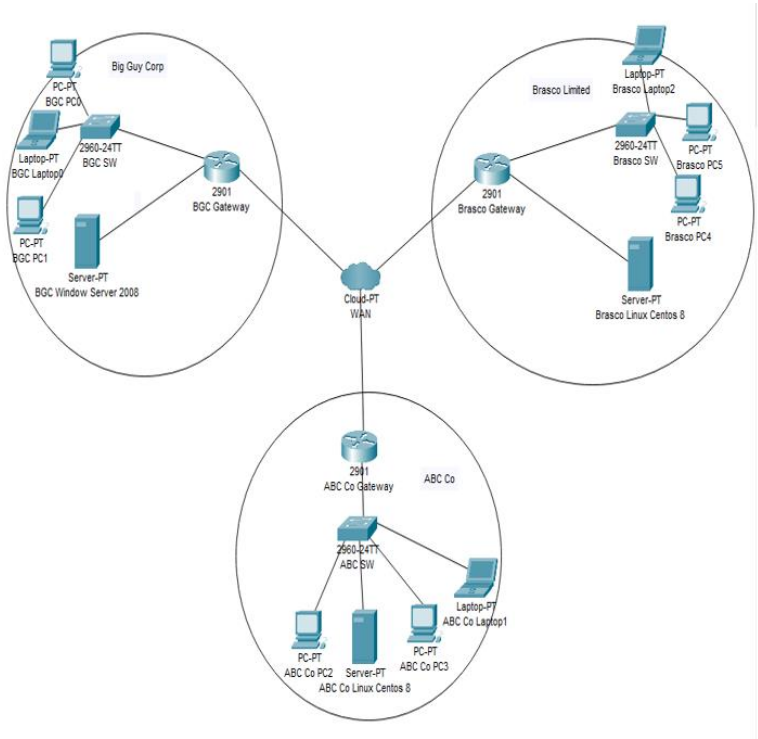
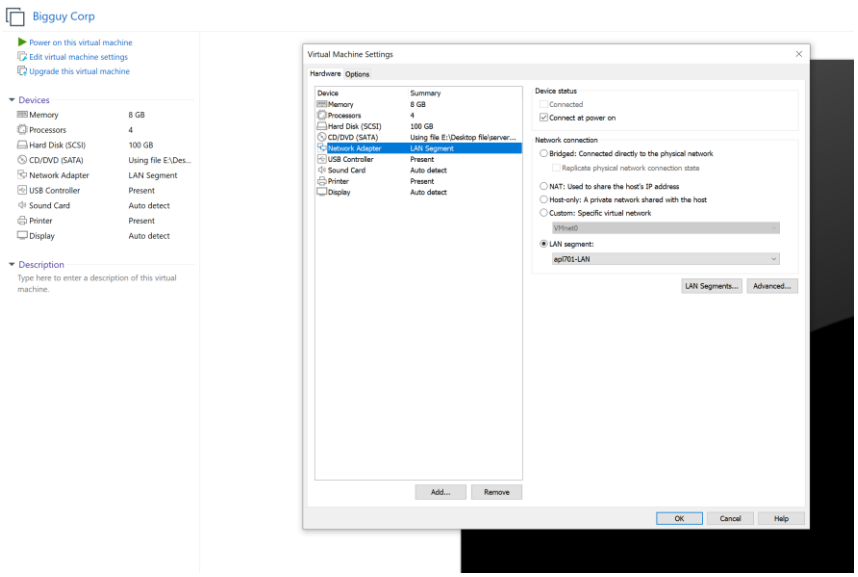
MULTI ACCESS PRINT SERVICE ON WINDOW SERVER AND LINUX



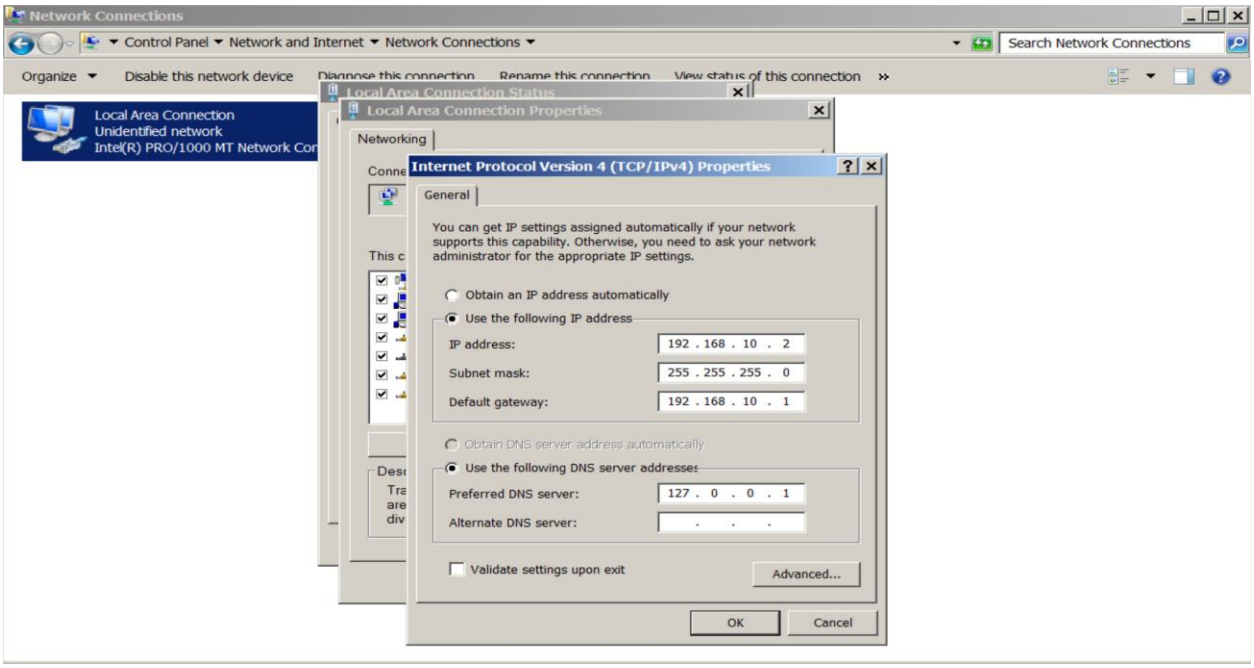
WINDOW 2008 R2 CONFIGURATION

- Create LAN segment named apl701-LAN
- Then, set up LAN segment as the main network card for window vm



