

Windows Active Directory and Group Policy Management

Active Directory Users and Computers

File Action View Help

Active Directory Users and Com

Saved Queries

Liang.Local

Bashful

Builtin

Client

Computers

Domain Controllers

EMSUsers

Exchange Users

ForeignSecurityPrincipal:

Keys

Lab2Users

LostAndFound

Managed Service Accour

Microsoft Exchange Secu

Program Data

System

Users

Microsoft Exchange Syst

NTDS Quotas

TPM Devices

Name	Type	Description
Administrat...	Computer	
Administrat...	Computer	
Administrat...	Computer	
Administrat...	Computer	
DAG-LM	Computer	
EX1-LIANG	Computer	
EX2-LIANG	Computer	
Failover	Computer	Failover cluster virtual n...
Failover-LM	Computer	Failover cluster virtual n...
FileServer-LM	Computer	Failover cluster virtual n...
FSCluster	Computer	Failover cluster virtual n...
SRV1-LIANG	Computer	
WIN10MON...	Computer	
WINMONCT...	Computer	
WINMONCT...	Computer	
WINS2019EX...	Computer	
WINS2019F...	Computer	
WINS2019F...	Computer	
WINS2019T...	Computer	
WINSERVER...	Computer	

Forest: Liang.Local

Domains

Liang.Local

Default Domain Policy

Administrator

Critters

CSV

Domain Controllers

Groups

HumanResources

Marketing

North America

Hide Desktop

North America-GPO

Restore Desktop

Canada

Mexico

Research

United States

Operations

Pets

Research and Development

Sales

South America

South America-GPO

Development

Students

TestOU1

TestOU2

TestOU3

Group Policy Objects

WMI Filters

Starter GPOs

Sites

Group Policy Modeling

Group Policy Results

Linked Group Policy Objects

Group Policy Inheritance

Delegation

Link Order	GPO	Enforced	Link Enabled	GPO Status	WMI Filter	Modified
1	Restore Desktop	No	Yes	Enabled	None	2019-10-
2	Hide Desktop	Yes	Yes	Enabled	None	2019-10-
3	North America-GPO	No	Yes	Enabled	None	2019-10-

DHCP Scopes Management

DHCP			
File Action View Help			
<div><div>DHCP</div><div><div>srv1-liang.liang.local</div><div>IPv4</div><div>Server Options</div><div>Scope [20.0.0.0] AdvancedDHCP20</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Scope [20.1.0.0] AdvancedDHCP20.1</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Scope [20.2.0.0] Test</div><div>Scope [192.168.12.0] Second Adapter</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Filters</div><div>IPv6</div></div></div>			
Start IP Address		End IP Address	Description
192.168.12.1		192.168.12.254	Address range for distribution
192.168.12.7		192.168.12.8	IP Addresses excluded from distribution
192.168.12.1		192.168.12.3	IP Addresses excluded from distribution

DHCP				
File Action View Help				
<div><div>DHCP</div><div><div>srv1-liang.liang.local</div><div>IPv4</div><div>Server Options</div><div>Scope [20.0.0.0] AdvancedDHCP20</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Scope [20.1.0.0] AdvancedDHCP20.1</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Scope [20.2.0.0] Test</div><div>Scope [192.168.12.0] Second Adapter</div><div>Address Pool</div><div>Address Leases</div><div>Reservations</div><div>Scope Options</div><div>Policies</div><div>Filters</div><div>IPv6</div></div></div>				
Option Name		Vendor	Value	Policy Name
003 Router		Standard	192.168.12.7	None
006 DNS Servers		Standard	192.168.12.2	None
015 DNS Domain Name		Standard	Liang.Local	None
060 PXEClient		Standard	PXEClient	None

