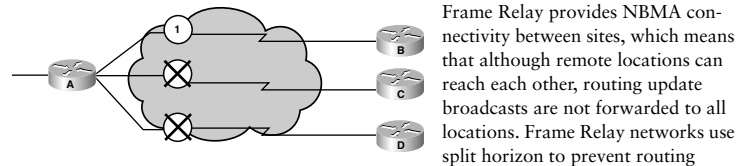


In a *partial-mesh topology*, not all sites have direct access to all other sites. Connections usually depend on the traffic patterns within the network.

Configuring Frame Relay Summary

- The `frame-relay`, `frame-relay lmi-type`, and `frame-relay inverse-arp` commands are used to configure Frame Relay.
- The `frame-relay map` command is used to configure static address-to-DLCI tables.
- The three WAN topologies used to interconnect remote sites are star, partial-mesh, and full-mesh.

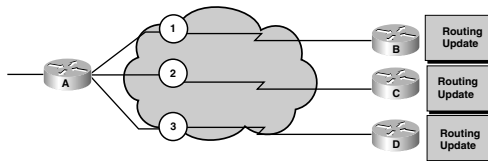
Configuring Frame Relay Subinterfaces



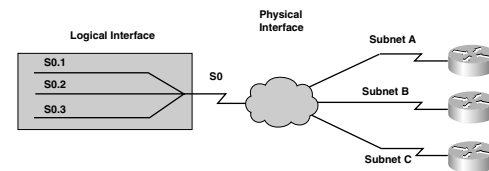
loops. With split horizon activated, if a remote router receives an update on an interface that has multiple PVCs, the router cannot forward that broadcast to routers on other PVCs on the same interface.

Routing Update Replication

When several DLCIs terminate in a single router, that router must replicate all routing updates and service advertisements on each DLCI. These updates consume bandwidth, cause latency variations, and consume interface buffers, which leads to higher packet rate loss. You should consider broadcast traffic and virtual circuit placement when designing Frame Relay networks to avoid negatively affecting critical user data.



Resolving Reachability Issues in Frame Relay



You can resolve reachability issues by configuring subinterfaces on the router. These logically assigned interfaces allow the router to forward broadcast updates in a Frame Relay network. Subinterfaces are logical

subdivisions of a physical interface. Routing updates received on one subinterface can be sent out another subinterface without violating split horizon rules. If you configure virtual circuits as point-to-point connections, the subinterface acts similar to a leased line.

Subinterface Configuration

Subinterfaces can be configured as either point-to-point or multipoint. With point-to-point, one PVC connection is established with another physical interface or subinterface on a remote router using a single subinterface. With multipoint, multiple PVC connections are established with multiple physical interfaces or subinterfaces on remote routers on a single subinterface. All interfaces involved use the same subnet, and each interface has its own local DLCI.

To configure a subinterface, use the following command:

```
frame-relay interface-dlci dlci-number
```

To select a subinterface, use the following command:

```
interface serial number.subinterface-number {multipoint | point-to-point}
```

The range of subinterface numbers is to 4294967293. The number that precedes the period (.) must match the physical interface number to which this subinterface belongs.

To configure the local DLCI on the subinterface, use the following command:

```
frame-relay interface-dlci dlci-number
```

The *dlci-number* defines the local DLCI number being linked to the subinterface. This is the only way to link an LMI-derived PVC to a subinterface. (LMI does not know about subinterfaces.)