

HULFT Integrate

SAP EICS Install Guide

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HULFT

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1. Before Use

This document is the installation guide related to SAP Enterprise Integration Component Server (Hereinafter SAP EICS) that is used to connect SAP R/3 system by linking with HULFT Integrate SAP Adapter (Hereinafter SAP Adapter)

In SAP EICS, it is a Web application for selecting the RFC generic module and IDoc including the BAPI to be used in the SAP adapter.

1.1. Precautions

1.1.1. Copyright Notice

- The copyright of this software is owned by HULFT, Inc. or its licensors.
- Unauthorized copy, reprinting of this software and this manual is prohibited.
- While preparing this manual every effort has been taken to ensure its correctness but in case of any mistakes, mismatch, and suggestions please contact us.
- Please use this software by user's responsibility. As a result, with regard to any trouble and the lawsuit, etc. occurs by any chance, damage or loss caused directly or indirectly, our company doesn't at all assume any responsibilities. This is for your information beforehand.
- The contents described in this manual and software specifications are subject to change for betterment, without prior notification.
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- HULFT, HULFT logo, Integrate, Integrate mark, IntegrateServer, IntegrateServer logo, and HULFT, Inc. are trademarks or registered trademarks of Hulft Inc.
- Additionally, company name, brand name and service name described in this manual are registered trademarks of each company.
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1.2. About the mark of this document

The rules of the notations in this document are as follows.




- Menu name, tab name, property item name, value, and button name displayed on screen are enclosed with [] and in bold letters. Moreover, the one without title of screens and other function names are enclosed with "" and distinguished from the former.
- "\$INTEGRATE_HOME" shows the directory where HULFT Integrate is installed. In default, it is "C:\Program Files\hulft\integrate" for Windows version and "<HOME>/hulft/integrate" for UNIX/Linux version.
- "x86 version" means 32bit OS.
"x64 version" means 64bit OS of 64bit CPU (Intel 64/AMD64).
- Name enclosed with < > is variable value.

Example: \$INTEGRATE_HOME/server/logs/<Date directory>

- URLs of the Web sites shown in this document are as of November 2018, and are subject to change without notice due to reasons of the Web site.
- "Studio" means "Integrate Studio", and "Studio for Web" means "Integrate Studio for Web".
- The descriptions of the Windows and UNIX/Linux versions of IntegrateServer have been standardized.
Please replace descriptions of operating system dependent items (such as path delimiter characters) as necessary.
- The numbers beginning with "DSS -" are unique IDs for controlling each corresponding problem.

1.3. About the Icons Used in This Guide

This Guide uses the following icons in its explanation.

Icon	Description
	Indicates that there are hints about operations or configurations.
	Indicates that there are warnings about operations or configurations.
	Indicates that there are detailed descriptions in other resources.

2. Software Requirements

Following software are necessary for SAP EICS.

2.1. SAP Java Connector 3.0 (SAP JCo 3.0)

- **Download Site**

Download from SAP Web site (<https://support.sap.com/connectors>).

- SAP JCo Release 3.0 Windows 32bit



When using x86 version of IntegrateServer, use this SAP JCo.

- SAP JCo Release 3.0 Windows 64bit X86



When using x64 version of IntegrateServer, use this SAP JCo.

- **Necessary library**

When using SAP JCo 3.0, it's necessary to install a special library. Refer to SAP note "684106" for details.

- **Precautions**

Use latest version of SAP JCo 3.0.

3. Supported OS of SAP EICS

- **Windows**

- Microsoft Windows Server 2008 Standard/Enterprise/Datacenter SP2 (x86 version, x64 version) (*1)
- Microsoft Windows Server 2008 R2 Standard/Enterprise/Datacenter SP1 (x64 version) (*1)
- Microsoft Windows Server 2012 Essentials/Standard/Datacenter (x64 version) (*2)
- Microsoft Windows Server 2012 R2 Essentials/Standard/Datacenter (x64 version) (*2)
- Microsoft Windows Server 2016 Essentials/Standard/Datacenter (x64 version) (*3)

(*1) Supports only when Windows Server installation options is full installation.

(*2) Supports full installation, minimum server interface and Server Core.

(*3) Supports Server Core and Server with Desktop Experience.

4. Support platform for SAP EICS

- **SAP System**
 - SAP ERP 6.0
 - SAP S/4HANA

5. Specification limits/ Precautions related to Installation

- If the SAP EICS already exists in the installation environment, do not overwrite the existing SAP EICS.
Always uninstall the existing SAP EICS using "[Uninstall SAP EICS](#)" procedure and install newly.
- Please install with the user having administrative rights.

