

Installing the SAP MII 12.1 SFTP Custom Action Blocks



Applies to:

SAP MII 12.1 & 12.2, SAP NetWeaver CE 7.1 EhP1. For more information, visit the [Manufacturing homepage](#).

Summary

The custom action blocks referenced in this document are for providing the option of SFTP communication. They are based on the existing FTP actions and leverage open source JSCH library (<http://www.jcraft.com/jsch/>) and the NetWeaver CE Keystore. For related files download [here](#)

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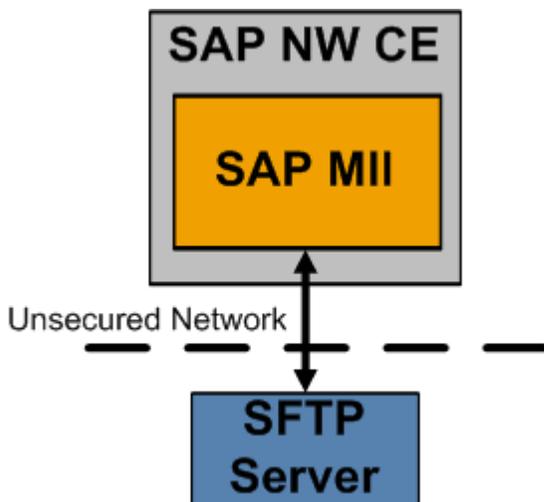
Business Scenario for Using SFTP

When integrating various systems in a manufacturing environment the need to securely write a file across the network often arises. Typically writing files as a means of communication between systems does not provide the necessary QoS features required when dealing with corporate systems but sometimes this is still the best approach. The recommended approach for asynchronous messaging is to have SAP PI at the enterprise and SAP MII at the individual or regional site locations and communicate directly between these systems using HTTP or HTTPs. If SAP PI is not available, then you can directly communicate from SAP ERP to SAP MII using JRA but you have to define the routing rules and processing instructions custom for the ERP destination. If you still want to use file transfers across an unsecured network then these actions will allow you to accomplish this task securely.

Technical Operation

The operation of the SFTP Transaction blocks is very simple and straight-forward as it mimics the existing FTP actions in MII. Documentation for these actions can be found here:

http://help.sap.com/saphelp_mii122/helpdata/en/44/7275afb9793672e10000000a114a6b/content.htm. The action architecture overview looks like this:



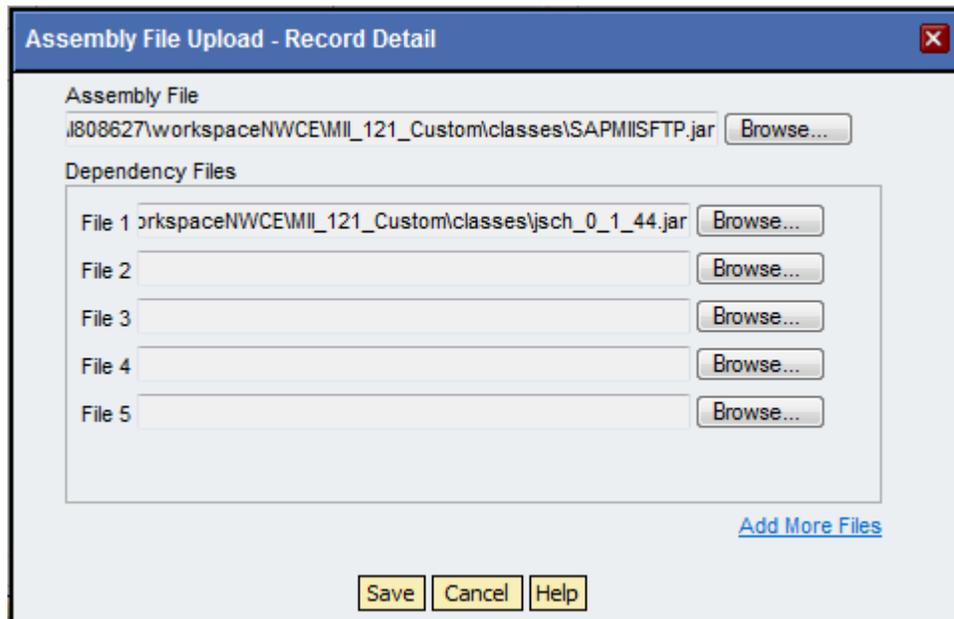
It is important to note that these actions leverage the open source JSCH, <http://www.jcraft.com/jsch/>, libraries for Secure communication so please reference the online documentation on this library for additional details. They also leverage the SAP NetWeaver CE Keystore in order to provide a secured environment to support the certificate exchange required for SFTP (<https://cw.sdn.sap.com/cw/docs/DOC-101924>).

