrator account. Substitute `<PASSWORD>` with the password. **Note** This value must match the value specified for `ISCMSPassword`.
`CMSUserName=<USER>`	User name for the CMS administrator account. Substitute `<USER>` with the user name. **Note** This value must match the value specified for `ISCMSUser`.
`Features=<CODE>`	List of components to install. To select multiple features, use a comma-delimited list without spaces to give each code. In the following example, the web tier and Task Server will be selected for install: `Features=WebTier,TaskServer` For a complete list of feature codes, see Feature codes [page 38].
`InstallType=<TYPE>`	Information Steward installation type. Substitute `<TYPE>` with `<First>` for Primary installation or `<Expand>` for Expanded installation.
`InstallDir=<PATH>`	Destination folder into which the installer will install the software. When installing to a computer that already has SAP Data Services, SAP BusinessObjects BI platform, or SAP BusinessObjects Information platform services installed, the installer sets the value of `InstallDir` to the same path as the existing installation.
`ISCMSAuth=<TYPE>`	Authentication type used by the Central Management Server (CMS). Substitute `<TYPE>` with the authentication type. Currently the only supported type is Enterprise authentication: `secEnterprise` **Note** This value must match the value specified for `CMSAuthentication`.
`ISCMSConnectionSuccess=<SWITCH>`	Specifies whether the test connection to the CMS was successful. Substitute `<SWITCH>` with `1` if the connection was successful, `0` if it was not successful.

Parameter	Description
`ISCMSPassword=<PASSWORD>`	Password for the CMS administrator account. Substitute `<PASSWORD>` with the password. **Note** This value must match the value specified for `CMSPassword`.
`ISCMSPort=<PORT>`	Network TCP listening port number used by the Central Management Server (CMS). Substitute `<PORT>` with the port number. **Note** This value must match the value specified for `MasterCMSPort`.
`ISCMSSerialNumber=<NUMBER>`	Serial number of the CMS (saved in the CMS).
`ISCMSSystem=<HOST>`	Host name of the Central Management Server (CMS). Substitute `<HOST>` with the CMS host name. **Note** This value must match the value specified for `MasterCMSName`.
`ISCMSSystemStr=<STRING>`	Complete system string for the Central Management Server (CMS). Substitute `<STRING>` with the CMS host name and port in the format `<hostname>:<port>`. **Note** This value must match the values specified for `ISCMSSystem` and `ISCMSPort`.
`ISCMSuser=<NAME>`	Name of the user that is used to connect to the CMS server. Substitute `<NAME>` with the name.
`ISCMSUser=<USER>`	User name for the CMS administrator account. Substitute `<USER>` with the user name. **Note** This value must match the value specified for `CMSUserName`.
`ISEnableSSL=<SWITCH>`	Specifies whether the Central Management Server (CMS) uses SSL security. If the CMS is configured for SSL support, set `<SWITCH>` to `1`. If the CMS is not configured for SSL support, set `<SWITCH>` to `0`. **Restriction** Information Steward does not support SSL for the CMS. `ISEnableSSL` must be set to `0`.

Parameter	Description
`ISInfObjectsInstalled=<VALUE>`	Specifies whether the Information Steward CMS info objects are installed and up to date. Substitute `<VALUE>` with `True` or `False`.
`ISInstallType=<TYPE>`	Specifies the installation type chosen. Substitute `<TYPE>` with `First` (for Primary installation type) or `<Expand>` (for Expanded installation type).
`ISJDBCDriverFileList=<NAME>`	Path and file name of the JDBC driver. Substitute `<NAME>` with the path and file name of the driver.
`ISMoreThanOneSIANode=<SWITCH>`	Specifies whether the Central Management Server (CMS) has more than one local Server Intelligence Agent (SIA) node configured. If more than one SIA node is configured, set `<SWITCH>` to `1`. If only one SIA node is configured, set `<SWITCH>` to `0`.
`ISOracleHANARepo=<VALUE>`	Specifies whether the user is configuring an Oracle or SAP HANA repository. Substitute `<VALUE>` with `True` or `False`.
`ISRepoAvailable=<SWITCH>`	Specifies whether the InfoObjects are already present in the CMS and are up to date. If the InfoObjects are already present in the CMS, set `<SWITCH>` to `1`. If the InfoObjects are not present, set `<SWITCH>` to `0`.
`ISRepoConnStr=<VALUE>`	Connection string used to connect to an Oracle repository database. Substitute `<VALUE>` with the connection string.
`ISRepoDBHost=<VALUE>`	Host name for the database server that will contain the Information Steward repository. Substitute `<VALUE>` with the host name. **Note** This value must match the value specified for `ISRepoDBHostStr`.
`ISRepoDBHostStr=<VALUE>`	Host name for the database server that will contain the Information Steward repository. Substitute VALUE with the host name. **Note** This value must match the value specified for `ISRepoDBHost`.
`ISRepoDBName=<NAME>`	Database name for the database that will contain the Information Steward repository. Substitute `<NAME>` with the database name.
`ISRepoDBPasswd=<PASSWORD>`	Password for the database account that will be used to access the repository database. Substitute `<PASSWORD>` with the account password.
`ISRepoDBPort=<PORT>`	Network TCP listening port number used by the database that will host the Information Steward repository. Substitute `<PORT>` with the port number.
`ISRepoDBType=<TYPE>`	Type of database that will host the Information Steward repository. Substitute the database type where `<TYPE>` is: • IBM DB2: `DB2` • Microsoft SQL Server: `Microsoft_SQL_Server` • Oracle: `Oracle` • Oracle RAC: `OracleRAC` • SQL Anywhere: `SQLAnywhere`

Parameter	Description
`ISRepoDBUser=<USER>`	User name for the database account that will be used to access the repository database. Substitute `<USER>` with the account user name.
`ISRepoODBCStr=<VALUE>`	Connection string used to connect to an ODBC repository database. Substitute `<VALUE>` with the connection string.
`ISRepoOption=<VALUE>`	Specifies the repository operation to perform during installation. Substitute the operation where `<VALUE>` is: • Create a new repository: `Create` • Upgrade an existing repository: `Upgrade` • Skip repository creation: `Skip`
`ISRepoSerialNumber=<VALUE>`	Serial number for the Information Steward repository. Substitute `<VALUE>` with the serial number.
`ISRepoWinAuth=<VALUE>` `ISRepoWinAuthValue=<VALUE>`	For Microsoft SQL Server repositories, specifies whether to use Windows authentication instead of Microsoft SQL Server authentication. Both values must be set to be consistent with one another: To enable Windows authentication, set `ISRepoWinAuth` to **`1`** and `ISRepoWinAuthValue` to **`true`**. To disable Windows authentication, set `ISRepoWinAuth` to **`0`** and `ISRepoWinAuthValue` to **`false`**. For more information about how to use Windows authentication with Microsoft SQL Server, see the Microsoft SQL Server documentation.
`ISSIANode=<NODE>`	Specifies the name of the local Server Intelligence Agent (SIA) node, which points to the specified Central Management Server (CMS). Substitute `<NODE>` with the SIA node name.
`MasterCMSName=<HOST>`	host name of the Central Management Server (CMS). Substitute `<HOST>` with the CMS host name. **Note** This value must match the value specified for `ISCMSSystem`.
`MasterCMSPort=<PORT>`	Network TCP listening port number used by the Central Management Server (CMS). Substitute `<PORT>` with the port number. **Note** This value must match the value specified for `ISCMSPort`.
`ProductKey=<KEY>`	Product license key issued when you purchased the software. Substitute `<KEY>` with the product key in the format `XXXXX-XXXXXX-XXXXXX-XXXX`.
`RegisteredCompany=<NAME>`	Name of the company to whom the software is registered. Substitute `<NAME>` with the name.
`RegisteredUser=<NAME>`	Name of the user to whom the software is registered. Substitute `<NAME>` with the name.

Parameter	Description
`SelectedLanguagePacks=<CODE>`	Installs language support for users and administrators to interact with SAP Information Steward in a supported language. If more than one language pack is to be installed, use a semicolon-delimited list without spaces, within quotes, to separate each code. In the following example, language support for English will be installed: `SelectedLanguagePacks="en"` Substitute the following language codes where `<CODE>` is: • English: EN • French: FR • German: DE
`SetupUILanguage=<CODE>`	Determines the language for the installer to use during the installation. Substitute the language code where `<CODE>` is the country's language code.. Currently the only code available for this parameter is English: EN
`SIAName=<NAME>`	Name of the Server Intelligent Agent (SIA) node used to deploy Information Steward services. Substitute `<NAME>` with the SIA name.

2.2.2.1 Feature codes

Use the following feature codes to select features for installation.

- root
  - WebTier
  - TaskServer
  - DataReviewTaskJobServer
  - ISServices
    - ApplicationService
    - SearchServer
    - CPBServices
    - DataReviewService
  - Integrators
    - BOEIntegrator
    - BWIntegrator
    - DFIntegrators
    - BODIIntegrators
    - CWMIntegrators
    - RDBMSIntegrators
    - MITIIntegrators
    - HANAIntegrators
    - SAP Sybase PowerDesigner

To select multiple features, separate each feature code with a comma, without spaces. For example, the following feature list selects the web tier and documentation files:

```
features=WebTier,Documentation
```

2.2.2.2 Response file example

The following example response file contains options for installing SAP Information Steward.