5.1. Select Installation

- The following characters cannot be used in the installation folder name.
 - ";" (Single byte semicolon)
 - "'" (Single byte single quote)
 - "~" (Single byte Tilde)

6. SAP EICS Installation

6.1. Installer start-up

Run the installer file "SAPEICS.exe" and start the installer.



When installing in Windows Server 2008 x64, be sure to use the dedicated installer "SAPEICS_WIN2K8.exe" placed under the "InstallerForWindowsServer2008x64" directory.

6.2. Description of each screen of installer

6.2.1. Selecting Language

Select the installer display language.

6.2.2. Starting Screen

After reading the details displayed in the starting screen, click **[Next]** button.

6.2.3. Installation settings

Set the path for the installation of HULFT Integrate to install SAP EICS and click **[Next]** button.

By default, the settings are installed in "C:/Program Files/hulft/integrate"

(In Windows x64 environment, "C:/Program Files (x86)/hulft/integrate")

To install in different directory, start the directory search by clicking the **[Select]** button and select the installation directory. Even after selecting a different directory, default directory can be specified by clicking the **[Return to Default Folder]** button.

6.2.4. Import of Repository

Select the SAP EICS repository for which back-up has been taken, and then press the **[Next]** button.

- **[Yes]:** Imports SAP EICS repository.
- **[No]:** Does not import SAP EICS repository.



If **[No]** is selected then the next section [Configure the repository folder] is not required. Refer to section "[OpenJMS Installation](#)".

6.2.5. Import of Repository/Repository Folder Setting

Set the path for SAP EICS repository folder with the back-up and click **[Next]** button.



SAP EICS import repository will be "\$INTEGRATE_HOME/server/system/eics".

6.2.6. OpenJMS Installation

SAP system requires OpenJMS in order to start the script by outbound process. Select whether to Install OpenJMS or not and then click **[Next]** button.

- **[Yes]:** Installs OpenJMS
- **[No]:** Does not Install OpenJMS



If **[No]** is selected then the next section [Configure OpenJMS installation folder] is not required. Refer to section "[Pre-Installation Summary](#)".

6.2.7. Installation of OpenJMS/ OpenJMS installation folder setting

Set the installation path for OpenJMS, and click **[Next]** button.

By default it is set to be installed in "C:¥ "

To install in different directory, start the directory search by clicking the **[Select]** button and select the installation directory. Even after selecting a different directory, default directory can be specified by clicking the **[Return to Default Folder]** button.

6.2.8. OpenJMS Installation/Windows Service registration

Select whether to register OpenJMS Server in Windows service or not, and click **[Next]** button.

6.2.9. Pre-Installation summary

Shows the summary of installation. After reading all the displayed details, if there is no problem click **[Install]** button and start the installation.

6.2.10. Integrate SAP EICS Installation

Installs SAP EICS.

6.2.11. Installation Completion

If the installation is succeeded normally, [Installation Complete] screen is displayed. If you click **[Finish]** button the installation is completed.

6.3. Configuring SAP EICS

SAP EICS consists of the following modules.

- **SAP EICS application**

`$INTEGRATE_HOME/server/plugin/tomcat/webapps/eics`

- **SAP EICS library**

`$INTEGRATE_HOME/server/system/common/lib`

- **SAP EICS repository**

`$INTEGRATE_HOME/server/system/eics`

7. SAP JCo Installation

7.1. SAP JCo Download

SAP JCo is the third-party library required to access the SAP system in SAP EICS. Refer to [“Software Requirements”](#) for downloading site and supporting version of SAP JCo.

7.2. SAP JCo Installation

SAP JCo consists of one JAR file and one DLL file. These files are placed in the following locations respectively.

- **sapjco3.jar**

Copy to \$INTEGRATE_HOME/server/system/common/lib

- **sapjco3.dll**

Copy to \$INTEGRATE_HOME/server/bin

7.3. Configure SAP system gateway port

The SAP system gateway port setting is required to perform outbound process. The following settings are added in C:\Windows\system32\drivers\etc\services file.

sapgwXX	33XX/tcp	# SAP System Gateway Port
---------	----------	---------------------------



XX represents two digit number. Configure it to match with the SAP system gateway settings.



Example for setting SAP system gateway port

sapqw00	3300/tcp	# SAP System Gateway Port
---------	----------	---------------------------

8. Start/Stop of OpenJMS server

In order to start Script by outbound process from SAP system, OpenJMS server should be started.



