

Technical Project

Phase 1 Task 2

Group : 1

Chamber of Secrets

Vtp Status



Floor1-Acc1

```
Floor1-Acc1#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.00b5.8000
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 13
Configuration Revision        : 0
MD5 digest                   : 0x57 0xCD 0x40 0x65 0x63 0x59 0x47 0xBD
                                0x56 0x9D 0x4A 0x3E 0xA5 0x69 0x35 0xBC

Floor1-Acc1#
```

Floor2-ACC1

```
Floor2-Acc1#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.00a9.8000
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 12
Configuration Revision        : 0
MD5 digest                   : 0x57 0xCD 0x40 0x65 0x63 0x59 0x47 0xBD
                                0x56 0x9D 0x4A 0x3E 0xA5 0x69 0x35 0xBC

Floor2-Acc1#
```

Floor3-Acc

```
Floor3-Acc1#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.0057.8000
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 12
Configuration Revision        : 0
MD5 digest                   : 0x57 0xCD 0x40 0x65 0x63 0x59 0x47 0xBD
                                0x56 0x9D 0x4A 0x3E 0xA5 0x69 0x35 0xBC

Floor3-Acc1#
```

SpringCore1

```
Springcore1#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.0012.8000
Configuration last modified by 10.16.0.2 at 9-23-25 21:15:20

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 24
Configuration Revision        : 0
MD5 digest                   : 0xA0 0xA4 0x19 0x01 0x6B 0x65 0x65 0x9F
                               0xFD 0x3F 0xDE 0x99 0xD3 0x81 0x04 0x70

Springcore1#
```

SpringCore2

```
Springcore2#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.0064.8000
Configuration last modified by 10.16.0.3 at 9-23-25 21:15:48

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 24
Configuration Revision        : 0
MD5 digest                   : 0x24 0x04 0x48 0xE0 0xCE 0x5A 0x46 0x60
                                0x4A 0x4B 0x6F 0xCF 0x1F 0xB2 0x88 0xB1

Springcore2#
```

DataCentre

```
Datacentre#show vtp status
VTP Version capable          : 1 to 3
VTP version running          : 1
VTP Domain Name              :
VTP Pruning Mode             : Disabled
VTP Traps Generation         : Disabled
Device ID                    : 5254.00b1.8000
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00

Feature VLAN:
-----
VTP Operating Mode           : Transparent
Maximum VLANs supported locally : 1005
Number of existing VLANs      : 8
Configuration Revision        : 0
MD5 digest                   : 0x57 0xCD 0x40 0x65 0x63 0x59 0x47 0xBD
                                0x56 0x9D 0x4A 0x3E 0xA5 0x69 0x35 0xBC

Datacentre#
```

Vlan



Floor1-Acc1

```
Floor1-Acc1#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	
110	PharmaPlus	active	Gi0/2
120	DynaLabs	active	Gi0/3
130	MN-Reception	active	Gi1/0, Gi1/1
140	MN-Security	active	Gi1/2, Gi1/3
150	MN-Facilities	active	Gi2/0
160	MN-Visitor1	active	Gi2/1, Gi2/2
716	MN-IT	active	Gi2/3
999	Native_vlan	active	
1002	fddi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default	act/unsup	

```
Floor1-Acc1#
```

Floor2-Acc1

```
Floor2-Acc1#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Gi2/3
210	Physicians	active	Gi0/2
220	ChildrensHealth	active	Gi0/3
230	CoolidgeLabs	active	Gi1/0, Gi1/1
240	MassageSpa	active	Gi1/2, Gi1/3
250	MN-Visitor2	active	Gi2/0
716	MN-IT	active	Gi2/1, Gi2/2
999	Native_vlan	active	
1002	fddi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default	act/unsup	

```
Floor2-Acc1#
```

Floor3-Acc1

```
Floor3-Acc1#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Gi2/3
310	Allergist	active	Gi0/2
320	Physiotherapy	active	Gi0/3
330	DentalOffice	active	Gi1/0, Gi1/1
340	ENT	active	Gi1/2, Gi1/3
350	MN-Visitor3	active	Gi2/0
716	MN-IT	active	Gi2/1, Gi2/2
999	Native_vlan	active	
1002	fddi-default	act/unsup	
1003	token-ring-default	act/unsup	
1004	fddinet-default	act/unsup	
1005	trnet-default	act/unsup	

Datacentre

```
Datacentre#show vlan brief

VLAN Name                                Status    Ports
--- -----
1   default                               active
716  MN-IT                                 active    Gi1/3
916  MN-DataCenter                         active    Gi1/0, Gi1/1, Gi1/2
999  Native_vlan                          active
1002 fddi-default                         act/unsup
1003 token-ring-default                   act/unsup
1004 fddinet-default                      act/unsup
1005 trnet-default                        act/unsup
Datacentre#
```

SpringCore1

