Systems and Networks Administration

Managing and Configuring Services

Network Services (Recap)

We've talked about lots of network services:

- Domain Name System maps names (website url) to IP addresses.
- DHCP assigns IP addresses to clients automatically
- NTP provides time synchronization

So, what make these services running?

Managing Services

It's important to understand how the programs that provide those services operate.

- The program run as background process called **Daemon** or service.
- The program doesn't need to interact with user through GUI or command line interface.
- Each service has one or more configuration files that are used to determine how the service should operate.
- Some services may rely on the system infrastructure and their configuration files need to be edited.

- ✓ As a sysadmin or IT support specialist, we need to know how to start, stop and inspect the current status of these services.
- ✓ Most services are usually configured to start when the machine boots.
- ✓ They can also be configured to restart when they crash.

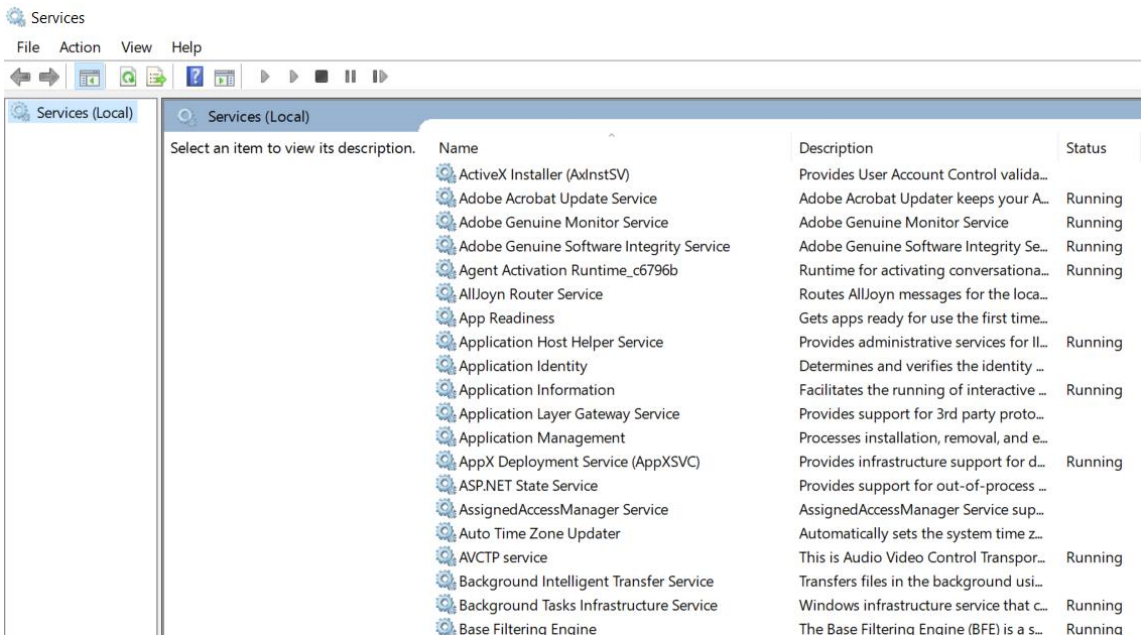
Managing Services in Linux

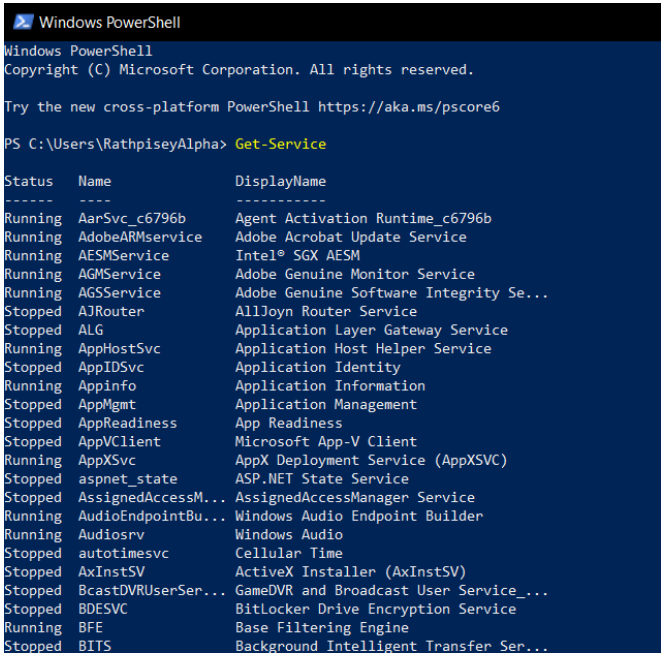
How to start, stop , look at the status and restart the services in Linux?

