

FUJITSU Software BeanConnect
FUJITSU Software openUTM-JConnect

Version 6.5A
September 2018

Release Notice

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1 General

This is the Release Notice for the products *FUJITSU Software BeanConnect V6.5A* and *FUJITSU Software openUTM-JConnect V6.5A*.

BeanConnect is a standardized adapter implementation in accordance with JCA1.5/1.6 (Java Connector Architecture), which allows data to be exchanged between Java™ EE application servers, such as the Oracle™ WebLogic server and EIS systems (Enterprise Information System). BeanConnect implements the connection of UTM-(Cluster) applications and CICS applications as EIS systems.

BeanConnect supports a variety of communication paradigms. It permits outbound communication, i.e. where communication is initiated by the application server and inbound communication, i.e. the communication is initiated by an EIS application. In addition an inbound communication initiated by UPIC, Socket or RFC1006 Clients is possible.

Communication can be transactional and non-transactional.

With outbound communication with UTM applications, two connection options are available:

- Connection via the OSI TP protocol
- Connection via the UPIC protocol

Several connection options are available with inbound communication:

- Connection via the OSI TP protocol
- Connection via the UTM socket protocol
- Connection via the RFC1006 protocol
- Connection via the UPIC protocol

Communication to the CICS application, for outbound and inbound communication, is via the LU6.2 protocol.

BeanConnect V6.5 consists of the following components:

- **BeanConnect Resource Adapter:**
This component provides the JCA interface for the user. It is deployed in the application server and runs as part of the application server.
- **BeanConnect Proxy:**
This component is implemented on the basis of openUTM. openUTM is the Universal Transaction Monitor from Fujitsu Technology Solutions.
It establishes the transactional connection between the Resource Adapter in the application server on the one side and the UTM application or CICS application on the other side.
With connections to CICS applications, the LU62-Stack is provided via the openUTM-LU62 Gateway.
- **BeanConnect Management Console:**
This component is the Java GUI and a Command Line Interface for the configuration and administration of the BeanConnect Proxy.
- **BeanConnect Tools:**
Cobol2Java supports and simplifies the communication of BeanConnect Clients with BS2000-Cobol applications
Management Console Command Handler (MCCmdHandler) helps the management console to manage other components (e.g. openUTM-LU62 gateways, communication services, proxies), which are not running on the same processor as the management console.

Note: The outbound communication with protocol UPIC only requires the Resource Adapter component. The BeanConnect proxy and the BeanConnect Management Console are not required.

The Java classes openUTM-JConnect V6.5 is an additional part of the BeanConnect V6.5 delivery and is used to access UTM server applications on the basis of the UPIC protocol.

BeanConnect is part of the comprehensive middleware suite openSEAS. The openSEAS middleware suite enables the simple integration of individual applications and the interaction of existing and new applications. openSEAS perfectly complements the Fusion middleware of our strategic partner Oracle. Oracle Fusion middleware is a market-leading family of pre-integrated products, which ranges from application infrastructure and development applications through to business intelligence.

Together this provides the platform for:

- Individual business-critical IT solutions
- Company portals
- Integration solutions for service-oriented architecture
- Web applications and portals
- Business processes

More information about the listed products and the data sheets is available under:

<http://de.ts.fujitsu.com/BeanConnect>

This Release Notice is a summary of the major extensions, dependencies and operating information with respect to BeanConnect V6.5A and openUTM-JConnect V6.5 and all the information necessary for migrating from the predecessor version BeanConnect V3.0B.

The content corresponds to release status V6.5A of September 2018.

All Unix, Linux and Windows product release notices including this one are available on the Internet under the following URL:

<http://manuals.ts.fujitsu.com>

The Release Notice is supplied as a readme file. Subsequent changes will be updated in this file.

If one or more predecessor versions are skipped when this current product version is in use, it may be necessary to also take account of the information from the release notices (i.e. readme files) of the predecessor versions.