```
Springcore1#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	
110	VLAN0110	active	
120	VLAN0120	active	
130	VLAN0130	active	
140	VLAN0140	active	
150	VLAN0150	active	
160	VLAN0160	active	
210	VLAN0210	active	
220	VLAN0220	active	
230	VLAN0230	active	
240	VLAN0240	active	
250	VLAN0250	active	
310	VLAN0310	active	
320	VLAN0320	active	
330	VLAN0330	active	
340	VLAN0340	active	
350	VLAN0350	active	
716	VLAN0716	active	
916	VLAN0916	active	
999	Native_vlan	active	

SrpingCore2

```
Springcore2#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	
110	VLAN0110	active	
120	VLAN0120	active	
130	VLAN0130	active	
140	VLAN0140	active	
150	VLAN0150	active	
160	VLAN0160	active	
210	VLAN0210	active	
220	VLAN0220	active	
230	VLAN0230	active	
240	VLAN0240	active	
250	VLAN0250	active	
310	VLAN0310	active	
320	VLAN0320	active	
330	VLAN0330	active	
340	VLAN0340	active	
350	VLAN0350	active	
716	VLAN0716	active	
916	VLAN0916	active	
999	Native_vlan	active	

Trunk Interfaces

Floor1-Acc1

```
Floor1-Acc1#show int trunk

Port          Mode           Encapsulation  Status        Native vlan
Gi0/0         on            802.1q         trunking    999
Gi0/1         on            802.1q         trunking    999

Port          Vlans allowed on trunk
Gi0/0         110,120,130,140,150,160,716
Gi0/1         110,120,130,140,150,160,716

Port          Vlans allowed and active in management domain
Gi0/0         110,120,130,140,150,160,716
Gi0/1         110,120,130,140,150,160,716

Port          Vlans in spanning tree forwarding state and not pruned
Gi0/0         110,120,130,140,150,160,716
Gi0/1         110,120,130,140,150,160,716
Floor1-Acc1# ]
```

Floor2-Acc1

```
0x56 0x9d 0x4a 0x5e 0xa5 0x69 0x55 0  
Floor2-Acc1#show int trunk  
  
Port      Mode          Encapsulation  Status      Native vlan  
Gi0/0     on           802.1q        trunking   999  
Gi0/1     on           802.1q        trunking   999  
  
Port      Vlans allowed on trunk  
Gi0/0     210,220,230,240,250,716  
Gi0/1     210,220,230,240,250,716  
  
Port      Vlans allowed and active in management domain  
Gi0/0     210,220,230,240,250,716  
Gi0/1     210,220,230,240,250,716  
  
Port      Vlans in spanning tree forwarding state and not pruned  
Gi0/0     210,220,230,240,250,716  
Gi0/1     210,220,230,240,250,716  
Floor2-Acc1#
```

Floor3-Acc1

```
Floor3-Acc1#show int trunk

  Port        Mode            Encapsulation  Status        Native vlan
  Gi0/0       on             802.1q         trunking    999
  Gi0/1       on             802.1q         trunking    999

  Port        Vlans allowed on trunk
  Gi0/0       310,320,330,340,350,716
  Gi0/1       310,320,330,340,350,716

  Port        Vlans allowed and active in management domain
  Gi0/0       310,320,330,340,350,716
  Gi0/1       310,320,330,340,350,716

  Port        Vlans in spanning tree forwarding state and not pruned
  Gi0/0       310,320,330,340,350,716
  Gi0/1       310,320,330,340,350,716
Floor3-Acc1#
```

Springcore1

```
Springcore1#show int trunk

  Port        Mode      Encapsulation  Status      Native vlan
  Gi0/0       on        802.1q         trunking   999
  Gi0/1       on        802.1q         trunking   999
  Gi0/2       on        802.1q         trunking   999
  Po1         on        802.1q         trunking   999

  Port        Vlans allowed on trunk
  Gi0/0       110,120,130,140,150,160,716
  Gi0/1       210,220,230,240,250,716
  Gi0/2       310,320,330,340,350,716
  Po1         716,916,999

  Port        Vlans allowed and active in management domain
  Gi0/0       110,120,130,140,150,160,716
  Gi0/1       210,220,230,240,250,716
  Gi0/2       310,320,330,340,350,716
  Po1         716,916,999

  Port        Vlans in spanning tree forwarding state and not pruned
  Gi0/0       110,120,130,140,150,160
```

SpringCore2

```
Springcore2#show int trunk

Port      Mode          Encapsulation  Status      Native vlan
Gi0/0     on           802.1q         trunking   999
Gi0/1     on           802.1q         trunking   999
Gi0/2     on           802.1q         trunking   999
Po2       [ on          802.1q         trunking   999

