System Preparation Guide

WebRTC Virtual Classroom PLatform

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# Software Versions

The following table lists the versions baselined for WebRTC VC.

|  |  |  |
| --- | --- | --- |
| Software | Version | Source |
| OS | Ubuntu 14.04.3 LTS (trusty) |  |
| OS (Azure) | ~~Ubuntu 15.04/vivid~~ | ~~Ubuntu-15-04-Shellinabox~~ |
| git | 2.1.4 (~not critical) |  |
| nodejs | 4.3.0 Argon | [here](https://nodejs.org/download/release/v4.3.0/) |
|  |  |  |

# Preparing a dev/test VM

## Assumptions

Git is already installed.

## Initial Preparation

mkdir –p downloads

cd downloads

sudo apt-get update

sudo apt-get install build-essential g++-4.7 -y

## Installing nodejs and other utilities

One of the cleanest ways to install node is to build it from the source. This step takes a while to finish.

wget <https://nodejs.org/download/release/v4.3.0/node-v4.3.0.tar.gz>

tar zxf node-v4.3.0.tar.gz

cd node-v4.3.0/

./configure

sudo make install

sudo npm install –g bunyan

sudo npm install –g pm2

## Installing NTP Daemon

This is important to keep the time drift in check.

sudo apt-get install ntp

# Checking out code

The following creates a ‘repos’ in the home directory and checks out the code. Note, that this may change if we shift to a different source control provider.

cd

mkdir repos

cd repos/

git clone <https://github.com/avinash-bhatia/wvc>

# Installing Mongodb & docker

From here on, it is assumed that the environment variable REPOS points to the top of the repositories “common” directory. Typically:

REPOS=~/repos/wvc/common

#

# Installing MongoDB & Docker

#

$REPOS/scripts/install/mongo-install

$REPOS/docker/scripts/docker-install-14.04

Post installation, sometimes locale related issues are encountered, while running “mongo”. They can be solved by various methods, as explained [here](http://ubuntuforums.org/showthread.php?t=2268614&p=13242719&viewfull=1#post13242719) or [here](http://ubuntuforums.org/showthread.php?t=2268614&p=13242728&viewfull=1#post13242728) or [here](http://askubuntu.com/questions/536875/error-in-installing-mongo-in-virtual-machine).

# Running REDIS

#

# Build & install redis

#

cd $REPOS/ext/redis-3.0.7

sudo make install

# Creating docker run envinronment

Using docker requires root privileges. Assuming that the current user login id is $USER, the following commands should be run to create a proper working environment:

#

# Create a docker group and add yourself to it

#

sudo usermod –aG docker $USER

exit

Login in again and verify that you do not need ***sudo*** to run docker commands:

docker run hello-world

Provide nodejs to access privileged ports (providing path of the symbolic link to node will not work – the target of the symbolic must be provided here):

$REPOS/scripts/install grant-sudo <path-to-actual-node>

# Other runtime tools

The following two tools are required for the proper run time deployment of the software: pm2 & authbind.

sudo npm install –g pm2.5

sudo apt-get install authbind

sudo touch /etc/authbind/byport/80

sudo chown <user>:<group> /etc/authbind/byport/80

sudo chmod 775  /etc/authbind/byport/80

sudo touch /etc/authbind/byport/443

sudo chown <user>:<group> /etc/authbind/byport/443

sudo chmod 775  /etc/authbind/byport/443

# Other Development tools

JavaScript optimizer:

sudo npm install –g requirejs