Example

In this example, the response file is named `C:\response.ini`.

```
### #property.CMSAUTHENTICATION.description#
cmsauthentication=secEnterprise
### #property.CMSPassword.description#
cmspassword=cmspassword
### #property.CMSUSERNAME.description#
cmsusername=Administrator
### Installation directory
installdir=C:\Program Files (x86)\SAP BusinessObjects\
### #property.CMSAuthMode.description#
iscmsauth=Enterprise
### #property.CMSPassword.description#
iscmspassword=cmspassword
### #property.CMSServerPort.description#
iscmsport=6400
### #property.CMSSystem.description#
iscmssystem=localhost
### #property.CMSSystemStr.description#
iscmssystemstr=localhost
### #property.CMSUser.description#
iscmsuser=Administrator
### #property.EnableSSL.description#
isenablessl=0
### #property.ISMoreThanOneSIANode.description#
ismorethanonesianode=0
### #property.ISRepoAvailable.description#
isrepoavailable=false
### #property.RepoConnStr.description#
isrepoconnstr=
### #property.RepoDBHost.description#
isrepodbhost=repo_host
### #property.RepoDBHostStr.description#
isrepodbhoststr=repo_desc
### #property.RepoDBName.description#
isrepodbname=repo_name
### #property.RepoDBPasswd.description#
isrepodbpasswd=dbpassword
### #property.RepoDBPort.description#
isrepodbport=1433
### #property.RepoDBType.description#
isrepodbtype=MS SQL Server 2005
### #property.RepoDBUser.description#
isrepodbuser=dbuser
### #property.RepoOdbcStr.description#
isrepoodbcstr=
```

```
### #property.ICCRepoOption.description#
isrepooption=Create
### #property.SIANode.description#
issianode=sianode
### #property.MasterCmsName.description#
mastercmsname=localhost
### #property.MasterCmsPort.description#
mastercmsport=6400
### Product keycode
productkey=XXXXX-XXXXXXX-XXXXXXX-XXXX
### Registered Company
registeredcompany=Company Name
### Registered User
registereduser=User Name
### #property.SelectedLanguagePack.description#
selectedlanguagepacks=en
### Setup UI language
setupuilanguage=en
### #property.SIAName.description#
sianame=pubsboe
### Available features
### ------------------
### root
###   WebTier
###   TaskServer
###   ISServices
###     RelationshipServer
###     SearchServer
###     CPBServices
###   Integrators
###     BOEIntegrator
###     BWIntegrator
###     DFIntegrators
###     BODIIntegrators
###     CWMIntegrators
###     RDBMSIntegrators
###     MITIIntegrators
features=WebTier,TaskServer,RelationshipServer,SearchServer,CPBServices,ISService
s,BOEIntegrator,BWIntegrator,DFIntegrators,BODIIntegrators,CWMIntegrators,RDBMSIn
tegrators,MITIIntegrators
```

2.3 Installation troubleshooting

During the SAP Information Steward installation, you may encounter errors, such as repository configuration errors, that require action on your part. These errors do not prevent Information Steward from installing. However, if they are not corrected, the Information Steward repository is not created or crucial elements of Information Steward will not work correctly.

Many of the errors occur in the following installation processes:

- Repository creation and configuration
- addNode commands
- Integrator deployment

Some errors are issued during installation in an error message that allows you to either fix the problem and resume installation, or to skip the configuration and continue with the installation. If you decide to skip the configuration, the errors that you did not fix, along with corrective actions, appear in the *Post Installation Steps* window at the end of installation.

The errors and corrective actions are also listed in the installation log file named `PostInstallationinstructions.txt`. The *Post Installation Steps* window lists the location of the log file, which is located in `<install_dir>\InformationSteward\MM\log` by default.

Related Information

Troubleshoot repository installation errors [page 41]
Troubleshoot addNode installation error [page 41]
Troubleshoot integrator deployment installation errors [page 42]

2.3.1 Troubleshoot repository installation errors

When the installer does not configure the Information Steward repository during a standard installation, a *Post Installation Steps* window opens after installation that contains a list of errors and corrective actions. These errors are also listed in the `postinstallinstruction.txt` log file located by default in `<install_dir>\InformationSteward\MM\log`.

The table below contains the possible errors and corrective actions that can occur when the Information Steward repository is not configured during installation.

Error description	Corrective action
The installer could not connect to the Central Management Server (CMS) and, therefore, did not configure the Information Steward repository.	After installation: 1. Make sure that the CMS is running. 2. Rerun the installer in repair mode.
The installer encountered one or more database errors and could not configure the Information Steward repository.	After installation: 1. Make sure that you have the correct access permissions to the applicable database. 2. Run the Information Steward repository utility tool (ISRepositoryUtility). 3. Rerun the installer in repair mode.
The installer was not able to create the required SAP Data Services profiling tables.	After installation: 1. Make sure that you have the correct access permissions to the applicable database. 2. Run the Information Steward repository utility tool (ISRepositoryUtility). 3. Rerun the installer in repair mode.

For more information about the Information Steward repository utility tool, see the *Administrator Guide*.

2.3.2 Troubleshoot addNode installation error

The `addNode` command adds the applicable servers and services to the *Enterprise Information Management* node listed under *Servers* in the Central Management Console (CMC). If an `addNode` command fails

to complete during installation, the server or service is not added to the CMC, and Information Steward will not run correctly. When these errors occur, they are listed, along with corrective actions, in the *Post Installation Steps* window and in the `postinstallinstruction.txt` log file located in `<install_dir>\InformationSteward\MM\log` by default.

The table below contains the possible addNode command errors and corrective actions.

Error description	Corrective action
The EIM Adaptive Processing Service or Information Steward Job Server did not deploy because the `addNode` command failed.	After installation: 1. Open the Central Configuration Manager (CCM) and stop the Server Intelligence Agent (SIA). 2. In a command prompt, go to `<Install_dir>\InformationSteward\Utilities\`. 3. Run the `RunAddNode.bat` command. 4. When prompted, enter your CMS password (used during installation). 5. Restart the SIA.
The EIM Adaptive Processing Service or the Information Steward Job Server did not deploy and the `addNode` batch file was not created during installation.	After installation: 1. Open the CCM and stop the SIA. 2. Create a .bat file using the following text: `"@echo off\r\nset /p CMSPassword=Please enter CMS Password and Press Enter Key:\r\n <boe root dir>\win64_x64\scripts\addnode.bat -update -cms <BOE_CMS_Server_Name> -name <SIA_Name> -username <BOE_CMS_User_Name> -password %BOE_Password% -authentication secEnterprise -cmsport <CMS_Port_Number> usetempcms";` • **Note** Replace the information in the brackets (< >) with the applicable value. 3. In a command prompt, execute the .bat file that you just created. 4. Restart the SIA.

2.3.3 Troubleshoot integrator deployment installation errors

When the installer does not deploy the applicable integrators during a standard installation, an error may appear during installation that describes the error and supplies corrective action. You can perform the corrective action and resume installation, or skip the integrator configuration step and continue with the installation.

If you decide to skip the integrator configuration, a *Post Installation Steps* window opens after installation that contains a list of errors and corrective actions. These errors are also listed in the `postinstallinstruction.txt` log file located in `<install_dir>\InformationSteward\MM\log` by default.

For additional information see the topic“Viewing integrator run progress, history, and log files” in the *Administrator Guide*.

The table below contains the possible errors and corrective actions that can occur when the installer does not deploy an integrator.

Error description	Corrective action
A specific integrator was not deployed because the installer could not connect to the Central Management Server (CMS).	After installation: 1. Make sure that the CMS is running. 2. Rerun the installer in repair mode. If this error appears during installation, you may resume installation after you have ensured the CMS is running.
A specific integrator was not deployed because of errors that are not related to the CMS connection.	After installation: 1. Find the error in the integrator deployment log (IntegratorDeploy.txt) located by default in `<install_dir>\InformationSteward\MM\log`. 2. Fix the problem as described in the log file. 3. Rerun the installation in repair mode.

2.3.4 Repairing an installation

You can repair an installation to correct possible issues with an unsuccessful installation of Information Steward.

Repairing an installation of Information Steward will install all the files and run various configuration commands, such as creating or upgrading the repository, deploying integrators, and running addNode. If one or more steps has failed in the installation, post-installation messages will provide instructions for fixing these steps; use the steps provided instead of repairing the installation. In some cases, post-installation messages may actually suggest repairing an installation, depending on what has failed.

Here are situations in which repairing an install might be useful:

- You get an error about a missing service, such as an "Integrator is not deployed" error when you are trying to save an integrator configuration or trying to run it. Before repairing an install, make sure the integrators were actually selected for installation by using the *Modify* option, or by checking the installation log. You can also compare the files in the Information Steward folder against a working Information Steward environment with the same version and configuration as the one you are currently installing. For example, check the files in these folders: `<installRoot>\InformationSteward\MM\` and all sub folders. If the files in the folders are different, repairing the installation might correct the issue.
- Services do not start and you see a classDefNotFound error in a message or application log. Compare these files in the Information Steward folder against a working Information Steward environment with the same version and configuration as the one you are currently installing: `<installRoot>\SAP BusinessObjects Enterprise XI 4.0\java\pjs\services<ICC.*>\lib`.