Port      Vlans allowed on trunk
Gi0/0     110,120,130,140,150,160,716
Gi0/1     210,220,230,240,250,716
Gi0/2     310,320,330,340,350,716
Po2       716,916,999

Port      Vlans allowed and active in management domain
Gi0/0     110,120,130,140,150,160,716
Gi0/1     210,220,230,240,250,716
Gi0/2     310,320,330,340,350,716
Po2       716,916,999

Port      Vlans in spanning tree forwarding state and not pruned
Gi0/0     110,120,130,140,150,160,716
```

Etherchannel

DataCentre

```
Datacentre#show etherchannel summary
Flags:  D - down          P - bundled in port-channel
       I - stand-alone  S - suspended
       H - Hot-standby (LACP only)
       R - Layer3         S - Layer2
       U - in use         N - not in use, no aggregation
       f - failed to allocate aggregator

       M - not in use, minimum links not met
       m - not in use, port not aggregated due to minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

       A - formed by Auto LAG

Number of channel-groups in use: 2
Number of aggregators:          2

Group  Port-channel  Protocol    Ports
-----+-----+-----+
 1     Po1 (SU)      PAgP        Gi0/0 (P)   Gi0/1 (P)
 2     Po2 (SU)      PAgP        Gi0/2 (P)   Gi0/3 (P)

Datacentre#
```

SpringCore1

```
Springcore1#show etherchannel summary
Flags:  D - down          P - bundled in port-channel
       I - stand-alone  S - suspended
       H - Hot-standby (LACP only)
       R - Layer3         S - Layer2
       U - in use         N - not in use, no aggregation
       f - failed to allocate aggregator

       M - not in use, minimum links not met
       m - not in use, port not aggregated due to minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

       A - formed by Auto LAG

Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
-----+-----+-----+
 1     Po1 (SU)      PAgP        Gi0/3 (P)   Gi1/0 (P)

Springcore1#
```

SpringCore2

```
Springcore2#show etherchannel summary
Flags:  D - down          P - bundled in port-channel
       I - stand-alone  S - suspended
       H - Hot-standby (LACP only)
       R - Layer3         S - Layer2
       U - in use         N - not in use, no aggregation
       f - failed to allocate aggregator

       M - not in use, minimum links not met
       m - not in use, port not aggregated due to minimum links not met
       u - unsuitable for bundling
       w - waiting to be aggregated
       d - default port

       A - formed by Auto LAG

Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
-----+-----+-----+
2      Po2 (SU)      PAgP        Gi0/3 (P)    Gi1/0 (P)
                                         I
```

Spanning-Tree Protocol



Floor1-Acc1

```
Floor1-Acc1#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: none
Extended system ID           is enabled
Portfast Default             is disabled
Portfast Edge BPDU Guard Default  is disabled
Portfast Edge BPDU Filter Default  is disabled
Loopguard Default            is disabled
PVST Simulation Default      is enabled but inactive in rapid-pvst mode
Bridge Assurance              is enabled
EtherChannel misconfig guard  is enabled
Configured Pathcost method used is short
UplinkFast                   is disabled
BackboneFast                  is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----        -----
VLAN0110       0          0          0          3          3
VLAN0120       0          0          0          3          3
VLAN0130       0          0          0          4          4
VLAN0140       0          0          0          4          4
VLAN0150       0          0          0          3          3

Name          Blocking Listening Learning Forwarding STP Active
-----        -----
VLAN0160       0          0          0          4          4
VLAN0716       0          0          0          3          3
-----        -----
7 vlans        0          0          0          24         24
Floor1-Acc1#
```

Floor2-Acc1

```
Floor2-Acc1#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: VLAN0001
Extended system ID           is enabled
Portfast Default             is disabled
Portfast Edge BPDU Guard Default  is disabled
Portfast Edge BPDU Filter Default  is disabled
Loopguard Default            is disabled
PVST Simulation Default      is enabled but inactive in rapid-pvst mode
Bridge Assurance              is enabled
EtherChannel misconfig guard  is enabled
Configured Pathcost method used is short
UplinkFast                   is disabled
BackboneFast                  is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----        -----   -----   -----   -----   -----
VLAN0001       0         0         0         1         1
VLAN0210       0         0         0         3         3
VLAN0220       0         0         0         3         3
VLAN0230       0         0         0         4         4
VLAN0240       0         0         0         4         4

Name          Blocking Listening Learning Forwarding STP Active
-----        -----   -----   -----   -----   -----
VLAN0250       0         0         0         3         3
VLAN0716       0         0         0         4         4
-----        -----   -----   -----   -----   -----
7 vlans        0         0         0         22        22
Floor2-Acc1#
```

Floor3-Acc1

