SAP BusinessObjects

SAP BusinessObjects Edge Series 3.1 Installation Guide for Linux

- SAP BusinessObjects Edge Series 3.1

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Contents

Getting Started

1.1 About this documentation

This documentation provides information, procedures, and options for installing, removing, and repairing SAP BusinessObjects Edge Series, client tools, and language packs. Two versions of this guide exist:

- *SAP BusinessObjects Edge Series 3.1 Installation Guide for Windows*: for use with Microsoft Windows operating systems.
- *SAP BusinessObjects Edge Series 3.1 Installation Guide for Linux*: for use with Linux operating systems.

Note:
Information related to the post-installation deployment of WAR files to a Java web application server is now covered by the *BusinessObjects Enterprise Web Application Deployment Guide*.

1.2 Who should read this documentation

This documentation is intended for the system administrator who needs to install SAP BusinessObjects Edge Series on a Linux operating system. Familiarity with your overall network environment, port usage conventions, database environment, and web server software is essential.

Note:
If you are installing SAP BusinessObjects Edge Series on a Microsoft Windows operating system, please read the *SAP BusinessObjects Edge Series 3.1 Installation Guide for Windows*.

1.3 What is SAP BusinessObjects Edge Series?

SAP BusinessObjects Edge Series is a flexible, scalable, and reliable business intelligence reporting system that can be tightly integrated into your information technology infrastructure. Support for many industry-standard database systems makes it easier to access your organization's data for analysis. The use of common industry standards for security allows you to use your existing authentication systems to control access to SAP BusinessObjects Edge Series. And broad platform support allows

you to install SAP BusinessObjects Edge Series on the operating systems and hardware architecture that you prefer.

As a system administrator, you will be faced with many choices when installing SAP BusinessObjects Edge Series. This documentation helps you to make the right decisions to create a reliable and powerful business intelligence reporting system for your organization.

1.4 SAP BusinessObjects Edge Series 3.1 Product line

SAP BusinessObjects Edge Series 3.1, is the Business Intelligence (BI) choice of mid-size companies that want to improve business processes, discover new opportunities, and get an edge on the competition. It includes simple, affordable solutions that can address any BI requirement, from operational reporting, to flexible ad hoc query reporting and analysis, to dashboards and visualization, to powerful data quality management and integration to planning and budgeting. The solution provides a simple, intuitive BI experience where and how you work – from search, mobile devices, and dashboards to Microsoft Office integration.

SAP BusinessObjects Edge Series 3.1 is offered in the following three editions:

Note:
SAP BusinessObjects Edge Series for non-SAP systems does not include BusinessObjects XI 3.1 Integration for SAP Solutions add-on.

SAP BusinessObjects Edge for non-SAP systems

SAP BusinessObjects Edge for non-SAP systems helps you to get started with Business Intelligence. It includes the core essential capabilities of Business Intelligence to empower you with greater information insight. Through flexible ad hoc reporting, query, analysis, and dashboards, you can make fast, data-driven decisions – all without relying on IT. You also benefit from the convenience of "live" data access in the tools they use everyday like Microsoft Office and SharePoint. Also, backed by a proven, open Business Intelligence platform, the SAP BusinessObjects Edge edition provides secure, managed information access so that you receive the right information at the right time.

SAP BusinessObjects Edge with data integration for non-SAP systems

SAP BusinessObjects Edge with data integration for non-SAP systems enables confident decision-making through trusted Business Intelligence. This version offers all the functionality of SAP BusinessObjects Edge package, in addition to features that enable you to combine data from multiple sources, populate a data warehouse expediently, and leverage ad hoc, advanced, and drill-down analysis.

SAP BusinessObjects Edge with data management for non-SAP systems

SAP BusinessObjects Edge with data management for non-SAP systems combines all the capabilities of the SAP BusinessObjects Edge package and the SAP BusinessObjects Edge with data integration version, and adds powerful functionality for data parsing, cleansing, and address synchronization within the data integration environment. It also offers a prepackaged data quality management functionality that can be deployed quickly, enabling you to ensure data quality management throughout the data integration process.

1.5 SAP BusinessObjects Edge Series guides

The following table provides a list of SAP BusinessObjects Edge Series guides and a brief description about the content.

Guide	Description
SAP BusinessObjects Edge Series 3.1 Installation Guide	This guide leads you through the steps required to run the setup program and complete your installation of BusinessObjects Edge Series 3.1. There are UNIX and Windows versions of this guide available.
SAP BusinessObjects Edge Series 3.1 Getting Started Guide	This guide introduces SAP BusinessObjects Edge Series 3.1 components and describes how to work with them.
SAP BusinessObjects Edge Series 3.1 Release Notes	Describes fixed and known problems in the SAP BusinessObjects Edge Series 3.1 release.
SAP BusinessObjects Edge Series 3.1 Release Summary	Highlights key features in the SAP BusinessObjects Edge Series 3.1 release.
Data Services Installation Guide	This guide leads you through the steps required to run the setup program and complete the installation of Data Services.
Data Services Getting Started Guide	This guide introduces you to Data Services and describes how to use it.
Data Services Release Notes	This document describes fixed and known issues in Data Services.

1.6 What's new in the SAP BusinessObjects Edge Series Installation Guide?

The installation and deployment documentation from previous releases of SAP BusinessObjects Edge Series has been split into separate installation and web application deployment guides:

- For information related to the installation of SAP BusinessObjects Edge Series, see the *SAP BusinessObjects Edge Series 3.1 Installation Guide* (this guide).
- For information related to the post-installation deployment of web applications, see the *BusinessObjects Enterprise Web Application Deployment Guide*.

This document is the first to include information on the following features for SAP BusinessObjects Edge Series:

Feature	Description
IPv6 support	IP version 6 (IPv6) addresses can now be used anywhere in SAP BusinessObjects Edge Series.
Response files	The response file information has been updated.
Operating systems	SAP BusinessObjects Edge Series is now supported by Redhat 5 operating system.

Business Objects product documentation is available in supported languages from the support web site, and is refreshed with up-to-date content as it becomes available between releases. For the most recent product documentation, visit http://help.sap.com/.

Preparing to install SAP BusinessObjects Edge Series

2.1 Installation overview

Before you install SAP BusinessObjects Edge Series, you should:

- Consult the *BusinessObjects Enterprise Planning Guide* to gain a general understanding of the installation process and the different options available.
- Review your systems to ensure that it meets the basic requirements for a SAP BusinessObjects Edge Series installation. See *System requirements*.
- Ensure that all machines that will be part of your SAP BusinessObjects Edge Series deployment can communicate with one another across your network. See *Network requirements*.
- Decide which SAP BusinessObjects Edge Series components to install, and which of your own components to integrate. For more information on determining your needs and planning requirements, consult the *BusinessObjects Enterprise Planning Guide*.
- Determine the location of the components to be installed. This includes the specific subnet, machine, database, security, or cluster systems that will be used to run your system.
- Decide which installation method to use.

The following sections list the core software requirements, the choices available to you within the core requirements, and the installation methods that you can use when you install SAP BusinessObjects Edge Series.

An installation checklist is provided to help ensure you are prepared before you begin your installation of SAP BusinessObjects Edge Series.

Related Topics

- Installation checklist
- Installation overview
- System requirements
- Network requirements

2.1.1 System requirements

For a detailed list of supported environments and hardware requirements, consult the Products Availability Report (PAR) document available on the Business Objects support site https://www.sdn.sap.com/irj/sdn/businessobjects-articles. This document includes specific version and patch-level requirements for web application servers, web browsers, and operating systems. For information related to the planning of a SAP BusinessObjects Edge Series 3.1 deployment, consult the *BusinessObjects Enterprise Planning Guide*.

SAP BusinessObjects Edge Series 3.1 ships with the Tomcat web application server and MySQL database server. If you are planning to use a database server, it must be installed and configured before installing SAP BusinessObjects Edge Series 3.1.

Related Topics

- CMS Database requirements and preparation

2.1.2 Network requirements

When installing SAP BusinessObjects Edge Series, ensure that the client machine can communicate over TCP/IP with the machine running the Central Management Server (CMS). All desktop clients must be able to access the server. For more information on the communication between components please refer to the *Architecture* chapter in the *BusinessObjects Enterprise Planning Guide*.

Note:

- If you are installing SAP BusinessObjects Edge Series in a firewalled environment, see the *Working with Firewalls* chapter of the *BusinessObjects Enterprise Administrator's Guide*.
- If you are installing on a VMware virtual machine, ensure the machine name does not include underscore (_), period (`.`), or slash (`/` or `\`) characters.

2.1.3 Linux permissions

To perform either a user or system installation on Linux, the user account under which the install is run must have read, write, and execute permissions to the directory where SAP BusinessObjects Edge Series will be installed.

However, if you run a system installation, you do require root authority to run the system-level initialization script. This script, which is called setupinit.sh, is run after the installation completes. This script creates entries into the run control scripts for the operating system that start up the SAP BusinessObjects Edge Series servers when the Linux server is brought up, and stops the servers when a machine is shut down.

The following table summarizes all the required permissions for installing SAP BusinessObjects Edge Series.

Category	Required permissions
Operating System	Read, write, and execute permissions to the directory where SAP BusinessObjects Edge Series will be installed. Root access if performing a system installation.
Network	Access to all machines via TCP/IP - all specified ports must be available.
Database	Rights to add and drop tables to or from the database, plus rights to read, write, and edit table rows.

2.1.4 Setting up your Linux system

SAP BusinessObjects Edge Series integrates with your existing database and web server software components, so the installation script needs to collect certain information about your current system. Because Linux systems can vary significantly from site to site, the following sections detail the key tasks that you must perform prior to installing SAP BusinessObjects Edge Series.

2.1.4.1 Setting the locale

Before you install SAP BusinessObjects Edge Series, set your operating system to use one of the locales that SAP BusinessObjects Edge Series supports for your version of Linux. For a detailed list of supported Linux environments see the *Product Availability Report* available from the following Business Objects support site: https://www.sdn.sap.com/irj/sdn/businessobjects-articles.

Note:
You should also ensure that the character set translation on your terminal is set to UTF-8.

If you are working through the console of a Linux machine, you can select your locale directly from the logon screen when you log on with the account from which you will install SAP BusinessObjects Edge Series. However, to ensure that your operating system uses the correct locale whenever SAP BusinessObjects Edge Series runs, set the `LC_ALL` and `LANG` environment variables to your preferred locale in your login environment. (For example, if you are using a C shell, set these environment variables in the `.login` file).

Tip:
Type `locale` to check that all of the related locale environment variables (such as `LC_MONETARY`, `LC_NUMERIC`, etc.) were properly set by `LC_ALL`.

See the section on International Deployments in the *BusinessObjects Enterprise Administrator's Guide* for information on deploying SAP BusinessObjects Edge Series for a multilingual, world-wide audience.

2.1.4.2 Checking for required commands and utilities

In order for the `install` setup program to run correctly, the following commands and utilities must be installed on your Linux system:

`/bin/sh`	`pwd`	`read`	`touch`
`uname`	`expr`	`hostname`	`sed`
`awk`	`chown`	`grep`	`tail`
`tar`	`id`	`dirname`	`gzip`
`stty`	`ulimit`	`which`	

These relatively standard commands and utilities should be available on most UNIX distributions. However, if for any reason one of them is not available on your system, download and install a version appropriate to your Linux system. It is recommended that you obtain any required files from your Linux vendor.

Additionally, these commands and utilities must be accessible in the `PATH` environment variable of the user account that you use when installing SAP BusinessObjects Edge Series. For details, see *Creating an account, a home directory, and a login environment*.

Related Topics

- Creating an account, a home directory, and a login environment

2.1.4.3 Creating an account, a home directory, and a login environment

Create a specific user account and group under which the SAP BusinessObjects Edge Series background processes can run. You will log on as this user in order to perform the remainder of the installation procedures. Although you will require root privileges to set up this account, the account itself does not require root privileges. Neither the installation scripts nor SAP BusinessObjects Edge Series itself needs to run as root.

Use your usual administrative procedures to perform these recommended tasks.

2.1.4.3.1 To set up an account for installing SAP BusinessObjects Edge Series

1. Create a new group or use an existing group. Create a new user account, and set this user's primary group to the new group. Assign a secure password to the new user account.
2. Create the directory where you want to install SAP BusinessObjects Edge Series.