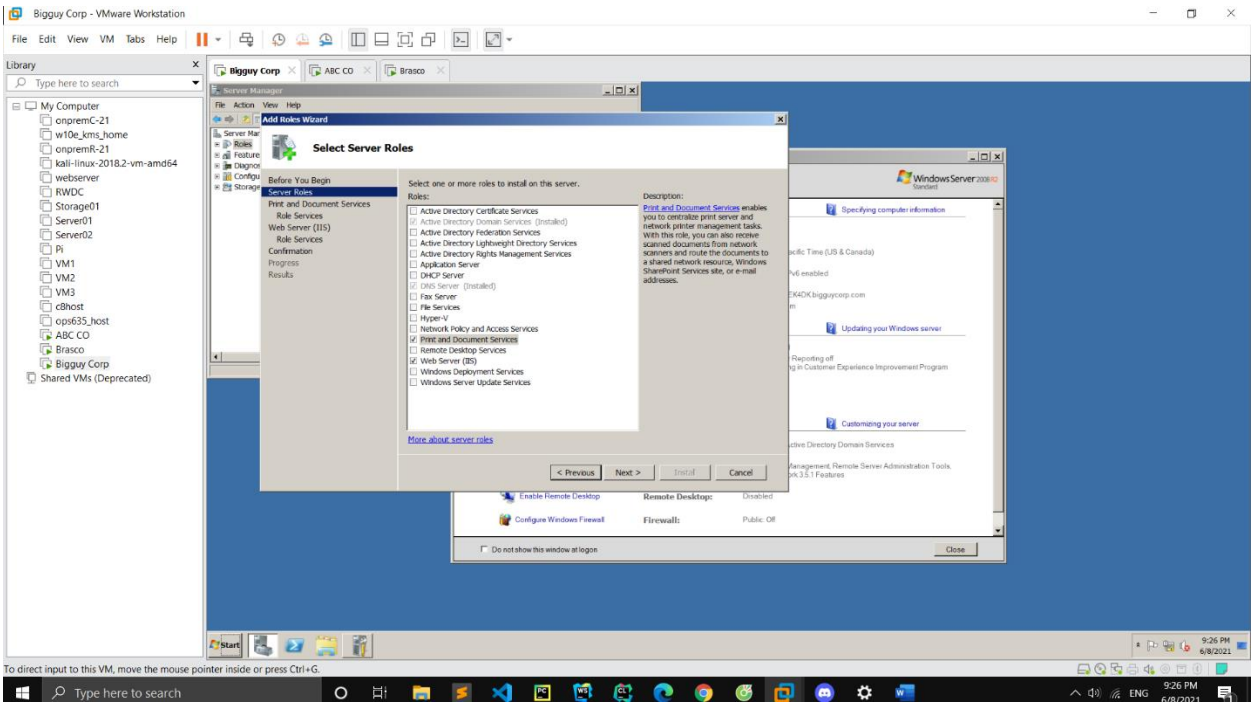
- **Configure static IP address on Open Network and Internet setting**
  - Right-click to the internet sympol
  - Click to change adapter setting

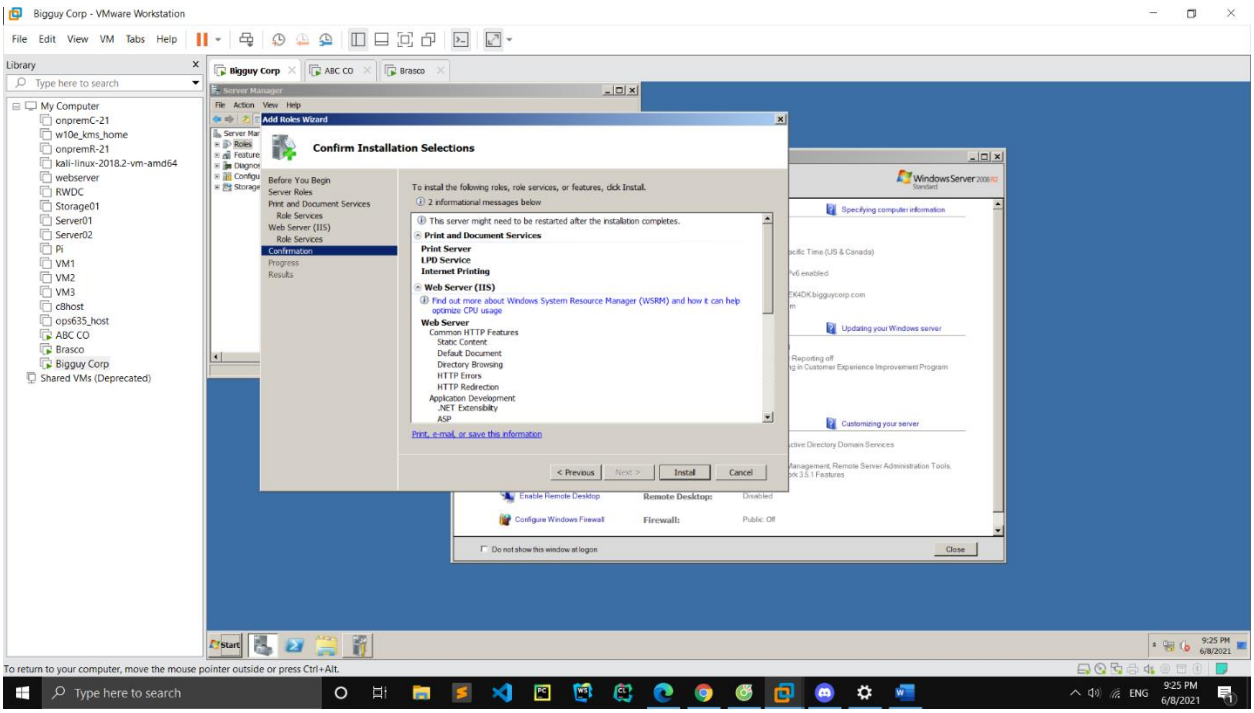
- Right-click to network adapter and choose Properties
- Then, choose Internet Protocol Version 4 (TCP/IPv4) and then assign the static IP address



- **Configure Active Directory Domain and Services:**
  - Install the ADDS role feature.
  - Click to the server manager, and click Add Roles
  - Finding the Active Directory Domain and service
  - Click Next, and choose Create a new domain in new forest
  - Set up the domain name for the machine
  - Install DNS, then restart the machine.

- **Configure window Roles service**
  - Install the Internet Printing service feature
  - Install the Print and Document service
  - Add the features during the installation: Print server, LDP service and Internet Printing