```
Floor3-Acc1#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: VLAN0001
Extended system ID           is enabled
Portfast Default             is disabled
Portfast Edge BPDU Guard Default  is disabled
Portfast Edge BPDU Filter Default  is disabled
Loopguard Default            is disabled
PVST Simulation Default      is enabled but inactive in rapid-pvst mode
Bridge Assurance              is enabled
EtherChannel misconfig guard  is enabled
Configured Pathcost method used is short
UplinkFast                   is disabled
BackboneFast                  is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----        -----
VLAN0001       0          0          0          1          1
VLAN0310       0          0          0          3          3
VLAN0320       0          0          0          3          3
VLAN0330       0          0          0          4          4
VLAN0340       0          0          0          4          4

Name          Blocking Listening Learning Forwarding STP Active
-----        -----
VLAN0350       0          0          0          3          3
VLAN0716       0          0          0          4          4
-----        -----
7 vlans        0          0          0          22         22
Floor3-Acc1#
```

Datacentre

```
Datacentre#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: none
Extended system ID           is enabled
Portfast Default             is disabled
Portfast Edge BPDU Guard Default is disabled
Portfast Edge BPDU Filter Default is disabled
Loopguard Default            is disabled
PVST Simulation Default      is enabled but inactive in rapid-pvst mode
Bridge Assurance              is enabled
EtherChannel misconfig guard is enabled
Configured Pathcost method used is short
UplinkFast      [             is disabled
BackboneFast                is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----|-----|-----|-----|-----|-----|-----|
VLAN0716       0        0        0        3        3
VLAN0916       0        0        0        5        5
VLAN0999       0        0        0        2        2
-----|-----|-----|-----|-----|-----|-----|
3 vlans        0        0        0        10       10
Datacentre#
```

SpringCore1

```

Springcore1#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: VLAN0110, VLAN0120, VLAN0130, VLAN0140, VLAN0150, VLAN0160
  VLAN0210, VLAN0220, VLAN0230, VLAN0240, VLAN0250, VLAN0999
Extended system ID          is enabled
Portfast Default            is disabled
Portfast Edge BPDU Guard Default  is disabled
Portfast Edge BPDU Filter Default  is disabled
Loopguard Default           is disabled
PVST Simulation Default     is enabled but inactive in rapid-pvst mode
Bridge Assurance             is enabled
EtherChannel misconfig guard  is enabled
Configured Pathcost method used is short
UplinkFast                  is disabled
BackboneFast                 is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----|-----|-----|-----|-----|-----|-----|
VLAN0110      0       0       0       1       1
VLAN0120      0       0       0       1       1
VLAN0130      0       0       0       1       1
VLAN0140      0       0       0       1       1

Name          Blocking Listening Learning Forwarding STP Active
-----|-----|-----|-----|-----|-----|-----|
VLAN0150      1       0       0       1       1

```

Name	Blocking	Listening	Learning	Forwarding	STP	Active
VLAN0150	0	0	0	1	1	1
VLAN0160	0	0	0	1	1	1
VLAN0210	0	0	0	1	1	1
VLAN0220	0	0	0	1	1	1
VLAN0230	0	0	0	1	1	1
VLAN0240	0	0	0	1	1	1
VLAN0250	0	0	0	1	1	1
VLAN0310	0	1	0	0	1	1
VLAN0320	0	0	0	1	1	1
VLAN0330	0	0	0	1	1	1
VLAN0340	0	0	0	1	1	1
VLAN0350	0	0	0	1	1	1
VLAN0716	3	0	0	1	4	
VLAN0916	0	0	0	1	1	
VLAN0999	0	0	0	1	1	
19 vlans	3	0	0	19	22	

Springcore1#

SpringCore2

```
Springcore2#show vlan summary
Number of existing VLANs          : 24
Number of existing VTP VLANs      : 24
Number of existing extended VLANs : 0

Springcore2#show spanning-tree summary
Switch is in rapid-pvst mode
Root bridge for: VLAN0310, VLAN0320, VLAN0330, VLAN0340, VLAN0350, VLAN0716
  VLAN0916
Extended system ID                is enabled
Portfast Default                  is disabled
Portfast Edge BPDU Guard Default  is disabled
Portfast Edge BPDU Filter Default  is disabled
Loopguard Default                is disabled
PVST Simulation Default          is enabled but inactive in rapid-pvst mode
Bridge Assurance                 is enabled
EtherChannel misconfig guard     is enabled
Configured Pathcost method used is short
UplinkFast                        is disabled
BackboneFast                       is disabled