Microsoft Exchange Server Mailbox Databases and Mailboxes

EnterpriseOffice 365

Exchange admin center

recipientspermissionscompliance managementorganizationprotectionmail flowmobilepublic foldersunified messagingservershybrid

serversdatabasesdatabase availability groupsvirtual directoriescertificates

NAME	ACTIVE ON SERVER	SERVERS WITH COPIES	STATUS	BAD COPY COUNT	
Mailbox Database 0388258...	EX1-LIANG	EX1-LIANG	Mounted	0	
Exchange2	EX1-LIANG	EX1-LIANG,EX2-LIANG	Mounted	0	
Archive	EX1-LIANG	EX1-LIANG,EX2-LIANG	Mounted	0	
Mailbox Database 06081576...	EX2-LIANG	EX2-LIANG	Mounted	0	
BackupDB	EX1-LIANG	EX1-LIANG	Mounted	0	

Mailbox Database 0388258451

Database availability group:
DAG-LM

Servers
EX1-LIANG

Database copies
Mailbox Database 0388258451\EX1-LIANG
Active Mounted
Copy queue length: 0
Content index state: Healthy
[View details](#)

EnterpriseOffice 365

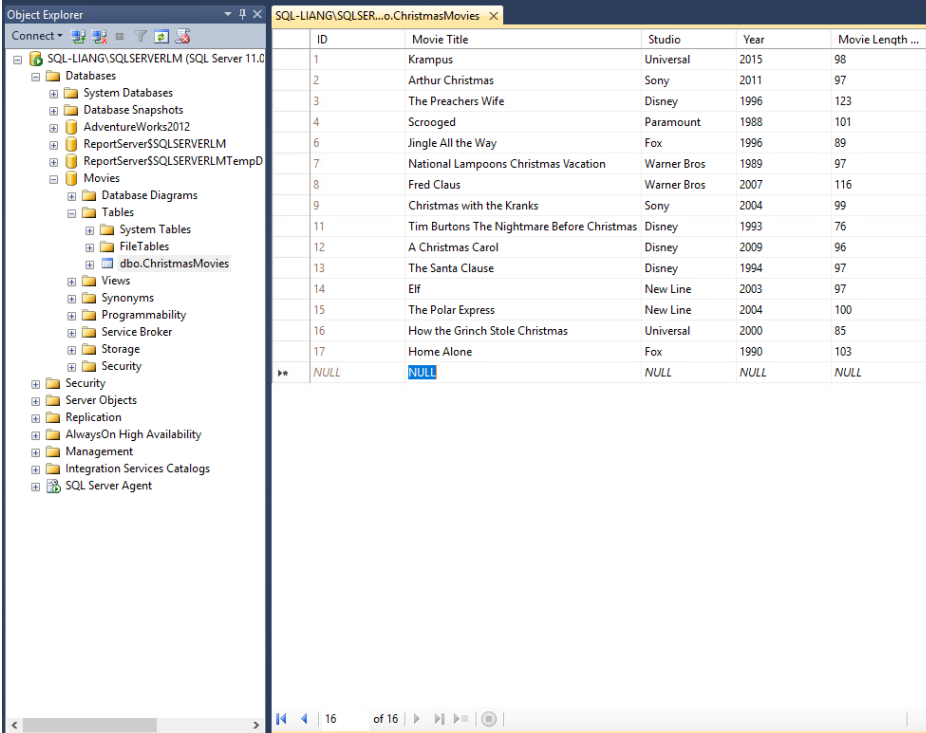
Exchange admin center

recipientspermissionscompliance managementorganizationprotectionmail flowmobilepublic foldersunified messagingservershybrid