Other installation issues cannot be corrected by repairing an installation. For example, if the installation software encounters a missing dependency from other components, like SAP Data Services or SAP Business Intelligence Platform, repairing the installation would not fix the issue. If you're unsure about how to fix an installation issue, check with SAP Support to find out if repairing the Information Steward installation is actually needed.

To run a repair your Information Steward installation on Windows:

1. Log off all user sessions that are logged in to the machine (for example, remote desktop connections). To view a list of users that are logged in to a machine, go to the *Task Manager* window and click the *Users* tab.
2. Go to *Start > Control Panel > Programs and Features*.
3. Right-click the current version of Information Steward, click *Uninstall/Change*, and select *Repair*.

Related Information

Installation troubleshooting [page 40]
Troubleshoot repository installation errors [page 41]
Troubleshoot addNode installation error [page 41]
Troubleshoot integrator deployment installation errors [page 42]
When installation is complete [page 29]

3 Post installation

This section describes the activities that should be performed after the installation program has finished.

3.1 Configuring a Data Services Job Server for Data Insight

Before Data Insight can use an SAP Data Services Job Server, add the Job Server to a predefined SAP Information Steward Job Server group.

Use additional Data Services Job Servers to run Data Insight profile and rule tasks or to run Data Cleansing Advisor. To make the Job Servers available to Data Insight, associate each Job Server with the Information Steward repository. The repository association adds the job server to a predefined Information Steward job server group.

> **Note**
>
> You must perform the association on the computer where the Job Server is installed.

To configure a Job Server and associate it with the Information Steward repository, perform the following steps on the computer where the Job Server is installed:

1. Open the Windows Start menu and right-click the Data Services Server Manager application.
2. Select *More* > *Run as Administrator.*
3. In the *Job Server* tab, select *Configuration Editor*.

   The *Job Server Configuration Editor* dialog box opens.
4. Select *Add*.

   The *Job Server Properties* dialog box opens.
5. Type a name in *Job Server name*.

   > **Note**
   >
   > Make sure that the Job Server name that you enter is different from the Data Services Job Server name.
6. Select *Add* in the *Associated Repositories* group and complete the *Repository Information*.

   Enter the following information about the Information steward repository:
   - *Database type*
   - *Database Server name*
   - *Database name*
   - *Username*
   - *Password*
7. Select *Apply* and select *OK*.

8. Verify that the Job Server displays in the *Job Server Configuration Editor* dialog box
9. Select *OK*.
10. Select *Close and Restart* to restart the job server with the updated configurations.
11. Select *OK* when you receive a message saying that Data Services Service restarts.

For more information about using the Data Services Server Manager, see "Server management" in the Data Services *Administrator Guide*.

3.2 Deploy web applications

Deploy web applications to your web application server when you use a web application server that is not installed with the SAP BI Platform or SAP IPS installation.

The SAP Information Steward installation program automatically deploys web applications to the Tomcat web application server, which is bundled with the SAP BI Platform or IPS installation. To deploy web applications to a different web application server than Tomcat, use the WDeploy tool.

WDeploy is installed as a part of the BI Platform or IPS installation. WDeploy eases the deployment process of web applications to Java-based web application servers. WDeploy has a consistent interface that automates the adjustments needed for the commands that are specific to each web application server.

Consult the Product Availability Matrix (PAM) for a list of supported web application servers.

Related Information

Deploy web applications with WDeploy [page 52]
Deploy web applications to SAP NetWeaver [page 63]

3.3 Configuring BI Launch Pad for Information Steward

BI Launch Pad enables users on SAP BusinessObjects Business Intelligence (BI) platform to access Information Steward on a different computer with SAP BusinessObjects Information platform services (IPS).

Follow these steps when your Information Steward installation is on IPS, and your BI Launch Pad users view the following items on a different computer:

- Lineage reports, such as Crystal or Web Intelligence
- Metapedia terms or categories associated with the lineage report

1. On the computer where IPS is installed, log in to the Central Management Console (CMC).

> **Note**
>
> The software doesn't support using the localhost URL. When you open the CMC web interface, make sure that you use the webserver name instead of "Localhost". For example, instead of using `http://localhost:<port_number>/BOE/CMC`, use `http://<webserver>:<port_number>/BOE/CMC`.

2. Select *Applications* from the navigation dropdown list located at the top left of the CMC.
3. Right-click on *Information Steward Application* in the *Application Name* list and select *BI Launch Pad Integration* from the dropdown menu.
4. Enter the connection information for the BI platform Central Management Server (CMS) for your BI Launch Pad application and click *Save*.

Grant view access to the user who accesses Information Steward from BI Launch Pad. For instructions, read about assigning principals to an access control list in the *SAP BusinessObjects Business Intelligence platform 4.1 Administrator Guide*.

Additionally, for information about relationships for universe objects and reports, see the *User Guide*.

3.4 Updating the license key

Situations when you might need to update your license key code for SAP Information Steward include the following:

- Update an expired key code
- Upgrade from a trial version
- Include additional features that you have purchased

To update the license key:

1. Go to the *License Keys* management area of the CMC.
2. If you are upgrading from a trial version of the product, be sure to delete the Evaluation key prior to adding any new license keys or product activation key codes.
   a. From the list of key codes, select the Evaluation key code.
   b. Click *Delete*.
3. Type the new key in the *Add Key* field.
4. Click *Add.*
   The key is added to the list.

3.5 Re-enable SSL on the Central Management Server (CMS)

If you use the Secure Sockets Layer (SSL) protocol on your Central Management Server (CMS) and disabled it prior to installing Information Steward, you must re-enable it before you run Information Steward.

For more information about enabling the SSL protocol, see the appropriate section in your CMS documentation.

See also:

- *SAP BusinessObjects Information Platform Services Administrator Guide*
- *SAP BusinessObjects BI Platform Administrator Guide*

3.6 Re-enabling SSL on the web application server

If you use the SSL protocol on your web application server, and disabled it prior to installing Information Steward, re-enable it.

For more information about enabling SSL protocol, see the appropriate section in your web application documentation.

See also:

- *SAP BusinessObjects Information Platform Services Administrator Guide*
- *SAP BusinessObjects Business Intelligence Platform Administrator Guide*

3.7 Extra requirements for Oracle, SAP HANA, and MySQL

SAP Information Steward requires a JDBC driver to connect to Oracle, SAP HANA, and MySQL databases. Use the JDBC Install utility in the following situations:

- When you want to change the database type (to Oracle, SAP HANA, or MySQL) from what you chose at installation time.
- When you need to upgrade to a newer version of the Oracle driver in order to keep connecting to the Oracle database.
- When you want to use Oracle or SAP HANA as the Information Steward repository.

> **Note**
>
> For more information about which Oracle JDBC driver version is compatible with each Oracle database version, see SAP Note 1741042.

The steps below provide an overview of how to run the JDBC Install utility. For detailed steps, see Running the JDBC Installation utility [page 50].

1. Obtain the JDBC driver for the applicable database type and obtain a license for each host system in your Information Steward deployment.
2. Download the database driver (`*.jar` file) to a local directory.
3. Run the JDBC Install Utility (`JDBCInstallUtility.bat`) to add the applicable driver files to your Information Steward environment.
   To run the JDBC Install utility, you need to know both the location of the install utility and the location of the applicable driver file.

The JDBC Install utility must be run on all machines where Information Steward is installed as a part of the BOE cluster system. For example, if you have a setup in which a Linux machine hosts the Central Management Server (CMS), and a Windows machine hosts Information Steward, you must run the JDBC Install utility on both machines.

Related Information

JDBC Install utility [page 49]

3.7.1 Extra requirements for Oracle - Information Steward

Extra requirements if you use Oracle for the repository database.

If you are using Oracle for the repository database:

Extra requirements for Oracle

Requirement	More information
Grant the database account the CONNECT and RESOURCE roles, and grant the CREATE ANY SEQUENCE privilege.	• For Oracle 10G/R2, also grant the CREATE VIEW privilege. • For Oracle 12c (12.1) or higher, also manually add the UNLIMITED TABLESPACE privilege to the database account, as the RESOURCE role no longer includes this privilege.

> **Note**
>
> To store multi-byte characters in a repository table when the repository is on an Oracle database, you must change the Oracle database character set to a code page that supports the multi-byte language that you plan to use, or you risk corrupting the metadata. For example, to store Japanese characters, change the Oracle database character set to either `SHIFT_JIS` or `UTF8`.

3.7.2 JDBC Install utility

The JDBC Install utility copies JDBC driver files for Oracle, SAP HANA, or MySQL into your SAP Information Steward environment. The JDBC drivers for Oracle, SAP HANA, and MySQL database types are not packaged with the Information Steward installation.

You run the JDBC Install utility using a command line. For the command line syntax and an example, see Running the JDBC Installation utility [page 50].

Database driver file names

In the JDBC Installation utility command line you must include the name of the driver file. The table below contains the applicable driver file names for each database type.

Database type	Driver file name
Oracle	Use one of these files based on your version of Oracle: • `ojdbc5.jar` • `ojdbc6.jar`
MySQL	`mysql-connector-java-5.1.15-bin.jar`
SAP HANA	`ngdbc.jar`

Database usage

You can use the databases for the following purposes:

- As a data source from which the Data Insight module of Information Steward collects profile attributes and determines the data quality and structure.
- As an integrator source from which the Metadata Management module of Information Steward collects metadata to display impact and lineage analysis.
- As the Information Steward repository (Oracle and SAP HANA only).