Bigguy Corp - VMware Workstation
File Edit View VM Tabs Help
Library
Type here to search
My Computer
onpremC-21
w10e_kms_home
onpremR-21
kali-linux-2018.2-vm-amd64
webserver
RWDC
Storage01
Server01
Server02
Pi
VM1
VM2
VM3
cBhost
ops635_host
ABC CO
Brasco
Bigguy Corp
Shared VMs (Deprecated)
Bigguy Corp
ABC CO
Brasco
Server Manager
File Action View Help
Add Roles Wizard
Select Server Roles
Before You Begin
Server Roles
Print and Document Services
Role Services
Web Server (IIS)
Role Services
Confirmation
Progress
Results
Select one or more roles to install on this server.
Roles:
Active Directory Certificate Services
Active Directory Domain Services (Installed)
Active Directory Federation Services
Active Directory Lightweight Directory Services
Active Directory Rights Management Services
Application Server
DHCP Server
DNS Server (Installed)
Fax Server
File Services
Hyper-V
Network Policy and Access Services
Print and Document Services
Remote Desktop Services
Web Server (IIS)
Windows Deployment Services
Windows Server Update Services
Description:
Print and Document Services enables you to centralize print server and network printer management tasks. With this role, you can also receive scanned documents from network scanners and route the documents to a shared network resource, Windows SharePoint Services site, or e-mail addresses.
More about server roles
< Previous
Next >
Install
Cancel
Windows Server 2008 R2
Specifying computer information
Updating your Windows server
Customizing your server
Enable Remote Desktop
Remote Desktop:
Disabled
Configure Windows Firewall
Firewall:
Public: Off
Do not show this window at logon
Close
To direct input to this VM, move the mouse pointer inside or press Ctrl+G.
Type here to search
ENG
9:26 PM
6/8/2021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RWDC
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Server01
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VM3
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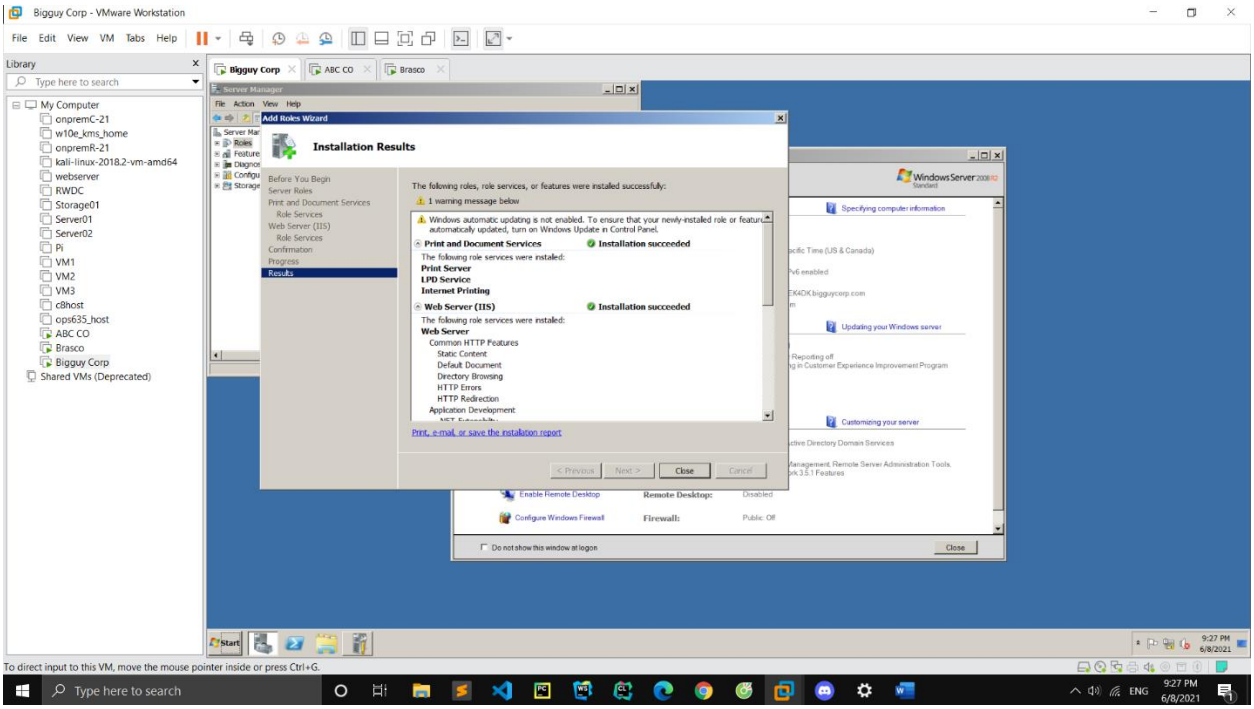
ops635_host
ABC CO
Brasco
Bigguy Corp
Shared VMs (Deprecated)
Bigguy Corp
ABC CO
Brasco
Server Manager
File Action View Help
Add Roles Wizard
Confirm Installation Selections
Before You Begin
Server Roles
Print and Document Services
Role Services
Web Server (IIS)
Role Services
Confirmation
Progress
Results
To install the following roles, role services, or features, click Install.
2 informational messages below
This server might need to be restarted after the installation completes.
Print and Document Services
Print Server
LPD Service
Internet Printing
Web Server (IIS)
Find out more about Windows System Resource Manager (WSRM) and how it can help optimize CPU usage
Web Server
Common HTTP Features
Static Content
Default Document
Directory Browsing
HTTP Errors
HTTP Redirection
Application Development
.NET Extensibility
ASP
Print, e-mail, or save this information
< Previous
Next >
Install
Cancel
Windows Server 2008 R2
Specifying computer information
Updating your Windows server
Customizing your server
Enable Remote Desktop
Remote Desktop:
Disabled
Configure Windows Firewall
Firewall:
Public: Off
Do not show this window at logon
Close
To return to your computer, move the mouse pointer outside or press Ctrl+Alt.
Type here to search
ENG
9:25 PM
6/8/2021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VM2
VM3
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ABC CO
Brasco
Bigguy Corp
Shared VMs (Deprecated)
Bigguy Corp
ABC CO
Brasco
Add Roles Wizard
Installation Results
Before You Begin
Server Roles
Print and Document Services
Role Services
Web Server (IIS)
Role Services
Confirmation
Progress
Results
The following roles, role services, or features were installed successfully:
1 warning message below
Print and Document Services
Installation succeeded
The following role services were installed:
Print Server
LPD Service
Internet Printing
Web Server (IIS)
Installation succeeded
The following role services were installed:
Web Server
Common HTTP Features
Static Content
Default Document
Directory Browsing
HTTP Errors
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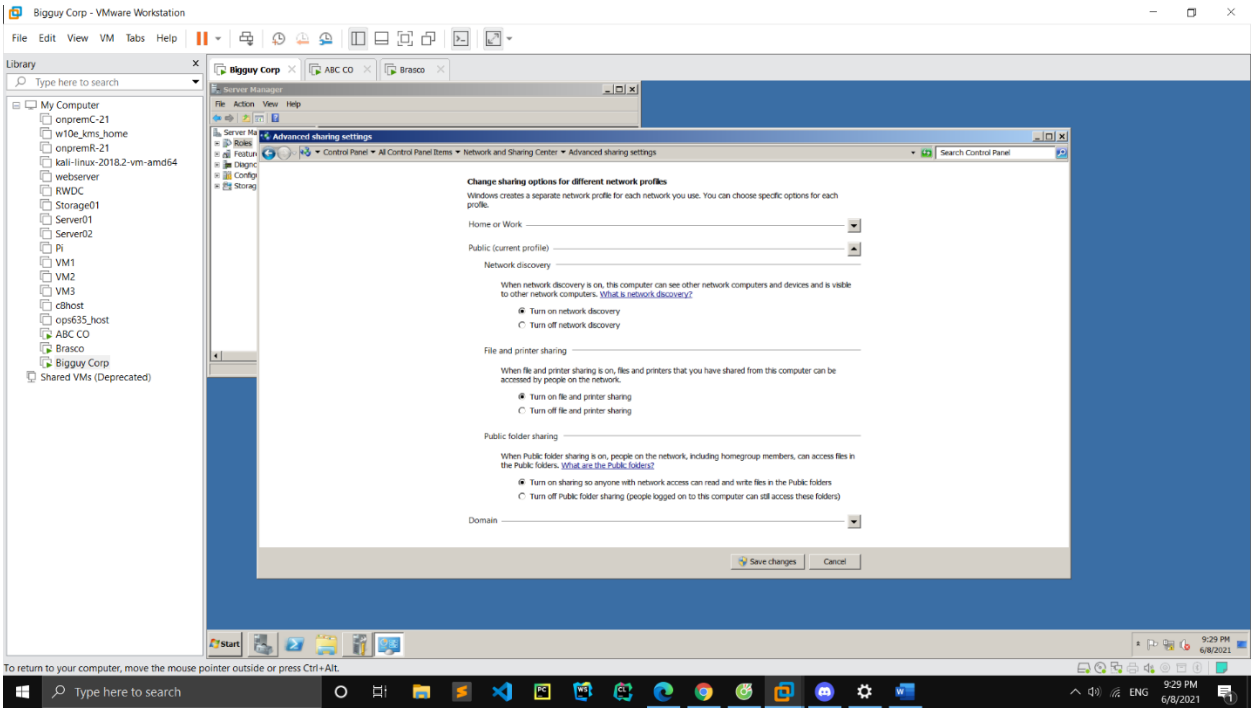
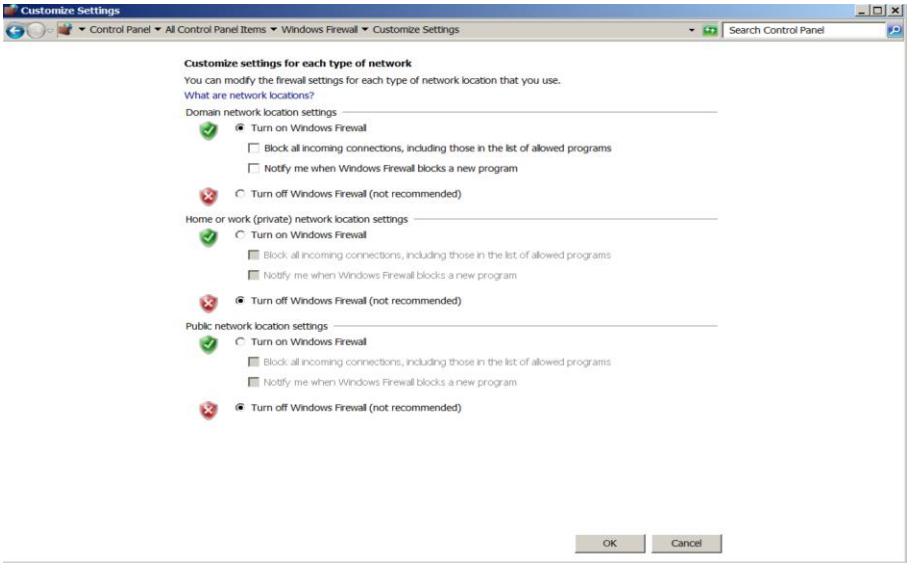
Application Development
Print, e-mail, or save the installation report
< Previous
Next >
Close
Cancel
Windows Server 2008 R2
Specifying computer information
Updating your Windows server
Customizing your server
Enable Remote Desktop
Remote Desktop:
Disabled
Configure Windows Firewall
Firewall:
Public: Off
Do not show this window at logon
Close
Start
9:27 PM
6/8/2021
To direct input to this VM, move the mouse pointer inside or press Ctrl+G.
Type here to search
ENG
9:27 PM
6/8/2021