   By default, the installation will use your current directory as its base directory for the install, that is, the directory where you run `install.sh`. You can override this default, with the directory of your choice at install time. You will see the directory that you specify for the installation directory referred to as `INSTALLDIR` throughout this document.

3. Ensure that the account you created has read, write, and execute permissions on the new installation directory.
4. Assign the new user a default login shell, and create or modify the appropriate login script(s) for the user account. In particular, make sure that the login script(s) set up a default login environment that meets these requirements:
   - All of the commands and utilities required by the `install` setup program must be accessible in the `PATH` environment variable.
   - The user's login environment must set up the database environment such that the `install` setup program can access your database client software.
   - The user's login environment must set up a default locale that is supported by your UNIX system and SAP BusinessObjects Edge Series.

Related Topics

- Checking for required commands and utilities
- Setting the locale

2.1.4.4 Meeting the host name and network requirements

Your Linux server must have a fixed host name before you run the installation script. You must have root privileges to set or modify this information on your system. If you are unfamiliar with these procedures, consult your Linux system documentation.

When installing SAP BusinessObjects Edge Series on multiple machines, ensure that each target machine is able to communicate over TCP/IP with the machine that is running as your Central Management Server (CMS).

Note:
If you are installing SAP BusinessObjects Edge Series in a firewall environment, you will need additional configuration details. See the "Working with Firewalls" section of the *BusinessObjects Enterprise Web Application Deployment Guide*.

2.1.4.5 Difference between user and system installation

When you perform a new installation, on Linux, you can choose between a user and a system installation.

- When you choose a user installation, all the required components are installed.
- When you choose a system installation, all the required components are installed, In addition, the installation creates a system-level initiation script. This script creates entries into the run control scripts for the operating system that start up the SAP BusinessObjects Edge Series servers when the Linux server is brought up and stops the SAP BusinessObjects Edge Series servers when a machine is shut down.

  Note:
  To perform a system installation, you do not require root-level authority. However, to run the system-level initiation script root-level authority is required.

2.1.5 Setting up server communication

SAP BusinessObjects Edge Series requires a database server and web application server software to be installed and configured if you want to use an existing database or web application server. You can also choose to install a database server (MySQL) and a Web application server (Apache Tomcat 5.5) during your installation of SAP BusinessObjects Edge Series.

You must ensure that all SAP BusinessObjects Edge Series machines can communicate properly with one another:

- Each SAP BusinessObjects Edge Series machine must be able to communicate over TCP/IP with the machine that runs your Central Management Server (CMS). The CMS is responsible for maintaining a database of information about your SAP BusinessObjects Edge Series system, which other components can access as required. The data stored by the CMS includes information about users and groups, security levels, SAP BusinessObjects Edge Series content, and servers. For more information about the CMS, see the “Managing and Configuring Servers” chapter in the *BusinessObjects Enterprise Administrator's Guide*.
- If the host machine has more than one network interface card (NIC), the CMS may automatically bind to a primary NIC. If the primary NIC is not routable, you may have to reconfigure your servers after installation. Alternatively, you could make the primary NIC routable before installing SAP BusinessObjects Edge Series. For more information on how to reconfigure to bind to routable NICs see the “Managing and Configuring Servers” chapter in the *BusinessObjects Enterprise Administrator's Guide*.
- Linux servers that run SAP BusinessObjects Edge Series must have a fixed host name. You must have root privileges to set or modify a fixed host name on your system. However, you do not require root privileges to perform a user installation of SAP BusinessObjects Edge Series. If you are unfamiliar with these procedures, consult your Linux system documentation.

Note:
Please ensure that the host name you use does not include any of the following characters: an underscore, a period, or a slash.

- Ensure that your database client and server are set up to use Unicode character encoding (such as UTF-8). Consult your database documentation to determine the settings required for a Unicode configuration.
- If you connect SAP BusinessObjects Edge Series to a web application server, the web application server must be able to communicate with all SAP BusinessObjects Edge Series machines. This communication is enabled by the SAP BusinessObjects Edge Series Software Development Kit (SDK), which is installed as part of the Web Tier Components. If you plan to use a Java application server and your existing application server does not include a version of the Java Development Kit (JDK) supported by SAP BusinessObjects Edge Series, you will need to install it.
- If you are installing SAP BusinessObjects Edge Series in a firewall environment, you will need additional configuration details. See the “Working with Firewalls” section of the *BusinessObjects Enterprise Administrator's Guide*.

2.1.5.1 Choosing a server location

When planning your SAP BusinessObjects Edge Series installation, you should also consider where you will place your deployment's servers.

Your Crystal Reports Page Server, Desktop Intelligence Report Server, Connection Server, Web Intelligence Report Server, Job Servers, and Report Application Server communicate frequently with the database servers containing the data in your published reports. To optimize data retrieval and minimize network traffic, place your processing servers close to your database servers (ideally, on the same subnet).

The Central Management Server (CMS) stores data about users and groups, security levels, published objects, and servers in the CMS database. The CMS can also maintain a separate audit database of information about user actions. To optimize CMS performance, place your CMS on the same LAN as the database servers that host your CMS database and the SAP BusinessObjects Edge Series audit database.

Consult the “Managing and Configuring Servers” section of the *BusinessObjects Enterprise Administrator's Guide* for information on other factors that you may want to consider in planning your SAP BusinessObjects Edge Series installation.

2.2 Installation modes

There are two methods that you can use to install SAP BusinessObjects Edge Series:

- Running the installation setup program.

The installation set up program provides a number of screens that allow to select an installation type, specify the details for your CMS database, and to deploy web applications to a supported application server.

- Running a silent or scripted installation.

  A silent or scripted installation uses configuration information that has been stored in a `.ini` response file during a previous command-line installation of SAP BusinessObjects Edge Series. This method is useful when you need to perform multiple installations, or you want to install without the setup program prompting for configuration information.

2.2.1 Silent installation

A silent installation uses configuration information that has been stored in a `.ini` response file during a previous command-line installation of SAP BusinessObjects Edge Series. This method is useful when you need to perform multiple installations, or you want to install without the setup program prompting for configuration information.

You can also incorporate the silent installation command into your own build scripts. For example, if your organization uses scripts to install software on machines, you can add the silent SAP BusinessObjects Edge Series installation command to those scripts.

You may want to choose a silent installation if:

- You need an automated method for performing identical or similar installations on several machines.
- You do not want to run the SAP BusinessObjects Edge Series setup program.

2.3 Installing client tools only

You can install the Business Objects client tools by using the SAP BusinessObjects Edge Series Client Tools installation package.

The client tools are applications that can only be installed on Windows, with the Windows Client Tools installation package.

If you install the SAP BusinessObjects Edge Series servers on a Linux machine, you can connect remotely to SAP BusinessObjects Edge Series with the client tools installed on a Windows machine.

The available tools are:

Client tool	Description
Desktop Intelligence	An integrated query, reporting, and analysis tool to access your organization's data for presentation and analysis in a Desktop Intelligence document.
Web Intelligence Rich Client	Provides business users an interactive and flexible interface for building and analyzing reports from your organization's data over the web, through a secured intra- or extranet.
Data Source Migration Wizard	Migrates reports based on Crystal queries, dictionaries, or InfoViews to SAP BusinessObjects Edge Series.
Report Conversion Tool	Converts Desktop Intelligence reports (`.rep` files) to Web Intelligence (`.wid`) format. Converted files can then be published to the Central Management Server (CMS).
Import Wizard	Imports user, group, object, or folder content from previous and current Crystal or SAP BusinessObjects Edge Series deployments.
Publishing Wizard	Publishes and sets properties for multiple reports in SAP BusinessObjects Edge Series.
Query as a Web Service	Creates custom web services for specific queries using Business Objects Web Services.
Universe Designer	Creates universe connections for Web Intelligence and Desktop Intelligence documents.
Translation Manager	Defines translations for multilingual documents and prompts. Supports Universe Designer universes and Web Intelligence documents.

Client tool	Description
Deployment Diagnostic Tool	The Deployment Diagnostic Tool is a Java-based application designed to verify basic operating functionality of a SAP BusinessObjects Edge Series 3.1 installation.
Software Inventory Tool	Software Inventory Tool is a Java-based maintenance tool available to administrators of SAP BusinessObjects Edge Series. Software Inventory tool creates and maintains an inventory of all changes made to Business Objects software via Business Objects installers and allows users to view these changes.
Universe Builder	Creates universe connections for Web Intelligence and Desktop Intelligence documents

Install these applications for users responsible for managing SAP BusinessObjects Edge Series content, developing applications, or importing system data. Client tools are not needed by users who access InfoView or the CMC administrative web applications.

Note:
The SAP BusinessObjects Edge Series Client Tool Setup program does not generally require a license key to activate the product.

2.4 CMS Database requirements and preparation

SAP BusinessObjects Edge Series requires a database to store Central Management Server (CMS) information about the system and its users. This database is referred to as the CMS, or system, database.

The following sections detail required settings and how to test settings for:

- DB2
- MySQL
- Oracle
- Sybase

Before installing SAP BusinessObjects Edge Series, review this information in order to properly prepare your CMS system and auditing database. For more information on database requirements, refer to the “Databases in BusinessObjects Enterprise” section in the *BusinessObjects Enterprise Planning Guide*.

Note:
Regardless of database type, the database must be setup to use Unicode character encoding, such as UTF-8.

2.4.1 Using a supported database server

The CMS supports a number of third-party database servers, so you can connect SAP BusinessObjects Edge Series to your existing database infrastructure. For a detailed list of supported database servers see the *Product Availability Report* PDF available from the Business Objects support site. If you do not have a database installed on your machine you choose to install and configure MySQL as your CMS database through the SAP BusinessObjects Edge Series installation setup program.

2.4.1.1 Using MySQL as the Central Management Server (CMS) database

MySQL is an open-source database included with SAP BusinessObjects Edge Series that can be automatically installed and configured for use as the Central Management Server (CMS), or system, database.

If you want to use an existing supported database server, you can enter connection and authentication parameters during the SAP BusinessObjects Edge Series installation process.

2.4.1.2 Sourcing the script that identifies the database environment variables

If you are using an existing database, you need a method to connect to it from within SAP BusinessObjects Edge Series. This is done through your database client. In this document, the terminology used for this operation is to source the script that identifies the database environment variables.

If you are integrating SAP BusinessObjects Edge Series with a different web application server than the version of Tomcat that can be configured with your installation, you may need to source the environment script. This will set up the required variables for SAP BusinessObjects Edge Series.

Technically, sourcing your environment script involves running a script in your current environment. When your database client is sourced from within SAP BusinessObjects Edge Series, all the required environment variables for your database are set up and exported.

Your database client or the SAP BusinessObjects Edge Series environment script can be sourced from the command line, entered into a profile, or entered into another script.

- To source your database client from the command line, you would execute the script that sets up the variables required by your database client to access your database. For example, in the bash shell, you could type this:

source ora10env.sh

- To source the SAP BusinessObjects Edge Series environment script, you would execute the script that sets up the variables required. For example, you could add this to the Tomcat setenv.sh or the WebSphere startup script:

  source "<INSTALLDIR>/bobje/setup/env.sh"

Note that the syntax used to source a script varies based on the type of shell you are using. Some UNIX shells use `source` as the syntax for this operation; some UNIX shells use the `. (dot operator)`. Please consult the documentation for your shell to determine the appropriate syntax.

Shell name	source	. (dot operator)
Bourne shell (sh)	no	yes
Korn shell (ksh)	no	yes
Bourne Again Shell (bash)	yes	yes
C shell (csh)	yes	no
Turbo C shell (tcsh)	yes	no

2.4.1.3 To setup a database account for SAP BusinessObjects Edge Series

The Central Management Server (CMS) uses a database to store system information. If you choose to install MySQL as part of your SAP BusinessObjects Edge Series installation, a MySQL CMS database will be created for you. If you plan to use your own database, you should complete the steps listed below before installing SAP BusinessObjects Edge Series.

To create tables and write data to your new CMS database, the installation program needs to establish a connection to the database server. When you log on to the account being used to install SAP BusinessObjects Edge Series, the environment must include the appropriate variables and database drivers to access your chosen database. Only then can the installation program access the CMS database using your database client software.

1. Create or select a user account that provides SAP BusinessObjects Edge Series with the appropriate privileges to your database server.
2. Verify that you can log on to your database and that you have rights to add or remove database tables and to add, delete, or edit table rows with the user account.