Start OpenJMS server before starting the IntegrateServer.



Start OpenJMS server with the user having administrative rights.



An OpenJMS server uses port number "1099".

8.1. Start/Stop from Command Prompt

8.1.1. Start

Navigate OpenJMS to the directory installed under bin directory, and run the "openjms.exe".

8.1.2. Stop

Navigate OpenJMS to the directory installed under bin directory, and run the "shutdown.exe".

8.2. Start/stop from Windows service

8.2.1. Start

To start the OpenJMS server, either start from [Administrative Tools] – [service] from Windows or execute "net start < Windows service name of OpenJMS>" command.

8.2.2. Stop

To stop the OpenJMS server, either stop from [Administrative Tools] – [service] from Windows or execute "net stop <Windows service name of OpenJMS>" command.

9. SAP EICS Start-up

SAP EICS is installed as Web application of IntegrateServer. SAP EICS is started at the time of starting IntegrateServer. Start the IntegrateServer and access the following URL from the Web browser.

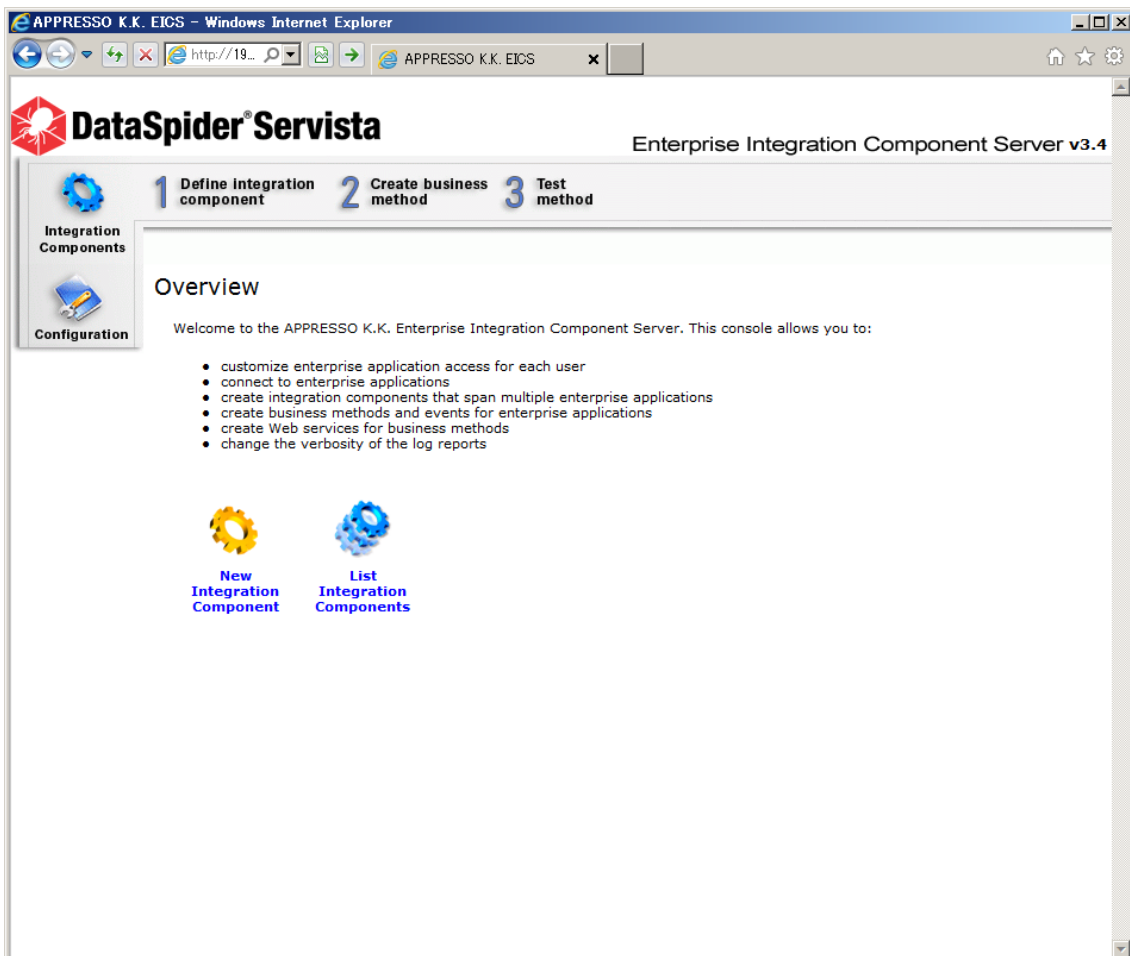
<http://<server-host>:<server-port>/eics/>

- **<server-host>:**

Host name or IP address in which IntegrateServer is installed.