The use of name, trademark, etc. in this release notice does not entitle readers to assume that these names/designations may be used without restriction by anyone; often the names/designations are protected by law or contract, even if this is not indicated here.

1.1 Ordering

BeanConnect V6.5A and *openUTM-JConnect V6.5A* can be ordered from your local Sales..

For *BeanConnect V6.5A* and *openUTM-JConnect V6.5A* the general Software license conditions of the Fujitsu Technology Solutions and the general conditions for Hardware and Software Support Services of the Fujitsu Technology Solutions are effective.

1.1.1 Licenses

The licenses are part of the contract that you entered into with Fujitsu Technology Solutions when you purchased *BeanConnect V6.5A* and *openUTM-JConnect V6.5A* .

BeanConnect V6.5A and *openUTM-JConnect V6.5A* are products for which a license must be purchased. Licenses are required in order to use the products.

- Two licenses exist for *BeanConnect V6.5A*.
The *BeanConnect V6.5* for *openUTM* license entitles you to communicate with UTM applications.
The *BeanConnect V6.5* for CICS license entitles you to communicate with CICS applications.
Both licenses must be available for communication with both EIS partners.
More information about licensing rights can be seen in the data sheet. The data sheet is available in the Internet.
<http://de.ts.fujitsu.com/products/software/openseas/beanconnect.html>
- PCMX:
PCMX is supplied with *BeanConnect V6.5A*. The PCMX supplied with *BeanConnect V6.5A* may only be used together with *BeanConnect V6.5A* and in this combination using is included in the license of *BeanConnect*.
- *openUTM*:
openUTM software is supplied with *BeanConnect V6.5A*. It is used as a process carrier in the *BeanConnect* proxy and in this combination using is included in the license of *BeanConnect*.
- *openUTM-LU62*:
openUTM-LU62 is supplied with *BeanConnect V6.5A*. The *openUTM-LU62 V5.1* supplied with *BeanConnect V6.5A* may only be used together with *BeanConnect V6.5A* and in this combination using is included in the license of *BeanConnect*.
- *openUTM-JConnect*:
openUTM-JConnect may only be used on the system, for which it was licensed. A *BeanConnect* license is required.

1.2 Delivery

The Software is supplied on DVD.

1.3 Documentation

The manual for BeanConnect V6.5 is available under <http://manuals.ts.fujitsu.com>.

After installation of the BeanConnect Resource Adapter, java documentation is available in the JavaDoc directory of the BeanConnect Resource Adapter (see manual „BeanConnect V6.5“, chapter „Installing BeanConnect“).

The BeanConnect Management Console includes an online help system.

After Installation of the BeanConnect Management Console, java documentation for the Command Line Interface is available in the JavaDoc directory of the BeanConnect Management Console (see manual „BeanConnect V6.5“, chapter „Structure of the BeanConnect documentation“).

After Installation of openUTM-JConnect, a Java documentation in English is available.

Further information related to BeanConnect and openUTM-JConnect as well as the datasheets, is available under:

<http://de.ts.fujitsu.com/BeanConnect>

2 Software extentions

2.1 New functions in V6.5A

- Long computer names
When installing the proxy container and the configuration of EIS partners, mapped names no longer need to be specified if the computer name is longer than 8 characters.
- Password length 16
As of BeanConnect V6.5, passwords up to 16 characters in length can be specified.
The default administrator password has the length of 16 characters.
- The BeanConnect proxy container V6.5 is based on openUTM V6.5 and therefore may run in a 64-bit environment.