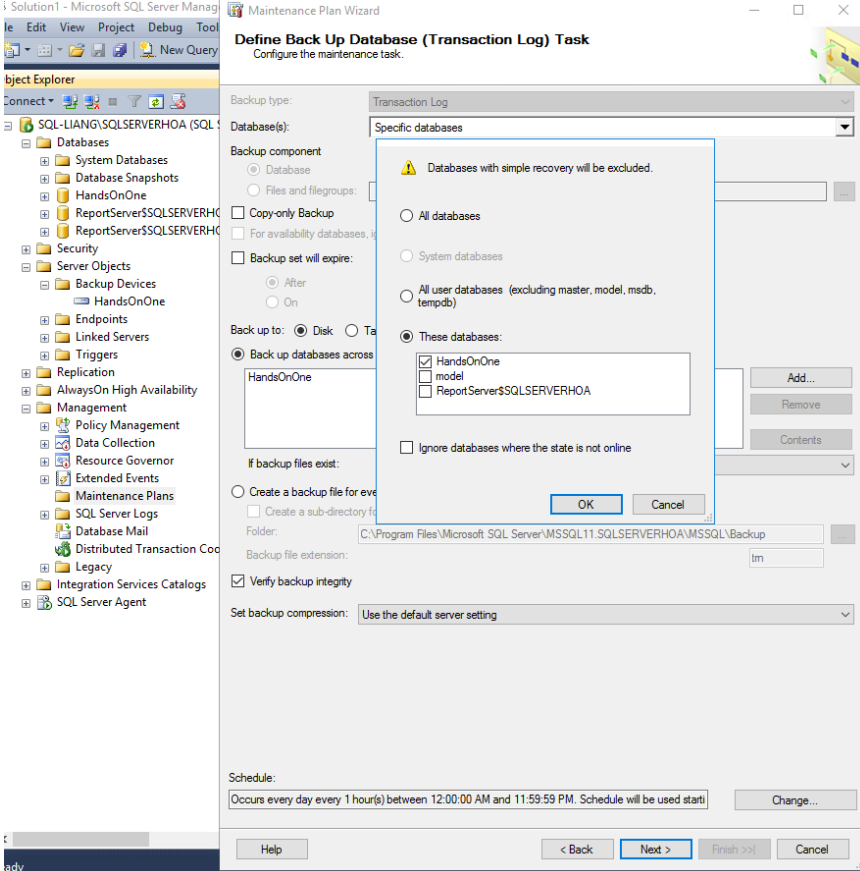
mailboxesgroupsresourcescontactssharedmigration

DISPLAY NAME	MAILBOX TYPE	EMAIL ADDRESS
WatermanMarc	User	Marc.Waterman@Ma.Local
WallsKyle	User	Kyle.Walls@Ma.Local
WallsJordan	User	Jordan.Walls@Ma.Local
WallsBen	User	Ben.Walls@Ma.Local
VonnRobert	User	Robert.Vonn@Ma.Local
VenusKathleen	User	Kathleen.Venus@Ma.Local
VedaliaHeather	User	Heather.Vedalia@Ma.Local
UranusJennifer	User	Jennifer.Uranus@Ma.Local
ToogoodShawn	User	Shawn.Toogood@Ma.Local
ToogoodHeather	User	Heather.Toogood@Ma.Local
ToogoodBrett	User	Brett.Toogood@Ma.Local
Tom Ford	User	Tom.Ford@Ma.Local
TheriaultMartine	User	Martine.Theriault@Ma.Local
ThebeauSerge	User	Serge.Thebeau@Ma.Local
ThebeauNicholas	User	Nicholas.Thebeau@Ma.Local
ThebeauNathalie	User	Nathalie.Thebeau@Ma.Local

SQL Server Tables and Backup Management



ID	Movie Title	Studio	Year	Movie Length ...
1	Krampus	Universal	2015	98
2	Arthur Christmas	Sony	2011	97
3	The Preachers Wife	Disney	1996	123
4	Scrooged	Paramount	1988	101
6	Jingle All the Way	Fox	1996	89
7	National Lampoons Christmas Vacation	Warner Bros	1989	97
8	Fred Claus	Warner Bros	2007	116
9	Christmas with the Kranks	Sony	2004	99
11	Tim Burtons The Nightmare Before Christmas	Disney	1993	76
12	A Christmas Carol	Disney	2009	96
13	The Santa Clause	Disney	1994	97
14	Elf	New Line	2003	97
15	The Polar Express	New Line	2004	100
16	How the Grinch Stole Christmas	Universal	2000	85
17	Home Alone	Fox	1990	103
18	NULL	NULL	NULL	NULL



Maintenance Plan Wizard
Define Back Up Database (Transaction Log) Task
Configure the maintenance task.

