# LAB-05. Managing Key Services  systemd/Scheduling/Time Services

## 

## Solution

Log in to the server using the credentials provided:

ssh cloud\_user@<PUBLIC\_IP\_ADDRESS>

**Schedule Tasks Using at and cron**

1. Check if an at command is already scheduled:

which at

1. Install the at command-line utility:

sudo dnf -y install at

1. Attempt to schedule a job using the at command:

at now

touch ~/atnowjob

CTRL+d

1. Display the list of pending jobs:

atq

1. Check if the file was created in the local directory:

ls -l atnowjob

1. Attempt to schedule a job to occur 2 minutes from now:

at now + 2 minutes

touch ~/at2minutejob

CTRL+d

1. Check the status of the atd service:

systemctl status atd.service

1. Enable the atd service:

sudo systemctl enable --now atd.service

1. Check the status of the service:

systemctl status atd.service

1. List the files in the home directory and look for the atnowjob file:

ls -l

1. Use the watch command to watch for the at2minutejob file:

watch ls -l at2minutejob

1. Using vim create a script file titled "cronjob.sh":

vim ~/cronjob.sh

1. In the file, paste the following:

#!/bin/bash

echo "This job ran at `date`" >> /home/cloud\_user/cronjob.log

1. Save and exit the file:

ESC

ZZ

1. List the details for the cronjob.sh script file:

ls -l cronjob.sh

1. Update the permissions for the script file so that it is executable:

chmod +x cronjob.sh

1. Check if there are any entries in the crontab:

crontab -l

1. Edit the crontab:

crontab -e

1. In the file, paste the following:

SHELL=/bin/bash

PATH=sbin:/bin:/usr/sbin:/usr/bin

MAILTO=root

HOME=/

\* \* \* \* \* /home/cloud\_user/cronjob.sh

\*/2 \* \* \* \* echo "This Job Runs Every 2 Minutes" >> /home/cloud\_user/cronjob.log

1. Save and exit the file:

ESC

ZZ

1. Watch for the cronjob.log file to appear in the home directory:

watch cat cronjob.log

**Start and Stop Services and Configure Services to Start Automatically at Boot**

1. Check the status of the cups service:

systemctl status cups.service

1. Unmask the cups service:

sudo systemctl unmask cups.service

1. Check the status of the cups service:

systemctl status cups.service

1. Start the service:

sudo systemctl start cups.service

1. Check the status of the service:

systemctl status cups.service

**Configure Systems to Boot into a Specific Target Automatically**

1. Check the current default target for the server:

systemctl get-default

1. Set the target to the graphical target:

sudo systemctl set-default graphical.target

1. Verify the update was successful:

sudo systemctl get-default

**Configure Time Service Clients**

1. Check if the chronyd service is installed:

sudo systemctl status chronyd

1. Check the current time sources that chronyc is accessing:

chronyc sources

1. Open the chrony.conf file:

sudo vim /etc/chrony.conf

1. In the file, comment out the pool 2 line, and beneath it paste the following:

Server tick.jrc.us

Server tock.jrc.us

1. Save and exit the file:

ESC

ZZ

1. Restart the chronyd service:

sudo systemctl restart chronyd.service

1. Check the status of the service:

sudo systemctl status chronyd

1. Check the time sources that chronyc is accessing:

chronyc sources

1. Check the chronyc source stats:

chronyc sourcestats

## Conclusion

Congratulations — you've completed this hands-on lab!