JDBC Install utility location

The JDBC Install utility (`JDBCInstallUtility.bat`) is installed in the following location on all machines where Information Steward is installed: `<SAP BusinessObjects>\InformationSteward\MM\BIN\>`.

3.7.3 Running the JDBC Installation utility

Run the JDBC Install utility if you did not configure the driver file during SAP Information Steward installation.

> **Note**
>
> Accepted values for the `database_type` field shown in the command line in step 2 below are `<oracle>`, `<hana>`, or `<mysql>`.

To run the JDBC Install utility:

1. Open a DOS command prompt and navigate to the location of the JDBC Install utility.

2. To install the applicable driver, use the following command syntax:

```
JDBCInstallUtility.bat "<JAR file location>\<driver file name>.jar"
<database_type>
```

   See the “Example: Command line” section below.

3. If you are copying the JDBC driver files for using Oracle or SAP HANA as the Information Steward repository, perform these additional steps:
   a. Redeploy the Web Application Server using WDeploy.
   b. If you run Data Insight profiling and rule tasks and you created a new repository with different connection information, access the SAP Data Services Server Manager to associate the Information Steward job server with the new repository.

The command copies the driver files for the specified database type into the following locations as applicable.

Repository type	Repository location
Information Steward repository (Oracle or SAP HANA databases only)	`<SAP BusinessObjects>\SAP BusinessObjects Enterprise XI 4.0\warfiles\webapps\BOE\WEB-INF\jars\lib\<database-type>\`
Data Insight data source or Metadata Management integrator source	`<SAP BusinessObjects>\InformationSteward\MM\lib\ext\`

Example: Command line

Let's say that you downloaded the `ngdbc.jar` file to the Information Steward installation directory in a folder named HANA (remember that the location must be local). Below is a sample command line for installing the driver files that enable you to use the SAP HANA database type in Information Steward:

```
JDBCInstallUtility.bat "c:\Program Files (X86)\SAP
BusinessObjects\InformationSteward\HANA\ngdbc.jar" hana
```

Related Information

Deploy web applications [page 46]
Configuring a Data Services Job Server for Data Insight [page 45]

3.8 Deploy web applications with WDeploy

Use WDeploy to deploy and undeploy Information Steward web applications to your Java-based web application server.

WDeploy is included with the BOE Platform or IPS installation. The Tomcat web server is also included with the installation. When you use Tomcat as your web server, Information Steward automatically deploys web applications during installation. If you use a different web application server, you deploy web applications to your web application server using WDeploy.

> **Note**
>
> If you use SAP NetWeaver as your web application server, you use WDeploy for a different purpose, and you follow a different process to deploy web applications.

The WDeploy tool has two interfaces from which to choose:

- Command line WDeploy: A traditional, text-based interface that processes commands and parameters given in a command prompt.
- Graphical user interface (GUI) WDeploy: A console-based guided assistant similar to the BI Platform installation program, which prompts you to enter deployment parameters.

Use the WDeploy GUI to run `deployall` and `undeployall` commands. Use the command-line WDeploy when you have more advanced processes to perform for web applications.

Related Information

Deploy web applications to SAP NetWeaver [page 63]

3.8.1 WDeploy prerequisites

Ensure that you adhere to the specific WDeploy prerequisites for web application server free space, platform requirement, and so on.

Read about the WDeploy software and hardware prerequisites, and other information in the SAP BusinessObjects Business Intelligence *Web Application Deployment Guide*. Find the most recent documentation on our Customer Portal.

Prerequisite for	Details
WebSphere as web application server	When using WebSphere with a non-default profile name that is not set to `AppSrv01`, manually update the `as_profile_name` parameter in the Websphere configuration file before launching the WDeploy console-based tool. **Example** 1. Update the `s_profile_name` in `<BIP_INSTALL_DIR>\wdeploy\conf\config.websphere<version>`. 2. Launch WDeploy. 3. Select WebSphere version and provide all parameters. 4. Perform the deployment.

Java home environment variable	Set the `JAVA_HOME` environment variable to the desired JDK folder.
	Example
	`<BIP_INSTALL_DIR>\Java`
	Example
	`<BIP_INSTALL_DIR>\win64_x64\jdk`

Web application server	• Installed and operating before you install Information Steward. • Have at least 5 GB of free disk space in addition to any other requirements given by other software installed on the machine.

Prerequisite for	Details
Host web application server	Must have configured the minimum heap size (-Xms), maximum heap size (-Xmx), and Permanent Generation (-XX:MaxPermSize) settings. **Example** `JAVA_OPTS=-Xms128m -Xmx1024m -XX:MaxPermSize=512` **Note** For SAP NetWeaver AS 7.3 or higher, ensure that the maximum heap size is at least 2048 megabytes: `JAVA_OPTS=-Xms128m -Xmx2048m -XX:MaxPermSize=512`
Host system	Must have a minimum of 5 GB of free space available in \temp for the deployment of web applications. You cannot use the TEMP environment variable to define a location other than \temp.
Web application server host system	• Must have at least 15 GB of free hard disk space before attempting to deploy web applications. • Must have at least 4 GB of RAM. When using SAP NetWeaver AS Java 7.3 or higher, ensure that the host system has at least 8 GB of RAM.
Operating system	• 64-bit operating system • 64-bit web application servers • 64-bit JDK
Rights to deploy web applications	User that deploys web applications with WDeploy is the same user that installed BI Platform or IPS. If the user is different, see the *BI Web Application Deployment Guide* for details.

3.8.2 Start WDeploy

Start the WDeploy console-based tool or use a command line to start the command line WDeploy tool.

Start the WDeploy console-based tool in Windows under the *Start* menu: *Start* > *All Programs* > *SAP BusinessObjects BI platform 4 (or Information Platform Services 4)* > *SAP BusinessObjects BI platform (or Information Platform)* > *WDeploy*.

To open the command line WDeploy tool, enter `<BIP_INSTALL_DIR>\wdeploy\wdeployGUI.bat`.

When the WDeploy console-based tool is run for the first time, it prompts for which language to use for displaying information in the user interface. Select a language and continue.

3.8.3 Deploying and undeploying all using WDeploy GUI

Use the WDeploy GUI tool to undeploy and deploy all web applications that are not automatically deployed during installation. Any web applications not deployed by the BI platform or IPS installation program or WDeploy tool will be unaffected.

Before deploying or undeploying web applications to a web application server, ensure that the WDeploy web application server configuration file, `config.<WEB_APP_SERVER>` is correctly configured. For details about your applicable web application server, see the *BI Web Application Deployment Guide*.

> **Note**
>
> To perform deployment operations other than deploy all and undeploy all, use the WDeploy command line tool.

1. Start WDeploy GUI.
2. Select an option from *Choose deployment Action* based on whether you are deploying or undeploying.

   Options include:

   - *Deploy all available SAP BusinessObjects Web Applications to the server*.
   - *Undeploy all SAP BusinessObjects Web Applications from the server*.

   > **Note**
   >
   > If the Information Steward web applications have previously been deployed on the web application server, the deployment operation may take several minutes.
3. Select the server type from the *Select Web Application Server* type dropdown list.
4. Complete the applicable *Web Application Server information* options applicable to the web application server type you chose.
5. Enter the path to the root directory in *Application Server Domain Root Directory*, or click *Browse* to select the root directory.
6. Click *Options* to set advanced options. Set the following options:

   - *WDeploy work directory*
   - *Web applications source locations*
   - *Web application root context*
7. Complete any other applicable options and click *Run*.

Related Information

WDeploy GUI advanced options [page 56]

3.8.3.1 WDeploy GUI advanced options

The WDeploy GUI tool *Options* dialog box allows you to select custom folders to use for the deployment of web applications.

Option	Description
Select WDeploy work directory	Select the folder in which WDeploy manipulates the web applications WAR or EAR archives (for example, to split static and dynamic content in a web application). This folder stores the results of the `wdeploy predeploy` action, and stores data required to undeploy web applications. **Example** `<BIP_INSTALL_DIR>\wdeploy\workdir`
Select source location of web applications *Web application source tree location*	The location of source used to create WAR or EAR. **Example** `<BIP_INSTALL_DIR>\warfiles\webapps`
Select Source location of web applications *Generic WAR files location*	The location of source content used to create the generic WAR files. **Example** `<BIP_INSTALL_DIR>\java\applications`
Web applications root context	Select the web application root context path to which all web applications are deployed. **Example** \BOE

Note

Non-English characters in paths are not valid in the WDeploy GUI tool.

3.8.4 Run WDeploy from the command line

Use the WDeploy command line tool to deploy the Information Steward web application components to a web application server and perform other advanced deployment functions unavailable in the WDeploy GUI tool.

Deploy the following web components using the WDeploy command line tool:

- BOE
- CPBWebservice

By default, the WDeploy tool is installed to the following location during the SAP Business Objects Business Intelligence or IPS installation:

- `<BIP_INSTALL_DIR>\wdeploy`

The web components are installed to the following location:

- `<BIP_INSTALL_DIR>\warfiles\webapps`

Use deployment commands to deploy specific web applications to a specific web application server. Deployment commands follow the format: server, properties, action. For example:

Sample Code

```
wdeploy <server_type> [-Das_admin_password=<password>] [-DAPP=<app_name>]
<command>
```

Sample Code

Where:

Parameter	Description
`<server_type>`	Name of the web or web application server. Must match the name of the WDeploy configuration file `<BIP_INSTALL_DIR>\wdeploy\conf\config.<WEB_APP_SERVER>`. Available values: • `jboss<version>` • `sapappsvr<version>` • `tomcat<version>` • `weblogic<version>` • `websphere<version>`
`-Das_admin_password=<password>`	Specifies the administrator password to use to deploy the application. **Note** A password is not required for Tomcat web application servers.

