

Installing MDSFTP Dependencies within MDCMS

from Midrange Dynamics

Version 8.5

Published December 10, 2022

Overview

The MDSFTP service is used to communicate over the SFTP (SSH File Transfer) protocol to remote servers. It allows you to deploy folders and files to remote servers that implement the SFTP service using a tool such as OpenSSH.

Versions of MDCMS prior to 8.5 used the MDFTP service to communicate with FTP, FTPS and SFTP servers. Starting with version 8.5, the SFTP service has been split out into MDSFTP to overcome limitations in the older SSH implementation. The MDSFTP implementation utilizes software in the PASE environment to run modern SSH libraries natively and requires the YUM package manager to be available in the PASE environment.

This document explains how to set up the YUM package manager.

Licensed Program Prerequisites

To use PASE on IBM i, the following licensed program options must be installed. These are provided by IBM on the same installation media that your operating system is installed from, and there is no extra charge to install them:

- 5770-SS1 option 30 – QShell
- 5770-SS1 option 33 – Portable Application Solutions Environment (PASE)
- 5733-SC1 base – IBM Portable Utilities for i
- 5733-SC1 option 1 – OpenSSH, OpenSSL and zlib

You may already have these options installed. (Most of IBM's customers use them). You can use the GO LICPGM command and choose option 10 to see what has been installed. If they are missing, you will need to install them (or ask your System Administrator to do so).

YUM Prerequisites

In addition to the operating system options described above, the open source Yellowdog Updater, Modified (YUM) is required. This is used to keep the underlying cryptography tools up-to-date, which is critical for secure operation because cryptography software (such as SSH) changes more frequently than IBM can issue system updates.

Installing YUM

You may choose to install YUM yourself using IBM's instructions, or if you provide the installation files, the MDSFTP tool can install it for you.

Installing YUM Yourself

IBM provides instructions on how to install and utilize YUM at the following link:

<https://ibmi-oss-docs.readthedocs.io/en/latest/yum/README.html#installation>

Allowing MDSFTP To Install YUM

The YUM software is provided by IBM and is not shipped with MDCMS. However, if the MDSFTP server detects the installation files, it will install it for you (if it is not already installed).

To make the files available, you can download it from IBM and place the files into IFS folder ***/product-install-directory/PASE/environment/bootstrap***

The string ***product-install directory*** should be replaced with the IFS folder where you have installed MDCMS, and ***environment*** should be replaced with the folder matching the MDCMS environment that you'd like to install it for.

For example, to install into the default environment of the default MDCMS installation location, the IFS directory should be as follows:

/MDCMS/PASE/default/bootstrap

You should create this folder if it does not already exist.

You will need to download the following files from IBM and place them into that directory:

- bootstrap.sh
<https://public.dhe.ibm.com/software/ibmi/products/pase/rpms/bootstrap.sh>
- bootstrap.tar.Z
<https://public.dhe.ibm.com/software/ibmi/products/pase/rpms/bootstrap.tar.Z>

After the 2 files have been placed in the bootstrap folder, take the following steps:

1. Type **MDCMS** (optionally include the environment) to start the product and set up your library lists.

2. Type **F21** to get a command line.
3. Type **MDSTRSFTP** (optionally include an environment) to re-start the MDSFTP server.
4. During startup the following message will appear at the bottom of the screen: **Please wait, performing first time setup...** this will be displayed while the YUM environment is being installed. It may take a few minutes to install for the first time you run it.
5. When the MDSTRSFTP command completes, YUM will be installed and the MDSFTP server will be started in the MDCMS subsystem.

Troubleshooting

When you allow MDCMS to install YUM, a log is created in the MDSFTP facility named **check_dependencies.log**. This will show what happened while MDSFTP attempted to install YUM and provide useful diagnostics if something went wrong.