



Universal Connector 5.1.0 Reference Guide

SAP System Interface

© 2013 by Stonebranch, Inc. All Rights Reserved.

Universal Connector 5.1.0 - SAP System Interface

- Objective
- Supported SAP Versions
 - XBP Interface
 - XBP 2.0 Support
 - Parent / Child Functionality
 - Job Intercept Functionality
 - Raise Events Externally
 - XBP 3.0 Support
 - Application Information
 - Enabling XBP 2.0 and XBP 3.0
- SAP User Authorization Requirements
 - SAP 3.1 - 4.0
 - SAP 4.5 (and Higher)
- Universal Connector Customization
 - Product License
 - Configuration
 - SAP RFC Configuration
 - JCL Procedure (z/OS only)
- Definition Files
 - Standard Universal Connector Job Definition File
 - Variant Definition File
 - Job Intercept Table Definition File

Objective

This Universal Connector 5.1.0 – SAP System Interface guide provides information on how Universal Connector *for Use with SAP® ERP* interfaces to an SAP system.

Universal Connector is a command line application that controls background processing within an SAP system. This allows any computer on a network to manage SAP background processing tasks via the local command line. To run Universal Connector, you tell it which SAP system to connect to and what background processing tasks to perform. Universal Connector connects to the SAP system and processes your request.

Supported SAP Versions

Universal Connector supports SAP 3.1G and above.

The following commands are not available when running Universal Connector against SAP 3.1 and 4.0 systems:

- Purge
- Display select
- Target Server parameter for START and RUN commands

XBP Interface

The BC-XBP interface, which allows external process schedulers access to CCMS Background Processing components of SAP systems, has gone through three major upgrades. The releases are named after their version numbers: BC-XBP 0.1, BC-XBP 1.0, BC-XBP 2.0 and BC-XBP 3.0. All four revisions of the interface require certification.

For detailed information on the difference between these release, refer to this [SAP Help Portal](#).

XBP 2.0 Support

Universal Connector supports the SAP XBP 2.0 interface. The XBP 2.0 interface introduces important new feature sets and many enhancements to basic functionality.

The following features are the most notable additions to the XBP 2.0 interface:

Parent / Child Functionality

This feature allows Universal Connector to identify the parent/child relationship between jobs and work with them accordingly. For example, monitoring a submitted job can now take into account the activity of all child jobs.

Job Intercept Functionality

This feature allows Universal Connector to define and modify criteria used by the SAP system to intercept jobs (prevent jobs from starting).

Raise Events Externally

This feature allows Universal Connector to trigger SAP events.



Important

Some features of the XBP 2.0 interface - Parent / Child and Job Intercept - may not be used by all SAP customers. Therefore, to prevent unnecessary use of resources, SAP provides a means to globally turn on and off these features. (They are turned off by default.) The SAP ABAP program **INITXBP2** performs this function.

XBP 3.0 Support

Universal Connector supports the SAP XBP 3.0 interface. All functionality will go through the XBP 3.0 interface if it is available.

Currently, Universal Connector supports only the following new feature set of XBP 3.0:

Application Information

This feature set includes the ability to retrieve application logs and application return codes for jobs on the SAP system.



Note

Not all jobs will create this information. The availability is dependent upon the functionality of the programs that are executed within the job on the SAP system.

Enabling XBP 2.0 and XBP 3.0

For information on how to enable XBP 2.0 and XBP 3.0 functionality, refer to this [SAP Help Portal](#).

SAP User Authorization Requirements

Universal Connector requires a user ID defined in the SAP system for RFC logon/user authentication. The user ID used with Universal Connector requires certain SAP authorizations to perform tasks within the SAP system.

If the instance profile parameter `auth/rfc_authority_check` is set to 1, the system checks authorization for the function group of the RFC function module against the authorization object `S_RFC`. In this case, the following authorizations are required:

SAP 3.1 - 4.0

User IDs that will run Universal Connector should be assigned an authorization for the authorization object `S_RFC` with the following fields:

- Type of RFC object to be protected (RFC_TYPE)=FUGR.
- Name of the RFC object (RFC_NAME)=SXMI, SXJI, SQUE, STUS.
- Activity (RFC_ACTVT)=16 (execute).

SAP 4.5 (and Higher)

User IDs that will run Universal Connector should be assigned an authorization for the authorization object `S_RFC` with the following fields:

- Type of RFC object to be protected (RFC_TYPE)=FUGR.
- Name of the RFC object (RFC_NAME)=SXMI, SXBP, SQUE, STUS.
- Activity (RFC_ACTVT)=16 (execute).

Universal Connector Customization

Product License

Universal Connector must be configured with a Universal Connector product license before it is used. It will not run without a valid license.

The product license contains the license parameter keywords and their values, which must be entered into the Universal Connector configuration file. The values are specified in the same syntax as all other configuration options.

Product licenses are provided by your Stonebranch, Inc. account representative.

Configuration

z/OS	<p>Universal Connector for z/OS uses a configuration file for system-wide customizations. The configuration file is member USPCFG00 in the UNVCONF library allocated to ddname UNVRFC in the Universal Broker's started task JCL procedure.</p> <p>Any changes to the configuration member requires the Broker's configuration cache to be refreshed by either restarting the Broker started task or using the Universal Control utility refresh option.</p>
UNIX	<p>Configuration options for Universal Connector are stored in configuration file <code>usap.conf</code>, in directory <code>/etc/universal</code> by default.</p> <p>The product executable files intended for command line use are located in the default directory <code>/opt/universal/bin</code>. This directory must be added to the PATH environment variable for intended users of the executable files.</p>

SAP RFC Configuration

Universal Connector communicates with an SAP system using an SAP RFC (Remote Function Call) connection. Through this RFC connection, Universal Connector utilizes SAP's external interfaces to perform background-processing tasks.