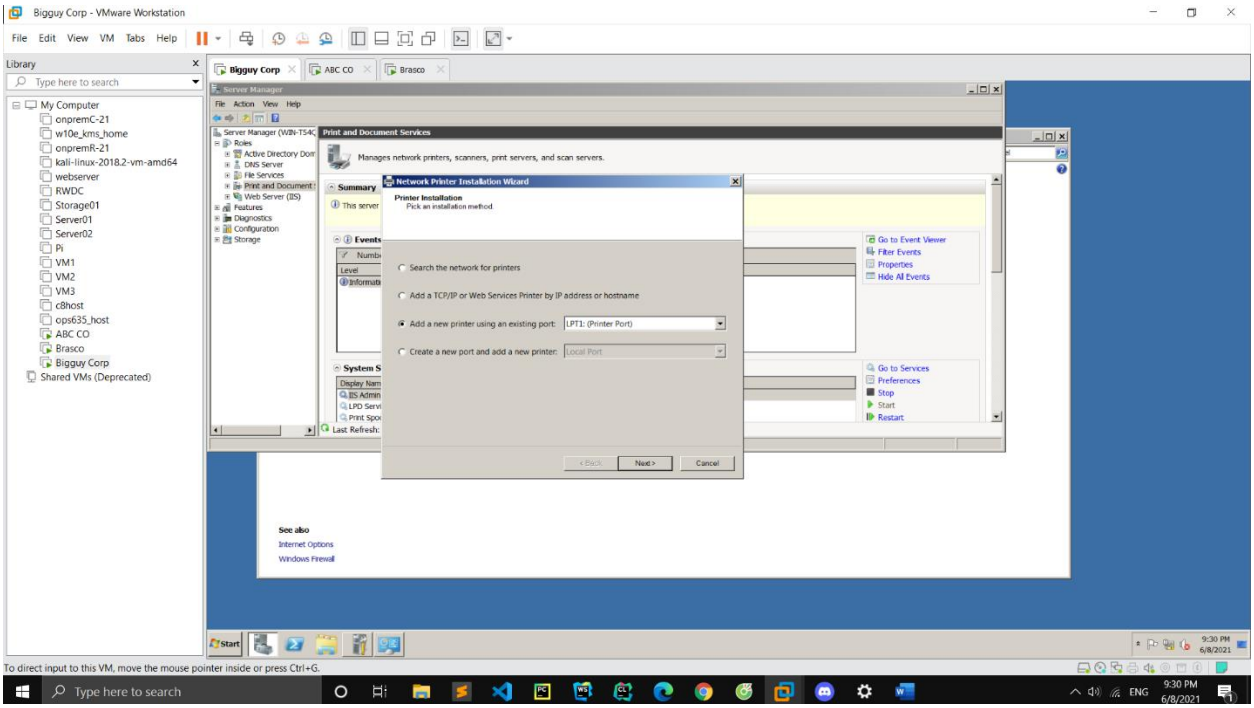
- **Configure Nework and Sharing Center**
  - Right-click to Network symbol
  - Then, choose Network sharing center
  - Then, Change advanced sharing options
  - Turn on all of network discovery and sharing.

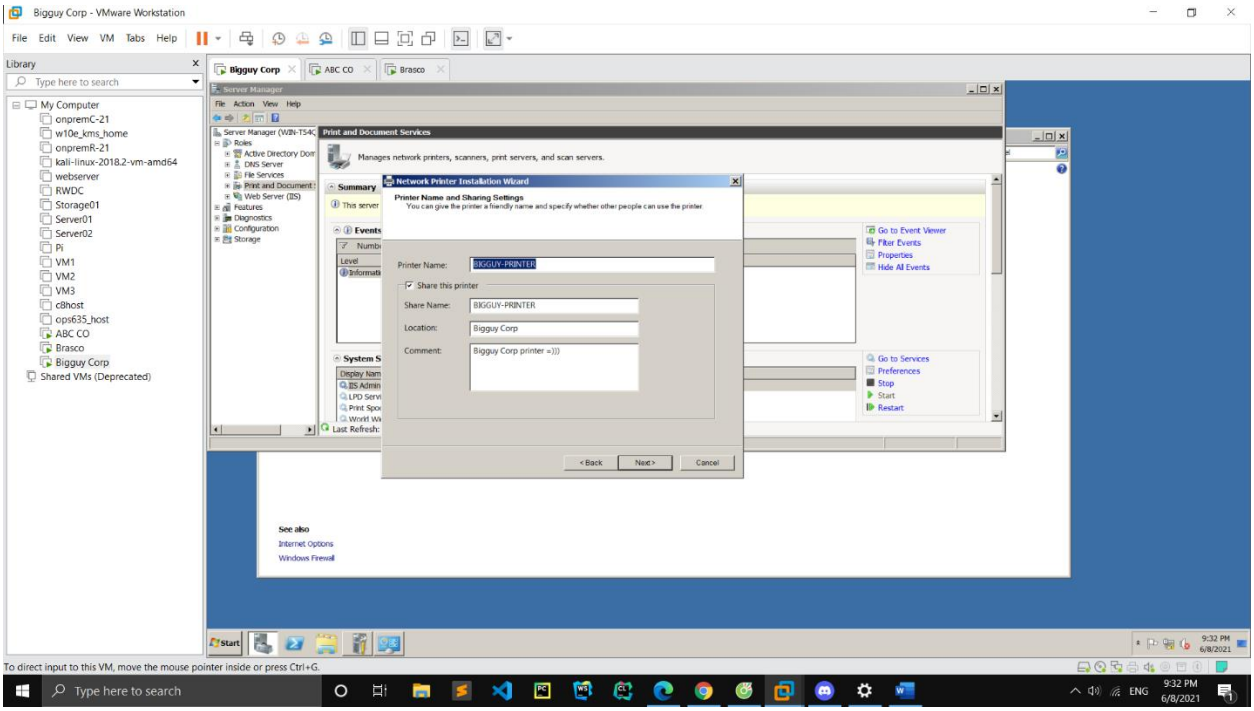


- **Turn off the firewall**
  - Click to Windows Firewall and Disable the firewall setting

