

iLAB

Infrastructure User Guide

Version 1.0

This document provides iLAB Infrastructure installation step procedure

**Cobbler Overview**

Cobbler is a Linux installation server that allows for rapid setup of network installation environments. It glues together and automates many associated Linux tasks so you do not have to hop between many various commands and applications when deploying new systems, and, in some cases, changing existing ones. Cobbler can help with provisioning, managing DNS and DHCP, package updates, power management, configuration management orchestration, and much more.

Where to get Cobbler software?

http://cobbler.github.io/downloads/2.8.x.html

System requirements on which Cobbler Server installation is carried out

Red Hat Enterprise Linux Server release 7.3

RAM: 36 GB

Which version of Cobbler software we are using

Cobbler 2.6.19

Where can one find the Cobbler troubleshooting guide (give online links)

<http://cobbler.github.io/manuals/quickstart/>

How/where to deploy OS images?

Cobbler handles to deploy all the OS images. Please refer <http://cobbler.github.io/manuals/quickstart/>

How/where to deploy Kickstart files?

In cobbler server. Please refer <http://cobbler.github.io/manuals/quickstart/>

**Cobbler set up Installation:**

Login to the Cobbler server

Go to the shared location: http://repomirror-rtp.eng.netapp.com/rhel/

From the above location, you will get the repo mirror for all the OS.

Pick the repomirror-rtp. repo and copy to the /etc/yum.repos. d in cobbler server.

repomirror-nb. repo is there but not all the packages are present hence we use rtp.repo.

Then do yum update on the cobbler server. This will sync all the packages

**Django installation: (part of Cobbler Setup)**

What is Django – give few lines overview

Install Django latest version.

What version of Django was used?

Where to get Django software

* Yum install python-django

Download cobbler rpm from this link : <http://eng-web.eng.btc.netapp.in/~nlab/softwares/cobbler/>

and install all the dependencies which are shown while installing cobbler rpm. After Cobbler Installation, follow the steps mentioned in the below quick start guide

http://cobbler.github.io/manuals/quickstart/

**iLAB Server set up (Using Apache)**

Login to the iLAB server

Go to the shared location: http://repomirror-rtp.eng.netapp.com/rhel/

From the above location, you will get the repo mirror for all the OS.

Pick the repomirror-rtp. repo and copy to the /etc/yum.repos. d in ILAB server.

repomirror-nb. repo is there but not all the packages are present hence we use rtp.repo.

Then do yum update on the ILAB server. This will sync all the packages

Install Apache with the following command: yum install httpd. Start the service (systemctl start httpd. service)

Edit the configuration file of Apache (httpd.conf) according to the requirements given in the following link-https://docs.djangoproject.com/en/1.10/howto/deployment/wsgi/modwsgi/

**Install the following dependencies:**

apt-get install -y mariadb-server  
 ["pip", "install", "--upgrade","pip"]  
 ["pip","install", "paramiko"]  
 ["pip","install","django==1.9"]  
 ["pip", "install", "mysql-python==1.2.5"]  
 ["pip", "install", "numpy==1.11.1"]  
 ["pip", "install", "pysftp==0.2.9"]  
 ["pip", "install", "requests==2.10.0"]  
 ["pip", "install", "wheel==0.29.0"]  
 ["pip", "install", "xmljson==0.1.6"]  
 ["pip", "install", "xmltodict==0.10.2"]  
 ["pip", "install", "apscheduler"]

**DB Installation steps:**

Install MariaDB - yum install mariadb

Start the mariadb service as systemctl start mariadb

Importing mySQL file - create DB name as ilab

Import file command :

mysql -u root ilab <sql filename

Where to get MariaDB software

It present in yum repository.

System requirements on which MariaDB Server installation is carried out

Red Hat Enterprise Linux Server release 7.3

RAM: 36 GB

Which version of MariaDB software we are using ?

mysql Ver 15.1 Distrib 5.5.52-MariaDB, for Linux (x86\_64) using readline 5.1

Where can one find the MariaDB troubleshooting guide (give online l

https://mariadb.com/kb/en/mariadb/troubleshooting-connection-issues/

**Windows Installation on Cobbler: -**

To add windows profile in cobbler use these links:

<http://www.letifer.org/2014/03/26/cobbler-and-windows/>

<https://technet.microsoft.com/en-us/library/hh825212.aspx> -Good documentation for winpe iso creation

<https://www.youtube.com/watch?v=n90Kli9u4CM> Creating unattend file

<https://technet.microsoft.com/en-us/library/cc749317.aspx> (Create answer file)

<http://www.tecmint.com/extract-files-from-iso-files-linux/> (Mounting in linux)

<https://social.technet.microsoft.com/Forums/windows/en-US/b23f40db-8fdf-49d0-9c14-e7b99add313e/sim-unknown-error-0xc1420127?forum=w7itproinstall>- Errors while generating answer file.

Changes in copype.cmd to create the winpe iso:<https://777notes.wordpress.com/2013/10/21/winpe-the-following-processor-architecture-was-not-found-amd64/> Instead of winpe. wim it is "boot.wim" in /media/sources

Main files to be created: winpe iso, windows iso and answer.

winpe iso is created using the Windows AIK. Windows ios we can download from the repo.

Make WinPEMedia /ISO C:\winpe\_amd64 c:\winpe\_amd64\winpe.iso

Create answer file using Windows System Image Manager.install.wim is located in the Sources folder of Windows iso. Use this to create the catalog file, after creating the distribution share. Use catalog to create answer unattend file-> /var/lib/cobbler/kickstarts

winpe iso-> /var/lib/cobbler/isos

samba settings: add windows 7 settings to /etc/samba/smb.conf

Mount the Windows 7 ISO someplace, and copy the contents to a location that you can share via samba.

add password smbpasswd -a <user\_name> (root, ilab)

smbclient -N -L 10.228.136.36 (To see all the samba shares)

Add the distro and profile

Change the DNS, nexthop and mask in the unattend file.

**The following Eng Support request has been raised to bring up the setup.**

Incident INC10974487 New ([PTE Interop] Increase maximum size on the root volume on the Server : 10.231.170.100)

INC10962991 Updated (configure cobbler PXE to the automation hosts)

Incident INC10965699 Close Pending (Server 10.141.19.69 is not accesible)

INC10938511 Updated (configure the DHCP / PXE to the Fujitsu blade servers)