Parameter	Description
-DAPP=<app_name>	Specifies the web application component to deploy. Available values for <app_name> include the following: • BOE • CPBWebservice
<command>	Specifies the command for WDeploy to execute. Available values for <command> include: • deploy: Prepares and deploys a single web application component to the web application server. • deployall: Prepares and deploys all web application components to the web application server. • undeploy: Removes a single web application component from the web application server • undeployall: Removes all web application components from the web application server.

3.8.4.1 Configuring WDeploy

Configure WDeploy to specify the web application server settings.

1. Open the configuration file for your web application server. By default, the configuration files are installed to <BIP_INSTALL_DIR>\wdeploy\conf.

   Available configuration files include:
   - config.jboss<version>
   - config.sapappsvr<version>
   - config.tomcat<version>
   - config.weblogic<version>
   - config.websphere<version>
2. Set the parameters to match your application server settings.
3. Save and close the configuration file.

3.8.4.2 Using WDeploy command line tool

Use the WDeploy command line tool to deploy or undelploy the Information Steward web application components to a web application server.

Before using the WDeploy command-line tool, ensure that the WDeploy configuration files have been configured appropriately for your web application server. For details about your applicable web application server, see the *BI Web Application Deployment Guide*

Examples of deploy commands:

> **Example**
>
> `wdeploy.sh <server_type> undeployall -Das_admin_password=<password>`

> **Example**
>
> `wdeploy.sh <server_type> deployall -Das_admin_password=<password>`

> **Example**
>
> `wdeploy.bat <server_type> undeployall -Das_admin_password=<password>`

> **Example**
>
> `wdeploy.bat <server_type> deployall -Das_admin_password=<password>`

Type the applicable command line using the example syntax.

Related Information

Run WDeploy from the command line [page 56]
Configuring WDeploy [page 58]

3.8.4.3 Deploying all web components

Deploying all web components deploys BOE and CPBWebservice, in addition to any other SAP BusinessObjects web application components available on the host system. To deploy all web content:

1. Access `<BIP_INSTALL_DIR>\wdeploy` from the command prompt.
2. Run `wdeploy` with the `deployall` command:
   `wdeploy <server_type> deployall -Das_admin_password=<password>`

   > **Note**
   >
   > Tomcat does not require a password. When you deploy on Tomcat, exclude the `-Das_admin_password=<password>` parameter.

All web components are deployed to the web application server.

Example: WebSphere 6

```
wdeploy websphere6 deployall -Das_admin_password=mypass
```

> **Note**
>
> After you deploy the web applications on Tomcat, you must restart the Tomcat application server for the changes to take effect.

3.8.4.4 Deploying one web component

To deploy a single web application component:

1. Access `<BIP_INSTALL_DIR>\wdeploy` from the command prompt.
2. Run `wdeploy` with the `deploy` command and the `-DAPP=<app_name>` parameter:
   `wdeploy <server_type> -Das_admin_password=<password> -DAPP=<app_name> deploy`

   > **Note**
   >
   > Tomcat does not require a password. When you deploy on Tomcat, exclude the `-Das_admin_password=<password>` parameter.

The specified web component is deployed to the web application server

Example: CPBWebservice on WebLogic 10

```
wdeploy weblogic10 -Das_admin_password=mypass -DAPP=CPBWebservice deploy
```

> **Note**
>
> After you deploy the web application on Tomcat, you must restart the Tomcat application server for the changes to take effect.

3.8.4.5 Verifying deployment

To verify the deployment was performed properly:

1. Check whether the web applications have been deployed to the correct location.
   - On Tomcat:
     Windows: `$CATALINA_HOME\webapps`
     Unix: `$CATALINA_HOME/webapps`
   - On WebSphere:
     Windows: `<server_folder>\installedApps\<Node_Cell_folder>`
     Unix: `<server_folder>/installedApps/<Node_Cell_folder>`
     For example, on Windows:
     `C:\Program Files\IBM\WebSphere\AppServer\profiles\AppSrv01\installedApps\SHG-D-01-CGAONode01Cell`

For example, on Unix: `/opt/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/SHG-D-01-CGAONode01Cell`

- On WebLogic:
  Windows: `<server_folder>\stage\`
  Unix: `<server_folder>/stage/`
  For example, on Windows:
  `C:\bea\wlserver_10.0\samples\domains\wl_server\servers\examplesServer\stage`
  For example, on Unix: `/opt/bea/weblogic11g/samples/domains/wl_server`

2. Log in to Information Steward.
3. Verify that the web application initializes properly.

   All cleansing packages should be retrieved and displayed.
4. (Optional) Perform additional tasks in Cleansing Package Builder.
   - Cleansing Package Builder Search
   - Open a cleansing package
   - Create a cleansing package

3.8.4.6 Undeploying all web components

Undeploying all web components undeploys BOE and CPBWebservice, in addition to any other SAP BusinessObjects web application components deployed on the host system. To undeploy all web components:

1. Access `<BIP_INSTALL_DIR>\wdeploy` from the command prompt.
2. Run **`wdeploy`** with the `undeployall` command:
   `wdeploy <server_type> undeployall -Das_admin_password=<password>`

   > **Note**
   >
   > Tomcat does not require a password. When you deploy on Tomcat, exclude the `-Das_admin_password=<password>` parameter.

All web components are removed from the web application server.

Example: WebSphere 6

```
wdeploy websphere6 undeployall -Das_admin_password=mypass
```

> **Note**
>
> After you undeploy the web applications on Tomcat, you must restart the Tomcat application server for the changes to take effect.

3.8.4.7 Undeploying one web component

To undeploy a single web component:

1. Access `<BIP_INSTALL_DIR>\wdeploy` from the command prompt.
2. Run `wdeploy` with the `undeploy` command and the `-DAPP=<app_name>` parameter:
   `wdeploy <server_type> -Das_admin_password=<password> -DAPP=<app_name> undeploy`

> **Note**
>
> Tomcat does not require a password. When you deploy on Tomcat, exclude the `-Das_admin_password=<password>` parameter.

The specified web component is removed from the web application server.

Example: CPBWebservice on WebLogic 10

```
wdeploy weblogic10 -Das_admin_password=mypass -DAPP=CPBWebservice undeploy
```

> **Note**
>
> After you undeploy the web application on Tomcat, you must restart the Tomcat application server for the changes to take effect.

3.9 Deploying web applications in a distributed environment

In a distributed deployment where the Information Steward web applications are deployed to a different system than the Central Management Server (CMS), a broken link may appear in a Central Management Console (CMC) that resides on the same computer as the CMS.

For example, consider the following deployment:

Host A	Host B
BI platform Central Management Server (CMS)	BI platform web tier
BI platform web tier	Information Steward web applications
Information Steward InfoObjects	

To manually deploy the Information Steward web application and repair the broken link on Host A:

1. Copy the `BOE` directory from Host B to Host A.
   By default, the `BOE` directory is located in `<BIP_INSTALL_DIR>\warfiles\webapps\`.
2. Use `wdeploy` to deploy the BOE web application on Host A:

- Deploy all SAP web applications from the command line or GUI.
  Or
- Deploy only the BOE web application from the command line.

Related Information

Deploy web applications [page 46]
Deploying all web components [page 59]
Deploying one web component [page 60]

3.10 Deploy web applications to SAP NetWeaver

When you use SAP NetWeaver version 7.3 and higher as your web server, you use the Software Update Manager (SUM) to deploy SAP Information Steward web applications.

Before you deploy Information Steward web applications to SAP NetWeaver, ensure that your system meets the following prerequisites:

- You are using a Windows Server 2008 or higher platform or you are using a Unix host.
- You install a compatible version of either SAP BusinessObjects BI (BOE) platform or Information Platform Services (IPS).
- You install NetWeaver version 7.3 or higher and you use the same host agent as you used for the BOE platform or IPS installation.
- You install Information Steward and you use the same host agent as you used for the BOE platform or IPS installation and NetWeaver installation.

> **Note**
>
> If you are using SAP Data Services, you install a compatible version of Data Services before you install Information Steward.

> **Note**
>
> To ensure that you use compatible versions of SAP software, see the Product Availability Matrix (PAM).

There are two predeployment phases to perform before you deploy Information Steward web applications to SAP NetWeaver 7.3 or higher:

- Set HTML or HTM files so that they are never compressed.
- Use WDeploy to generate SCA files.

When you deploy Information Steward web applications to SAP NetWeaver 7.3 or higher, use the Software Update Manager (SUM).

> **Note**
>
> View all information for SUM in the SAP Customer Portal beginning with the System Maintenance section of the Software Logistics Toolset (SL Toolset) page at http://help.sap.com/disclaimer?site=https://support.sap.com/sltoolset.

Related Information

Setting compression for HTML and HTM files [page 64]
Generating SCA files with WDeploy [page 65]
Software Update Manager (SUM) [page 65]

3.10.1 Setting compression for HTML and HTM files

Before you deploy SAP Information Steward web applications to an SAP NetWeaver web application server, set your system so that `.html` and `.htm` files are never compressed.