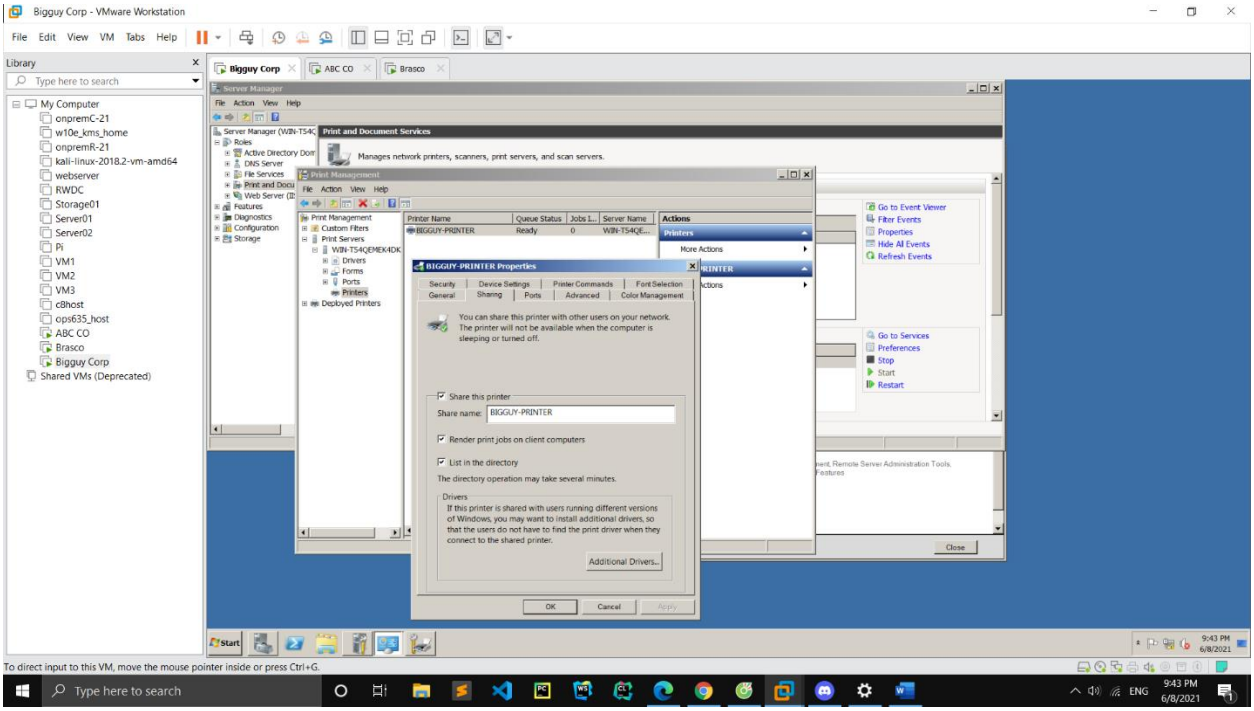


- **Add Printer and Share printing service on Window Server.**
  - Window + S, then find Printer Management
  - Right-Click into the Printers, and click Add Printer.
  - Then select Add a new printer using port LPT1: (Printer Port)
  - Select Generic/Text only
  - Assign name of your Printer and suitable description.
  - Click next, then Finish.