Name          Blocking Listening Learning Forwarding STP Active
-----|-----|-----|-----|-----|-----|-----|
VLAN0110      0        0        0        1        1
VLAN0120      0        0        0        1        1
VLAN0130      0        0        0        1        1
```

Name	Blocking	Listening	Learning	Forwarding	STP	Active
VLAN0110	0	0	0	1	1	1
VLAN0120	0	0	0	1	1	1
VLAN0130	0	0	0	1	1	1
VLAN0140	0	0	0	1	1	1
Name	Blocking	Listening	Learning	Forwarding	STP	Active
VLAN0150	0	0	0	1	1	1
VLAN0160	0	0	0	1	1	1
VLAN0210	0	0	0	1	1	1
VLAN0220	0	0	0	1	1	1
VLAN0230	0	0	0	1	1	1
VLAN0240	0	0	0	1	1	1
VLAN0250	0	0	0	1	1	1
VLAN0310	0	0	0	1	1	1
VLAN0320	0	0	0	1	1	1
VLAN0330	0	0	0	1	1	1
VLAN0340	0	0	0	1	1	1
VLAN0350	0	0	0	1	1	1
VLAN0716	0	0	0	4	4	4
VLAN0916	0	0	0	1	1	1
VLAN0999	0	0	0	1	1	1
19 vlans	0	0	0	22	22	22

```
Springcore2#
```

OSPF



SpringCore1

```
Springcore1#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
3.3.3.3	0	FULL/ -	00:00:36	192.168.60.1	GigabitEthernet1/3
4.4.4.4	0	FULL/ -	00:00:38	192.168.60.13	GigabitEthernet1/2
2.2.2.2	1	FULL/ -	00:00:35	192.168.60.22	GigabitEthernet1/1

```
Springcore1#
```

SpringCore2

```
Springcore2#show ip ospf neighbor

Neighbor ID      Pri   State            Dead Time      Address          Interface
4.4.4.4           0     FULL/ -          00:00:31      192.168.60.10    GigabitEthernet1/3
3.3.3.3           0     FULL/ -          00:00:38      192.168.60.5     GigabitEthernet1/2
1.1.1.1           0     FULL/ -          00:00:36      192.168.60.21    GigabitEthernet1/1
Springcore2#
```

SpringR1

```
SpringR1#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
4.4.4.4	0	FULL/ -	00:00:37	192.168.60.18	GigabitEthernet0/2
2.2.2.2	0	FULL/ -	00:00:30	192.168.60.6	GigabitEthernet0/1
1.1.1.1	0	FULL/ -	00:00:35	192.168.60.2	GigabitEthernet0/0

```
SpringR1#
```

SpringR2

```
SpringR2#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
3.3.3.3	+	0 FULL/ -	00:00:32	192.168.60.17	GigabitEthernet0/2
1.1.1.1	+	0 FULL/ -	00:00:31	192.168.60.14	GigabitEthernet0/1
2.2.2.2	0	FULL/ -	00:00:36	192.168.60.9	GigabitEthernet0/0

```
SpringR2#
```

IP Routes



SpringCore1

```
Springcore1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2
      i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
      ia - IS-IS inter area, * - candidate default, U - per-user static route
      o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
      a - application route
      + - replicated route, % - next hop override, p - overrides from PfR
      Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 20 subnets, 2 masks
C       10.16.0.0/24 is directly connected, Vlan110
L       10.16.0.2/32 is directly connected, Vlan110
C       10.16.1.0/24 is directly connected, Vlan120
L       10.16.1.2/32 is directly connected, Vlan120
C       10.16.2.0/24 is directly connected, Vlan210
L       10.16.2.2/32 is directly connected, Vlan210
C       10.16.3.0/24 is directly connected, Vlan220
L       10.16.3.2/32 is directly connected, Vlan220
C       10.16.4.0/24 is directly connected, Vlan230
L       10.16.4.2/32 is directly connected, Vlan230
C       10.16.5.0/24 is directly connected, Vlan240
L       10.16.5.2/32 is directly connected, Vlan240
C       172.21.0.0/24 is directly connected, Vlan916
L       172.21.0.2/32 is directly connected, Vlan916
C       172.21.1.0/24 is directly connected, Vlan130
L       172.21.1.2/32 is directly connected, Vlan130
C       172.21.2.0/24 is directly connected, Vlan140
L       172.21.2.2/32 is directly connected, Vlan140
C       172.21.3.0/24 is directly connected, Vlan150
L       172.21.3.2/32 is directly connected, Vlan150
C       172.21.4.0/24 is directly connected, Vlan716
L       172.21.4.2/32 is directly connected, Vlan716
C       172.21.5.0/24 is directly connected, Vlan160
L       172.21.5.2/32 is directly connected, Vlan160
C       172.21.6.0/24 is directly connected, Vlan250
L       172.21.6.2/32 is directly connected, Vlan250
C       172.21.7.0/24 is directly connected, Vlan350
L       172.21.7.2/32 is directly connected, Vlan350
C       192.168.60.0/24 is variably subnetted, 9 subnets, 2 masks
C           192.168.60.0/30 is directly connected, GigabitEthernet1/3
L           192.168.60.2/32 is directly connected, GigabitEthernet1/3
O           192.168.60.4/30 [110/2] via 192.168.60.22, 1d20h, GigabitEthernet1/1
                  [110/2] via 192.168.60.1, 1d20h, GigabitEthernet1/3
O           192.168.60.8/30 [110/2] via 192.168.60.22, 1d20h, GigabitEthernet1/1
                  [110/2] via 192.168.60.13, 1d20h, GigabitEthernet1/2
C           192.168.60.12/30 is directly connected, GigabitEthernet1/2
L           192.168.60.14/32 is directly connected, GigabitEthernet1/2
O           192.168.60.16/30 [110/2] via 192.168.60.13, 1d20h, GigabitEthernet1/2
                  [110/2] via 192.168.60.1, 1d20h, GigabitEthernet1/3
C           192.168.60.20/30 is directly connected, GigabitEthernet1/1
L           192.168.60.21/32 is directly connected, GigabitEthernet1/1
Springcore1#
```