2.4.2 Setting up an empty database for the CMS

If you want to use an existing database server as the Central Management Server (CMS) or auditing database, you must create a new tablespace or database before installing SAP BusinessObjects Edge Series.

The installer will prompt for the connection and authentication details if you choose to use your own database during the installation of SAP BusinessObjects Edge Series. The following database servers are supported for the CMS system and audit databases:

- Oracle
- DB2
- MySQL
- Sybase

Note:
Review the online SAP BusinessObjects Edge Series supported platforms document for information related to supported database software and version requirements:https://www.sdn.sap.com/irj/sdn/businessobjects-articles.

To integrate your existing database with SAP BusinessObjects Edge Series, you need to prepare it. Here is a summary of the steps to prepare your database:

- Create a new tablespace, schema, or database (the exact terminology will depend on the database platform you're using) to act as the CMS database. Create a second for the auditing database, if you plan to enable auditing.
- Create a new user account and password to be used by SAP BusinessObjects Edge Series to access the CMS database. Create a second username and password if you plan to enable auditing.
- Specify that the new user account has required permissions to create, modify, and delete tables and create procedures so that database can be modified as required.
- Record the name of the database(s), the user account(s), and the password(s) you created, so you can enter the details when you run the SAP BusinessObjects Edge Series installer.

During the installation, you can choose to reinitialize the existing database. This will cause new tables to be created in your existing database. Consult your specific database server documentation if you are unsure of the procedure for creating a new tablespace, schema, or database. Ensure that your database server is set up to use Unicode character encoding (such as UTF-8).

Note:
If you have a previous release of SAP BusinessObjects Edge Series you cannot use your database from a previous release for SAP BusinessObjects Edge Series. You must create a new database, or existing data from the previous release will be destroyed. To migrate from an previous release, create a new database migrate your old content to the new current version's database after the installation is complete.

2.4.2.1 DB2 database requirements

If you are using DB2 for the Central Management Console (CMC) or auditing database:

- Ensure that the CMS database is not partitioned.

  Note:
  The auditing database can be partitioned.

- Create the database with these settings:

  ```
  Collating Sequence = "Identity"
  Codeset = "UTF-8"
  Territory = "XX"
  ```

  If your DB2 database does not have the correct Collating Sequence setting, the user and usergroup objects may not sort properly in the CMC.

  Replace `XX` with the code that is appropriate for your location. Consult your DB2 documentation for more information.

- If you are using DB2 8.1, you require a C compiler that is installed and configured to build SQL stored procedures. DB2 8.2 through version 9.1 do not have this requirement. Stored procedures are used by SAP BusinessObjects Edge Series when users are added to groups. Please consult the DB2 documentation for details on how to configure the C compiler for SQL stored procedures.

Once the database is created, you will need to prepare it for the SAP BusinessObjects Edge Series installation.

Related Topics

- Preparing an existing database server

2.4.2.1.1 Testing DB2 environment variables

If you choose to connect to DB2 through a native connection, the installation searches the current shell for the `DB2INSTANCE` environment variable. This standard DB2 environment variable must be set in order for the `install` script to utilize the DB2 client software.

If you are using an existing database, you need to source your database client.

Sourcing the script that identifies the database environment variables can be done in one of two ways:

- The user who performs a system installation can modify the SAP BusinessObjects Edge Series script setupint.sh to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location: <install dir>/bobje/init/setupint.sh. This method will source the database for all users for information.
- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

For example, if an DB2 database was required, an entry would be made in the user profile to source the environment script used by DB2 (db2profile). Consult your database documentation for the name of its environment script.

Note:
Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.

Consult your database documentation and/or your database administrator if the account shell environment from which you will install SAP BusinessObjects Edge Series has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

The following steps will test whether the required environment variables are set.

Related Topics

- Sourcing the script that identifies the database environment variables

2.4.2.1.2 To verify DB2 native connectivity through a database alias

1. Log on to the Linux server with the user account and password which you will use to do your install.

   Note:
   This account should already be set up. See *Creating an account, a home directory, and a login environment* for more information on setting up a Linux account to use when you install SAP BusinessObjects Edge Series.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

Variable	Value
`DB2INSTANCE`	This variable defines the current DB2 database instance.
`INSTHOME`	This variable contains the path to the root directory of your DB2 client installation.
`DB2DIR`	This variable contains the path to the root directory of your DB2 installation (one level above the DB2 `bin` and `lib` directories).

Variable	Value
library path	The library search path (LD_LIBRARY_PATH on Solaris and Linux, LIBPATH on AIX, and SHLIB_PATH on HPUX) must include the lib directory of your DB2 client installation.
PATH	The search path must include the bin directory of your DB2 client installation.

This example checks the required variables and shows sample output values.

```
$ echo $DB2INSTANCE
db2inst1
$ echo $DB2DIR
/opt/IBMdb2/V7.1
$ echo $LD_LIBRARY_PATH
/export/home/db2inst1/sqllib/lib
$ echo $PATH
/usr/bin:/usr/ucb:/etc:.:/export/home/db2inst1/sqllib/adm:/export/home/db2inst1/sqllib/misc
```

3. Issue the following command to run the DB2 SQL tool:

```
db2
```

4. Issue the following command to connect to the desired database alias:

```
connect to db_alias user accountname using password
```

Replace db_alias and password with the appropriate values. If the shell environment has been configured correctly, you are connected to DB2.

5. Issue the following command to ensure that the account has permission to create tables:

```
create table sampletable (col_fld char(10) not null)
```

6. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable
```

7. Type `terminate`

Related Topics

- Creating an account, a home directory, and a login environment

2.4.2.2 Oracle database requirements

If you are using Oracle for the CMS or auditing database:

- Use a Unicode character set, such as UTF-8.

Once the database is created, you will need to prepare it for the SAP BusinessObjects Edge Series installation.

Related Topics

- Preparing an existing database server

2.4.2.2.1 Testing Oracle environment variables

If you choose to connect to Oracle through a native connection, the installation searches the current shell for the `ORACLE_HOME` environment variable. This standard Oracle environment variable must be set in order for the `install` script to utilize the Oracle client software.

If you are using an existing database, you need to source your database client.

Sourcing your database client can be done in one of two ways:

- The user who performs a system installation can modify the SAP BusinessObjects Edge Series script setupint.sh to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location: <install dir>/bobje/init/setupint.sh. This method will source the database for all users.
- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

  For example, if an Oracle database was required, an entry would be made in the user profile to source the environment script used by Oracle (oraXXenv.csh or oraXXenv.sh where XX is replaced with the version number). Consult your database documentation for the name of its environment script.

Note:

- Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.
- Consult your database documentation and/or your database administrator if the account shell environment from which you will install SAP BusinessObjects Edge Series has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

Related Topics

- Sourcing the script that identifies the database environment variables

2.4.2.2.2 To verify Oracle native connectivity through a TNS

1. Log on to the Linux server with the user account and password which you will use to do your install.

Note:
This account should already be set up. See *Creating an account, a home directory, and a login environment* for more information on setting up a Linux account to use when you install SAP BusinessObjects Edge Series.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

Variable	Value
ORACLE_HOME	This variable contains the path to the root directory of your Oracle client installation (one level above the Oracle `bin` and `lib` directories).
library path	The library search path (`LD_LIBRARY_PATH` on Solaris and Linux, `LIBPATH` on AIX, and SHLIB_PATH on HPUX) must include the `lib32` directory of your Oracle client installation.
PATH	The search path must include the `bin` directory of your Oracle client installation.

This example checks the required variables and shows sample output values.

```
$ echo $ORACLE_HOME
/home/dbclient/oracle/10.1.0.3
$ echo $LD_LIBRARY_PATH
/home/dbclient/oracle/10.1.0.3/lib32
$ echo $PATH
/usr/local/bin:/home/dbclient/oracle/10.1.0.3/bin
```

3. Issue the following command to run the Oracle SQL tool and connect to the appropriate service name:

```
sqlplus accountname/password@tnsname
```

Replace accountname, password and tnsname with the appropriate values. If the shell environment has been configured correctly, you are connected to Oracle.

4. Issue the following command to ensure that account has permission to create tables:

```
create table sampletable (field1 char(10));
```

5. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable;
```

6. Issue the following command to ensure that the account has permission to create procedures:

```
CREATE PROCEDURE test_proc (foo_in VARCHAR, bar_in VARCHAR) IS
BEGIN
INSERT INTO test_table (foo, bar) VALUES (foo_in, bar_in);
END;
```

7. Issue the following command to ensure that the account has permission to drop procedures:

```
DROP PROCEDURE TEST_PROC;
```

8. Type `exit`

Related Topics

- Creating an account, a home directory, and a login environment

2.4.2.3 Sybase database requirements

If you are using Sybase for the CMS or auditing database:

- Create a database with a page size of 8 KB. The Sybase database default page size is 2KB, which is too small for the CMS system database to run efficiently. The page size is set up during the database creation and cannot be changed after the database is created.
- Use a Unicode character set, such as UTF-8.

Once the database is created, you must prepare it for the SAP BusinessObjects Edge Series installation.

Related Topics

- Preparing an existing database server

2.4.2.3.1 Testing Sybase environment variables

If you choose to connect to Sybase through a native connection, the installation searches the current shell for the `SYBASE` and `SYBASE_OCS` environment variables. These standard Sybase environment variables must be set in order for the `install` script to utilize the Sybase client software.

If you are using an existing database, you need to source the script that identifies the database environment variables.

Sourcing the script that identifies the database environment variables can be done in one of two ways:

- The user who performs a system installation can modify the SAP BusinessObjects Edge Series script setupint.sh to add the command to source your database client. However, root access is required to execute this script. This script can be found at the following location: <install dir>/bobje/init/setupint.sh. This method will source the database for all users.
- Each person with a user installation can modify their profile and add the command to source their database environment. This method can be done anytime.

  For example, if a Sybase database was required, an entry would be made in the user profile to source the environment script used by Sybase (SYBASE.sh or SYBASE.csh). Consult your database documentation for the name of its environment script.

Note:

- Instead of sourcing the script that identifies the database environment variables, you can manually set the environment variables required by your database. However, if you manually set the environment variables, you will need to set them again if the system is restarted.
- Consult your database documentation and/or your database administrator if the account shell environment from which you will install SAP BusinessObjects Edge Series has not yet been set up for your database client software, or if you are unable to connect successfully to the database.

These steps will test whether the required environment variables are set:

Related Topics

- Sourcing the script that identifies the database environment variables

2.4.2.3.2 To verify Sybase native connectivity through a server name

1. Log on to the Linux server with the user account and password which you will use to do your install.

   Note:
   This account should already be set up. See *Creating an account, a home directory, and a login environment* for more information on setting up a Linux account to use when you install SAP BusinessObjects Edge Series.

2. Echo the following environment variables and ensure that their values correspond to your database client software installation.

Variable	Value
`SYBASE`	This variable contains the path to the root directory of your Sybase client installation (one level above the SYBASE_OCS version directory).
`SYBASE_OCS`	This variable contains the name of the Sybase version directory (one level above the Sybase bin and lib directories).
`library path`	The library search path (`LD_LIBRARY_PATH` on Solaris and Linux, `LIBPATH` on AIX, and `SHLIB_PATH` on HPUX) must include the `lib` directory of your Sybase client installation.
`PATH`	The search path must include the `bin` directory of your Sybase client installation.

This example checks the required variables, and shows sample output values:

```
$ echo $SYBASE
/opt/sybase/12.0
$ echo $SYBASE_OCS
OCS-12_O
$ echo $LD_LIBRARY_PATH
/export/home/sybase/12.0/OCS-12_0/lib
$ echo $PATH
/usr/bin:/usr/ucb:/etc:.:/export/home/sybase/12.0/OCS-12_0/bin
```

3. Issue the following command to run the Sybase SQL tool and connect to the database server:

```
isql -U user -P password -S servername
```

Replace user, password, and servername with the appropriate values. If the shell environment has been configured correctly, you are connected to Sybase.

4. Issue the following command to ensure that the account has permission to create tables:

```
use aps
go
create table sampletable (def_field char(10))
go
sp_help sampletable
go
```

5. Issue the following command to ensure that the account has permission to delete tables:

```
drop table sampletable
go
sp_help sampletable
go
```

6. Type `quit`

Related Topics

- Creating an account, a home directory, and a login environment

2.4.2.4 MySQL database requirements

If you are using your own MySQL installation for the CMS or auditing database:

- Use a Unicode character set, such as UTF-8.