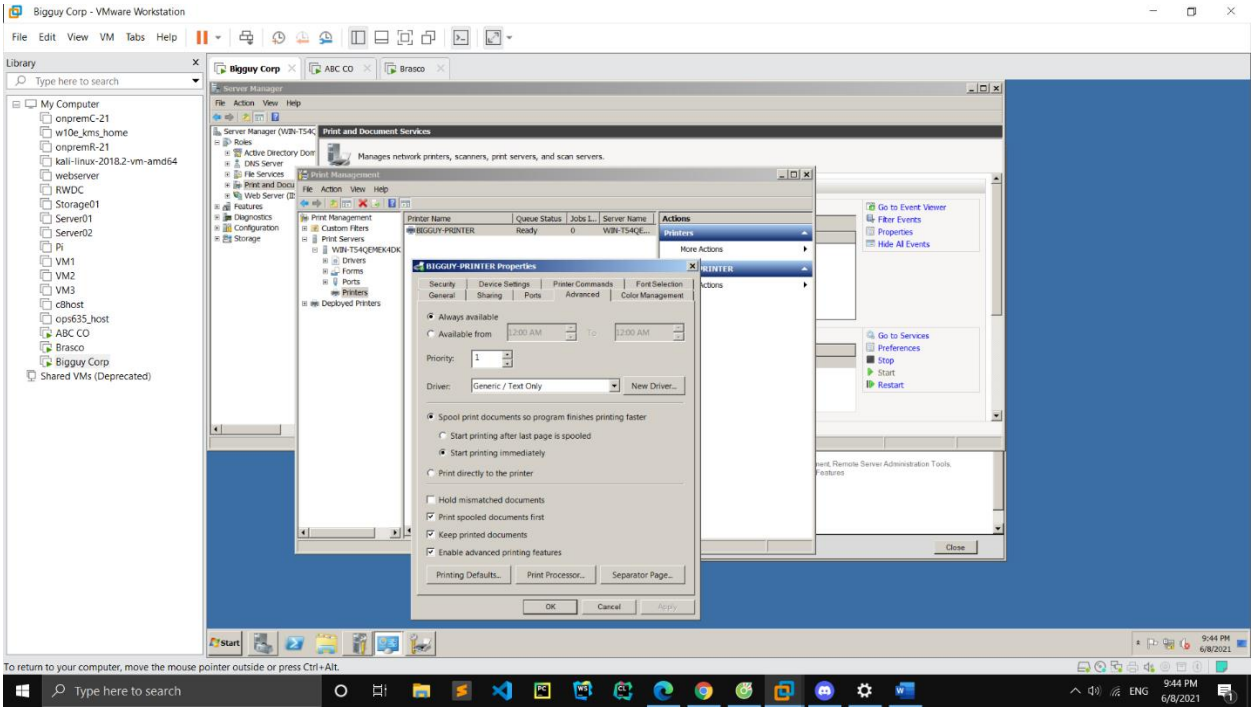




- **Right-click into the created printer, sharing tab and share your printer.**

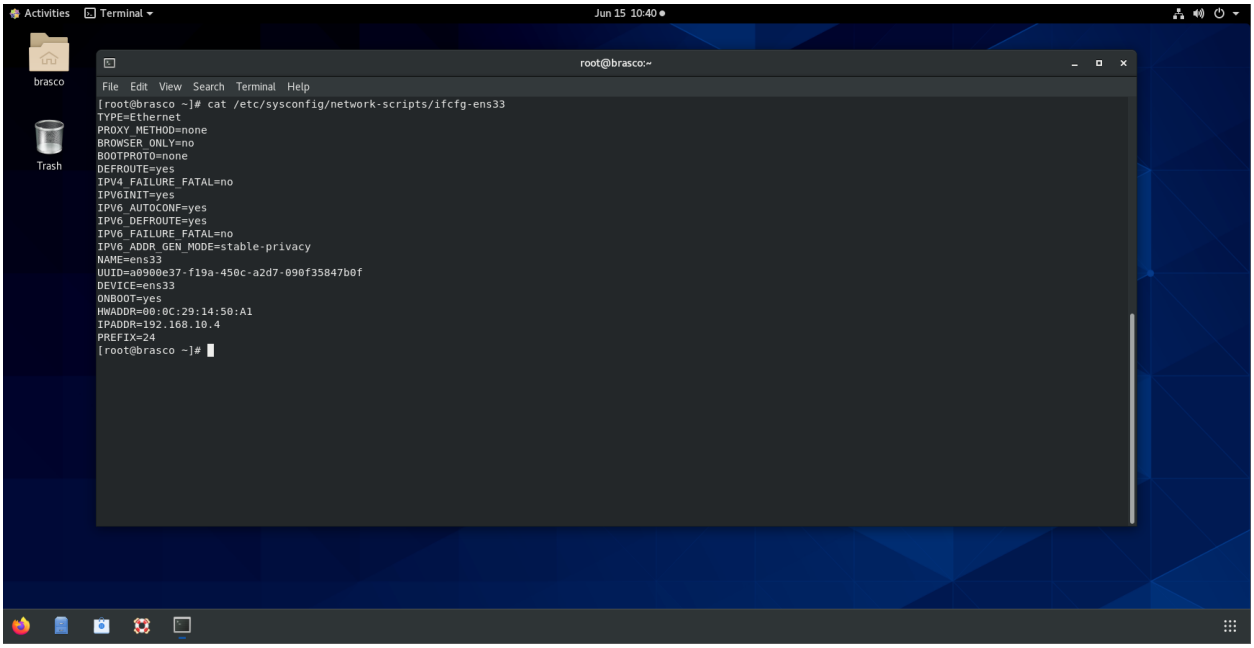


- **Click to the Advanced tab.**



CENTOS 8 CONFIGURATION

- **Set-up the network adapter as similar as Window Server 2008 R2 "apl-701-LAN"**
- **Configure the Static IP address**
  - sudo vi /etc/sysconfig/network-script/ifcfg-ens33
  - Save the setting, and restart the network ens33 (ifdown ens33 -> ifup ens33)



- **Configure CUPs for printing service**
  - yum install cups -y
  - yum install cups-ipptool -y
  - systemctl enable cups
  - systemctl start cups
  - vi /etc/cups/cupsd.conf
  - Listen all with 631

```
# Only listen for connections from the local machine.
Listen *:631
Listen /var/run/cups/cups.sock
```

  - Ensure that the Browsing setting is ON

```
# Show shared printers on the local network.
Browsing On
BrowseLocalProtocols cups dnssd
```

- Allow printing communication on your network. My network is 192.168.10.0/24

```
# Restrict access to the server...
<Location />
  Order allow,deny
  Allow 192.168.10.0/24
</Location>

# Restrict access to the admin pages...
<Location /admin>
  Order allow,deny
  Allow 192.168.10.0/24
</Location>
```

- Save and exit. Then issue the systemctl commands above to restart cups service

- **Allow firewall for printing service**
  - firewall-cmd --add-port=631/tcp --permanent --zone=public
  - firewall-cmd --reload

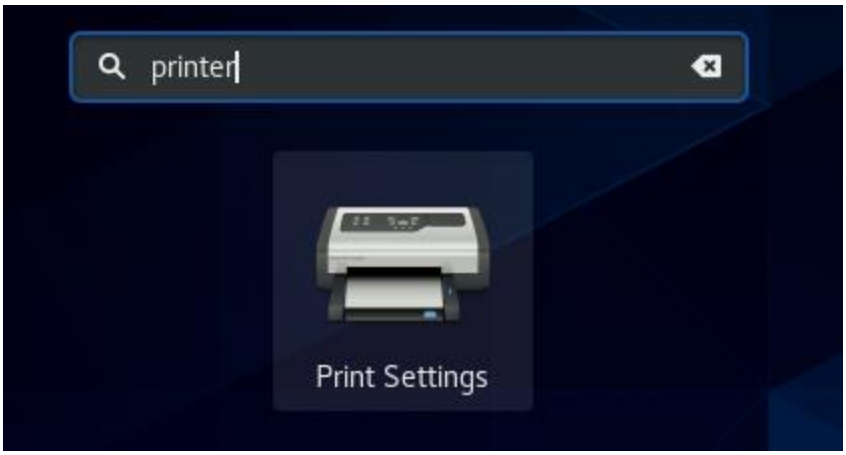
- **Allow the printing service on Browser (Mozilla firefox)**
  - yum install cups-browsed -y
  - systemctl enable cups-browsed
  - systemctl start cups-browsed

- **Share CUPs printer via IPP**
  - yum install epel-release -y
  - yum install nss-mdns -y
  - yum install avahi -y

- **Issue these command to start service and allow firewalld**
  - systemctl enable avahi-daemon
  - systemctl start avahi-daemon
  - firewall-cmd --add-port=5353/udp --permanent --zone=public
  - firewall-cmd --reload

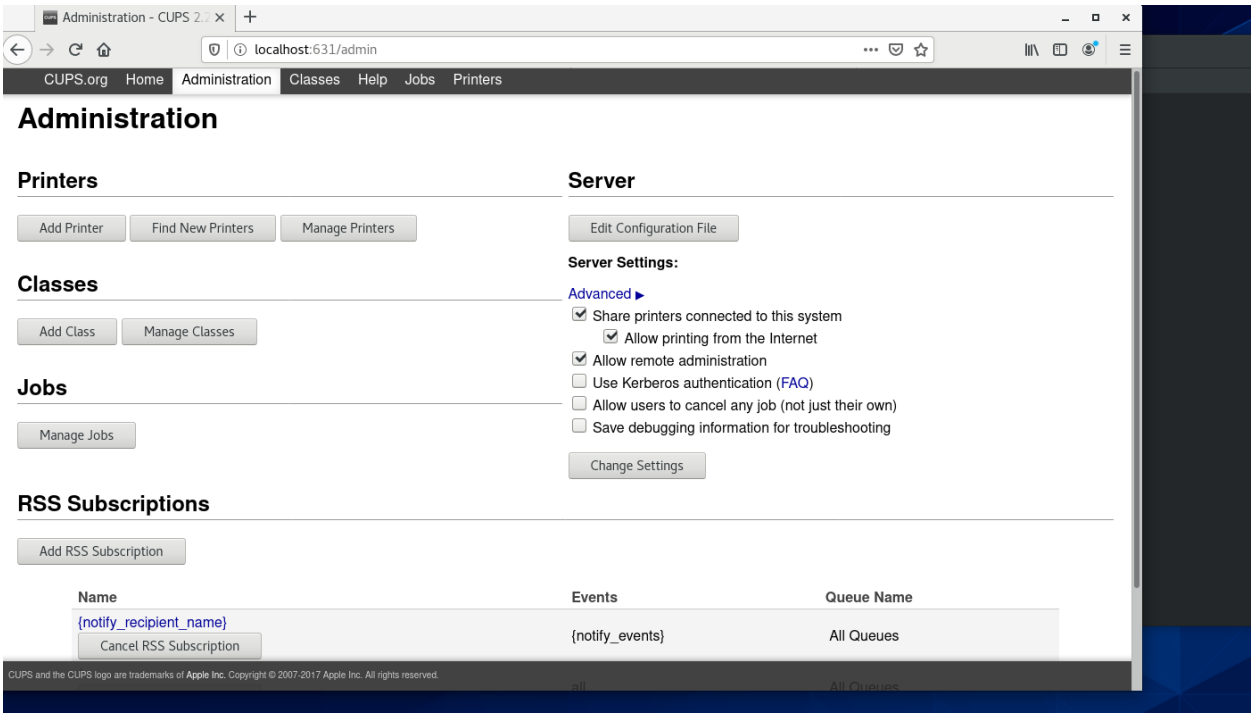
  ➔ It helps cups client and cups server are able to communicate together