- **<server-port>:**

The port number in which the IntegrateServer is started. The default port number during the installation is [7700]



10. Backup/migration of SAP EICS repository

10.1. Backup Method

When taking backup for SAP EICS repository, copy the \$INTEGRATE_HOME/server/system/eics directory, and paste it into the backup storage directory.

10.2. Restore Method

When restoring the SAPEICS for which backup is taken, overwrite \$INTEGRATE_HOME/server/system/eics directory with the SAPEICS repository that has a backup.

1. Stop the IntegrateServer.
2. Delete or move to the \$INTEGRATE_HOME/server/system/eics directory.
3. Place the SAP EICS repository backup as \$ INTEGRATE_HOME/server/system/eics directory.
4. Start the IntegrateServer.

10.3. Migration method

When SAP EICS repository is migrated to a different mainframe, copy the SAP EICS repository of the mainframe of the migration source and overwrite to the SAP EICS repository of the mainframe of the migration destination.

1. Copy the \$INTEGRATE_HOME/server/system/eics directory of the migration source.
2. Stop the IntegrateServer of the mainframe of the migration destination.
3. Move or delete the \$INTEGRATE_HOME/server/system/eics directory of the mainframe of the migration destination.
4. Place the SAP EICS repository copied from the mainframe of the migration source as the \$INTEGRATE_HOME/server/system/eics directory of the mainframe of the migration destination.
5. Start the IntegrateServer of the migration destination.

11. Uninstall SAP EICS

To Uninstall the SAP EICS, uninstall it by the following procedures.



Please confirm that all types of the applications of HULFT Integrate and OpenJMS server are stopped before uninstalling.

11.1. Repository backup of SAP EICS

Performs backup for SAP EICS repository. Refer to "[Backup Method](#)" for the details about the repository backup of SAP EICS.



When the repository backup of SAP EICS is not required, to uninstall SAP EICS refer to next section "[Uninstall SAP EICS](#)".

11.2. Uninstall SAP EICS

11.2.1. Delete Module

Manually delete all the following files and directories.

- `$INTEGRATE_HOME/server/system/common/lib/cryptix-jce-api.jar`
- `$INTEGRATE_HOME/server/system/common/lib/cryptix-jce-compat.jar`
- `$INTEGRATE_HOME/server/system/common/lib/cryptix-jce-provider.jar`
- `$INTEGRATE_HOME/server/system/common/lib/eics-client.jar`
- `$INTEGRATE_HOME/server/system/eics`
- `$INTEGRATE_HOME/server/plugin/tomcat`
- `$INTEGRATE_HOME/Uninstall/SAPEICS`

11.2.2. Delete Programs and Function Entries

Open "Control Panel" of Windows with the user having administrative rights and open "Programs and Functions" and select the "Integrate SAP EICS" and run "Uninstall and Changes".

Dialog box with the message "An error occurred while trying to uninstall Integrate SAP EICS. It may be already uninstalled" is shown, and a dialog is displayed to check whether to uninstall the Integrate SAP EICS from the "programs and functions" or not.

Click **[Yes]** and delete the SAP EICS entries.

11.3. Uninstall OpenJMS

11.3.1. Delete Module

Manually delete all the installed directories below the OpenJMS folder.

11.3.2. Delete Windows Service entry

Start a command prompt with user having administrative rights and delete the Windows service entries of OpenJMS server with the following command.

```
> sc delete <Windows Service Name of OpenJMSServer>
```



Run if you have registered the OpenJMS server in Windows services.

12. Limitations

- The log of SAP EICS will be output in the server standard error "\$INTEGRATE_HOME/server/logs/server.error.log".
- Please do not change the settings of OpenJMS server.

13. To the customer upgraded from SAP EICS that is released before HULFT Integrate 2.4.2

When upgrading from SAP EICS that is released before HULFT Integrate 2.4.2, reconfigure all the Business Methods and Events that is set in SAP EICS. Double click [Continue] without changing the setting value from the [Edit] menu of the existing Business Methods and Events, and by registering once again, reconfiguration can be done.

When upgrading from the SAP EICS that is released after HULFT Integrate 2.4.3, reconfiguration of Business Methods and Events are not necessary.

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