SpringCore2

```
Springcore2#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2
      i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
      ia - IS-IS inter area, * - candidate default, U - per-user static route
      o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
      a - application route
      + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 20 subnets, 2 masks
```

```
      C    10.16.0.0/24 is directly connected, Vlan110
      L    10.16.0.3/32 is directly connected, Vlan110
      C    10.16.1.0/24 is directly connected, Vlan120
      L    10.16.1.3/32 is directly connected, Vlan120
      C    10.16.2.0/24 is directly connected, Vlan210
      L    10.16.2.3/32 is directly connected, Vlan210
      C    10.16.3.0/24 is directly connected, Vlan220
      L    10.16.3.3/32 is directly connected, Vlan220
      C    10.16.4.0/24 is directly connected, Vlan230
      L    10.16.4.3/32 is directly connected, Vlan230
      C    10.16.5.0/24 is directly connected, Vlan240
      L    10.16.5.3/32 is directly connected, Vlan240
```

```
      C    172.21.0.0/24 is directly connected, Vlan916
      L    172.21.0.3/32 is directly connected, Vlan916
      C    172.21.1.0/24 is directly connected, Vlan130
      L    172.21.1.3/32 is directly connected, Vlan130
      C    172.21.2.0/24 is directly connected, Vlan140
      L    172.21.2.3/32 is directly connected, Vlan140
      C    172.21.3.0/24 is directly connected, Vlan150
      L    172.21.3.3/32 is directly connected, Vlan150
      C    172.21.4.0/24 is directly connected, Vlan716
      L    172.21.4.3/32 is directly connected, Vlan716
      C    172.21.5.0/24 is directly connected, Vlan160
      L    172.21.5.3/32 is directly connected, Vlan160
      C    172.21.6.0/24 is directly connected, Vlan250
      L    172.21.6.3/32 is directly connected, Vlan250
      C    172.21.7.0/24 is directly connected, Vlan350
      L    172.21.7.3/32 is directly connected, Vlan350
      C    192.168.60.0/24 is variably subnetted, 9 subnets, 2 masks
      O    192.168.60.0/30 [110/2] via 192.168.60.21, 1d20h, GigabitEthernet1/1
           [110/2] via 192.168.60.5, 1d20h, GigabitEthernet1/2
      C    192.168.60.4/30 is directly connected, GigabitEthernet1/2
      L    192.168.60.6/32 is directly connected, GigabitEthernet1/2
      C    192.168.60.8/30 is directly connected, GigabitEthernet1/3
      L    192.168.60.9/32 is directly connected, GigabitEthernet1/3
      O    192.168.60.12/30 [110/2] via 192.168.60.21, 1d20h, GigabitEthernet1/1
           [110/2] via 192.168.60.10, 1d20h, GigabitEthernet1/3
      O    192.168.60.16/30 [110/2] via 192.168.60.10, 1d20h, GigabitEthernet1/3
           [110/2] via 192.168.60.5, 1d20h, GigabitEthernet1/2
      C    192.168.60.20/30 is directly connected, GigabitEthernet1/1
      L    192.168.60.22/32 is directly connected, GigabitEthernet1/1
```

```
Springcore2#
```