Undeploy any existing BOE platform or IPS web applications that are running before you perform these steps.

Use the following example to set the compression for your applicable components for SAP NetWeaver Application Server 7.3 or higher.

1. Log on to the SAP Administrator portal.

   In your browser, type `http://<servername>:<1128>/nwa`. Use port number 1128 when you use HTTP and use port 1129 when you use HTTPS.
2. Select *Configuration* > *Infrastructure* > *Java System Properties*.
3. On the *Services* tab, select *HTTP provider* or *HTTPS provider* as applicable.
4. Under *Extended Details*, modify the *AlwaysCompressed* and *NeverCompressed* properties as follows:
   - *AlwaysCompressed*: Remove `*.htm`, `*.html`, and`text/html` (or the values for HTTPS). The *AlwaysCompressed* field cannot be blank. Therefore, if this field is blank after you remove the listed properties, enter a space.
   - *NeverCompressed*: Add `*.htm`, `*.html`, `text/html` (or the values for HTTPS) to this property.
5. Save your changes and exit the SAP Administrator portal.

Related Information

Generating SCA files with WDeploy [page 65]
Software Update Manager (SUM) [page 65]

3.10.2 Generating SCA files with WDeploy

Use WDeploy to generate the necessary SCA (Service Component Architect) files that you manually deploy to the SAP NetWeaver web application server.

Before you begin, undeploy any existing Information Steward web applications that are currently running on the server.

The system administrator user that performs the following steps must be the same system administrator as for SAP BusinessObjects BI platform or IPS installation and Information Steward installation.

1. Run the WDeploy `predeploy` command or `predeployall` command to generate SCA files.

   > **Note**
   >
   > You cannot use the WDeploy GUI to run the `predeploy` or `predeployall` commands.

   - `wdeploy.bat sapappsvr73 -DAPP=DataServices predeploy` or
   - `wdeploy.bat sapappsvr73 predeployall`

Command	Description
`predeploy`	Prepares a web application for deployment to the target web application server.
`predeployall`	Prepares all web applications for deployment to the target web application server.

   The WDeploy command saves the resulting SCA files to the following location:
   `<BIP_INSTALL_DIR>\wdeploy\workdir\sapappsvr73\application`

2. Continue with the deployment process by downloading and unpacking the SUM.

Related Information

Downloading and unpacking the SUM [page 66]

3.10.3 Software Update Manager (SUM)

Use SUM to deploy Information Steward web applications to SAP NetWeaver.

SUM is a multipurpose tool that supports various processes such as performing a release upgrade, installing enhancement packages, applying support package stacks, installing add-ons, or updating single components. You need to use SUM to complete the deployment of Information Steward web applications to NetWeaver.

Related Information

Downloading and unpacking the SUM [page 66]

3.10.4 Downloading and unpacking the SUM

Before you can perform a manual deployment of Information Steward web applications to SAP NetWeaver, obtain the Software Update Manager (SUM) tool, and prepare it for deployment.

If you already have downloaded the SUM tool, make sure that you are using the most recent version.

Ensure that the web application server is installed, configured, and running.

> **Note**
>
> Obtain all information about SUM, including a link to the download center, and access to SUM guides, by visiting the Customer Support Portal at https://support.sap.com/sltoolset. The link takes you to the Software Logistics Toolset (SL Toolset) page. Scroll down to *System Maintenance* to see the SUM section.

You need SUM to deploy web applications to SAP NetWeaver.

The instructions require that you be an administrator and that you enter the SAP system identification code that you used when you installed SAP NetWeaver.

1. Download SUM from the SAP Software Download Center at https://support.sap.com/swdc.
2. Unpack SUM to the same system that hosts SAP NetWeaver technology platform, with network access to the location where you deploy the SCA packages with WDeploy.
3. Unpack SUM with the following command:

   > **Code Syntax**
   >
   ```
   SAPCAR - xvf <download directory>\<path>\<Archive>.SAR -R
   <SAPNW_INSTALL_DIR>:\usr\sap\<sapsid>
   ```

   Enter `sapsid` in lower case. Enter your SAP system identification code in the command above in lower case.

   When you extract the files, the software creates a folder named *SUM* under the specified path.
4. Continue with the deployment by deploying Information Steward web applications to NetWeaver with SUM.

Related Information

Deploying Information Steward web applications to NetWeaver with SUM [page 67]

3.10.5 Deploying Information Steward web applications to NetWeaver with SUM

If you have not deployed SAP Information Steward web applications to the SAP NetWeaver Application Server, follow this fresh deployment method.

Make sure that you meet the following requirements:

- You are an administrator user and you use the same system identification code that you specified when you installed SAP NetWeaver.
- You have write permission for the `<DS_COMMON_DIR>` folder.
- The web application server is installed, configured, and running.
- The SUM software is downloaded, unpacked, and configured.
- You have generated the SCA files with WDeploy.

Follow these steps to manually deploy SAP Information Steward web applications to SAP NetWeaver:

1. Set the Information Steward environment so that it is available.
   a. Set the `$LINK_DIR` environment variable to point to `<dataservices_install_directory>\dataservices`.
   b. Set `$DS_COMMON_DIR` environment variable to point to `<dataservices_install_directory>\dataservices`.

      > **Note**
      >
      > You can also perform Steps a. and b. in the NetWeaver users, `.profile` or related files. By setting the Information Steward environment in the `.profile` or related files, you set the environment before the NetWeaver application server daemon starts.

   c. Restart the NetWeaver application server daemon after Information Steward setup.
2. Ensure that all server processes on the Java instance are started.
3. Copy all SCA files that you generated with WDeploy and place them into the following folder:
   `<SAPNW_INSTALL>\usr\sap\Trans\EPS\in`
4. Start the NetWeaver Application Server component.

   Perform the following steps:

   a. Start SAP Management Console.
   b. Choose *Start*.
   c. Enter the local machine details where you installed the NetWeaver application.
5. Start the SUM server process:
   a. Logon as `<sid>adm` and start the SUM process from the SUM directory.
   b. Execute the following command: `STARTUP confighostagent <SAPSID>`.
6. Start the SUM graphical user interface (GUI) from a browser at `http://<host>:<port>/lmsl/sumjava/<SAPSID>/index.html`

   About port: When you use `http`, use port 1128. When you use `https`, use port 1129.
7. For *Define Target*, choose *Manually prepared directory* and enter the path to the SCA files in the *Stack file or Directory path* text box:

   Enter `<SAPNW_INSTALL>\usr\sap\Trans\EPS\in`

8. Click *Next*.

   The update procedure starts. When the update procedure completes, the deployment process is finished. The SUM displays a confirmation tab. If there are warnings or errors, you may be able to click *Back* to fix the errors in SUM before you try to deploy again.

   > **Note**
   >
   > For details about the deployment, open the latest `ProcessOverview.html` report, stored in `<SAPNW_INSTALL>:\usr\sap\<sapsid>\SUM\sdt\htdoc`.

For more information about troubleshooting, see the SAP NetWeaver *Web Application Deployment Guide*.

Related Information

Setting compression for HTML and HTM files [page 64]
Generating SCA files with WDeploy [page 65]
Software Update Manager (SUM) [page 65]
Downloading and unpacking the SUM [page 66]

3.10.6 Undeploying Information Steward web applications

Use the command line console to undeploy the Information Steward web applications from SAP NetWeaver.

The Software Update Manager (SUM) tool does not support an undeployment process. Therefore, perform the following steps to undeploy web applications:

1. On the SAP NetWeaver 7.3 or higher host system, go to `<install_dir>:\usr\sap\<AS_ID>\<instance_folder>\j2ee\console`.
2. Run `textconsole` and log on using your NetWeaver user name and password.
3. Check if the web application is already deployed by using the `list_app` command.
4. Use the `undeploy` command to undeploy the Information Steward web applications.

   ```
   undeploy name=<web_app_name> on_deploy_error=stop
   ```

   where `<web_app_name>` is the name of the web application that you want to undeploy.

3.10.7 Updating an existing deployment

Update the deployed SAP Information Steward web applications to SAP NetWeaver 7.3 or higher for a support pack or patch.

> **Note**
>
> You can alternatively choose to undeploy the existing Information Steward web applications and perform a fresh deployment with the NetWeaver support pack or patch. Follow the steps in "To undeploy Information Steward web applications".

To update an existing web application deployment:

1. Update the `SAP_metadata.properties` file version to the new NetWeaver version.

   By default, the properties file is located in `<BIP_INSTALL_DIR>\wdeploy\SDLDSupport\NWSLD\<warfile>`.

   > **Note**
   >
   > Ensure that you set the support pack or patch version to a higher value than the one in the deployed version.

2. Follow the predeployment configuration steps in WDeploy to generate new SCA files.
3. Follow the deployment steps in the Software Update Manager (SUM) tool GUI.

   When you update web applications with the SUM tool, the software displays existing versions and the target version during the process.