- **Install Printer-Setting GUI:**
  - cd /etc/yum.repos.d/
  - curl 'https://copr.fedorainfracloud.org/coprs/scx/system-config-printer/repo/epel-8/scx-system-config-printer-epel-8.repo' > 'scx-system-config-printer-epel-8.repo'
  - yum install system-config-printer



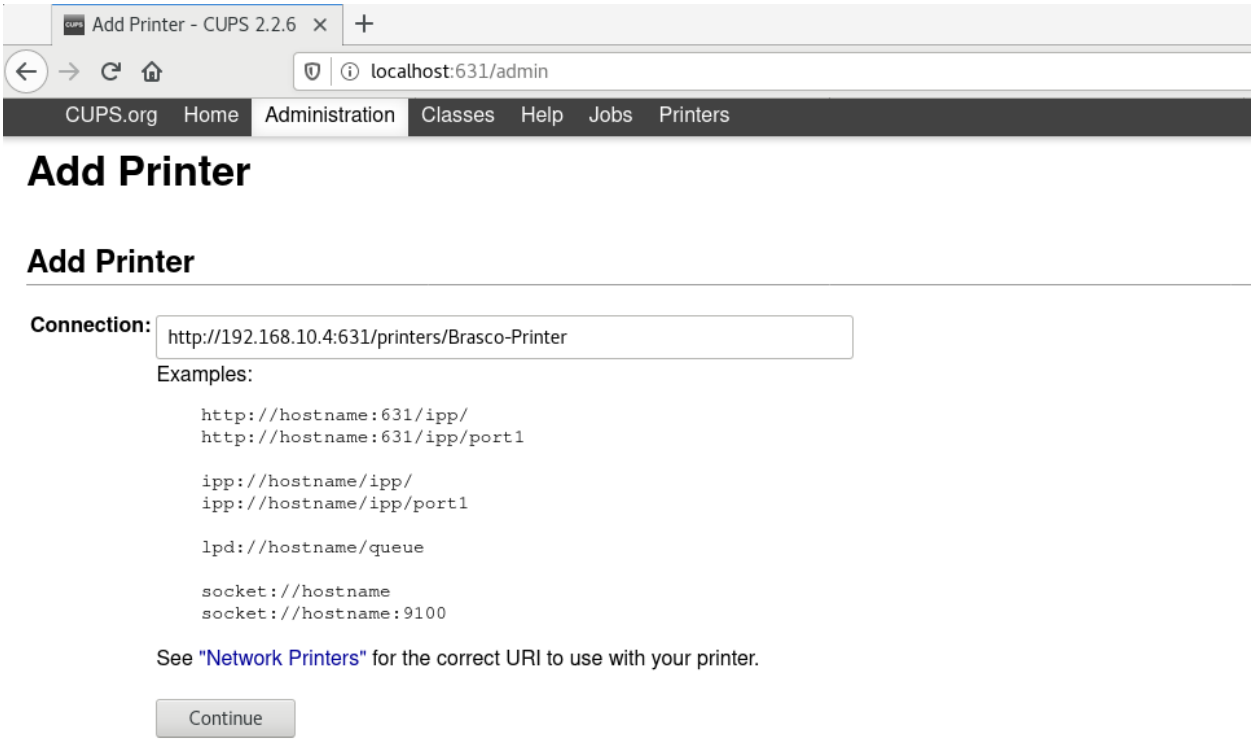
- **Adding printer client**
  - yum install cup-ipptool -y
  - systemctl restart cups

- **Add Printer to Linux Machine via browser (Mozilla Firefox)**
  - Open Mozilla Firefox, then type http://localhost:631/
  - Then click into the Adding Printers and Classes
  - Enable the Allow printing from the Internet
  - Then Add Printer



  - Type root and your machine password
  - Select Internet Printing Protocol (http)

- Type the URL to your home printer page. Then click Continue



- Type your printer Name, then enable ”Sharing this printer”
- Choose the proper printer and driver (Generic and PDF driver)
- Then click Finish
- When you finish, the printer is available on http://localhost:631/printers/

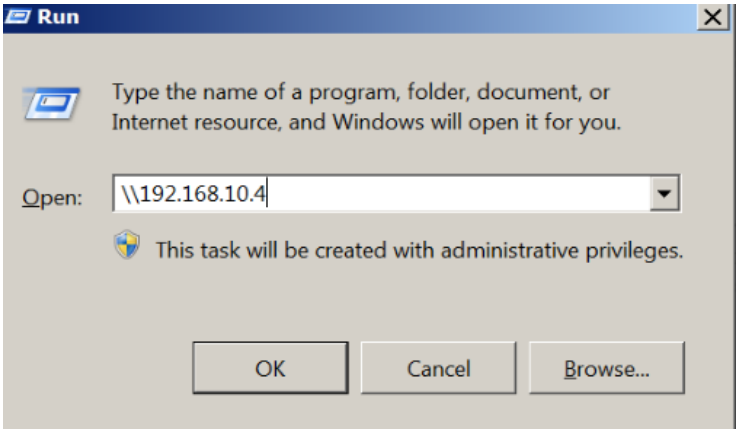
- **Configure SAMBA to connect from Linux to Window 2008 R2**
  - vi /etc/samba/smb.conf

```
[global]
        workgroup = SAMBA
        security = user

        passdb backend = tdbsam

        printing = cups
        printcap name = cups
        load printers = yes
        cups options = raw
        rpc_server:spoolss = external
        rpc_daemon:spoolssd = fork
```

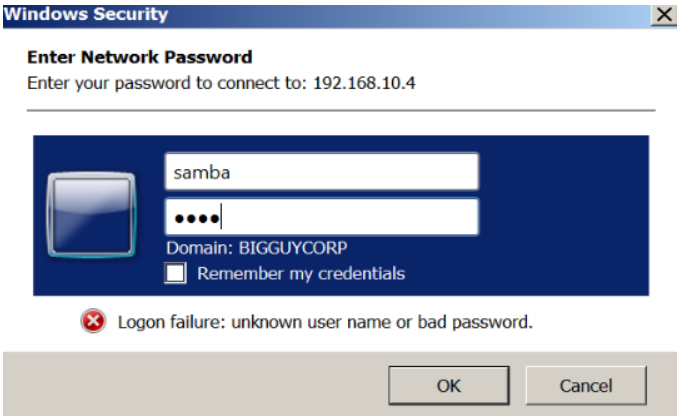
```
[printers]
        comment = All Printers
        #path = /var/tmp
        path = /var/spool/samba
        printable = Yes
        create mask = 0600
        browseable = Yes
        guest ok = Yes
        valid users = samba apl701
```

- Save, and restart samba service by issue the command systemctl restart smb
- Create the user for samba service. (This user is used to login when you find the connection on Window server //192.168.10.4)
- useradd -m samba
- passwd samba
- smbpasswd -a samba
- systemctl restart smb nmb