Backup type: Transaction Log

Database(s): Specific databases

Backup component: ☒ Database

☐ Files and filegroups:

☐ Copy-only Backup

☐ For availability databases, the backup set will expire:

Back up to: ☒ Disk ☐ Tape

☒ Back up databases across:

HandsOnOne

If backup files exist:

☐ Create a backup file for every backup

Folder: C:\Program Files\Microsoft SQL Server\MSSQL11.SQLSERVERHOA\MSSQL\Backup

Backup file extension: .bak

☒ Verify backup integrity

Set backup compression: Use the default server setting

Schedule: Occurs every day every 1 hour(s) between 12:00:00 AM and 11:59:59 PM. Schedule will be used starting at 12:00:00 AM. Change...

Help < Back Next > Finish >> Cancel

Dialog Box:
Databases with simple recovery will be excluded.

☐ All databases

☐ System databases

☐ All user databases (excluding master, model, msdb, tempdb)

☒ These databases:

☒ HandsOnOne

☐ model

☐ ReportServer\$SQLSERVERHOA

☐ Ignore databases where the state is not online

OK Cancel

PowerShell Scripts Creating Users and Configuring a NIC

```
FirstScript.ps1* X IPSetScript.ps1*
6 $desc= read-host
7 Write-host Would you like to enable the user account - yes or no
8 $enable= read-host
9 If ($enable= "yes") {$en= 1}
10 Else {$en= 0}
11 Write-host Enter the user last name
12 $last= read-host
13 Write-host Enter the user first name
14 $first= read-host
15 Write-host Enter the user password
16 $pass= read-host
17 Write-host Which department is the user in
18 $dept= read-host
19 Write-host What is the user job title
20 $title= read-host
21 New-aduser $un -path "ou=$ou,dc=Liang,dc=dc" -surname $last -givenname $first -accountpassword (convertto-securest

Enter the ou to create the user in
Advertising
Enter a description
PowerShellUser
Would you like to enable the user account - yes or no
yes
Enter the user last name
Power
Enter the user first name
Shell
Enter the user password
Password01
Which department is the user in
Networking
What is the user job title
Student
PS C:\Users\Administrator\Documents>
```

```
FirstScript.ps1* IPSetScript.ps1 X
1 write-host Please enter a valid IP address
2 $ip= read-host
3 Write-Host Please enter an interface name
4 $int= Read-Host
5 Write-Host Please enter your default gateway
6 $dg= Read-Host
7 write-host Please enter a subnet mask
8 $sm= read-host
9 write-host Please enter an interface for dns server
10 $dnsint= Read-Host
11 Write-Host Please enter an ip address for the dns server
12 $dnsip= Read-Host
13 write-host new-netipaddress $ip -interfacealias $int -DefaultGateway $gd -PrefixLength $sm
14 write-host Set-DnsClientServerAddress -InterfaceAlias $dnsint -ServerAddresses $dnsip

PS C:\Users\Administrator\Documents> C:\Users\Administrator\Documents\IPSetScript.ps1
Please enter a valid IP address
192.168.0.2
Please enter an interface name
vEthernet
Please enter your default gateway
192.168.0.1
Please enter a subnet mask
255.255.255.0
Please enter an interface for dns server
vEthernet
Please enter an ip address for the dns server
127.0.0.1
new-netipaddress 192.168.0.2 -interfacealias vEthernet -DefaultGateway -PrefixLength 255.255.255.0
Set-DnsClientServerAddress -InterfaceAlias vEthernet -ServerAddresses 127.0.0.1
PS C:\Users\Administrator\Documents> |
```