Related Information

Undeploying Information Steward web applications [page 68]
Generating SCA files with WDeploy [page 65]
Deploying Information Steward web applications to NetWeaver with SUM [page 67]

3.11 Verifying Information Steward servers are running

To verify that the Information Steward servers are running and enabled:

1. From the CMC Home page, select Servers from the *CMC Home* drop-down list.
2. Expand the *Service Categories* node and select *Enterprise Information Management Services*.
   The list of servers in the right pane includes a *State* column that provides the status for each server in the list.
3. Verify that the following servers are "Running" and "Enabled":
   - AdaptiveProcessingServer
   - JobServer

4. If a server is not running or enabled, do the following:
   a. Select the server name from the list.
   b. Click *Actions* from the toolbar and select *Start Server* or *Enable Server*.

For more information, see "Services" in the *Information Steward Administrator Guide*.

3.12 Verifying Information Steward services

Verify that the features that you chose during SAP Information Steward installation have the corresponding services in the SAP Central Management Console (CMC).

1. Open the CMC and select *Servers* from the *CMC Home* drop-down list.
2. Expand *Service Categories* in the left pane and select *Enterprise Information Management Services*.
   The right pane lists information about the following kinds of servers:
   - AdaptiveProcessingServer (EIM)
   - JobServer (IS)
3. Right-click the applicable server row and select *Stop Server* from the drop-down list.
   The *State* column changes to *Stopped*.
4. Right-click the applicable server row again and select *Select Services* from the drop-down list.
   The *Select Services: <computer_name>.<server_type>* window opens.
5. Verify that the list of services in the *Services of <computer_name>.<server_type>* column in the right pane is correct for each feature that was installed.

   The table below lists each feature and the applicable service for each type of server.

	Services	
Feature Installed	**EIM Adaptive Processing Server**	**Information Steward Adaptive Job Server (ISJobServer)**
Information Steward Task Server	Information Steward Administrator Task Service	• Information Steward Task Scheduling Service • Information Steward Integrator Scheduling Service
Information Steward Data Review Server	N/A	Information Steward Data Review Task Scheduling Service
Metadata Search Service	Information Steward Metadata Search Service	N/A
Application Service	Information Steward Application Service	N/A
Cleansing Package Builder Service	• Cleansing Package Builder Auto-analysis Service • Cleansing Package Builder Core service • Cleansing Package Builder Publishing Service	N/A

	Services	
Feature Installed	**EIM Adaptive Processing Server**	**Information Steward Adaptive Job Server (ISJobServer)**
Information Steward Data Review Service	Information Steward Data Review Service	N/A
Data Cleansing Advisor Service	Data Cleansing Advisor Service	N/A
All metadata integrators	N/A	• Information Steward Integrator Scheduling Service • Information Steward Integrator Service

6. To add any missing service to the *Services of* `<computer_name>.<server_type>` list, select the service from the *Available services* list in the left pane and use the arrow button > to move it to the left-pane list.

> **Note**
>
> If you want to be able to use Information Steward Data Cleansing Advisor feature, you must move the Data Cleansing Advisor service from the list of available services to the list of services for *EIMAdaptiveProcessingServer*.

7. Click *OK* when you have finished.
8. Right-click the applicable server row and click *Start Server* or *Enable Server* from the drop-down list to start the server again.

3.13 Verifying Data Insight installation

To validate the installation of the Data Insight component:

1. Log in to the Central Management Console (CMC) .
2. Create a connection, test, and save it.
3. Log in to Information Steward.
4. In the Data Insight tab, browse and import a table from the connection using the Enterprise Project.
5. View the table data.
6. Profile the table.
7. Delete the table from the project.

3.14 Verifying Metadata Management installation

To validate the installation of the Metadata Management component:

1. Log in to the Central Management Console (CMC).
2. Create an RDB Integrator source using a small repository, test and save it.

3. Run the Integrator source and wait until it finishes successfully.
4. Log in to Information Steward.
5. In the Metadata Management tab, browse the contents of the Integrator source.
6. Search for a table name and validate the result.
7. View the lineage diagram for a view or table.

3.15 Metadata Integrator server groups

The SAP Information Steward installer creates a new server group when a new Integrator is deployed. For example, the Server Group SAP BusinessObjects Enterprise Metadata Integrator is created for the SAP BusinessObjects Enterprise Integrator. This server group is used by the scheduler to run the integrator process on the correct Information Steward Job Server.

You must not create, replace or change a deployed Information Steward Server Group. Doing so could cause the Information Steward Job Server to stop working. In this case, you must re-install the Integrators.

3.16 Restarting Enterprise Information Management Servers

If you uninstalled Information Steward and installed it again to recreate the Information Steward repository, you must restart the Enterprise Information Management servers.

1. Select *Servers* from the *Organize* list in the Central Management Console (CMC).
2. Expand the *Service Categories* node and select *Enterprise Information Management Services*.
3. Select all servers in the right pane and click the *Enable Server* icon (green check mark) located in the menu bar at the top.

3.17 Installing new or additional features (Windows)

Modify the newly-installed version of SAP Information Steward by adding or removing installed components through the Windows Control Panel.

Before performing these steps, backup your Information Steward repository before modifying or uninstalling Information Steward.

1. Find where the application is installed.
   - When using a newer Windows operating system (Windows Server 2008 or later), go to: *Start* > *Control Panel* > *Programs and Features*.
   - When using an older Windows operating system (Windows Server 2003 or earlier), go to: *Start* > *Control Panel* > *Add or Remove Programs*.

2. Select the SAP application, and then click *Change/Remove* or *Uninstall/Change*.
   The *Application Maintenance* window appears.
3. Select *Modify*, and then click *Next*.
4. Enter the password for the Central Management Server (CMS) administrator user, and then click *Next*.
5. Select any features you want to install.
6. Click *Next* to apply your changes.

The setup program applies your changes and returns to the *Control Panel* window. The installation has been updated.

3.18 Uninstalling Information Steward

These instructions describe the process to permanently uninstall SAP Information Steward from a host system. You might want to uninstall SAP Information Steward because:

- You want to move the software from one host system to another.
- You want to move a particular Information Steward component to a more powerful host system.
- You do not want to have Information Steward components installed on a particular host system.

> **Note**
>
> Uninstalling Information Steward removes the Information Steward integrator configurations. If you want to keep your current integrator configurations, see the *Administrator Guide: Life Cycle Management* to find out how to keep the existing integrator configurations before you proceed with the uninstall steps below.

It is recommended that you back up the CMS database and your repository databases before uninstalling Information Steward.

1. If you're using a newer Windows operating system, such as Windows Server 2008, go to: *Start* > *Control Panel* > *Programs and Features*.

   If you're using an older Windows operating system, such as Windows Server 2003, go to: *Start* > *Control Panel* > *Add or Remove Programs*.
2. Select SAP Information Steward `<version_to_uninstall>`.
3. On newer Windows operating systems, select *Uninstall*.
   On older Windows operating systems, select *Uninstall/Change* or *Change/Remove*.
4. Select *Remove* and click *Next*.
5. Enter the password for the Central Management Server (CMS) Administrator user and click *Next*.
6. Click through to confirm the removal.
7. Select *Finish* to close the *System Setup* screen.

3.19 Delete connections after permanent uninstall

If you uninstall Information Steward and you do not intend to reinstall it on the same machine, you can clean up any unnecessary links to eliminate unnecessary information in the Central Management Console (CMC) and the Business Intelligence LaunchPad.

3.20 Uninstalling specific components

You might want to uninstall specific components of SAP Information Steward if you want to deploy them on a different host system.

To uninstall specific components:

1. Run the SAP Information Steward installation program.
2. At the Business Intelligence platform server login window, specify connection information for your SAP Central Management Server (CMS) .
3. At the *Select Features* window, deselect components that you want to remove from this host system.

   > ⓘ Note
   >
   > - If you uninstall any of the Metadata Integrator components, the Information Steward Job Server will be deleted and the Metadata Integrator binary files will be removed from the installation directory. However, the integrator configurations in the CMS repository will not be removed.
   > - If you uninstall the Information Steward CMS Repository Objects component, all integrator configurations and other components in the CMS Repository will be removed.

4. Complete the remaining windows of the installation program.

Related Information

Standard installation [page 25]

4 Additional installation scenarios

4.1 Metadata collection from older BI version on a remote machine

This scenario shows how to collect SAP Business Intelligence (BI) report metadata from an older version of SAP BI platform on a remote machine using SAP Information Steward 4.2 SPx installed on a local machine.

The SAP BusinessObjects Enterprise (BOE) metadata integrator in Information Steward 4.2 SPx collects metadata for reporting impact and lineage for SAP BI platform reports such as Crystal Reports and Web Intelligence. To enable the metadata collection from an older version of SAP BI platform that resides on a remote machine, you install the Remote Job Server on the remote machine.

> **Note**
>
> Information Steward 4.2 SPx and later versions support SAP BI platform 4.2 SPx.

The SAP BOE metadata integrator in Information Steward can collect metadata from the following systems to show impact and lineage of SAP BI reports:

- SAP BI platform 4.0 SPx with installed client and server tools
- SAP BI platform 4.1 SP2 with installed client and server tools

4.1.1 The Remote Job Server

The SAP Information Steward Remote Job Server enables you to collect metadata from SAP BI platform 4.0 SPx or 4.1 SP2 that is installed on a remote machine.

You either manually install the Remote Job Server or choose to install it when you install Information Steward. The Remote Job Server installation is based on the SAP BI platform version you have.