SpringR1

```
SpringR1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2
      i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
      ia - IS-IS inter area, * - candidate default, U - per-user static route
      o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
      a - application route
      + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

          10.0.0.0/24 is subnetted, 10 subnets
O    10.16.0.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.1.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.2.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.3.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.4.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.5.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0

O    10.16.5.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.6.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.7.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.8.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    10.16.9.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0

172.21.0.0/24 is subnetted, 8 subnets
O    172.21.0.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d01h, GigabitEthernet0/0
O    172.21.1.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    172.21.2.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    172.21.3.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    172.21.4.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d01h, GigabitEthernet0/0
O    172.21.5.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    172.21.6.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d02h, GigabitEthernet0/0
O    172.21.7.0 [110/2] via 192.168.60.6, 1d01h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d01h, GigabitEthernet0/0

192.168.60.0/24 is variably subnetted, 9 subnets, 2 masks
C    192.168.60.0/30 is directly connected, GigabitEthernet0/0
L    192.168.60.1/32 is directly connected, GigabitEthernet0/0

C    192.168.60.4/30 is directly connected, GigabitEthernet0/1
C    192.168.60.5/32 is directly connected, GigabitEthernet0/1
O    192.168.60.8/30 [110/2] via 192.168.60.18, 1d23h, GigabitEthernet0/2
      [110/2] via 192.168.60.6, 1d21h, GigabitEthernet0/1
O    192.168.60.12/30 [110/2] via 192.168.60.18, 1d23h, GigabitEthernet0/2
      [110/2] via 192.168.60.2, 1d21h, GigabitEthernet0/0
C    192.168.60.16/30 is directly connected, GigabitEthernet0/2
L    192.168.60.17/32 is directly connected, GigabitEthernet0/2
O    192.168.60.20/30 [110/2] via 192.168.60.6, 1d21h, GigabitEthernet0/1
      [110/2] via 192.168.60.2, 1d21h, GigabitEthernet0/0
```

SpringR1#

SpringR2

```
SpringR2#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2
      i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
      ia - IS-IS inter area, * - candidate default, U - per-user static route
      o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
      a - application route
      + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

  10.0.0.0/24 is subnetted, 10 subnets
    0.  10.16.0.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
    0.  10.16.1.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
    0.  10.16.2.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
    0.  10.16.3.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
    0.  10.16.4.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
    0.  10.16.5.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
        [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
```

```
0.  10.16.6.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  10.16.7.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  10.16.8.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  10.16.9.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
172.21.0.0/24 is subnetted, 8 subnets
0.  172.21.0.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.1.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.2.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.3.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.4.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.5.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.6.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
0.  172.21.7.0 [110/2] via 192.168.60.14, 1d02h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d02h, GigabitEthernet0/0
192.168.60.0/24 is variably subnetted, 9 subnets, 2 masks
0.  192.168.60.0/30 [110/2] via 192.168.60.17, 1d23h, GigabitEthernet0/2
    [110/2] via 192.168.60.14, 1d21h, GigabitEthernet0/1
0.  192.168.60.4/30 [110/2] via 192.168.60.17, 1d23h, GigabitEthernet0/2
    [110/2] via 192.168.60.9, 1d21h, GigabitEthernet0/0
C  192.168.60.8/30 is directly connected, GigabitEthernet0/0
L  192.168.60.10/32 is directly connected, GigabitEthernet0/0
C  192.168.60.12/30 is directly connected, GigabitEthernet0/1
L  192.168.60.13/32 is directly connected, GigabitEthernet0/1
C  192.168.60.16/30 is directly connected, GigabitEthernet0/2
L  192.168.60.18/32 is directly connected, GigabitEthernet0/2
0.  192.168.60.20/30 [110/2] via 192.168.60.14, 1d21h, GigabitEthernet0/1
    [110/2] via 192.168.60.9, 1d21h, GigabitEthernet0/0
```

```
SpringR2#
```

HSRP



SpringCore1

```
Springcore1#show standby brief
    P indicates configured to preempt.
    |
Interface  Grp  Pri  P State   Active           Standby          Virtual IP
Vl110       110  120  P Active  local            10.16.0.3        10.16.0.1
Vl120       120  120  P Active  local            10.16.1.3        10.16.1.1
Vl130       130  120  P Active  local            172.21.1.3       172.21.1.1
Vl140       140  120  P Active  local            172.21.2.3       172.21.2.1
Vl150       150  120  P Active  local            172.21.3.3       172.21.3.1
Vl160       160  120  P Active  local            172.21.5.3       172.21.5.1
Vl210       210  120  P Active  local            10.16.2.3        10.16.2.1
Vl220       220  120  P Active  local            10.16.3.3        10.16.3.1
Vl230       230  120  P Active  local            10.16.4.3        10.16.4.1
Vl240       240  120  P Active  local            10.16.5.3        10.16.5.1
Vl250       250  120  P Active  local            172.21.6.3       172.21.6.1
Vl310       310  100  P Standby  10.16.6.3      local            10.16.6.1
Vl320       320  100  P Standby  10.16.7.3      local            10.16.7.1
Vl330       330  100  P Standby  10.16.8.3      local            10.16.8.1
Vl340       340  100  P Standby  10.16.9.3      local            10.16.9.1
Vl350       350  100  P Standby  172.21.7.3     local            172.21.7.1
Vl716       716  100  P Standby  172.21.4.3     local            172.21.4.1
Vl916       916  100  P Standby  172.21.0.3     local            172.21.0.1
Springcore1#
```