Once the database is created, you will need to prepare it for the SAP BusinessObjects Edge Series installation.

Related Topics

- Preparing an existing database server

2.4.2.4.1 Testing MySQL environment variables

If you are using an existing MySQL database, ensure the following variable is set up for the user who will install SAP BusinessObjects Edge Series:

MYSQL_HOME

If this variable is not set up, and you have specified that you are using an existing MySQL database, the installation will not proceed and you will receive an error message. Consult the documentation for MySQL for information on how to configure the MySQL.

2.5 Preparing an existing database server

After you have created your database, setup the database client, and before you install SAP BusinessObjects Edge Series 3.1, ensure that you are able to connect to it with the username and password.

During your installation, you will be asked whether you want to install MySQL or use an existing database. If you opt to use an existing database, you will be asked for the connection and authentication details by the SAP BusinessObjects Edge Series 3.1 installer:

Existing database	Information required by installer
MySQL	• Database name • Server name • Port number (default is 3306) • Login credentials used to access database
Sybase	• Server name • Login credentials used to access database **Note:** • The Sybase server name is a combination of the host name and the port number which is set by your database administrator in the file `sql.ini` interfaces file. • SAP BusinessObjects Edge Series will connect to the default database for the user you specify. This default is set by the database administrator.
DB2	• Server: DB2 database alias • Login credentials used to access database
Oracle	• Server: TNSNAMES connect identifier • Login credentials used to access database

2.6 Before you deploy web applications

Your web application server must be installed and working before you attempt to install SAP BusinessObjects Edge Series.

To deploy and run the Central Management Console (CMC) and InfoView web applications, your web application server should have at least 2 GB of free disk space, in addition to any other requirements for other software installed on the machine.

2.6.1 Before deploying to a Java web application server

It is recommended that you change the heapsize and maximum perm size settings of your Java Virtual Machine (JVM) to -Xmx1024m -XX:MaxPermSize=256m. For example, Tomcat uses the *JAVA_OPTS* environment variable to configure its JVM:

```
JAVA_OPTS="$JAVA_OPTS -Xmx1024m -XX:MaxPermSize=256m"
```

Consult your JVM documentation for more information about changing your Java memory settings.

Before you begin the deployment process, ensure that the web application server is running correctly by launching its administrative console at:

- `http://<WAS_HOSTNAME>:<PORT>`

Replace `<WAS_HOSTNAME>` with the hostname or IP address of your web application server, and `<PORT>` with the port number, if required.

2.7 Before you deploy web applications

Your web application server must be installed and working before you attempt to install SAP BusinessObjects Edge Series.

Note:
If you want to install Data Services or integration kits such as SAP, PeopleSoft, JD Edwards EnterpriseOne, Siebel, or Oracle E-Business Suite, you have to choose Tomcat as web application server.

To deploy and run the Central Management Console (CMC) and InfoView web applications, your web application server should have at least 2 GB of free disk space, in addition to any other requirements for other software installed on the machine.

Beginning the installation of SAP BusinessObjects Edge Series

3.1 Installation checklist

Prior to installing SAP BusinessObjects Edge Series, review the checklist below.

- Have you tested that all machines that will run SAP BusinessObjects Edge Series can communicate properly?
- Have you tested the database connection between the machine where your CMS database will reside and where the Central Management Server will be installed?
- Have you decided which database to use with SAP BusinessObjects Edge Series?
- If you are using your own database server, have you created a database for the CMS?
- If you plan to connect remotely to install, have you ensured your terminal setting is set to VT100 before beginning the installation?
- If you are using your own database server and plan to use Auditor, have you created an auditing database?
- If you are using your own database server, have you created a userid and password with access to your existing database (if you are integrating your existing database server software), so that the installation can access your database to configure the CMS database?
- If you are using your own database server, have you made sure you can log on to the database with the ID and setup tables?
- Have you ensured that any existing database you will be connecting to has been configured correctly?
- Have you verified you are using a supported locale?
- Have you decided whether or not you will develop custom applications?
- Have you decided what web application server to use?
- If you are not using Tomcat, have you made sure your existing web application server has the JDK installed?
- If you are not using Tomcat, is your web application server already installed and configured?
- Do the SAP BusinessObjects Edge Series system requirements match your UNIX setup?
- If you are installing on a VMware virtual machine, ensure the machine name does not include underscore (_), period(`.`), or slash (`/` or `\`) characters.
- Does the UNIX user account under which the install is run have read, write, and execute permissions to the directory where SAP BusinessObjects Edge Series will be installed?
- Have you sourced your database client so that all the required environment variables are set up properly?
- If you are using DB2 or Sybase, have you verified that your database was created with the correct settings? (Some settings can't be modified after the database has been created.)

3.2 Installation overview

SAP BusinessObjects Edge Series allows you to run all server components on a Linux server. Users then connect to SAP BusinessObjects Edge Series over the Web with a supported web browser. The installation can place the necessary run control scripts in the relevant directories for automated startup (requires root privileges), or you can confine the installation to a particular directory.

After you finish the installation and setup procedures, the various core server components run as background processes. You can then deploy the SAP BusinessObjects Edge Series web applications.

When you install the SAP BusinessObjects Edge Series server components on a Linux machine, you can connect remotely to SAP BusinessObjects Edge Series with the Publishing Wizard and the Import Wizard. However, these client applications must be installed on Windows.

Note:
Before you run the interactive installation setup program (`./install`), it is strongly recommended that you read through the details and procedures provided in the previous chapter.

3.3 Setting up product distribution

This section shows how to distribute SAP BusinessObjects Edge Series so that you can perform an installation.

You can perform this installation remotely through a telnet session, or locally through a terminal window. If you will connect remotely to install SAP BusinessObjects Edge Series, be sure to set your terminal settings to VT100 before beginning the installation.

There are two ways you can set up the product distribution:

- Before you run `./install.sh`, you can copy the installation files to a temporary location.
- When you run `./install.sh`, you can specify the temporary location to place the installation distribution.

Before following this procedure, ensure that you have set up your Linux system appropriately.

Related Topics

- Setting up your Linux system

3.3.1 Running the product distribution directly from a DVD

By default, the installation will use your current directory, that is, the directory you run `install.sh` from, as its base directory for the install. If you run `install.sh` without copying the files to a temporary location, you will be prompted to specify a temporary location for the install. After you specify the temporary location, this will happen:

- The installation files will be copied to that temporary location.
- The installation program will exit.

You are then required to go to the temporary location you specified, and then run install.sh from that location.

3.3.2 Copying the product distribution to your machine

By default, the installation will use your current directory, that is, the directory you run `install.sh` from, as its base directory for the install. You may want to copy the product distribution to directory on your machine and run `install.sh` from there. The advantage of this option is that when you run `install.sh`, you will not be prompted for a temporary location to put the files.

3.3.2.1 To copy the product distribution to your machine

1. Log on to your Linux system under the new account designated for installing SAP BusinessObjects Edge Series.
2. Copy the installation files from the product distribution to a temporary directory with this command where `/mnt/cd` is mapped to the DVD drive and `tmp` is a temporary directory where you want to store the installation files:

   /mnt/cd/install -t /tmp/

   Repeat this process for each DISK contained in the product distribution.
3. Proceed to *Beginning your installation*.
4. Run `install.sh` from the first DVD.

Related Topics

- Creating an account, a home directory, and a login environment

3.4 Beginning your installation

The following instructions lead you through the initial steps of installing SAP BusinessObjects Edge Series on Linux. In this stage you will do the following:

- Choose the language for the installation.
- Agree to the license terms.
- Enter the product key codes.
- Select where to install SAP BusinessObjects Edge Series.
- Select which language packs to install.
- Choose between a user and system install.
- Select an install type.

3.4.1 To begin your installation

The installation procedure below is a quick overview of the initial steps required to install SAP BusinessObjects Edge Series on Linux. This section is followed by a detailed description of each screen in the installation setup program.

1. Mount the device that contains the installation files.
2. Type `./install.sh` in the command line and press **Enter**.

   Note:
   If you run `install.sh` without copying the files to a temporary location, you will be prompted to specify a temporary location for the install.

   The installation setup program is launched and you are prompted to select a language for the installation.
3. Select a language for the installation and press **Enter**.

   You can select from one of the following languages:
   - Chinese Simplified
   - Chinese Traditional
   - Danish
   - Dutch
   - English

- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese (Brazil)
- Russian
- Spanish
- Swedish
- Thai

The "Business Objects License Agreement" is displayed.

Related Topics

- Running the product distribution directly from a DVD

3.4.2 To accept the license agreement

To install SAP BusinessObjects Edge Series on Linux, you must accept the Business Objects License Agreement.

1. Read the software license agreement.
2. Type `y` to agree to the terms and continue with the setup program.

   The "Enter Product Keycode" screen is displayed.

3.4.3 To enter a product keycode

You must provide a valid SAP BusinessObjects Edge Series product activation keycode to continue with the installation setup program. The keycode contains 26 characters and you can find it in the DVD liner notes or the DVD sleeve.

1. Type your code in **Product Keycode**.
2. Press **Enter** to validate the keycode.

   The setup program validates the keycode before the "Installation Directory" screen is displayed.

3.4.4 To specify the installation directory

After your product keycode is validated, you must specify an installation directory.

Note:
If you are installing SAP BusinessObjects Edge Series on a machine that has an earlier version of SAP BusinessObjects Edge Series installed, you must specify a different directory for the new installation.

1. To accept the default installation directory press **Enter**.
2. To create your own directory, use the **Backspace** key to remove the current directory and replace it with your own path to the desired installation directory and press **Enter**.

   You are prompted to select which language packs to install.

3.4.5 To install language packs

You can choose to install language packs when running the installation setup program on Linux.

1. Select any additional language packs you want to install.

   The following languages are available:

   - Chinese Simplified
   - Chinese Traditional
   - Danish
   - Dutch
   - English
   - French
   - German
   - Italian
   - Japanese
   - Korean
   - Norwegian
   - Polish
   - Portuguese (Brazil)
   - Russian
   - Spanish
   - Swedish
   - Thai
2. Press **Enter**.

Note:
You can also add language packs after installing SAP BusinessObjects Edge Series on Linux.

You are prompted to select either a user or system installation.

Related Topics

- Installing language packs

3.4.6 To select user or system installation

1. Select the type of installation you want to perform.
   - **User**
   - **System**

   Note:
   To perform a System installation, you do not require root-level authority. However, to run the system-level initiation script root-level authority is required. After you perform a System installation, there are a few additional steps you must perform.

2. Press **Enter**.

   The "Installation Type" screen is displayed.

Related Topics

- Difference between user and system installation

New installation

4.1 Performing a new installation

Performing a new installation is the simplest way to deploy SAP BusinessObjects Edge Series because all the required and optional components are installed on one machine.

The setup of a new installation of SAP BusinessObjects Edge Series requires the following input.

1. Providing information on the system administrator for the new installation.
2. Setting up the system and auditing database. You can choose to either install and configure MySQL or configure your existing database.
3. Configuring the Server Intelligence Agent (SIA).
4. Setting up the web application server. You can choose to either install and configure Tomcat or configure your existing web application server.
5. Confirming the installation directory.

4.1.1 Selecting a new installation

The "Installation Type" screen in the following procedure is displayed after you have completed the initial set up of the SAP BusinessObjects Edge Series installation.

1. Select or deselect **Enable servers after installation**. This option is selected by default. Scroll down and use the spacebar to deselect the field.
2. Select **New** and press **Enter**.

   The "Enter the information for your new CMS" screen is displayed.

Related Topics

- Beginning your installation

4.1.2 To configure the new CMS

Use the "Enter the information for your new CMS" screen to specify the Central Management Server (CMS) port number and password for the SAP BusinessObjects Edge Series Administrator.

1. Type a valid port number in **CMS Port Number** or accept the default number - 6400.
2. Type the same password under **Administrator Password** and **Confirm Password** and press **Enter**.

   Note:
   You can also leave the passwords fields blank and configure the password at a later time. Your password must be at least six characters long and should contain two of the following options:

   - upper case character
   - lower case character
   - number
   - punctuation

4.1.3 To specify a system database option

You must select a system database option. You can either choose to install MySQL or specify to use your current database.