VMware Virtual VM Environment Management

vm vSphere Client

2019Second

Summary Monitor Configure Permissions Datastores Networks

Guest OS: Microsoft Windows Server 2016 (64-bit)
Compatibility: ESXi 6.5 and later (VM version 13)
VMware Tools: Running, version:10341 (Current)
More info
DNS Name: Srv1-Liang.Liang.Local
IP Addresses: 10.157.121.199
View all 2 IP addresses
Host: nbcc-ac-esx02.cc.loc

Powered On

Launch Web Console
Launch Remote Console

CPU USAGE
179 MHz
MEMORY USAGE
163 MB
STORAGE USAGE
42.06 GB

VM Hardware

- CPU: 4 CPU(s)
- Memory: 16 GB, 0.16 GB memory active
- Hard disk 1: 40 GB

Notes

Custom Attributes

Recent Tasks

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion Time	Server
Set console window screen resolution	2019Second	Completed	CC:5031691	116 ms	02/14/2020, 10:27:08 AM	02/14/2020, 10:27:09 AM	nbcc-ac-vcsa.cc.loc
Set console window screen resolution	2019Second	Completed	CC:5031691	41 ms	02/14/2020, 10:27:07 AM	02/14/2020, 10:27:08 AM	nbcc-ac-vcsa.cc.loc

Apply Storage DRS

VMware Workstation

File Edit View VM Tabs Help

Library

Type here to search

- My Computer
- Shared VMs
 - nbcc-ac-vcsa.cc.loc (VMs)
 - NBCC Academic Computer Center
 - Moncton Templates
 - Moncton_Lab_12 (Liang)
 - 2016Exchange
 - 2019First
 - 2019Second
 - Exchange Server Two
 - Unattended
 - Win 10 Deploy
 - Windows Server 2019 One
 - Windows Server 2019 Two
 - Windows10
 - NBCC Moncton Campus
 - Happy Sunshine Corporation
 - FF-DC1
 - FF-SRV1
 - FF-WEB1
 - FF-WEB2
 - HS-CA
 - HS-DC1
 - SUSE-Brisbane
 - Moncton_Lab_12 (Liang)
 - LinuxClass
 - Mageia
 - Win10Moncton
 - Windows Server 2019 Moncton One
 - Windows Server 2019 Moncton Two
 - WinServer2019Extra
 - WinServer2019Fourth
 - WinServer2019Third
 - Templates

nbcc-ac-vcsa.cc.loc (VMs)