- **systemctl**: Linux command-line utility used to control systemd or services.
  - ✓ To start: `systemctl start service-name`
  - ✓ To stop: `systemctl stop service-name`
  - ✓ To restart: `systemctl restart service-name`
  - ✓ To start every time machine boot: `systemctl enable service-name`
- We can also use **service** command to do the same thing:
  - ✓ `service service-name start`

Managing Services in Windows

In Windows, we can GUI or Powershell to interact with the services.





Configuring Services

As a sysadmin, we also have to know how to configure services to meet the need of organization.

For example:

- ✓ If you're running a DNS server, you'll need to configure the DNS zones that you want to serve.
- ✓ If you're running a Web server, you'll need to configure the different sites and Web applications that you'd like to have enabled.

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- On Windows, most of the configuration is stored in the registry. This can be modified using graphical wizards or using the set service command.
- On Linux, the configuration files for the installed services are located in the **/etc directory**. And while some software may ship graphical configuration editors, you typically have to edit the configuration files with a text editor.

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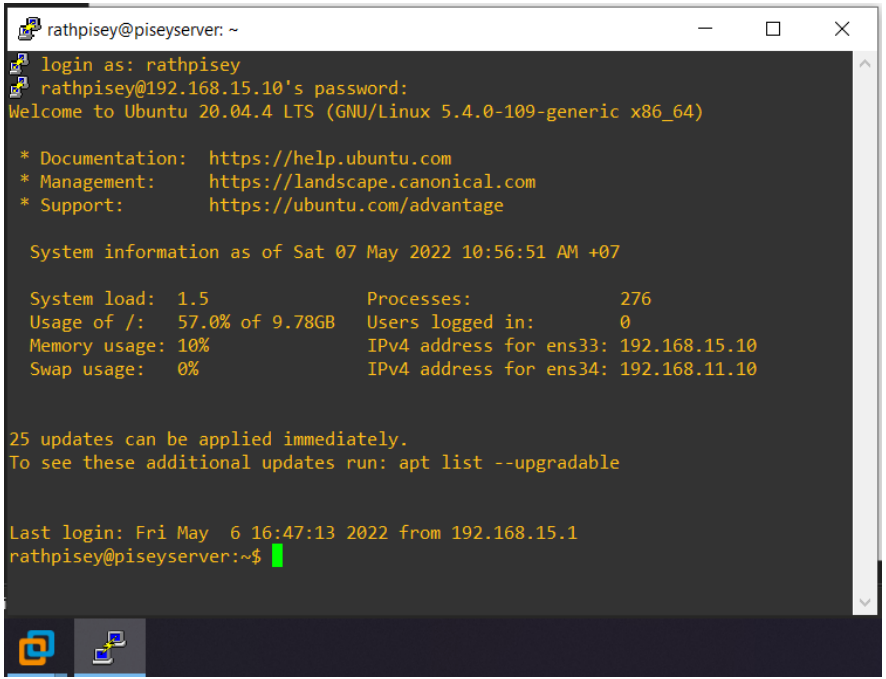
Assignment

- In our lab, we directly interact with client and server. In real practice, we might not be able to be physically present next to those machines. It's better to remote from afar within the local network.
- Install and configure Openssh on the server in our lab so that you're able to remote to the server from our host using Putty.
- Note: the firewall on the server might block incoming connection via ports. Port 22 is used ssh connection. Remember to enable this port on firewall using: `sudo ufw allow ssh`
- Screenshot the result and upload to MS Teams assignment.
- Support materials: https://www.cyberciti.biz/faq/ubuntu-linux-install-openssh-server/

Assignment

- Result:



Next session

- Software and Platform Services

Lab Discussion

- Raise your problems in lab