Feature enhancements in the Management Console:

- MC-CLI GUI-Recording for CICS
The MC-CLI Recording now offers the possibility to record CICS specific actions of the graphical user interface to use as input for the MC-CLI.
- Delivery of asynchronous outbound messages
If asynchronous outbound messages to an EIS partner consisting of multiple applications cannot be sent to the initially selected application, then after the Partner Reconnect Timer has expired, the messages will be sent to another application where a connection is established.
For details see online Help system of the Management Console.
- Dead Letter Queue for outbound messages
Asynchronous outbound messages that could not be processed by the EIS partner because of a permanent error are saved in the dead letter queue. These messages can then be either deleted or (after elimination of the permanent error) moved to the EIS partner for further processing.
For details see online Help system of the Management Console.
- Evaluation and Display of SYSLOG files
As of BeanConnect V6.5 there are three possibilities to select SYSLOG files for evaluation and display.
- Display online Help system
The online Help system will be displayed as a HTML page in the Browser.

Other changes:

- The BeanConnect proxy container V6.5 under Solaris systems may only run in a 64-bit environment.
- The installation of BeanConnect on Windows systems was changed to a new proceeding.

2.2 Implemented Change Requests

The following Change Request has been implemented with BeanConnect V6.5:

- Identification of cross-platform transaction for better analysis of errors. Therefor the XID is issued in UTM messages.

3 Technical information

3.1 Resource requirements

CPU / BeanConnect Proxy:

At least 450 MHz, recommended 1GHz or more

Main memory / BeanConnect Proxy:

At least 512 MB, recommended 1GB or more

Disk storage requirements:

BeanConnect Resource Adapter: archive about 13 MB
extracted about 16 MB

BeanConnect system: Solaris systems : about 64 MB
Linux systems : about 32 MB
Windows systems : about 26 MB

BeanConnect Container: Solaris systems : about 123 MB
Linux systems : about 62 MB
Windows systems : about 65 MB

BeanConnect Management Console: Solaris systems : about 1,5 MB
Linux systems : about 720 KB
Windows systems : about 900 KB

Tools:

Cobol2Java: archive about 8 MB
extracted about 10 MB

MCCmdHandler: archive about 5 MB
extracted about 5 MB

openUTM: Solaris systems : about 1,5 GB
Linux systems : about 162 MB
Windows systems : about 100 MB

openUTM-LU62: Solaris systems : about 11 MB
Linux systems : about 6 MB
Windows systems : about 6 MB

openUTM-JConnect: : archive about 5 MB
extracted about 5 MB

3.2 SW configuration

3.2.1 BeanConnect V6.5

The components BeanConnect Resource Adapter and BeanConnect Tools are available for the following operating systems:

Solaris SPARC	64-bit	as of V10
Linux(SuSE)	32/64-bit	as of SLES 11 PL4
Linux(RedHat)	32/64-bit	as of RHEL 6.5
HP-UX	32/64-bit	as of V11.31
IBM-AIX	32/64-bit	as of V6.1
Windows	32/64-bit	as of Windows 8.x
Windows Server	32/64-bit	as of Windows Server 2012

The components BeanConnect Proxy and BeanConnect Management Console are available for the following operating systems:

Solaris SPARC	64-bit	as of V10
Linux(SuSE)	32/64-bit	as of SLES 11 PL4
Linux(RedHat)	32/64-bit	as of RHEL 6.5
Windows	32/64-bit	as of Windows 8.x
Windows Server	32/64-bit	as of Windows Server 2012

The BeanConnect components can be operated on the same processor or run on different processors. For the functionality of BeanConnect it is irrelevant which coupling of operating systems or operating system versions is used.

BeanConnect V6.5 requires Java SE 8.

BeanConnect V6.5 supports the following application server:

- Oracle™ WebLogic Server 12c

The following application servers require the BeanConnect service packs, which have to be ordered additionally AS Interoperability Check and BeanConnect AS Interoperability Service:

- IBM WebSphere AS as of V9
- RedHat JBoss EAP as of 7.0

The BeanConnect Proxy also requires:

PCMX :	- PCMX(Solaris systems)	6.0B30
	- PCMX(Linux systems)	6.0B30
	- PCMX-32(Windows systems)	5.0A90
	- PCMX-64(Windows systems)	5.0A90

These PCMX versions are included on the DVD and must be installed.
They may only be used with the Proxy application of BeanConnect V6.5A.

openUTM : A required openUTM version for use with BeanConnect Proxy is included on the DVD and must be installed.