1. Choose one of the following options:
   - **Use an existing database (Oracle/DB2/Sybase/MySQL)**
   - **Install MySQL**
2. Press **Enter**.

   Depending on your selection you will either select and configure your existing database, or configure your MySQL installation.

Related Topics

- To configure your existing database
- To install a new MySQL Database

4.1.3.1 To configure your existing database

If you specified to use an existing database for the CMS, use the "Select the database type for your new CMS" screen to select your existing database type. You will then have to configure the database.

1. Select your database type. You can choose from the following
   - **MySQL**
   - **Oracle**
   - **DB2**
   - **Sybase**

   A new screen displays containing fields for configuring your database.
2. Provide information about your database, and press **Enter**.

   The table below lists the information required for each database type.

Database type	Information required
MySQL	Host Name User ID for CMS database Password for CMS database MySQL port number Database name for CMS
Oracle	TNS name User ID for CMS database Password for CMS database CMS port number
DB2	Alias name User ID for CMS database Password for CMS database
Sybase	Sybase Service name User ID for CMS database Password for CMS database

   The "Select the Auditing Database type" screen appears.
3. Select one of the following option, and press **Enter**:
   a. Do not install Auditing Database

b. MySQl
c. Oracle
d. DB2
e. Sybase
- If you select **Do not install Auditing Database** option, then proceed to step 5.
- If you select other database option, then proceed to step 4.

4. Enter the information for you new auditing database.
5. Decide if you want to reinitialize the database, and press **Enter**.

   Note:
   Reinitialization of the SAP BusinessObjects Edge Series database will erase all previous content in that particular database.

   After configuring your CMS and auditing database, you are prompted for information on the Server Intelligence agent.

If you are using an existing database, you need to source your database environment variable so the CMS can access it after a system reboot. This can be done one of two ways

- Someone with root access can modify the SAP BusinessObjects Edge Series script BobjEnterprise120 and add the command to source your database environment. This script can be found at the following location: `<INSTALLDIR>/bobje/init/BobjEnterprise120`. This method will source the database environment variable for all users.
- Each user can modify their own profile and add the command to source their database environment. This method must be done by each user.

Related Topics

- CMS Database requirements and preparation

4.1.3.2 To install a new MySQL Database

You need to provide configuration details for the new MySQL database. The setup program provides two screens to configure the new database.

1. Provide the following information for your new MySQL database and press **Enter**.
   - **MySQL Port Number**
   - **Database administrator password**

   The second MySQL configuration screen is displayed.
2. Provide the following information for your new MySQL database and press **Enter**.
   - **MySQL CMS Database Name**
   - **MySQL Audit Database Name**
   - **User ID**

Note:
This is the SAP BusinessObjects Edge Series user account.

- **Password for user account**

3. Press **Enter** to continue with the installation setup.
   The "Enter Server Intelligence Agent information" screen is displayed.

4.1.4 To enter Server Intelligence Agent information

The Server Intelligence Agent (SIA) simplifies the deployment and management of the SAP BusinessObjects Edge Series servers. The SIA is automatically created during installation of SAP BusinessObjects Edge Series. Use the installation setup program to configure the SIA.

1. Type a name in **Server Intelligence Agent Node**.

   Note:
   Do not use spaces or non-alphanumeric characters in a SIA node name.

   This node name serves as an identifier for the SIA.

2. Type a valid port number under **Server Intelligence Agent Port** or accept the default port number which is 6410, and press **Enter**.

4.1.5 To select a web application server configuration option

As part of the installation setup, you need to provide information on the web application server that will work with your BusinessObjects applications such as InfoView and the Central Management Console (CMC). Use the installation program to specify to install Tomcat as your application server, or choose to work with your existing Tomcat web application server.

- Select one of the options listed below and press **Enter**.

Deployment option	When to use
Install Tomcat, deploy web applications	If you do not have an existing web application server.
Use existing Java application server, deploy web applications	If you have an existing supported web application server and you want to automatically deploy the web applications.
Use existing Tomcat, do not deploy web applications	If you have an existing supported web application server and you want to manually deploy the web applications.

If you have selected either the first or second option, you will now have to configure the web application server. If you have selected the third option you can start the installation process.

Related Topics

- To start the installation
- To configure your existing web application server
- To configure the Tomcat installation

4.1.5.1 To configure the Tomcat installation

If you chose to install the Tomcat application server, the "Please enter port numbers for the Tomcat installation screen" is displayed. You must configure the server to use InfoView, the Central Management Console and other web application servers.

1. You can either choose to accept the default port numbers or provide new values for the following:

Required port numbers
Receive HTTP requests
Redirect jsp requests
Shutdown hook

2. Press **Enter**.

   You can now start the installation process.

Related Topics

- To start the installation

4.1.5.2 To configure your existing web application server

You must select the Use existing Java application server, deploy web applications option to view the "Select a Web Application Server to deploy to" screen.

Select the server type before configuring your web application server.

1. Select your existing web application server and press **Enter**.
   - **Tomcat 5.5**

   If your existing Java application server is Tomcat 5.5, select **Use existing Java application server, do not deploy web applications** option.

   If you select **Other**, you can begin the installation. If you selected one of the supported servers, you can now configure the server on a separate screen.
2. Provide the requested configuration details for your web application server and press **Enter**.

   The table below summarizes the information required for each supported web application server.

Web application server	Information required for installation setup
Apache Tomcat 5.5	• **Instance to install to**: Name of the current web application server instance (for example “localhost”). • **Application server Installation directory**: The directory where the web application server is installed (for example: `<INSTALLDIR>/Tomcat`).

Related Topics

- To start the installation

4.1.6 To start the installation

You are now ready to start the installation.

1. Review the installation directory specified on the screen.

   Note:
   To modify the directory you would need to press [**Ctrl** + **B**] several times until you reach the screen where you specify the installation directory.
2. Press **Enter** to start the installation.

The installation program will validate your system and install SAP BusinessObjects Edge Series in the specified directory.

When the new installation is finished, the setup program starts the servers as daemons and then enables each server that is registered with the CMS. To control the servers manually, use the `ccm.sh` script.

Related Topics

- Using ccm.sh to start the SAP BusinessObjects Edge Series servers

4.2 Finishing a system installation

If you chose to perform a system installation, the setup program script prompts you to run the `BobjEnterprise120` script after it is finished. The `BobjEnterprise120` script copies the run control scripts to your `/sbin/rc#` directories. When implemented, these run control scripts start/stop the SAP BusinessObjects Edge Series servers on system startup/shutdown.

Note:
To run the system installation, you must log on using a normal account. After installation, however, you must have root privileges to run the `setupinit.sh` script. This script copies the `BobjEnterprise120` to the /`sbin/rc#` directory.

Silent installation

5.1 Overview

There are two methods for running SAP BusinessObjects Edge Series installations for Linux directly from the command line:

- Silent installation using a response file - referred to as a scripted installation in this guide
- Silent installation specifying parameters directly on the command line

Both methods can be used to automate installations across multiple machines. The scripted installation requires you to specify a response file. The silent installation allows you to specify parameters for running the `./install.sh` command.

Note:
The silent installation without the response file is not recommended for custom installations. This method does not allow for the same level of customization provided when using a response file.

These installation types are particularly useful when you need to perform multiple installations, as you can save time and avoid being prompted for information by the installation setup program. You can also integrate the scripts and commands into your own installation scripts.

Related Topics

- To create a response file
- Scripted installation parameters

5.2 Performing a scripted installation

While setting up an installation process on Linux, you can write installation settings to a specified response file. The file is generated once the installation setup program is ready to start the installation.

The response file supports new SAP BusinessObjects Edge Series installation for Linux.

Tip:
You do not start the installation process to generate the response file. Select**Ctrl** + **X** to abort the installation setup once you reach the final screen in the installation setup program.

5.2.1 To create a response file

1. Mount the device that contains the installation files.

   Note:
   If you run the installation script without copying the files to a temporary location, you will be prompted to specify a temporary location for the installation.

2. In the command line type ./install.sh, -w and the file path the response file you want to generate.

   ```
   ./install.sh -w responseFilePath
   ```

   Note:
   When specifying `responseFilePath` make sure you include the name of the file you want to generate.

3. Press **Enter** to launch the installation setup program.
4. Follow the onscreen instructions to enter your preferred installation settings until you reach the final screen of the setup program.

   These settings are recorded in the response file.

5. Press [**Ctrl** + **X**] to abort the installation setup once you reach the final screen in the installation setup program.

   You can access the response file from the directory you specified in step 2.

Related Topics

- To create a response file
- Scripted installation parameters

5.2.2 Sample response file

The following example installation response file was generated for a new SAP BusinessObjects Edge Series installation in which MySQL and Tomcat were selected. The French language pack was added to the English default.

```
# Installation Response File
# ------------------------------------------------------------------------ #
[Manual Settings]
# The name of the local server. This feature overrides the local server name
# to the machine name specified. It must be manually set within the response file
# or it will be defaulted to the local machine name.
MACHINENAME= <mymachine>

[Paths]
# The path of the bobje directory. This feature is automatically set by
# the installation directory specified as a command line argument followed
# by /bobje/.
```

```
BOBJEDIR="/net/home/businessobjectsenterprise/bobje/"

# The path of the DISK_1 directory on the CD. This path defaults to the cd directory
# pertaining to the install which has created the response file. It may be overwritten
# by specifying the cd directory as an argument on the command line.
CDDIR=/net/home/temp

# The path of the license directory.
LICENSEDIR=

[Product Information]
# The current language with the following exceptions:
#       1) "jp"         if the current language is "ja"         (Japanese)
#       2) "chs"        if the current language is "zh_CN"      (Chinese - China)
#       3) "cht"        if the current language is "zh_TW"      (Chinese - Taiwan)
BOBJELANG="en"

# The name of the product being installed.
PRODUCTID_NAME="BusinessObjects"

# The version of Business Objects Enterprise.
BOBJEVERSION="12.0"

# The version of the product being installed.
PRODUCTID_VER="12.0"

# The license key to install Business Objects Enterprise.
BOBJELICENSEKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX

# The product id key. ( The product id is usually the same as the BOBJELICENSEKEY )
PIDKEY=XXXXX-XXXXXXX-XXXXXXX-XXXX

[Installation Information]
# The installation function to perform. (i.e. install)
FUNCTION=install

# The type of installation. (i.e. new / custom / webtier )
INSTALLTYPE="new"

# A comma-delimited list of flags that describe the operating mode of the Installer
# The following flags are supported:
# install     - running a new install of the product
# modify      - running a modify install on a previously installed product
# remove      - running a uninstall of on a previously installed product
# integrated  - the current install is running from within another installed (ie. integrated langpacks)
# interactive - UI is enabled and can prompt for user response
INSTALLMODE=interactive,install

# The name of the local server.
LOCALNAMESERVER="<servername>"

# Whether to perform a user or system install.
BOBJEINSTALLLOCAL="user"

# The language packs to install.
# Each language is specified using the short format and is separated by a space.
# Example: LANGPACKS_TO_INSTALL=en fr
LANGPACKS_TO_INSTALL=fr

# List of all languages included in the product.
# Each language is specified using the short format and is separate by a comma.
# Example: LANGUAGES_TO_INSTALL=en,fr
LANGUAGES_TO_INSTALL=en,fr,is,ja

# The Business Objects Enterprise username.
BOBJEUSERNAME="Administrator"

# Specified servers to add.
EXPANDSERVERS=

[Tomcat]
# Whether or not to install Tomcat.
INSTALLTOMCAT=yes

# The connection port.
CONNECTORPORT="8080"

# The redirection port.
REDIRECTPORT="8443"
```

```
# The shutdown port.
SHUTDOWNPORT="8005"

[Application Server]
# The path of the Application Server directory (If an Application Server
# is being installed). This path is automatically set using the installation
# directory.

AS_DIR=/net/home/businessobjectsenterprise/bobje/tomcat/

# The Application Server name.
# Defaults to tomcat55 if Tomcat is to be installed.
AS_SERVER=tomcat55

# The instance of the Application Server. (e.g. localhost)
# Defaults to localhost if Tomcat is to be installed.
AS_INSTANCE=localhost

# The Application Server virtual host.
AS_VIRTUAL_HOST=

# The Application Server port.
AS_ADMIN_PORT=

# The Application Server's Administrator Username.
AS_ADMIN_USERNAME=

# The Application Server's Administrator Password.
AS_ADMIN_PASSWORD=

# Whether or not the Application Server's Administrator is secure.
AS_ADMIN_IS_SECURE=

# The Application Server's Name (Oracle AS only).
AS_APPSERVER_ID=

# The Application Server's Group Id (Oracle AS only).
AS_GROUP_ID=

# The Application Server deployment action. (i.e. deploy or predeploy)
WDEPLOYACTION=deploy

[CMS Cluster]
# Whether or not to cluster the CMS.
CMSCLUSTER="no"

# The CMS name to cluster to.
CLUSTER_NAMESERVER=""

# The CMS port number to cluster to.
CLUSTERPORTNUMBER="6400"

[CMS]
# The type of database. (e.g. MySQL, DB2, Oracle)
DBTYPE="MySQL"

# The service name of the CMS.
SERVICENAME="BOE120"

# The username to connect to the database.
DATABASEUID="Administrator"

# The password to connect to the database.
DATABASEPWD=<password>

# The name of the CMS server.
CMSNAMESERVER="<servername>"

# The port number used to communicate with the CMS.
CMSPORTNUMBER="6400"

# The password used to connect to the CMS.
CMSPASSWORD=<password>

# The server intelligence agent node name.
SIANODENAME="MyNode"

# The port used to communicate with the server intelligence agent.
SIAPORTNUMBER="6410"
```

```
# Whether or not to reinitialize the database.
REINIT="yes"

[MySQL]
# Whether or not to install MySQL
INSTALLMYSQL="yes"

# The port number used to communicate with the MySQL database.
SERVICEPORT="3306"

# The name of the server hosting the MySQL database.
MYSQLHOSTNAME="<servername>"

# The root password for the MySQL database.
MYSQLROOTPWD=<password>


[Audit]
# Whether or not auditing is enabled.

AUDITINGENABLED=yes

# The service audit name of the CMS.
SERVICENAME_AUDIT="BOE120_AUDIT"

# The port number used to communicate with the MySQL database.
SERVICEPORT_AUDIT="3306"

# The name of the server hosting the MySQL database.
MYSQLHOSTNAME_AUDIT="<servername>"

# The audit username to connect to the database.
DATABASEUID_AUDIT=Administrator

# The audit password to connect to the database.
DATABASEPWD_AUDIT=<password>

[Marketing Products]
# This feature manually enables specified marketing products. Each marketing product
# specified must be seperated by a comma.
# For a custom install this field is used to enable those products which are different from a default new
installation.
# Example: ENABLEMP=BusinessObjects.MySQL,BusinessObjects.WebTierComponents
ENABLEMP=

# This feature manually disables specified marketing products. Each marketing product
# specified must be seperated by a comma.
# For a custom install this field is used to disable those products which are different from a default new
installation.
# Example: DISABLEMP=BusinessObjects.MySQL,BusinessObjects.WebTierComponents
DISABLEMP=

[New Settings]
# All uncommented settings are added here.
DBTYPE_AUDIT="MySQL"
```

