

SEE/Change

SSH Configuration

(V4.5402 and above)



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2 Introduction

Use this document to configure SSH (Secure Shell) distribution in an iSeries network.

You may also be directed by Thenon technical support to use this document to help in testing and diagnosing problems with SSH connectivity.

3 Configuration Procedure

The following procedure will establish SSH distribution.

3.1 Preparation

If you have used SEE/Change communications in the past (for example with FTP) and regularly have the QDMS subsystem running, end it before starting this procedure.

In order to ensure that the QDMS subsystem will not be restricted when spawning jobs to run SSH, issue the following command:

```
CHGSBSD SBSD (OMSOBJ/QDMS) MAXJOBS (*NOMAX)
```

3.2 SSH Test

You will have already set up a user profile for DMS operations (usually DMS). Public-key authentication must have been configured for this DMS user profile on both the development and production systems so that it can act as a SSH client on the development system to gain access to the SSH server on the production system and also as a SSH client on the production system to gain access to the SSH server on the development system. (Note: Password authentication will not be used.)

Follow the steps in this section to confirm the SSH link is sound.

Starting on your development system, sign on using the DMS user profile and start SEE/Change, then create a temporary save file in any library except QTEMP. Optionally save a small library into it if you like.

```
CRTSAVF MYLIB/SSHTEST
```

Enter the following command substituting the target system name or IP address to suit. The result of this should be that a save file called SSHTEST will be created in OMSDTA on your production machine.

```
SNDSSHF USERID(DMS) FROMFILE (MYLIB/SSHTEST)
TOSYSTEM('123.123.123.123') TOLIB (OMSDTA)
```

Sign onto the production system and enter the following command to verify that the file has arrived.

```
WRKOBJ OMSDTA/SSHTEST
```

If the file has arrived OK, delete it and repeat the test in reverse. You will then have successfully proved the SSH connection.

If the procedure fails, then reissue the command in debug mode:

```
SNDSSHF USERID(DMS) FROMFILE (MYLIB/SSHTEST)
TOSYSTEM('123.123.123.123') TOLIB (OMSDTA) SSHDEBUG (1)
```

The SSH conversation will be displayed on the terminal and this will help in diagnosing the problem.

3.3 Configuring SEE/Change

Now that you have confirmed your SSH connectivity, you are ready to configure SEE/Change to use SSH. Follow the steps in this section to do this.

3.3.1 OMS Application configuration

Ensure that the OMS application, (SEE/Changes' own internal application configuration), is correctly set. The SSH distribution uses this to derive the name of the SEE/Change data library (usually OMSDTA) on a remote Production system. This library is used as the target library for SSH distribution.

To check the OMS application use the *Work with Application Configuration* (WRKAPPCFG) command and press *F21=Include Thenon app* to reveal the SEE/Change application.

Take option *12=Where used* against the OMS application then press <Enter> to reach the *Work with Application Configuration – Libraries* Panel. Ignore the Thenon development system but ensure all the other systems have the correct library names. This is particularly important if you have renamed the SEE/Change libraries. Note that even your development system will show as a production system. This is correct. Validate the entries correcting as necessary and press *F16=Update* to update and exit.

Repeat this step for each instance of SEE/Change in your network.

3.3.2 DMS object locations

The DMS subsystem is made up of four jobs. QMONR, QRCVR, QSNDR, QSRVR. Each has four objects. A message queue, job description, program and command. For example, entering the following command:

```
WRKOBJ QSNDR
```

Should yield the following results:

```

Work with Objects

Type options, press Enter.
  2=Edit authority      3=Copy   4=Delete   5=Display authority   7=Rename
  8=Display description 13=Change description

Opt  Object      Type      Library      Attribute      Text
----  -----      -
QMONR      *MSGQ      OMSDTA
QMONR      *JOB      OMSDTA
QMONR      *PGM      OMSOBJ      CLP
QMONR      *CMD      OMSOBJ

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Parameters for options 5, 7 and 13 or command
===>
F3=Exit   F4=Prompt   F5=Refresh   F9=Retrieve   F11=Display names and types
F12=Cancel F16=Repeat position to F17=Position to F24=More keys
Bottom

```

Ensure that the message queue and job description are in the *data* library. Move them if necessary.

Check all four jobs.

Ensure that there are no duplicate objects, remove them if there are.

3.3.3 Review job descriptions

Each of the DMS jobs job descriptions should have the following library list.

```

QTEMP
OMSDTA
OMSOBJ
OMSSAV
QTCP
QSHELL
QGPL

```

Check each of the four job descriptions on each of your systems and amend if necessary, substituting OMSDTA for your data library if necessary

3.3.4 System configuration

Next, on the development system, review the system configuration using the *Work with System Configuration* (WRKSYSCFG) command.

Against your Development system selection option 2=*Change* and change the communications method to *SSH.

```

THENON                      SEE/Change - Change Management for IBM i
                             Work with Systems Details

System Code . . . . . : DEV
System description . . . . . Development
Machine Serial Number . . . . .

OS/400 Version . . . . . V 7 R 3 M 0          Version/Release/Mod lvl

Communications Method. . . . . *SSH             *SNADS/*FTP/*SSH
SNADS User ID . . . . .(P). SSH DEV
FTP/SSH Dev Site Code . . . . . DEV
FTP/SSH Host Name/IP address . 123.123.123.123
FTP/SSH User profile . . . . . DMS
FTP Password . . . . .

F3=Exit  F4=Prompt  F9=Cmd  F12=Cancel  F14=Ping FTP

```

Firstly, ensure that the OS/400 version is correct for the instance to which the system code corresponds.

Against the *SNADS User Id* field enter the value 'SSH' followed by the three-letter code for the system as shown below.

Don't be confused by the fact that the field is named *SNADS User ID*. Setting the user as 'SSH' signals to SEE/Change that the distribution method has changed.

Beneath this enter the site code for the system against which the SEE/Change configuration is specified. This is usually the same as the local system code, as shown in the above example.

Finally, enter the machine host name or IP address and the DMS user profile name for the machine being maintained. You do not need to enter the FTP Password field.

Repeat this process for the other configured systems then visit each of the other SEE/Change systems in the network and review the configuration there too.

3.3.5 Test SSH via SEE/Change

Having proven that a working SSH connection is present, the next step is to confirm that the SEE/Change configuration is sound. To test this, a command called THNNETF may be used. Starting on the development system, enter the following commands:

```
CRTSAVF MYLIB/SSHTEST2
```

```
THNNETF FILE(MYLIB/SSHTEST2) TOUSRID((SSH PRD))
```

Replacing PRD with the OMS application site code against which the remote system libraries are configured on this system.

Now, on the production system enter the following command to verify that the file has arrived:

```
WRKOBJ OMSDTA/SSHTEST2
```

If the file has arrived OK, delete it and repeat the test in reverse. You will then have successfully proved the SSH connection and configuration. You are now ready to use SSH in SEE/Change.

If the procedure fails, then reissue the command in debug mode:

```
THNNETF FILE(MYLIB/SSHTEST2) TOUSRID((SSH PRD)) SSHDEBUG(1)
```

The SSH conversation will be displayed on the terminal and this will help in diagnosing the problem.

3.3.6 Starting the DMS subsystem

The DMS subsystem can now be restarted.

```
STRSBS OMSOBJ/QDMS
```

Ensure the jobs all come to rest on their regular MSGW status.

3.3.7 Testing

The final step in this procedure is to test the whole procedure. Create a small CR with a small test object in it. Assign this to a new dummy release and send to the target machine(s). Ensure that status messages are returning to the development machine to be sure the entire configuration has been achieved correctly.