Uploading and Deploying the Custom Actions

The deployment of custom actions is documented in the MII v12.1 Help documentation which can be found online (<http://help.sap.com> -> SAP Business Suite -> Manufacturing Integration & Intelligence).

The specifics for installing these actions are simply to navigate to the following in the MII Menu:

1. Download the JCraft JSCH API from <http://sourceforge.net/projects/jsch/files/jsch.jar/0.1.44/jsch-0.1.44.jar/download>
 - a. The API release that these actions were test with is 0.1.44 so newer releases may or may not work depending on the changes made to the API.
 - b. Change the API Jar file to the name: jsch_0_1_44.jar so that the action catalog.xml matches this dependency JAR name.
2. From the SAP MII Menu navigate to System Management -> Custom Actions
3. Press the Upload button
4. In the assembly file upload window perform the following:
 - a. Browse to the **SAPMIISFTP.jar** file and press Ok
 - b. In the first Dependency field browse to the **jsch_0_1_44.jar** file and press Ok



- c. Press the Save button

5. Press the Deploy Button

Your actions will now appear in the MII Workbench the next time you open up the transaction editor under the "SFTP" category; you may have to clear your Java WebStart cache in order for these actions to load properly. You can run this command from the Start -> Run menu or manually clear you application cache via the Java Menu in your Control Panel:

javaws -uninstall

Using the SFTP Actions

The SFTP actions provide the same capabilities as the existing FTP actions only using the SFTP protocol. Documentation on the standard SAP MII FTP Actions can be found here:

http://help.sap.com/saphelp_mii122/helpdata/en/44/7275afb9793672e1000000a114a6b/content.htm

It is recommended that you understand how these actions work before using the SFTP Actions as the documentation below only explains the differences between the standard FTP actions and these SFTP actions. If you would like to know additional information about these actions please provide feedback about this document and I will update it accordingly (Your feedback **is** appreciated).

The following SFTP actions are delivered with this archive: Get, Put, Get File List, Delete, and Create Directory. These actions also make use of the SAP MII Connection (Type FTP) and Credential Store features to simplify action configuration and content rollout. In addition to the standard FTP Action inputs the SFTP actions support additional inputs for ensuring secure communication. The parameters in addition to the standard FTP Action parameters are:

Known Hosts: This is an option field that expects a path to a Known Hosts file either on the server or in the MII Web or content database. It supports WEB:// and DB:// as prefixes to the path for accessing the file if it's uploaded to MII or access to the server file system using the drive letter, like C:\<path>\<file>. Information about the contents of this file can be found here: <http://www.jcraft.com/jsch/README>. For managing entries in the known_hosts file of the server please refer to this blog for details: <http://gablog.eu/online/node/35>

UseSecureStore: This parameter indicates that the certificate and private key information is contained in the SAP NetWeaver CE Keystore (<https://cw.sdn.sap.com/cw/docs/DOC-101924>) of the MII server. In order for this to work properly the name of the **KeyStoreName** and **CertificateName** parameters must be set in the Link Editor. If the **UseSecureStore** parameter is set to false and a **CertificateName** is specified but no **KeyStoreName** is set then the actions assume that the **CertificateName** parameter is a full path to the certificate to use. This approach is not recommended but sometimes it is required to support certificates not supported by the NetWeaver Keystore. Finally, if the **UseSecureStore** parameter is false and no **CertificateName** is set then the password of the user set in the **CredentialAlias** parameter is used to authenticate against the SFTP server.

Use Proxy: This will tell the action connection to the SFTP server to use the Proxy server configuration that is set in the MII System Management -> System Configuration window.

Force Folder Change: This Boolean is available since some FTP servers require that the change directory (cd) command is issued to the server before get, put, delete, create folder can be called. The cd operation is skipped by default if the remote folder parameter is left blank or set to a period. This parameter allows you to force a folder change operation with these values set for the remote folder. This is specific to your SFTP server and is only provided to accommodate a small percentage of available SFTP Server implementations. (Most likely you will not need this parameter).

Trace: This will indicate to the action at design time to run in verbose mode so that internal code execution steps are printed out for debug/development purposes. This will not affect the runtime operation of the action but does increase the number of log entries created. It is recommended that you keep this set to true while troubleshooting and then once you have your interface working that you set it to false; perhaps a good use case for using a shared memory property in your application.

Related Content

[The SAP MII Wiki](#)

[The SAP MII Forum](#)

[SAP MII FTP Action Help](#)

[JCraft JSCH API Documentation](#)

For more information, visit the [Manufacturing homepage](#).

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