Note:

Do not use spaces or non-alphanumeric characters in a SIA node name.

This script can now be used for future silent installations by including the file name and path in the command line as shown below:

```
./install.sh -r <filename> -I /<INSTALLDIR>/ -s /<SOURCEDIR>/
```

5.2.3 To run a scripted installation

You need to have a response residing in a known directory. The MACHINENAME parameter must be specified in the response file if you are replicating an installation. If the parameter is not specified, the local server name will be used by default.

1. Mount the device that contains the installation files.

   Note:
   If you run the install script without copying the files to a temporary location, you will be prompted to specify a temporary location for the install.

2. In the command-line type the following information:

```
install.sh -r <filename> -I /<INSTALLDIR>/ -s /<SOURCEDIR>/
```

   - `-r <filename>` Specifies the name of the response file you want the installation setup to read for installation parameters.
   - `-I <INSTALLDIR>` Specifies the installation directory for the scripted installation.
   - `-s <SOURCEDIR>` This optional command specifies the location of the cd directory. The source directory must point to the location of DISK_1 in the installation DVD. If not specified, the DVD directory setting in the response file will be used.

3. Press **Enter** to launch the installation.

Related Topics

- Copying the product distribution to your machine

5.2.4 Scripted installation parameters

The table below lists the most common parameters used in SAP BusinessObjects Edge Series installation scripts. These parameters are saved in a file which is used to run scripted installations of SAP BusinessObjects Edge Series on Linux. To change the listed parameters, it is recommended that you create a new response file using `./install.sh` and the `-w` parameter.

Parameter	Description
MACHINENAME	Name of the machine on which to run the scripted installation. The setting overrides the local server name. If not specified, the local machine name is used. `MACHINENAME="mymachine"`
BOBJEDIR	Path of the `bobje` directory automatically setup in the installation directory. `BOBJEDIR="<INSTALLDIR>/bobje/"`

Parameter	Description
CDDIR	Path to the `DISK_1` directory on the distribution DVD. This path defaults to the DVD directory. `CDDIR="<CD>/BusinessObjects/DISK_1"`
LICENSEDIR	Path to the directory containing the product license. `LICENSEDIR="<INSTALLDIR>/<LICENSEDIR/"`
BOBJELANG	The language setting used for the installation setup. • en=English • fr=French • jp=Japanese • de=German • es=Spanish • it=Italian • ko=Korean • nl=Dutch • sv=Swedish • pt=Portuguese (Brazilian) • chs=Simplified Chinese • cht=Traditional Chinese • da=Danish • no=Norwegian • pl=Polish • ru=Russian • th=Thai `BOBJELANG="en"`
BOBJELICENSEKEY	Specifies the product activation keycode for the product to be installed. `BOBJELICENSEKEY=XXXXX-XXXXXXX-XXXXXXX`
PIDKEY	The product id key - same as the `BOBJELICENSEKEY` `PIDKEY =XXXXX-XXXXXXX-XXXXXXX`
INSTALLTYPE	Specifies the type of installation to perform. This parameter supports the following options: • new `INSTALLTYPE="new"`

Parameter	Description
LOCALNAMESERVER	Specifies the name of the local server `LOCALNAMESERVER="myservername"`
BOBJEINSTALLLOCAL	Specifies to perform either a user or system installation. `BOBJEINSTALLLOCAL="user"`
LANGPACKS_TO_INSTALL	Specifies the language packs to install. Each language pack is specified in the short format and is separated by a space. • en=English • fr=French • jp=Japanese • de=German • es=Spanish • it=Italian • ko=Korean • nl=Dutch • sv=Swedish • pt=Portuguese (Brazilian) • chs=Simplified Chinese • cht=Traditional Chinese • da=Danish • no=Norwegian • pl=Polish • ru=Russian • th=Thai `LANGPACKS_TO_INSTALL="en fr"`
BOBJEUSERNAME	Specifies the SAP BusinessObjects Edge Series username. `BOBJEUSERNAME="username"`
INSTALLTOMCAT	Specifies to either install or not to install Tomcat. `INSTALLTOMCAT="yes"`
CONNECTORPORT	Specifies the connection port for the Tomcat server. `CONNECTORPORT="15037"`
REDIRECTPORT	Specifies the redirection port for the Tomcat server. `REDIRECTPORT="15034"`

Parameter	Description
SHUTDOWNPORT	Specifies the shutdown port for the Tomcat server. `SHUTDOWNPORT=“15024”`
AS_DIR	Specifies the path of the application server directory if the server is being installed. The path is automatically set using the installation directory. `AS_DIR=“<INSTALLDIR>/bobje/tomcat/”`
AS_SERVER	Specifies the name of the application server being installed. • Use tomcat55 for Tomcat `AS_SERVER=“tomcat55”`
AS_INSTANCE	Specifies the name of the current web application server instance. `AS_INSTANCE="localhost"`
AS_VIRTUAL_HOST	Specifies virtual host to which the application must be bound. `AS_VIRTUAL_HOST="hostname"`
AS_ADMIN_PORT	Specifies the port used by the web application server. `AS_ADMIN_PORT="8080"`
AS_ADMIN_USERNAME	Specifies the account name used by the administrator to access the web application server. `AS_ADMIN_USERNAME="admin"`
AS_ADMIN_PASSWORD	Password used by the administrator account to access the web application server. `AS_ADMIN_PASSWORD="pass"`
AS_ADMIN_IS_SECURE	Specifies that an administrator credential must be passed to access the web application server. This setting only valid for WebSphere 6 and Oracle. `AS_ADMIN_IS_SECURE="true"`

Parameter	Description
WDEPLOYACTION	Specifies the action to perform on the application server. The available options are: • deploy • predeploy • none `WDEPLOYACTION="deploy"`
CMSCLUSTER	Specifies whether or not to cluster to an existing CMS. `CMSCLUSTER="no"`
CLUSTER_NAMESERVER	If clustering to a CMS, specifies the name of the CMS. `CLUSTER_NAMESERVER="name"`
CLUSTERPORTNUMBER	If clustering to a CMS, specifies the port number used by the CMS. `CLUSTERPORTNUMBER="6400"`
DBTYPE	Specifies the type of database used by the CMS. The available options are: • MySQL • DB2 • Oracle • Sybase `DBTYPE="MySQL"`
SERVICENAME	Specifies the service name for the CMS. `SERVICENAME="BOE953"`
DATABASEUID	Specifies the username used to connected to the database. `DATABASEUID="username"`
DATABASEPWD	Specifies the password used to connected to the database. `DATABASEPWD="password"`
CMSNAMESERVER	Specifies the name of the CMS server. `CMSNAMESERVER="servername"`

Parameter	Description
CMSPORTNUMBER	Specifies the port number used to communicate with the CMS. `CMSPORTNUMBER="14000"`
CMSPASSWORD	Specifies the password used to connect to the CMS. `CMSPASSWORD="password"`
SIANODENAME	Specifies the node name for the Server Intelligence Agent (SIA). `SIANODENAME="name"` **Note:** Do not use spaces or non-alphanumeric characters in a SIA node name.
SIAPORTNUMBER	Specifies the port used by the Server Intelligence Agent. `SIAPORTNUMBER="14090"`
REINIT	Specifies to or not to reinitialize the database. `REINIT="yes"`
INSTALLMYSQL	Specifies to or not to install MySQL as the system database. `INSTALLMYSQL="yes"`
SERVICEPORT	Specifies the port number used to communicate with the MySQL database. `SERVICEPORT="15036"`
MYSQLYHOSTNAME	Specifies the name of the server hosting the MySQL database. `MYSQLYHOSTNAME="servername"`
MYSQLROOTPWD	Specifies the root password for the MySQL database. `MYSQLROOTPWD="password"`
AUDITINGENABLED	Specifies if auditing is or is not enabled for the CMS. `AUDITINGENABLED="yes"`

Parameter	Description
SERVICENAME_AUDIT	Specifies the service audit name used by the CMS. `SERVICENAME_AUDIT="servicename"`
SERVICEPORT_AUDIT	Specifies the port number used to communicate with the auditing database. `SERVICEPORT_AUDIT="12133"`
MYSQLHOSTNAME_AUDIT	Specifies the name of the server hosting the MySQL auditing database. `MYSQLHOSTNAME_AUDIT="servername"`
DATABASEUID_AUDIT	Specifies the user name used to connect to the auditing database. `DATABASEUID_AUDIT="username"`
DATABASEPWD_AUDIT	Specifies the password used to connect to the auditing database. `DATABASEPWD_AUDIT="password"`
-ENABLEMP	Specifies which specific products to manually enable. Each product must be separated by a comma. For a custom installation this setting is used to enable those products typically not installed in a new installation. `ENABLEMP=BusinessObjects.WebTierComponents,`
-DISABLEMP	Specifies which specific products to manually dis able. Each product must be separated by a comma. For a custom installation this setting is used to dis able those products typically not installed in a new installation. `DISABLEMP=ENABLEMP=BusinessObjects.WebTierComponents,`

Other automatically generated parameters

The following parameters are automatically generated parameters that should not be modified in the `.ini` file.

Parameter name
PRODUCTID_NAME
BOBJEVERSION
PRODUCTID_VER
FUNCTION
LANGUAGES_TO_INSTALL
EXPANDSERVERS

Related Topics

- To create a response file

5.3 Performing a silent installation

You can run a silent installation from the command line to automatically install SAP BusinessObjects Edge Series on any machine in your system, without the installation program prompting for information during the installation. To install silently, run the `./install.sh` script, adding parameters that provide information for installation settings and directory paths.

