

Rapid PVST+ Configuration Example

The following topology is an example of a rapid-PVST+ configuration. Switches A and B are in the aggregation layer, and switches C and D are in the access layer. Configure switch A as the root bridge of VLAN 100 and VLAN 200, switch B as the root bridge of VLAN 300, and switch C as the root bridge of VLAN 400.

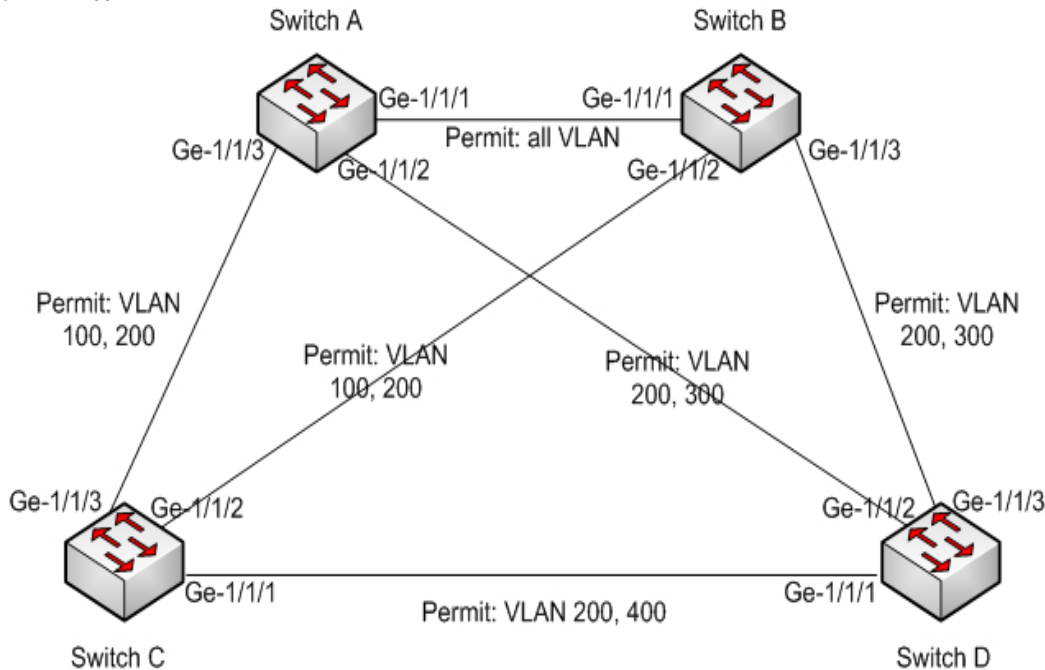


Figure 4-11. PVST configuration.

Configuring Switch A

For Switch A, configure ge-1/1/1–ge-1/1/3 as trunk ports; ge-1/1/1 as a member of VLANs 100, 200, 300, and 400; ge-1/1/2 as a member of VLANs 200 and 300; and ge-1/1/3 as a member of VLANs 100 and 200.

```
admin@XorPlus# set vlans vlan-id 100
admin@XorPlus# set vlans vlan-id 200
admin@XorPlus# set vlans vlan-id 300
admin@XorPlus# set vlans vlan-id 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 300
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 300
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 200
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
admin@XorPlus# set protocols spanning-tree force-version 4
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
```

To verify that Switch A is the root bridge of VLANs 100 and 200, configure VLANs 100 and 200 as the higher priority.

```
admin@XorPlus# set protocols spanning-tree pvst vlan 100 bridge-priority 0
admin@XorPlus# set protocols spanning-tree pvst vlan 200 bridge-priority 0
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
```

Configuring Switch B

Configure ge-1/1/1~ge-1/1/3 as trunk ports, and ge-1/1/1 as a member of VLANs 100, 200, 300, and 400; ge-1/1/2 as a member of VLANs 100 and 200; and ge-1/1/3 as a member of VLANs 200 and 300.

```
admin@XorPlus# set vlans vlan-id 100
admin@XorPlus# set vlans vlan-id 200
admin@XorPlus# set vlans vlan-id 300
admin@XorPlus# set vlans vlan-id 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 300
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 300
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
admin@XorPlus# set protocols spanning-tree force-version 4
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
```

To verify that Switch B is the root bridge of VLAN 300, configure VLAN 300 as the higher priority.

```
admin@XorPlus# set protocols spanning-tree pvst vlan 300 bridge-priority 0
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
```

Configuring Switch C

Configure ge-1/1/1~ge-1/1/3 as trunk ports; ge-1/1/1 as a member of VLANs 200 and 400; ge-1/1/2 as a member of VLANs 100 and 200; and ge-1/1/3 as a member of VLANs 100 and 200.

```

admin@XorPlus# set vlans vlan-id 100
admin@XorPlus# set vlans vlan-id 200
admin@XorPlus# set vlans vlan-id 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 100
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 200
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
admin@XorPlus# set protocols spanning-tree force-version 4
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#

```

To verify that Switch C is the root bridge of VLAN 400, configure VLAN 400 as the higher priority.

```

admin@XorPlus# set protocols spanning-tree pvst vlan 400 bridge-priority 0
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#

```

Configuring Switch D

Configure ge-1/1/1~ge-1/1/3 as trunk ports; ge-1/1/1 as a member of VLANs 200 and 400; ge-1/1/2 as a member of VLANs 200 and 300; and ge-1/1/3 as a member of VLANs 200 and 300.

```

admin@XorPlus# set vlans vlan-id 200
admin@XorPlus# set vlans vlan-id 300
admin@XorPlus# set vlans vlan-id 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/1 family ethernet-switching vlan members 400
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/2 family ethernet-switching vlan members 300
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching port-mode trunk
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 200
admin@XorPlus# set interface gigabit-ethernet ge-1/1/3 family ethernet-switching vlan members 300
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#
admin@XorPlus# set protocols spanning-tree force-version 4
admin@XorPlus# commit
Waiting for merging configuration.
Commit OK.
Save done.
admin@XorPlus#

```