It may only be used with the Proxy application of BeanConnect V6.5A.

openUTM-LU62 Gateway:

An appropriate openUTM-LU62 version for use with BeanConnect Proxy is included on the DVD and must be installed.

It may only be used with BeanConnect V6.5A.

The BeanConnect Management Console also needs:

Jython: If you want to use the command line interface of the management console, you must then provide the product Jython.
(see also section 3.3.5)

Cobol2Java also needs:

Cobol2XML: The software prerequisites of Cobol2000 V1.5 apply for the BS2000 tool Cobol2XML - included in scope of delivery. For details see the Release Notice of Cobol2000 V1.5.

Enterprise Information System (EIS) openUTM:

- openUTM as of V6.3, on all platforms (32- and 64-bit)
Under BS2000 systems openUTM-D is also required for transactional communication.
- openUTM-Client (UPIC) as of V6.3, on all platforms (32- and 64-bit)

Enterprise Information System (EIS) CICS:

- CICS on z/OS: z/OS as of V1.9
CICS as of V3.2

Additional required software for interconnection with CICS:

- Solaris systems : SNAP-IX, V7.0.2.4 or higher, from Data Connection Ltd.
- Linux systems : IBM Communications Server for Linux, V6.2 or higher
- Windows systems : IBM Communications Server for Windows, V6.1.2 or higher

Note: SNAP-IX and the Communications Server are not part of the BeanConnect V6.5A delivery.

The following connection options are also supported:

Enterprise Extender and Ethernet (LLC2).

BeanConnect uses Open Source Software which is necessary for the operation of BeanConnect V6.5. A comprehensive list of these products is included in the file „ThirdPartyLicenseReadme.txt“, in the subdirectory docs/licenses (Solaris/Linux systems) respectively Docs\licenses (Windows systems) of the BeanConnect installation directory. Please note the corresponding licenses files, which is provided in this directory as well.

3.2.2 openUTM-JConnect V6.5

openUTM-JConnect V6.5 is available for the following operating systems:

Solaris SPARC	64-bit	as of V10
Linux(SuSE)	32/64-bit	as of SLES 11 PL4
Linux(RedHat)	32/64-bit	as of RHEL 6.5
HP-UX	32/64-bit	as of V11.31
IBM-AIX	32/64-bit	as of V6.1
Windows	32/64-bit	as of Windows 8.x
Windows Server	32/64-bit	as of Windows Server 2012

openUTM-JConnect V6.5 requires Java SE 8.

Enterprise Information System (EIS) openUTM:

- openUTM as of V6.3 on all platforms (32- and 64-bit)

openUTM-JConnect uses Open Source Software, which is necessary for the operating of openUTM-JConnect V6.5A. In the openUTM-JConnect installation directory under the subdirectory docs/licenses (Solaris/Linux systems) and docs/licenses (Windows systems), a detailed list of these products is available in the file "ThirdPartyLicenseReadme.txt". Please note the corresponding license files, also located in this directory.

3.3 Product installation

Comprehensive information about the installation of BeanConnect V6.5A is available in the manual „BeanConnect V6.5A“, chapter „Installing BeanConnect“.

The product openUTM-JConnect V6.5A is installed with the following call with a graphic interface:
java -jar BC65A00_JConnect.jar

The product openUTM-JConnect V6.5A is installed as follows for systems without graphic interface:
java -jar BC65A00_JConnect.jar BCJConnect-auto.xml
whereby the file BCJConnect-auto.xml must be adapted accordingly. The standard target directory is the current directory.

3.3.1 Update installation

The prerequisite for an update installation is that the proxy and the management console are runnable with the BeanConnect V3.0B installation and that the proxy container was terminated normally.