This type of installation is particularly useful when you need to perform multiple installations. You can also use the silent installation script in your own scripts. For example, if your organization uses scripts to install software on machines, you can add the silent SAP BusinessObjects Edge Series installation command to your scripts.

The silent installation command consists of the `./install.sh` script, followed by the location of the installation executable file, and a number of parameters that provide information about the installation. For example:

The following example would perform an English new user installation with the following configuration:

- SAP BusinessObjects Edge Series 3.1
- Tomcat
- MySQL
- Auditor
- Database reinitialized

```
./install.sh -INSTALLDIR /program/business/boe_120
-c en
-BOBJELICENSEKEY 00000-1111111-2222222-0000
-BOBJEINSTALLLOCAL user -INSTALLTYPE new -CMSPORTNUMBER 13888
-DBTYPE MySQL -SERVICENAME boe -INSTALLMYSQL yes -DATABASEUID
username -DATABASEPWD sa -REINIT yes -MYSQLROOTPWD sa
-SERVICENAME_AUDIT audit -DATABASEUID_AUDIT hsmith
-DATABASEPWD_AUDIT sa123 -SIANODENAME=MyNode
```

```
-SIAPORTNUMBER=6410 -INSTALLTOMCAT yes
-TOMCATCONNECTORPORT 13890 -TOMCATREDIRECTPORT 13889
-TOMCATSHUTDOWNPORT 13891 -AUDITINGENABLED yes
-DASENABLED yes
```

Note:
The example uses the most common parameters. You can choose any number of valid parameters, but it is good practice to keep the silent installation as simple as possible.

Note that when you run a silent installation, you need to run the command once for each DVD, but you only need to provide the full list of options for the first DVD. For example, if the DVDs are on different drives, the commands could look like the following:

```
./install.sh -s /mnt/cd1 -INSTALLDIR /mymachine/
BOBJ/Enterprise120 -BOBJELICENSEKEY 00000-0000000-0000000-0000
-INSTALLTYPE new -BOBJEINSTALLLOCAL user -CMSPORTNUMBER 6401
-DBTYPE Oracle -SERVICENAME tnsname -DATABASEUID userid
-DATABASEPWD password -REINIT yes -SIANODENAME=MyNode
-SIAPORTNUMBER=6410 -INSTALLTOMCAT yes
-TOMCATCONNECTORPORT 8080 -TOMCATREDIRECTPORT 8443
-TOMCATSHUTDOWNPORT 8005

./install.sh -s /mnt/cd2 -INSTALLDIR /mymachine/BOBJ/
Enterprise120

./install -s /mnt/cd3 -INSTALLDIR /mymachine/BOBJ/Enterprise120
```

The following table lists the most common parameters used in a silent installation. To use a parameter, place it on the command line after the `./install.sh` command and the path for the installation files.

Note:
Parameter values are case-sensitive.

Installation parameter	Description
`-s`*`filepath`*	The location of the DVD used to run the installation. Replace *`filepath`* with the full path for the DVD drive or other installation source directory. For example, `-s /mnt/CD1/`
`-INSTALLDIR` *`filepath`*	Specifies the directory where you want to install the new SAP BusinessObjects Edge Series components. Replace *`filepath`* with the full path for the installation directory. For example, `-INSTALLDIR /BOBJE/Enterprise120`.
`-BOBJELICENSEKEY 00000-0000000-0000000-0000`	Required to activate the product license for your product.
`-DASENABLED`	Enables you to install Dashboard and Analytics servers without a keycode. The options are “yes” and “no”; the default setting is “no”. **Note:** The Dashboard and Analytics servers will be disabled until you enter an appropriate keycode through the Central Management Console (CMC).

Installation parameter	Description
`-clanguage code`	This option determines the language for the installation. Replace *`languagecode`* with a language code for one of the supported languages: • en=English • zh_CN=Simplified Chinese • zh_TW=Traditional Chinese • de=German • es=Spanish • ko=Korean • nl=Dutch • jp=Japanese • ru=Russian • fr=French • it=Italian • th=Thai • pl=Polish • da=Danish • no=Norwegian • sv=Swedish • pt=Portuguese
`-SIANODENAME`	Specifies the Server Intelligence Agent (SIA) node name to use for the installation. **Note:** Do not use spaces or non-alphanumeric characters in a SIA node name.
`-SIAPORTNUMBER`	Specifies the port used by the SIA.
`-INSTALLTYPE`	Specifies the type of installation. The possible values are: • new
`-xmymenu.xml`	This parameter is followed by a comma-separated values (CSV) string of features that you do not want to install. Note that this cannot be used in combination with the `-f` option. See the `my menu.xml` file in the setup directory on DISK_1 for a full list of features.
`-f`	This parameter is followed by CSV string of features that you want to install. Note that this cannot be used in combination with the `-x` option. See the `mymenu.xml` file in the setup directory on DISK_1 for a full list of features.

Installation parameter	Description
-ENABLEMP	Specifies which specific products to manually enable. Each product must be separated by a comma. For a custom installation this setting is used to enable those products typically not installed in a new installation.
-BOBJEINSTALLLOCAL	Specifies whether to perform a user or a system installation. The options are `user` or `system`; `user` is the default.
-CMSNAMESERVER	Specifies the name of an existing CMS to use for either a custom or web tier installation.
-CMSPORTNUMBER	Specifies the port number for the Central Management Server. If not specified, the default is 6400.
-CMSPASSWORD	Specifies the administrator password for an existing CMS to use in either a custom or web tier installation.
-DBTYPE	When installing a Central Management Server, you need to specify the type of database you want to use. Possible values include: • Oracle • DB2 • Sybase • MySQL
-INSTALLMYSQL	When installing a Central Management Server, you can specify whether or not to install and configure a new MySQL database. The options are `yes` or `no`; `no` is the default.
-MYSQLHOSTNAME	Specifies the name of the machine hosting the MySQL server.
-SERVICENAME	Specifies the service name used to connect to the Central Management Server database.
-SERVICEPORT	Specifies the port number used to connect to the Central Management Server database. This is required only for MySQL databases.
-DATABASEUID	Specifies the user ID used to connect to the Central Management Server database. This option cannot be set to root if the `-INSTALLMYSQL` option is set to `yes`.
-DATABASEPWD	Specifies the password used to connect to the Central Management Server database. If this option is not specified, it defaults to blank.
-MYSQLROOTPWD	Specifies the password used for the root account when setting up the database. When the -INSTALLMYSQL option is set to yes, you must also specify the -MYSQLROOTPWD option.

Installation parameter	Description
-AUDITINGENABLED	Specifies if the an auditing database will be configured the during your installation setup. The two options are yes and no. If this option is not specified, it defaults to no.
-SERVICENAME_AUDIT	Modifies the name of the MySQL auditing database, otherwise, the default name of BOE120_Audit will be used.
-DATABASEUID_AUDIT	Use this parameter to pass the user ID for the auditing database.
-DATABASEPWD_AUDIT	Specifies the password for the auditing database server.
-MYSQLHOSTNAME_AUDIT	Specifies the host name for the MySQL server for your auditing database.
-DBTYPE_AUDIT	Specifies an existing auditing database type from one of the following options: • Oracle • DB2 • Sybase • MySQL
-SERVICEPORT_AUDIT	Specifies the port for the MySQL auditing database server.
-SYBASEHOSTNAME_AUDIT	Specifies the name of the machine hosting the Sybase auditing database.
-SYBASEPORT_AUDIT	Specifies the port number used by the Sybase auditing database.
-REINIT	Specifies whether to reinitialize the Central Management Server database. The options are `yes` or `no`; `yes` is the default.
-CLUSTERCMS	Specifies whether or not to cluster the Central Management Server with an existing CMS. The options are `yes` or `no`; `no` is the default. **Note:** This option is used for a custom installation.
-CLUSTER_NAMESERVER	Specifies the name of the Central Management Server for the system you are expanding. For a custom installation, if the `-CLUSTERCMS` option is set to `yes`, then you need to specify the name of the CMS you want to cluster with.
-CLUSTERPORTNUMBER	Specifies the port number of the Central Management Server for the system you are expanding. The default is 6400. For a custom installation, if the `-CLUSTERCMS` option is set to `yes`, then you need to specify the port number of the CMS you want to cluster with. The default is 6400.

Installation parameter	Description
`-INSTALLTOMCAT`	Specifies if Tomcat is to be installed as the web application server. The default value is `no`.
`-TOMCATCONNECTORPORT`	The port number that Tomcat uses to connect. The default is 8080.
`-TOMCATREDIRECTPORT`	The port number that Tomcat uses to redirect. The default is 8443.
`-TOMCATSHUTDOWNPORT`	The port number that Tomcat uses to shut down. The default is 8005.

Installing Data Services

6.1 Installing Data Services

Data Services blends batch extraction, transformation, and loading (ETL) technology with real-time bi-directional data flow across multiple applications for the extended enterprise.

For information on how to install and uninstall Data Services, refer *Data Services Installation Guide for Unix*.

Data Services must be launched separately because it has a separate setup. In the DVD, the setup file is available at the following location: `root\Data Services\install.sh`

Note:
It is not mandatory to install the Data Services on the same machine as SAP BusinessObjects Edge Series 3.1 with this release. However, if installed on the same machine, Tomcat can be shared.

6.1.1 Upgrading Data Services

To upgrade from an existing Data Integrator or Data Services installation, refer to *Data Services Migration Considerations guide*, *Installation Guide*, and the *Release Notes*.

After installing SAP BusinessObjects Edge Series

7.1 Using ccm.sh to start the SAP BusinessObjects Edge Series servers

The `ccm.sh` script provides you with a command-line interface to the various SAP BusinessObjects Edge Series server components. For more information about this script and others that are installed on your system, see the *BusinessObjects Enterprise Administrator's Guide*.

In SAP BusinessObjects Edge Series, the installation setup program starts and enables servers automatically. The following information is included only as a reference.

7.1.1 To view additional help on ccm.sh

The `ccm.sh` script provides a detailed description of its command-line options. To see the help, issue the following command:

```
<INSTALLDIR>/bobje/ccm.sh -help | more
```

7.2 To manually start and enable servers

1. Go to the `bobje` directory that was created by the installation:

   ```
   cd <INSTALLDIR>/bobje
   ```

2. Start the Server Intelligence Agent (SIA) by typing the following command:

   ```
   ./ccm.sh -start sia
   ```

3. Open a web browser to the URL of your Central Management Console (CMC) deployment on your web application server. For example

   ```
   http://<SERVERNAME>:<PORTNUMBER>/CmcApp
   ```

4. Log on to the CMC by providing your SAP BusinessObjects Administrator credentials.
5. Navigate to the "Servers" page.

6. Select the server you want to start.
7. Select **Start Server**.

The server should now start.

7.3 To check if the CMS is running

After installing SAP BusinessObjects Edge Series, you can validate if the Central Management Server (CMS) is running.

1. CD to the `bobje` directory in your installation.
2. Enter ./ccm.sh -display -cms *<hostname>*:*<port>*.

   Note:
   It is not necessary to provide the CMS hostname and port if you've specified the default port during installation.

   A list of running servers is displayed. Make sure the CMS is running.

7.4 Post install component deployment

When you install Tomcat as part of your SAP BusinessObjects Edge Series installation, SAP BusinessObjects Edge Series web applications (e.g. InfoView, CMC) and the SAP BusinessObjects Edge Series SDK are installed, configured, and deployed for you.

InfoView is a web-based interface that end users access to view, schedule, and keep track of published reports. The Central Management Console (CMC) allows you to perform user and server management tasks such as setting up authentication, starting servers, and adding users and groups. The SAP BusinessObjects Edge Series SDKs are used by many SAP BusinessObjects Edge Series components and are also used to simplify the development of custom SAP BusinessObjects Edge Series applications.

If you do not install Tomcat when you install SAP BusinessObjects Edge Series, these components must be configured and deployed before you use them. You can either deploy the components manually or use the wdeploy tool. For more information, see the *BusinessObjects Enterprise Web Application Deployment Guide for UNIX*.

For more information about the system architecture of an installation of SAP BusinessObjects Edge Series, see the architecture chapter of the *BusinessObjects Enterprise Administrator's Guide.*

Note:
If you have a firewall between the machine running your web application server and your other SAP BusinessObjects Edge Series servers, you must perform additional system configuration. See the section on how to configure firewalls, in your *BusinessObjects Enterprise Administrator's Guide*.

