

Connecting OPNFV Community Labs to OPNFV Jenkins

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Abstract

This document describes how to connect resources (servers) located in Linux Foundation (LF) lab and labs provided by the OPNFV Community to OPNFV Jenkins.

License

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Version History

Date	Ver.	Author	Comment
2015-05-05	0.1.0	Fatih Degirmenci	First draft
2015-09-25	1.0.0	Fatih Degirmenci	Instructions for the Arno SR1 release

Jenkins

Jenkins is an extensible open source Continuous Integration (CI) server. [1]

Linux Foundation (LF) hosts and operates [OPNFV Jenkins](#).

Jenkins Slaves

Slaves are computers that are set up to build projects for a **Jenkins Master**. [2]

Jenkins runs a separate program called "**slave agent**" on slaves. When slaves are registered to a master, the master starts distributing loads to slaves. [2]

Term **Node** is used to refer to all machines that are part of Jenkins grid, slaves and master. [2]

Two types of slaves are currently connected to OPNFV Jenkins and handling different tasks depending on the purpose of connecting the slave.

- Slaves hosted in [LF Lab](#)
- Slaves hosted in [Community Test Labs](#)

The slaves connected to OPNFV Jenkins can be seen using this link: <https://build.opnfv.org/ci/computer/>
Slaves without red cross next to computer icon are fully functional.

Connecting Slaves to OPNFV Jenkins

The method that is normally used for connecting slaves to Jenkins requires direct SSH access to servers. [3] This is the method that is used for connecting slaves hosted in LF Lab.

Connecting slaves using direct SSH access can become a challenge given that OPNFV Project has number of different labs provided by community as mentioned in previous section. All these labs have different security requirements which can increase the effort and the time needed for connecting slaves to Jenkins. In order to reduce the effort and the time needed for connecting slaves and streamline the process, it has been decided to connect slaves using [Java Network Launch Protocol \(JNLP\)](#).

Connecting Slaves from LF Lab to OPNFV Jenkins

Slaves hosted in LF Lab are handled by LF. All the requests and questions regarding these slaves should be submitted to [OPNFV LF Helpdesk](#).

Connecting Slaves from Community Labs to OPNFV Jenkins

As noted in corresponding section, slaves from Community Labs are connected using JNLP. Via JNLP, slaves open connection towards Jenkins Master instead of Jenkins Master accessing to them directly.

Servers connecting to OPNFV Jenkins using this method must have access to internet.

Please follow below steps to connect a slave to OPNFV Jenkins.

1. Create a ticket by sending mail to OPNFV LF Helpdesk first, opnfv-helpdesk@rt.linuxfoundation.org.
2. Ensure DNS is setup for your public IP addresses: DNS A records and PTR records need to be matching.
3. Create a local user on server you want to connect to OPNFV Jenkins. (named **jenkins** for example)
4. Download slave.jar using <https://build.opnfv.org/ci/jnlpJars/slave.jar> and place it to somewhere so jenkins user created in previous step can access.
5. Create a directory `/home/jenkins/opnfv_slave_root`.
6. Contact LF by sending mail to opnfv-helpdesk@rt.linuxfoundation.org as getting the server connected requires help from LF.
7. Provide needed information to LF including the IP of the server, name of the slave, slave root, and your Public PGP key in order for LF to pass credentials to you securely. Please see the notes section for details regarding how to pass your Public PGP Key.

Slave IP: x.x.x.x

Slave name: company-build

Slave Root: /home/jenkins/opnfv_slave_root

PGP Key: (attached, or exported to key server)

8. LF will provide you the key/token you need to use.

9. Try to see if you can establish connection towards OPNFV Jenkins by using below command.

```
java -jar slave.jar -jnlpUrl https://build.opnfv.org/ci/computer/<slave_name>/slave-agent.jnlp -secret <token>
```

10. Navigate to OPNFV Jenkins and look for your slave. It should have some executors in "Idle" state if the connection is successful.

11. Once you reach this step, you have the server connection to OPNFV Jenkins completed. You can script the command you used above so the connection between slave and Jenkins can be kept open.

Notes

Keeping the slave.jar Up to Date

It is important to keep the slave.jar up to date since OPNFV Jenkins version may be updated any time. In order to make sure you are using compatible version of slave.jar, you can download it from <https://build.opnfv.org/ci/jnlpJars/slave.jar> whenever you reopen the connection towards OPNFV Jenkins. You may experience random disconnects if you do not do this regularly.

PGP Key Instructions

Public PGP Key can be uploaded to public key server so it can be taken from there using your mail address. Example command to upload the key to key server is

```
gpg --keyserver hkp://keys.gnupg.net:80 --send-keys XXXXXXXX
```

The Public PGP Key can also be attached to the email by storing the key in a file and then attaching it to the email.

```
gpg --export -a '<your email address>' > pgp.pubkey
```

References

- [What is Jenkins](#)
- [Jenkins Terminology](#)
- [Jenkins SSH Slaves Plugin](#)

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