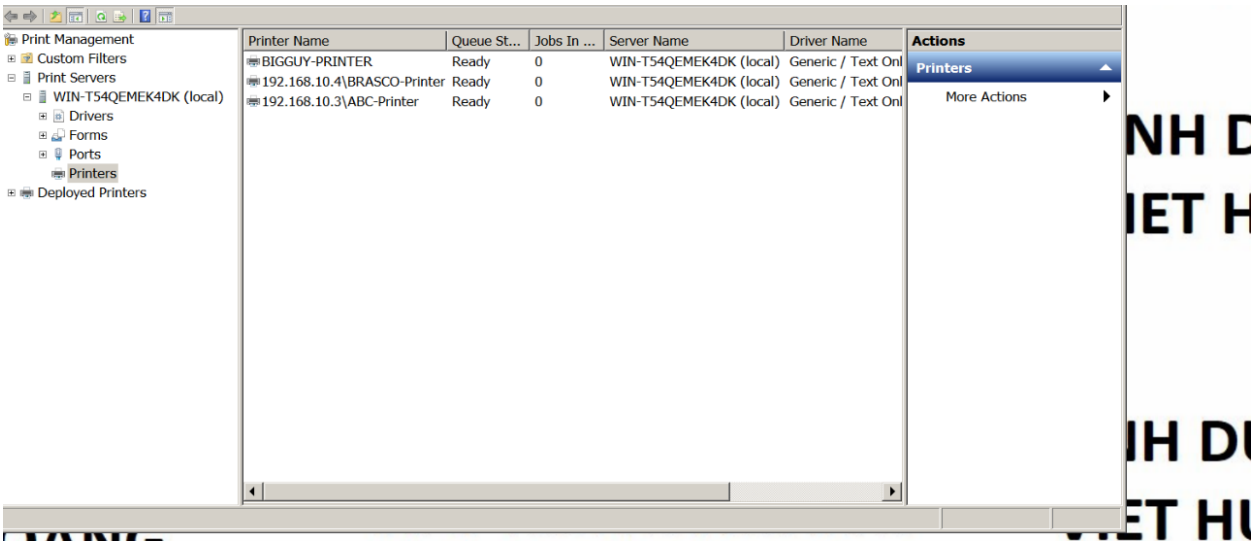
- **Connect from Window to Linux CentOS8**
  - Click Runs on window server 2008 R2. Then issue //IP_address_Linux



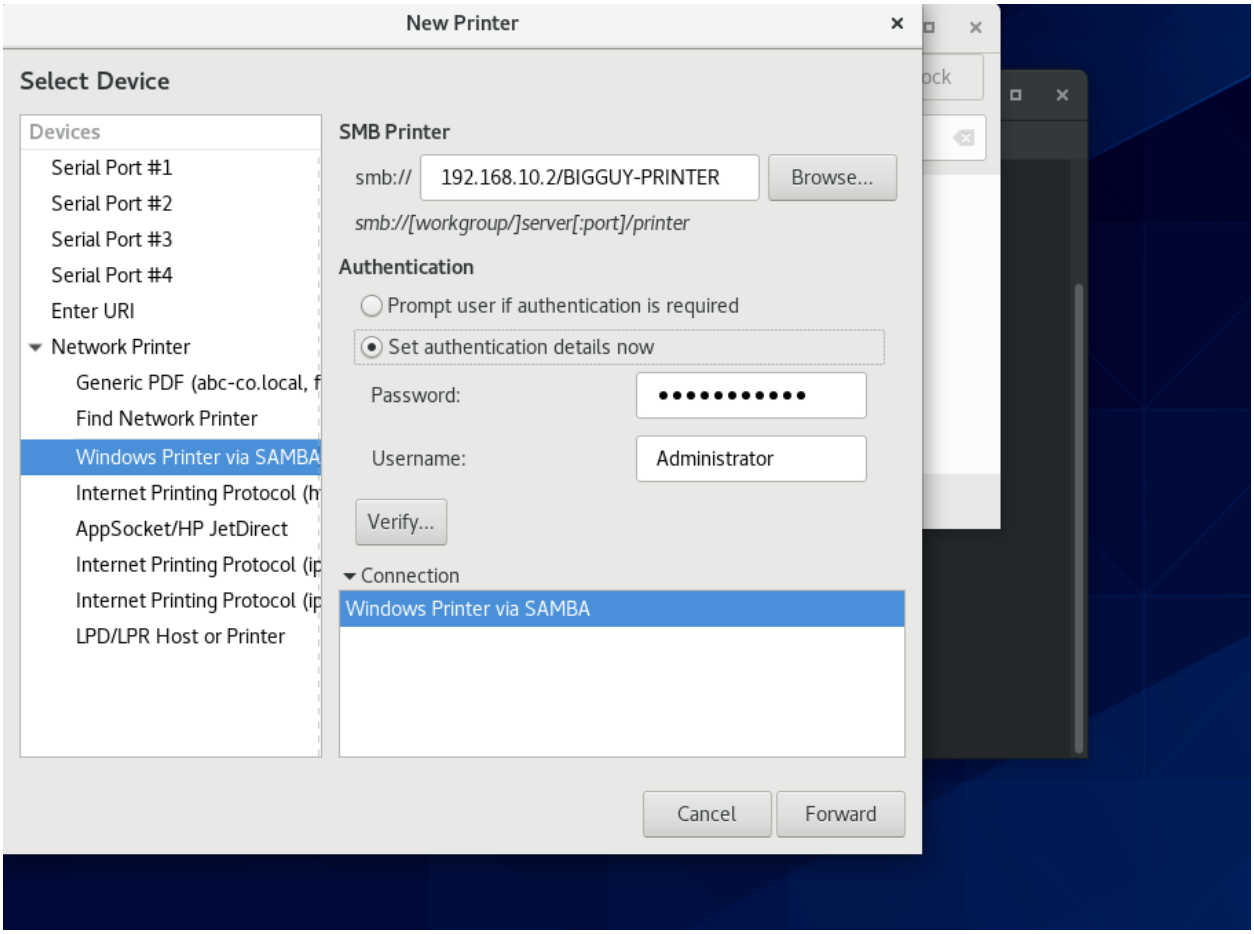
  - Then login as samba user that created above



- Then you can choose a printer and add the connection as remote printer.
- You can check successful installation on Print Management



- **Connect Linux Printing via samba to Window server 2008 R2**
  - Unlock and Click Add.
  - Open the Printer setting that installed above by using curl command
  - Then, select Window Printer via SAMBA
  - Add the printer via smb URL
  - Set the authentication as the Window server 2008 R2 “Administrator”



- Click Forward and Select Generic as the driver
- Click IPP for everywhere for the driver
- Then, click Finish
- You can check successful installation on http://localhost:631/printers/

Queue Name	Description	Location	Make and Model	Status
ABC-Printer	ABC-Printer		Remote printer: Generic PDF Printer	Idle
BIGGUY-PRINTER	Remote from Brasco to Bigguy	Bigguy Corp	Generic PDF Printer	Idle
BIGGUY-PRINTER@abc-co.local	Remote printing from ABC to Bigguy		Remote printer: Generic PDF Printer	Idle
Brasco-ABC	Remote printer from Brasco to ABC	ABC	Local Raw Printer	Idle
BRASCO-Printer	BRASCO-Printer	BRASCO	Generic PDF Printer	Idle

➔ If you cannot connect from Window server Printer "client-error-not-possible", you can issue the command "yum install samba-client", then restart the samba service.