SpringCore2

```
Springcore2#show standby brief
          P indicates configured to preempt.
          |
Interface  Grp  Pri  P State   Active           Standby      Virtual IP
v1110      110  100  P Standby 10.16.0.2       local        10.16.0.1
v1120      120  100  P Standby 10.16.1.2       local        10.16.1.1
v1130      130  100  P Standby 172.21.1.2      local        172.21.1.1
v1140      140  100  P Standby 172.21.2.2      local        172.21.2.1
v1150      150  100  P Standby 172.21.3.2      local        172.21.3.1
v1160      160  100  P Standby 172.21.5.2      local        172.21.5.1
v1210      210  100  P Standby 10.16.2.2       local        10.16.2.1
v1220      220  100  P Standby 10.16.3.2       local        10.16.3.1
v1230      230  100  P Standby 10.16.4.2       local        10.16.4.1
v1240      240  100  P Standby 10.16.5.2       local        10.16.5.1
v1250      250  100  P Standby 172.21.6.2      local        172.21.6.1
v1310      310  120  P Active  local            10.16.6.2    10.16.6.1
v1320      320  120  P Active  local            10.16.7.2    10.16.7.1
v1330      330  120  P Active  local            10.16.8.2    10.16.8.1
v1340      340  120  P Active  local            10.16.9.2    10.16.9.1
v1350      350  120  P Active  local            172.21.7.2   172.21.7.1
v1716      716  120  P Active  local            172.21.4.2   172.21.4.1
v1916      916  120  P Active  local            172.21.0.2   172.21.0.1
Springcore2#
```

Tracert



Tracert from client 1 to R1

```
C:\Users\admin>hostname  
client1  
  
C:\Users\admin>tracert 192.168.60.1  
  
Tracing route to 192.168.60.1 over a maximum of 30 hops  
  
 1      8 ms      8 ms      8 ms  10.16.0.2  
 2      9 ms      9 ms      9 ms  192.168.60.1  
  
Trace complete.  
  
C:\Users\admin>
```

Tracert from Client 3 to R1

```
Trace complete.

C:\Users\admin>
C:\Users\admin>hostname
client3

C:\Users\admin>tracert 192.168.60.1

Tracing route to 192.168.60.1 over a maximum of 30 hops

  1    10 ms      7 ms      10 ms  10.16.6.3
  2    17 ms      10 ms     10 ms  192.168.60.1

Trace complete.

C:\Users\admin>
```

Tracert from Client1 > Client 3

```
C:\Users\admin>hostname  
client1  
  
C:\Users\admin>ipconfig  
  
Windows IP Configuration  
  
Ethernet adapter Ethernet:  
  
    Connection-specific DNS Suffix . : SHMC.LOCAL  
    Link-local IPv6 Address . . . . . : fe80::52bb:b4f9:f86a:7c%13  
    IPv4 Address . . . . . : 10.16.0.50  
    Subnet Mask . . . . . : 255.255.255.0  
    Default Gateway . . . . . : 10.16.0.1  
  
C:\Users\admin>tracert 10.16.6.50  
  
Tracing route to 10.16.6.50 over a maximum of 30 hops  
  
 1      6 ms      6 ms      5ms  10.16.0.2  
 2     11 ms     10 ms     13 ms  10.16.6.50  
  
Trace complete.  
C:\Users\admin>
```

Tracert from client 3 > client 1

```
C:\Users\admin>hostname  
client3  
  
C:\Users\admin>ipconfig  
  
Windows IP Configuration  
  
Ethernet adapter Ethernet:  
  
    Connection-specific DNS Suffix . : SHMC.LOCAL  
    Link-local IPv6 Address . . . . . : fe80::bd0a:3044:6173:78f4%13  
    IPv4 Address . . . . . : 10.16.6.50  
    Subnet Mask . . . . . : 255.255.255.0  
    Default Gateway . . . . . : 10.16.6.1  
  
C:\Users\admin>tracert 10.16.0.50  
Tracing route to 10.16.0.50 over a maximum of 30 hops  
  
 1       6 ms      7 ms      6 ms  10.16.6.3  
 2     13 ms     11 ms      9 ms  10.16.0.50  
  
Trace complete.  
C:\Users\admin>
```