# Help.SSHCommand

## NAME

`SSH Command` plugin is for running commands and getting the result by SSH client.

## SYNOPSIS

`SSH Command` plugin need next parameters or options.

### Parameters

#### SSH Host

- Host name or ip address to connect SSH
- E.g. `mydb.company.com` or `1.2.3.4`

#### SSH User

- User id to connect SSH
- E.g. `user1`

#### Prompt RegExp

- Every CLI (Command Line Interface) command has prompt.
- When SSH connect to host, device, etc it shows prompt.
- This plugin is waiting until such prompt is come up.
- When the expectation condition of prompt is meet the next command is presented.
- After the command is executed this plugin is waiting until such prompt is come up.
- The CLI result between command and prompt can be saved as the result of plugin by `Display index`
- Usually this prompt can be changed in running, so can be described using [Regular Expression](#).
- E.g. Usually the prompt of linux host is like `root@testweb [ ~ ]#`
  - `root` is user
  - `testweb` is hostname
  - `[ ~ ]` is the current working directory. If you change to `/tmp` directory, the prompt is `root@testweb [ /tmp ]#`
  - In this case the prompt can be `root@testweb.*# $`.
    - `root@testweb` is the starting point of regular expression.
    - `.*` means any character before `# $`. `$` means ends with `#[blank]`

#### Command

- One or more command after SSH connection.

- These command is dependent to connected system.

- In case connected to linux server, linux commands, shell scripts or linux executable files can be used.

- In case connected to Cisco Cytalist Switch, IOS command can be used.

- E.g. `df -h`, `free`, `ls -al` for linux command.

## Options

### Port

- SSH port to use.

- Default is `22`.

- In some cases behind firewall this port usually can be changed into bigger than 10000.

- E.g. `12022`

### Password

- User password for SSH connection.

- Some cases need more secure connection, use with `SSH keyfile` instead of this password.

- This password is shown `****` for security.

### SSH keyfile

- SSH connection need for password or key file for user credential.

- This key file can be a `/home/toor/.ssh/id_rsa.pub`.

- Key file can be selected by file choice dialog window in STU.

- E.g. `/home/toor/.ssh/id_rsa.pub` or `C:\Users\Administrator\mykey.pk`

### Connect timeout

- SSH connection can take some seconds to connect.

- This is `Connection waiting timeout` for SSH.

- Default is `10` seconds.

- E.g. `3` or `20`

### Prompt Expect timeout

- After command is presented to run this plugin is waiting for the next prompt is matched.

- This `Prompt expectation timeout` is the waiting seconds for the timeout of duration which is the running time for the command.

- After running a command this `Prompt expectation timeout` is exceeded but not the prompot is come up, then a timeout error happen.

- Defeault `Prompt expectation timeout` is `60` seconds.

## Echo type

- When command is running ususally the command itself is not shown the the output.

- This flag is set then the command is echoed so user can catch the command also.

## Display index

- As explained above command can be a one or more.

- This `Display index` is the index of which command's result can be captured.

- If set `1 3` then first and third command's result can be captured.

- E.g. `1 2 3`, `3 2 5`

# EXAMPLES

## In case linux command

### Parameters

### SSH HOST

`192.168.99.250`

### SSH USER

`root`

### Prompt RegExp

`root@testweb.*# $`

### Command

- `ls -la` : show current directory with all file including hidden one (-a) and long format (-l).

- `df -h` : disk free with human readble option (-h).

### Options

### Password

`r`

### Display Index

`1`, `2`

### Results

```
total 76
drwxr-x---  9 root root  4096 May  7 22:46 .
drwxr-xr-x 15 root root  4096 Apr 30 12:58 ..
-rw-------  1 root root 11473 May  8 10:22 .bash_history
```

```
-rw-r--r--  1 root root   178 Oct 31  2018 .bash_logout
-rw-r-----  1 root root   138 Nov 22 20:18 .bash_profile
drwxr-x---  3 root root  4096 Apr 16 19:02 .cache
drwxr-x---  2 root root  4096 Dec 14 19:11 compose
drwx------  3 root root  4096 Nov 22 20:28 .config
drwxr-x---  2 root root  4096 Jan  7 18:47 diagpy
drwxr-x---  2 root root  4096 Dec 14 18:54 naswork
drwx------  2 root root  4096 Apr  3 18:18 .ssh
-rw-r-----  1 root root   207 Nov 22 20:16 .tmux.conf
drwxr-xr-x  3 root root  4096 Nov 22 19:55 .vim
-rw-------  1 root root 12210 May  7 13:41 .viminfo
-rw-r-----  1 root root   165 Apr  3 17:40 .wget-hsts
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        16G  564M   15G   4% /
devtmpfs        998M     0  998M   0% /dev
tmpfs          1000M     0 1000M   0% /dev/shm
tmpfs          1000M  548K  999M   1% /run
tmpfs          1000M     0 1000M   0% /sys/fs/cgroup
tmpfs          1000M     0 1000M   0% /tmp
tmpfs           200M     0  200M   0% /run/user/0
```

## In case cisco switch command

### Parameters

### SSH HOST

`192.168.168.1`

### SSH USER

`admin`

### Prompt

`(Switch[>#]|Password: )$`

### Command

- `enable` : Administrator escalation. Most command need admin escalation in IOS cisco.

- `r` : Password for administrator escalation.

- `show interfaces GigabitEthernet 0/1 | include packets.*bytes` : Show interface information for the first port of switch.

- `exit` : Exit the ssh connection.

### Options

### Password

`r`

### Display Index

`3`

**Result**

```
    308519467 packets input, 93589873779 bytes, 0 no buffer


175748894 packets output, 115163897977 bytes, 0 underruns
```

# PLATFORM

Here is the supported platform for this plugin.

- This plugin support Windows 7, 10 and above.
- This plugin support Linux (Ubuntu).
- This plugin support Mac.

# VERSION

## 1.415.1930

## Changlog

- ...
- ...

# LIMITATION

- Current the supported protocol is `SSH`
- Not supported `telnet`

# SEE ALSO

{{xxx}}}

- [Regular Expression](#)
- This plugin use [Paramiko Expect](#)

# LICENSE

- [Paramiko Expect](#) is MIT LICENSE