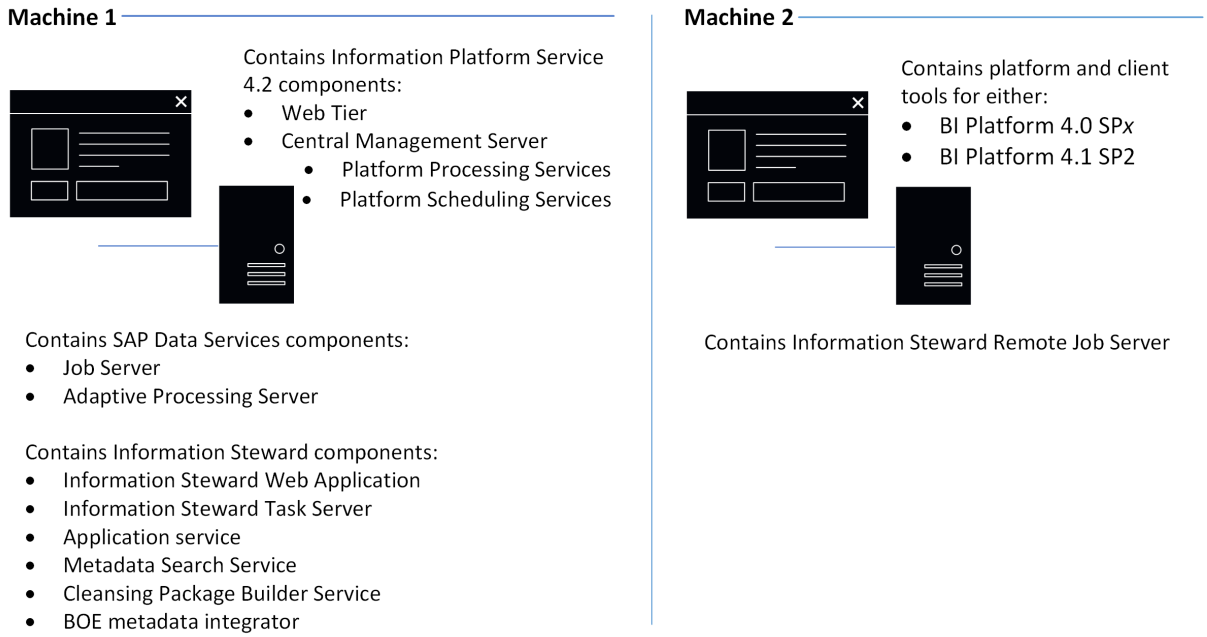
The following table shows the applicable versions and installation method.

Machine 2: Source system type and version	Remote Job Server	Remote Job Server configuration
SAP BI platform 4.0 SPx	You install on the remote machine using the Remote Job Server utility.	You configure after the Remote Job Server utility completes the installation.
SAP BI platform 4.1 SP2	Information Steward installs the Remote Job Server on the remote machine.	You configure during Information Steward installation.

4.1.2 Scenario: Collect metadata from a remote server

An example of component distribution for collecting metadata from a machine other than the machine where SAP Information Steward is installed.

In the following scenario Information Steward collects metadata from a BI platform that is on a different machine than where Information Steward is installed. The software and supporting components are distributed between the two machines as you see in the following diagram.



4.1.2.1 Collecting metadata for scenario

Prepare for the scenario by collecting metadata that includes SAP BusinessObjects BI platform 4.0 SPx as the source on a remote server.

These tasks show how to collect metadata for the example scenario shown in Scenario: Collect metadata from a remote server [page 76].

1. Ensure that your SAP Information Steward installation on machine 1 includes the SAP BOE metadata integrator in the Metadata Management module.
2. Manually install the Information Steward Remote Job Server on machine 2 using the Remote Job Server utility.

   Follow the steps in Installing the Remote Job Server [page 77].
3. Configure the Remote Job Server on machine 2 to accept requests from SAP BusinessObjects Information platform services (IPS) 4.2 SPx on machine 1.

   The requests come from the BOE metadata integrator in Information Steward through IPS 4.2 SPx.
4. Set up and run the BOE metadata integrator in Information Steward to collect metadata from SAP BI platform 4.0 SPx on machine 2. The metadata is from Crystal Reports or Web Intelligence documentation.

5. Use Information Steward Metadata Management module to view impact and lineage data for the Crystal Reports or Web Intelligence documents for which you collected metadata.

For more information about any of these tasks, see the applicable Information Steward guide or documentation for SAP Business Intelligence (BI) platform, and SAP BusinessObjects Information Platform Service (IPS).

4.1.3 Installing the Remote Job Server

Steps to install the Remote Job Server on a remote machine that has SAP BI platform 4.0 SPx.

These steps apply to those using SAP BI 4.0 SPx. The Information Steward installer installs the Remote Job Server when you have SAP BI platform 4.1 SP2.

1. Copy the `MMRemoteServiceInstall.zip` file located in `Utilities\MMRemoteJobServer`.
2. Paste the `MMRemoteServiceInstall.zip` file to any location on the machine that contains the BI platform 4.0 SPx client installation.
3. Unzip `MMRemoteServiceInstall.zip` to one of the following directories:
   - If you do not have Information Steward installed yet, unzip to the default installation location: `<INSTALL_DIR>\Program Files(x86)\SAP BusinessObjects`.
   - If you have Information Steward installed, choose a different location than the installation location.
4. From a command line prompt, enter the following command: `cd <InstallDir>\InformationSteward\MM\bin` and click `Enter`.
5. Run the following command: `InstallRemoteService.bat "<InstallDir>\InformationSteward"`
6. When prompted, provide the following information:
   a. Local (machine 1) Central Management Server (CMS) connection information for SAP BI platform 4.0 SPx.
   b. Remote (machine 2) CMS connection information for SAP BusinessObjects Information Platform Services (IPS) 4.2 SPx.
   c. Remote Job Server listening port

      The default listening port is 5050. Make sure that the port number is not being used before you use the port number.

   The `InstallRemoteService.bat` program installs the Remote Job Server on machine 2. After installation completes:
   - The Remote Job Server starts automatically.
   - The Information Steward Service Configuration utility opens.
7. Use the Information Steward Service Configuration utility to start and stop the Remote Job Server and to reconfigure the Remote Job Server if necessary.

   To restart the SAP Information Steward Service Configuration utility after you have closed it, run `Admin.bat` located on the remote machine 2 under `<installdir>\InformationSteward\MM\bin`.

Related Information

Modifying the Remote Job Server configuration [page 78]

4.1.4 Modifying the Remote Job Server configuration

After you install the SAP Information Steward Remote Job Server, you can modify its configuration using the Service Configuration utility.

1. Run `admin.bat` located in `<installdir>InformationSteward\MM\bin` in the root folder of the Information Steward installation package.
   The SAP Information Steward Service Configuration opens.
2. Edit options in the *General* tab to change the service startup type and indicate its status.

Option	Description
Startup Type	The Remote Job Server startup type. Values are: • Automatic • Manual The default is Automatic.
Service Status	Starts and stops the Remote Job Server service. • Stop: Stops the service • Start: Starts the service

3. Edit options in the *Java* tab to redefine the location of the Java runtime environment (JRE) used by the Remote Job Server service.
   For more information about runtime parameters, see the *Administrator Guide*.

Option	Description
User Default	Select to enable the *Java Home* option. **Note** If you enable this option, set the `JAVA_HOME` environment variable.
Integrator Java Home	Directory for the Java SDK. The Java SDK starts the BOE metadata integrator. The default resource size for the BOE metadata integrator is 32-bit JRE. Install a 64-bit JRE if the metadata integrator needs more resource space. If you install the 64-bit JRE, update this option to the applicable directory.
Service Java Home	Directory for the JRE that starts the Remote Job Server. This JRE must remain 32-bit.

Option	Description
Service Java Options	Specify Java runtime options for the Remote Job Server. **Note** Define the Java options for the BOE metadata integrator when you schedule the integrator source. For more information about runtime parameters, see the *Administrator Guide*.
Internal Memory Pool (MB)	Size of the internal memory pool. The default size is 512 MB. For more information about changing your Java memory settings, consult your Java Virtual Machine (JVM) documentation.
Maximum Memory Pool (MB)	Maximum size of the memory pool. The default maximum size is 1024 MB. For more information about changing your Java memory settings, consult your JVM documentation.

4. Edit options in the *Listener* tab to define the listening port. The listening port listens for service requests and connectivity to the BI platform Central Management Server (CMS) that sends service requests.

Option	Description
Application port	Port number of the listener service that listens for run requests for the BOE metadata integrator on local machine 1.
CMS Server Name	Host name of the BI platform CMS on remote machine 2.
User Name	User name for the BI platform CMS on remote machine 2.
Password	Password for the BI platform CMS on remote machine 2.
Authentication Mode	Authentication mode for the BI platform CMS on remote machine 2. The default value is *Enterprise*. For more information about authentications, see the *SAP Business Intelligence Platform Administrator Guide*.

5. To verify that the port number is available, click *Test port*. The Job Server service on local machine 1 uses this port to listen for requests to run the BI metadata integrator from remote machine 2 .
6. To verify that the Remote Job Server service can connect successfully to the CMS on machine 2, click *Test connection*.
7. Edit SSL protocol options in the *Protocol* tab. SSL protocol is for all network communication between clients and servers in your BI platform deployments.

For descriptions of all of the SSL protocol options, read about configuring the Remote Job Server for SSL in the *Administrator Guide*.

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