3.3.2 Kernel tuning

For operation of the BeanConnect Proxy, it may become necessary to increase several UNIX kernel parameters.

- Changing the kernel parameters under Solaris systems:
The values can be modified by making entries in `/etc/system`. A reboot is required after changes have been completed.

Recommended values for the respective parameters:

```
set shmsys:shminfo_shmmax=0x10000000
set shmsys:shminfo_shmseg=32
set semsys:shminfo_shmmapx=64
set semsys:shminfo_shmmni=64
set semsys:shminfo_shmmns=1600
set semsys:shminfo_shmmnu=64
set semsys:shminfo_shmume=900
```

- Changing the kernel parameters under Linux systems:
The values can be altered by making entries in `/etc/sysctl.conf`. Once the change has been concluded, execute the command:

sysctl -p

and in addition on SuSE Linux systems, execute the command

chkconfig boot.sysctl on

Recommended values for the respective parameters:

```
Kernel.shmmax = 0x10000000
```

Further information about how to modify the kernel parameters and how to create a new kernel is included in the documentation provided by your Linux distributors.

Please observe the information in the delivery information.

3.3.3 Java and SELinux

When using BeanConnect on Linux systems, the following error message may occur:

error while loading shared libraries: `./libjvm.so`: cannot restore segment prot after reloc: Permission denied

This is a general problem in the interface between Java and SELinux (Security-Enhanced Linux) which cannot be solved or bypassed by BeanConnect. Using BeanConnect therefore requires disabling the SELinux environment.

To disable SELinux, open the file `/etc/sysconfig/selinux` and replace the line

```
SELINUX=enforcing
```

by

```
SELINUX=disabled.
```

Please note that the changes will not become effective before rebooting the Linux system.

3.3.4 Installation under Solaris systems

The GUI based IzPack installation of the Resource Adapter and the tools MCCmdHandler and Cobol2Java may not work on Solaris 10 systems due to technical reasons (error message: not enough free space on device to install). Here the command line mode has to be used for installation. Please refer to the manual for further notes.

3.3.5 Installation of Jython

You need Jython for the command line interface of the management console. Jython is available for download at the following link: <http://www.jython.org> .

Download the Jython installation file, e.g. jython-installer-2.7.0.jar. Double-click on the jar file or alternatively in the command line mode with `java -jar <jython-install-datei>` to carry out the installation.

3.4 Product use

Information for the product use of BeanConnect is available in the manual „BeanConnect V6.5“.

Information for the product use of openUTM-JConnect is available in the Java documentation.

3.5 Functions to be discontinued

The executability of the BeanConnect components in a 32-bit environment is supported with this version for the last time.

3.6 Incompatibilities

The BeanConnect proxy container V6.5 under Solaris systems may only run in a 64-bit environment.

3.7 Restrictions

None

3.8 Procedure in the event of errors

The following information is necessary for error analysis:

- Detailed description of the error situation
- Information about the version/correction version levels of the software used
- Exact information concerning the processor type

The error documentation should be as complete as possible. The following error documentation is required:

- All the created logging files (if possible, set TRACE to all Logger and rerun the error case)
- UTM Dumps of all Work processes and respective gcores. These files should be available as binary files, i.e. in non-prepared form
- SYSLOG file(s)
- stdout/stderr protocols of the UTM processes
- KDCDEF generation, start procedure and start parameter
- Core files with respective phases (utmwork) and shared objects. The shared objects can be defined with "Idd utmwork"
- All created traces

With errors, which occur in connection with the UTM network connection, the following information can also be created :

- CMX traces
- OSS traces
- UTM-BCAM trace
- With a heterogeneous connection of generation information and trace of openUTM LU6.2 and its SNA components and the IBM-SNA system.

Further information required for the diagnostics is available in the manual „BeanConnect V6.5“, chapter „Logging, diagnostics and troubleshooting“.

4 Hardware support

The hardware is supported on which the operating systems version run as named under „3.2 SW configuration“.