

SSH Plugin

The SSH plugin allows you to execute SSH commands as part of a process, including uploading/downloading files via SCP. It supports username/password and private key file (with optional passphrase) verification. Execution of remote commands through "sudo" is also supported.

In the Process Editor Available Plugin Steps, navigate to Scripting > SSH.

This plugin has the following steps for you to add to your processes:

- Create Remote File step
- Run Remote Command step
- Get Remote File Content step
- Upload File step
- Upload Directory step
- Download Remote File step
- Download Remote Directory step

This plugin makes use of [JSCH](#) and [sshooqr](#). Please refer to the appropriate licenses for these libraries where applicable.

Please note this is a community plugin and not officially supported by Micro Focus. If you use this plugin, please provide some feedback so we can improve and potentially productize it.

Source code is located at: <https://github.com/sda-community-plugins/SSH>

Create Remote File step

This step creates a remote file with the content specified.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Remote File	The name of the remote file to create. This can be an absolute or relative path.
File Content	The content of the file.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Temp Directory	Path to the temporary directory on the remote host. The file with content is uploaded to this directory first before being moved into place. Defaults to '/tmp'.
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Post Upload Command	Post upload command to copy from temp directory to target location. Defaults to 'cp -R %from%/* %to% && sudo rm -rf %from%'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Run Remote Command step

This step runs one or more commands on a remote server.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Command	The command(s) to execute on the remote host.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Get Remote File Content step

This step gets the content of a remote file and sets a property with its value.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Remote File	The name of the remote file to get the content of. This can be relative or absolute.
Property name	The name of the property to set with the content of the remote file.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Temp Directory	Path to the temporary directory on the remote host.
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Upload File step

This step uploads a file to a remote server via SCP.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Local File	The local file to copy to the remote host.
Remote Directory	The absolute name of the remote directory to copy to on the remote host.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.

Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Temp Directory	Path to the temporary directory on the remote host. The file is uploaded to this directory first before being moved into place. Defaults to '/tmp'.
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Post Upload Command	Post upload command to copy from temp directory to target location. Defaults to 'cp -R %from%/* %to% && sudo rm -rf %from%'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Upload Directory step

This step uploads a complete directory to a remote server via SCP.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Local Directory	The local directory to copy to the remote host.
Remote Directory	The absolute name of the remote directory to copy to on the remote host.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Temp Directory	Path to the temporary directory on the remote host. The file is uploaded to this directory first before being moved into place. Defaults to '/tmp'.

Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Post Upload Command	Post upload command to copy from temp directory to target location. Defaults to 'cp -R %from%/* %to% && sudo rm -rf %from%'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Download Remote File step

This step download a file from a remote server via SCP.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.
Remote File	The absolute name of the remote file to download to the local host.
Local Directory	The name of the local directory to download to on the local host.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Download Remote Directory step

This step downloads a complete directory from a remote server via SCP.

Required properties:

Property	Description
Host Address	The address of the remote host to execute the command on.
Username	The username to connect with.

Remote Directory	The absolute name of the remote directory to download to the local host.
Local Directory	The name of the local directory to download to on the local host.

Optional properties:

Property	Description
Port	The port on which the remote SSH server is running. Defaults to 22.
Password	Password to use for authentication. Only one of Password and Private key file is required.
Private key file	The full path to a private key file to use for authentication. Only one of Password and Private key file is required.
Passphrase	Optional passphrase for the private key in the private key file.
Use sudo	Use sudo for executing commands. Defaults to false.

Hidden properties (can be displayed by clicking the Show Hidden Properties checkbox at the bottom of the step Item Properties window):

Property	Description
Sudo Command Prefix	Sudo command to prefix to the original command, e.g. 'sudo' or 'sudo -u root'. Defaults to 'sudo'.
Verbose Output	Select this option to display verbose output during execution. Defaults to false.
Debug Output	Select this option to display debug output during execution. Defaults to false.

Usage

To make use of SSH plugin first upload the plugin into DA via Administration > Automation > Plugins. You will still need an Agent (recommended approach is an Agent for each environment) where the SSH plugin is downloaded to and executed. These Agent servers do not need any SSH libraries installed as they are included in the plugin but they will need network access to the servers where you are executing the remote commands.

Note: it is not recommended to install any Agents on the DA server itself.

The plugin should work on Windows, Linux and UNIX but has not been fully tested in all of these environments.

Amazon EC2 example

The following screenshot shows an example of a couple of steps to create a file and upload it a specific Amazon instance. In this example the connection to Amazon instances is made via private key files. Publishing the location of these files can lead to a security risk. Therefore, it is recommended that these files are securely stored in the Agent work directory and referred to, e.g. “\${p:resource/work.dir}\keys\amazon-linux-openssh.key”.

Deployment Automation

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admin

SSH Test

Version 7 of 7Run

Item PropertiesTools

NameRun Remote Command

Host AddressPrompt for a value on use
ec2-34-240-3-134.eu-west-1.compute.amazonaws

PortPrompt for a value on use
22

UsernamePrompt for a value on use
ec2-user

CommandPrompt for a value on use
echo "running in \$SHELL"
pwd
cat /tmp/ssh-test.txt
echo "done."

PasswordPrompt for a value on use

Private key filePrompt for a value on use
\$(p.resource/work.dir)/keys/amazon-linux-openss

PassphrasePrompt for a value on use

☐ Use sudoPrompt for a value on use

☐ Ignore Failure

Working Directory

Start

Create Remote File
Create Remote File (v. 1)

Run Remote Command
Run Remote Command (v. 1)

Finish

Start

Create Remote File
Create Remote File (v. 1)

Run Remote Command
Run Remote Command (v. 1)

Finish

SSH Test

Item Properties

Tools

Name *

Run Remote Command

Host Address *

Prompt for a value on use

ec2-34-240-3-134.eu-west-1.compute.amazonaws

Port *

Prompt for a value on use

22

Username *

Prompt for a value on use

ec2-user

Command *

Prompt for a value on use

echo "running in \$SHELL"

pwd

cat /tmp/ssh-test.txt

echo "done."

Password *

Prompt for a value on use

Private key file *

Prompt for a value on use

\$(p.resource/work.dir)/keys/amazon-linux-openss

Passphrase *

Prompt for a value on use

☐ Use sudo

Prompt for a value on use

☐ Ignore Failure

Working Directory

Start

Create Remote File

Create Remote File (v. 1)

Run Remote Command

Run Remote Command (v. 1)

Finish