Create a new virtual machine

CPU Usage: 108.67 GHz
Capacity: 341.85 GHz
Memory Usage: 3.5 TB
Capacity: 5.2 TB

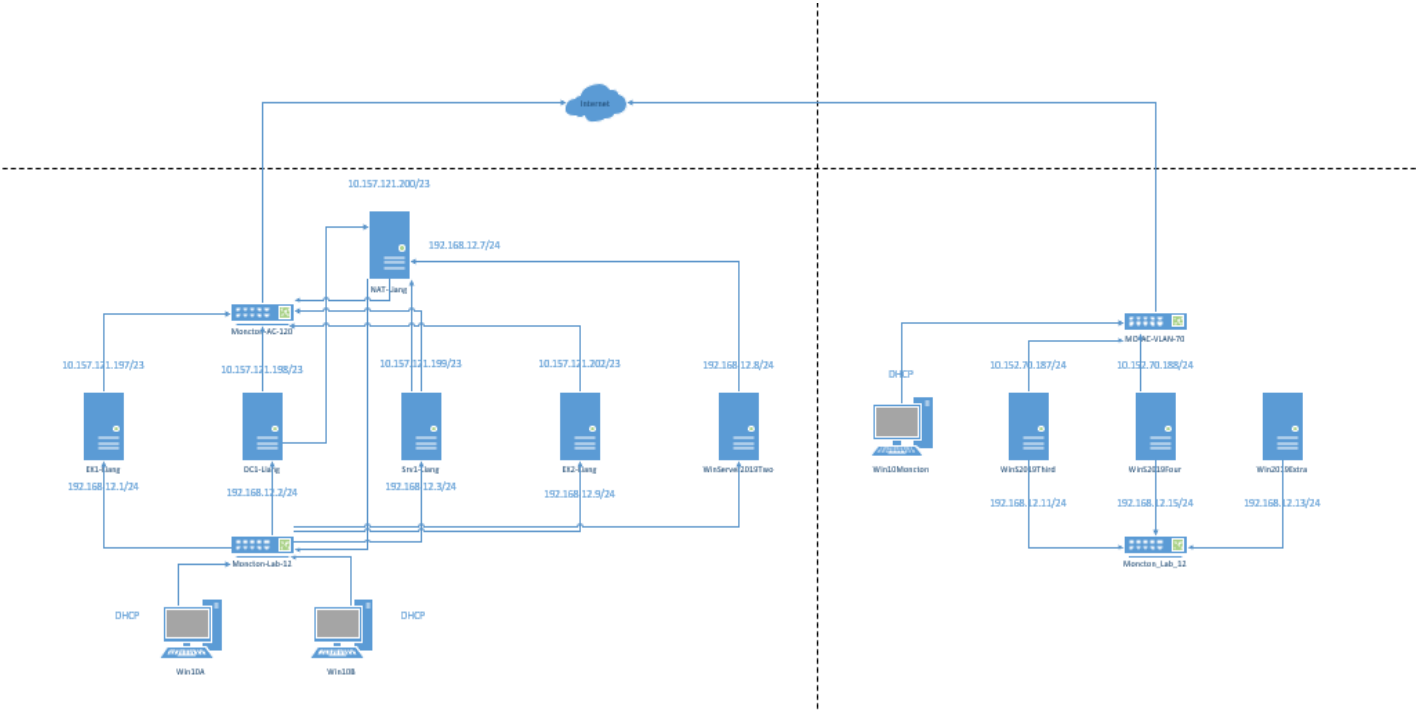
Virtual Machines

Name	Status
NBCC Academic Computer Center	
NBCC Moncton Campus	

Tasks

Name	Target	Status	Initiated by	Start Time
------	--------	--------	--------------	------------

Network Topology Infrastructure and Documentation Management



OneNote | OneDrive Documents

NetworkDocumentationProject

File Home Insert Draw View Help Open in app Tell me what you want to do

Calibri Light 20 B I U A Styles Tags abc

NetworkDocumentationProject

Server	DC1-Liang
Physical Topology	Srv1-Liang
Active Directory Layout	EX1-Liang
	EX2-Liang
	NAT-Liang
	WinServer2019Two
	Windows10Deploy
	WinS2019Third
	WinS2019Four
	WinS2019Extra
+ Section	+ Page

DC1-Liang

Tuesday, January 7, 2020 2:46 PM

Server Configuration

- **Server's Computer Name**
 - DC1-Liang
- **Domain or Workgroup Name**
 - Liang.Local
- **Ip Configuration**
 - Ethernet 0
 - IP and Subnet Mask: 10.157.121.198/23
 - Default gateway: 10.157.120.1
 - Ethernet 1
 - IP and Subnet Mask: 192.168.12.2/24
 - Default Gateway: 192.168.12.7
- **Resources**
 - CPU: 4 sockets with 1 core each
 - RAM: 16 GB
 - Network
 - Network Adapter 1: NBCC-AC-Moncton-120
 - Network Adapter 2: Moncton_Lab_12
 - Storage
 - 4 Hard Drives with 40 GB each
 - Thin Provisioning (all disks)
- **OS**
 - Version 1809
 - Edition: Windows Server 2019 Datacenter Evaluation
- **Roles**
 - AD Domain Services
 - Liang.Local (DC)
 - Active Directory Certificate Services