The RFC configuration file installed with Universal Connector contains SAP documentation specifying required network attributes for connecting to an SAP server. You must modify this file in order to connect to SAP. You must have SAP knowledge in order to correctly make these modifications.

z/OS	<p>Universal Connector utilizes SAP's RFC communication library to communicate with SAP systems. The RFC library uses configuration files to store information required for connecting to SAP systems. The RFC configuration file groups connection information into destinations. Each destination contains the connection information required to establish a connection to a particular SAP system.</p> <p>The default location for this file is member USPRFC00 in the UNVCONF library allocated to ddname UNVCONF in the Universal Broker's started task JCL procedure.</p> <p>The connections defined in the RFC configuration file must be configured to meet your local SAP environment. Member USPRFC00 is installed with sample connections and documentation on the available configuration options.</p> <p>Changes to the RFC configuration member do not require a Broker restart or refresh.</p>
-------------	--

UNIX	<p>Universal Connector utilizes SAP's RFC interface to communicate with SAP systems. The RFC interface uses configuration file <code>saprfc.ini</code> to store information required for connecting to SAP systems. The <code>saprfc.inisaprfc.ini</code> file is an SAP resource that can be shared by multiple external tools using the SAP RFC interface. The <code>saprfc.ini</code> file groups connection information into destinations. Each destination contains the connection information required to establish a connection to a particular SAP system.</p> <p>The connections defined in the <code>saprfc.ini</code> file must be configured to meet your local SAP environment. A sample <code>saprfc.ini</code> file is installed with Universal Connector to directory <code>/opt/universal/usap/samp</code>. The file is provided by SAP and contains complete documentation on its configuration.</p> <p>In order for Universal Connector to find the configured <code>saprfc.ini</code> file, it must be placed in the Universal Connector executable directory, or environment variable <code>RFC_INI</code> must be set to its full path name.</p> <p>Changes to the RFC configuration member do not require a Broker restart or refresh.</p>
-------------	---

JCL Procedure (z/OS only)

A JCL procedure is provided in member `USPPRC` in library `SUNVSAMP`. Using the procedure simplifies future product upgrades and reduces the amount of JCL statements required in the job JCL.

Edit the JCL procedure to meet local JCL installation requirements. The `TZ` environment variable should be modified to meet your local time zone information. See `zOS Installation - Time Zone Environment Variable` for more information the `TZ` environment variable.

The JCL procedure can be made available for use by either:

- Copying it to a JES procedure library, such as `SYS1.PROCLIB`
- Using the `JCLLIB` JCL statement in the job JCL to include the `SUNVSAMP` library in the procedure library search order.

For example:

```
//jobname JOB . . .
//      JCLLIB ORDER=UNV.SUNVSAMP
//STEP1 EXEC USPPRC
```

Definition Files

Definition files contain statements that specify job or job-related attributes.

Standard Universal Connector Job Definition File

Standard Universal Connector Job Definition files are used by the `SUBMIT`, `MODIFY`, and `RUN` commands to define or modify jobs in an SAP system

The standard Universal Connector job is equivalent to defining a background job `SAP` via transaction `SM36`. There are four types of statements used to define a standard Universal Connector job:

- Job Header statement
- ABAP Step statement
- External Step statement
- External Command Step statement

A job definition requires a Job Header statement followed by one or more Step statements. Statements are made up of keyword = value assignments and are terminated with a semi-colon (;). Each statement type has a specific unique keyword that is required to start the keyword = value assignment list.

The following illustrates the syntax of a `USAP` standard job definition.

```
Job_Header_Statement      Step_Statement      [Step_Statements]
```

Variant Definition File

Variant definition files contain statements that specify the attributes of SAP variants. These variant definitions are used by the `SUBMIT` and `MODIFY` commands to define or modify variants in an SAP system.

There are three types of statements used to define a variant:

- Variant Header Statement
- Variant Text Statement
- Variant Content Statement

A variant definition requires a Variant Header statement followed by Text and Content statements. Statements are made up of keyword = value assignments and are terminated with a semi-colon (;). Each statement type has a specific unique keyword that is required to start the keyword = value assignment list.

The following illustrates the syntax of a USAP variant definition.

```
Variant_Header_Statement      Variant_Text_Statement      Variant_Content_Statement  
[Variant_Content_Statements]
```

Job Intercept Table Definition File

Job intercept table definition files contain statements that specify criteria rows. These definitions are used by the SUBMIT command to replace or append the job intercept table in an SAP system.

There are two types of statements used to define a job intercept table:

- Job Intercept Table Header Statement
- Job Intercept Table Row Statement

A job intercept table definition requires a Header statement followed by row statements. Statements are made up of keyword = value assignments and are terminated with a semi-colon (;). Each statement type has a specific unique keyword that is required to start the keyword = value assignment list.

The following illustrates the syntax of a USAP job intercept table definition.

```
Job_Intercept_Table_Header_Statement      [Job_Intercept_Table_Row_Statements]
```