Language Packs

8.1 About language packs

A language pack is a resource package that gives a SAP BusinessObjects Edge Series system the ability to interact with users in a specific language. An individual language is known as a locale.

You can install as many different language packs as you want. The default language pack, English, is always installed.

Note:
Data Services supports only English language pack.

8.1.1 English language fall-back

In the event of a localization error, such as a missing, corrupted, or uninstalled language pack, SAP BusinessObjects Edge Series products fall back to using the default English language. If a preferred language has not been set in the Product Locale drop-down, SAP BusinessObjects Edge Series defaults to using the locale of the installed operating system. If a language pack corresponding to the locale of the operating system is not found, the default English is used.

8.1.2 Product locale changes

Product Locale changes are immediately reflected in the current product's interface, reports, and help. Where multiple client applications are installed, the selected **Product Locale** is only displayed when client is next started. For example, setting the Crystal Report Designer product locale to Japanese will cause the Business Intelligence Modeler client to also display in Japanese. However, if the Business Intelligence Modeler is running at the time of the change, it must be restarted in order for the change to take effect.

8.1.3 Installing language with complex deployments

If your organization uses a SAP BusinessObjects Edge Series deployment with more than one server, you will need to deploy language packs to each server individually.

8.2 Installing language packs

Language packs can be installed either during the initial installation of SAP BusinessObjects Edge Series, or post-install using a dedicated language pack installation program. The installation program is a script that adds the localized language resources to your Business Objects software deployment.

English is the default option during the installation of SAP BusinessObjects Edge Series, but administrators can opt to install any or all of the other available languages. Additional languages can also be installed onto an existing system by downloading the appropriate language pack from the Business Objects support web site at http://technicalsupport.businessobjects.com.

In the event of an operational problem with a language pack, SAP BusinessObjects Edge Series will default back to English localization. Because of this fall-back system, English cannot be deselected as an installable option during the installation of SAP BusinessObjects Edge Series.

Note:
An error message will be displayed if a language pack detects that it is incompatible with a previously installed version of SAP BusinessObjects Edge Series.

8.2.1 Locating language packs

Language packs can be found in the `langs` folder of the SAP BusinessObjects Edge Series for UNIX distribution package.

Alternatively, language packs can be downloaded from the Business Objects technical support site at http://technicalsupport.businessobjects.com.

8.2.2 To install language packs

Before installing a language pack, your BusinessObjects Edge Series server must be running and patched to the required revision level. You will be asked for CMS administrator credentials. If any part of your BusinessObjects Edge Series deployment is not patched to the required software version, the language pack installation will abort and must be reapplied after the system has been patched to the correct level. Please review the requirements for language packs at the Business Objects customer support site: http://support.businessobjects.com/documentation/supported_platforms.

Note:
Language packs do not require a keycode.

1. Open the Central Management Console (CMC) and ensure that the server processes are running.
2. Locate the language pack to install under *BUSINESS_OBJECTS_DISTRIBUTION_CD_DIR*/langs/*LANGUAGE*/DISK_1.
3. Run the `install.sh` script with the first argument set to the location of the BusinessObjects Edge Series installation directory.

   For example: `install.sh /opt/bobj`
4. Press **y** to accept the license agreement.
5. Enter the CMS hostname, port number, and administrator password into the labeled fields and press **Enter**.
6. Type the path of the application server install directory, and press **Enter**.
7. Press **Enter** after you have confirmed the location of the BusinessObjects Edge Series install directory.

Once the installation is complete, you will be able to choose the installed language from the **Options** dialog window in BusinessObjects Edge Series applications.

Note:

- All fix packs or other updates to BusinessObjects Edge Series released on a date after the language pack release date must be re-applied to ensure that updated functionality is maintained.
- Language packs must be re-installed after you have added or removed a component from your BusinessObjects Edge Series deployment.

8.2.3 Installing language packs across a SAP BusinessObjects Edge Series deployment

You can install language packs with one command by specifying parameters on the command-line. This is referred to as a “silent” installation. When parameters are supplied on the command-line the installation will not prompt for information.

The command-line syntax for a silent install is as follows:

```
install.sh BUSINESS_OBJECTS_HOME_DIR
  INSTALLMODE=silent,install
  CMSNAMESERVER=CMS_HOSTNAME
  CMSPORTNUMBER=PORT_NUMBER
  CMSPASSWORD=CMS_PASSWORD
```

Replace *BUSINESS_OBJECTS_HOME_DIR* with the full path of your SAP BusinessObjects Edge Series installation. The following table details each of the parameters used by `install.sh`.

Parameter	Expected argument	Description
INSTALLMODE	“silent”	Switch to enable silent install mode
CMSNAMESERVER	CMS Hostname	Enter the name of your CMS machine
CMSPORTNUMBER	Port number for CMS	CMS port number
CMSPASSWORD	CMS admin password	The password for your CMS server

You must also specify parameters for your web application server. The specific parameters that you must use depend on the Tomcat 5.5 web application server that you use.

To uninstall language packs, use the `wdeploy undeployall` command to remove Tomcat 5.5 web application server, then `wdeploy deployall` to re-deploy Tomcat 5.5 web application without the language packs.

For more information on using wdeploy, see the *BusinessObjects Enterprise Web Application Deployment Guide for UNIX*.

8.3 Selecting a language

Once installed, SAP BusinessObjects Edge Series products detect the existence of the language pack, and users can choose a language from a list of installed languages found in the **Product Locale** drop-down list of the **CMC Preferences** section of the CMC Preferences, or under the **Options** dialog box on the toolbar or application menu in other SAP BusinessObjects Edge Series products. Command-line utilities use the **LANG** environment variable to determine which language to use.

Each language listed in the **Product Locale** drop-down is displayed in its native localization, rather than the currently employed language. For example, the German language pack is always displayed as *Deutsch*, rather than as *German* in English or *Allemand* in French.

Note:
Application shortcut keys are language neutral and do not change, regardless of which language is in use. For example, Ctrl+S is always mapped to the **Save** command, regardless of the localized name for the **Save** function.

8.4 To uninstall language packs

1. Run the `./AddOrRemoveProcducts.sh` script.

2. On the "Choose Product to Modify" screen, select the language pack that you want to uninstall, and press **Enter**.
3. On the "Enter information for existing CMS" screen, specify the CMS Hostname, CMS Port, and Existing CMS Administrator Password, and then press **Enter**.
4. Press **Enter** to confirm the removal of the language pack.

Maintaining your installation

9.1 The installation log file

The installation log files contains information on all the parameter settings used in a SAP BusinessObjects Edge Series installation. The log files can be used as a reference or to troubleshoot installation errors. The name of the initial log files are `BusinessObjects.12.1.0.log` and `BusinessObjects.12.1.0.log.summary`. The `BusinessObjects.12.1.0.log` file contains detailed information on installation and deployment. Both files are saved under the following directory: *<INSTALLDIR>*`/setup/logs/`.

9.2 Uninstalling SAP BusinessObjects Edge Series from Linux

Before you can remove SAP BusinessObjects Edge Series from your Linux machine, you must run the `AddOrRemoveProducts.sh` script. The script is installed to the directory of your installation and is used to add or remove SAP BusinessObjects Edge Series products or components.

This script stops all SAP BusinessObjects Edge Series servers and processes. It then deletes the files copied from the product DVD during your original installation of SAP BusinessObjects Edge Series.

A SAP BusinessObjects Edge Series installation creates a number of additional files on your system. When you uninstall SAP BusinessObjects Edge Series these additional files and any files created by the system or by users after installation will not be removed. The files that remain include log files created by SAP BusinessObjects Edge Series. These log files can be useful for diagnosing problems with previous installations.

9.2.1 To uninstall SAP BusinessObjects Edge Series

Before removing SAP BusinessObjects Edge Series from your Linux system, you should uninstall all language packs used by the installation.

To uninstall SAP BusinessObjects Edge Series:

1. From the installation directory run ./AddOrRemoveProducts.sh.

The "Add or Remove Programs" screen is displayed.

2. Select SAP BusinessObjects Edge Series and press **Enter**.
   The "Add Features or Uninstall Current Product" screen is displayed.
3. Select **Uninstall Product** and press **Enter**.
   A confirmation screen is displayed.
4. Select **Yes** and press **Enter**.
   The uninstallation process begins.

To completely remove all SAP BusinessObjects Edge Series files, perform an `rm -Rf` command on the `bobje` directory.

If you performed a system installation, you must also delete the run control scripts from the appropriate `/etc/rc#` directories.

Related Topics

- To uninstall language packs

SAP BusinessObjects Edge Series 3.1 Add-ons

10.1 BusinessObjects XI Integration for JD Edwards EnterpriseOne

The BusinessObjects XI Integration for JD Edwards EnterpriseOne enables you to combine the functionality of Crystal Reports and SAP BusinessObjects Edge Series to extract, report, and distribute data from your JD Edwards EnterpriseOne system.

For information about installing JD Edwards EnterpriseOne, see *BusinessObjects XI Integration for JD Edwards EnterpriseOne*.

10.2 BusinessObjects XI Integration for PeopleSoft Enterprise

The BusinessObjects XI Integration for PeopleSoft Enterprise enables you to combine the functionality of Crystal Reports and SAP BusinessObjects Edge Series to extract, report, and distribute data from your PeopleSoft system.

For information about installing PeopleSoft Enterprise, see *BusinessObjects XI Integration for PeopleSoft Enterprise*.

10.3 BusinessObjects XI Integration for Oracle E-Business Suite

The BusinessObjects XI Integration for Oracle E-Business Suite (EBS) enables you to combine the functionality of Crystal Reports and SAP BusinessObjects Edge Series to extract, report, and distribute data from your Oracle EBS system.

For information about installing Oracle E-Business Suite, see *BusinessObjects XI Integration for Oracle E-Business Suite*.

More Information

Information Resource	Location
SAP BusinessObjects product information	http://www.sap.com
SAP Help Portal	Navigate to http://help.sap.com/businessobjects and on the "SAP BusinessObjects Overview" side panel click **All Products**. You can access the most up-to-date documentation covering all SAP BusinessObjects products and their deployment at the SAP Help Portal. You can download PDF versions or installable HTML libraries. Certain guides are stored on the SAP Service Marketplace and are not available from the SAP Help Portal. These guides are listed on the Help Portal accompanied by a link to the SAP Service Marketplace. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.
SAP Service Marketplace	http://service.sap.com/bosap-support > Documentation • Installation guides: https://service.sap.com/bosap-instguides • Release notes: http://service.sap.com/releasenotes The SAP Service Marketplace stores certain installation guides, upgrade and migration guides, deployment guides, release notes and Supported Platforms documents. Customers with a maintenance agreement have an authorized user ID to access this site. Contact your customer support representative to obtain an ID. If you are redirected to the SAP Service Marketplace from the SAP Help Portal, use the menu in the navigation pane on the left to locate the category containing the documentation you want to access.
Docupedia	https://cw.sdn.sap.com/cw/community/docupedia Docupedia provides additional documentation resources, a collaborative authoring environment, and an interactive feedback channel.
Developer resources	https://boc.sdn.sap.com/ https://www.sdn.sap.com/irj/sdn/businessobjects-sdklibrary

Information Resource	Location
SAP BusinessObjects articles on the SAP Community Network	https://www.sdn.sap.com/irj/boc/businessobjects-articles These articles were formerly known as technical papers.
Notes	https://service.sap.com/notes These notes were formerly known as Knowledge Base articles.
Forums on the SAP Community Network	https://www.sdn.sap.com/irj/scn/forums
Training	http://www.sap.com/services/education From traditional classroom learning to targeted e-learning seminars, we can offer a training package to suit your learning needs and preferred learning style.
Online customer support	http://service.sap.com/bosap-support The SAP Support Portal contains information about Customer Support programs and services. It also has links to a wide range of technical information and downloads. Customers with a maintenance agreement have an authorized user ID to access this site. To obtain an ID, contact your customer support representative.
Consulting	http://www.sap.com/services/bysubject/businessobjectsconsulting Consultants can accompany you from the initial analysis stage to the delivery of your deployment project. Expertise is available in topics such as relational and multidimensional databases, connectivity, database design tools, and customized embedding technology.

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