Cisco Scripts For Configuring Routers and Switches

```

en
Config t
No ip domain-lookup
Enable secret class
Line con 0
Password cisco
Login
Exit
Line vty 0 15
Password cisco
Login
Exit
Service password-encryption
Banner motd - Leave this configuration if you are unauthorized, this access is prohibited -
Int S0/0/0
Ip address 172.16.254.2 255.255.255.252
Clock rate 128000
Description "This is a WAN interface between BR1 and HQ"
No shut
Exit
Int S0/0/1
Ip address 172.16.254.9 255.255.255.252
Description "This is WAN interface between BR1 and BR2"
No shut
Exit
G0/0
Ip address 172.16.240.1 255.255.248.0
Description "This is subnet 172.16.240.0 for 2000 hosts LAN"
No shut
Exit
Int G0/1
Ip address 172.16.224.1 255.255.240.0
Description "This is subnet 172.16.224.0 for 4000 hosts LAN"
No shut
Exit
Exit
Copy run start

```

```

en
config t
hostname S1
interface vlan 1
ip address 192.168.1.2 255.255.255.0
no shutdown
exit
no ip domain-lookup
no ip http server
no ip http secure-server
enable algorithm-type scrypt secret cisco12345
line console 0
password ciscoconpass
exec-timeout 0 0
login
logging synchronous
exit
ip domain-name ccnasecurity.com
username admin privilege 15 algorithm-type scrypt secret cisco12345
crypto key generate rsa general-keys modulus 1024
ip ssh version 2
ip ssh time-out 90
ip ssh authentication-retries 2
line vty 0 4
privilege level 15
exec-timeout 0 0
login local
transport input ssh
exit
line vty 5 15
transport input none
exit
spanning-tree vlan 1 priority 0
interface f0/1
switchport mode trunk
switchport trunk native vlan 99
switchport nonegotiate
exit
interface f0/5
spanning-tree portfast
exit
interface f0/6
switchport mode access
spanning-tree portfast

```


Linux File Editing and Disk Management

```
student@localhost:~ — sudo vi /etc/fstab

#
# /etc/fstab
# Created by anaconda on Tue Jan 21 09:32:08 2020
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
/dev/mapper/fedora_localhost--live-root / ext4 defaults 1 1
UUID=92b0b489-0f56-4b77-9955-8ced62cbd246 /boot ext4 defaults 1 2
/dev/mapper/fedora_localhost--live-swap none swap defaults 0 0
/dev/Pool/DATA /media/volumes1 ext4 defaults 1 3
/dev/Pool/Documents /media/volumes2 ntfs defaults 1 4
/dev/Pool/Software /media/volumes vfat defaults 1 5
/dev/sde1 /newpart ext4 defaults,usrquota,grpquota 1 6
/dev/sde2 /newpart2 ext4 defaults,usrquota,grpquota 1 7
~
~
~
~
"/etc/fstab" 19L, 877C
```

```
[student@localhost ~]$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda                                 8:0      0   40G  0 disk
├─sda1                             8:1      0    1G  0 part /boot
└─sda2                             8:2      0   39G  0 part
   ├─fedora_localhost--live-root 253:0    0   35G  0 lvm  /
   └─fedora_localhost--live-swap 253:1    0    4G  0 lvm  [SWAP]
sdb                                 8:16     0   16G  0 disk
├─sdb1                             8:17     0   16G  0 part
│   ├─Pool-DATA                   253:2    0    2G  0 lvm  /media/volumes1
│   ├─Pool-Documents              253:3    0    3G  0 lvm  /media/volumes2
│   └─Pool-Software               253:4    0    1G  0 lvm  /media/volumes
sdc                                 8:32     0   16G  0 disk
└─sdc1                             8:33     0   16G  0 part
sdd                                 8:48     0   16G  0 disk
└─sdd1                             8:49     0   16G  0 part
sde                                 8:64     0   16G  0 disk
├─sde1                             8:65     0    5G  0 part /newpart
└─sde2                             8:66     0   1.5G  0 part /newpart2
sr0                                11:0     1 1024M  0 rom
[student@localhost ~]$
```

