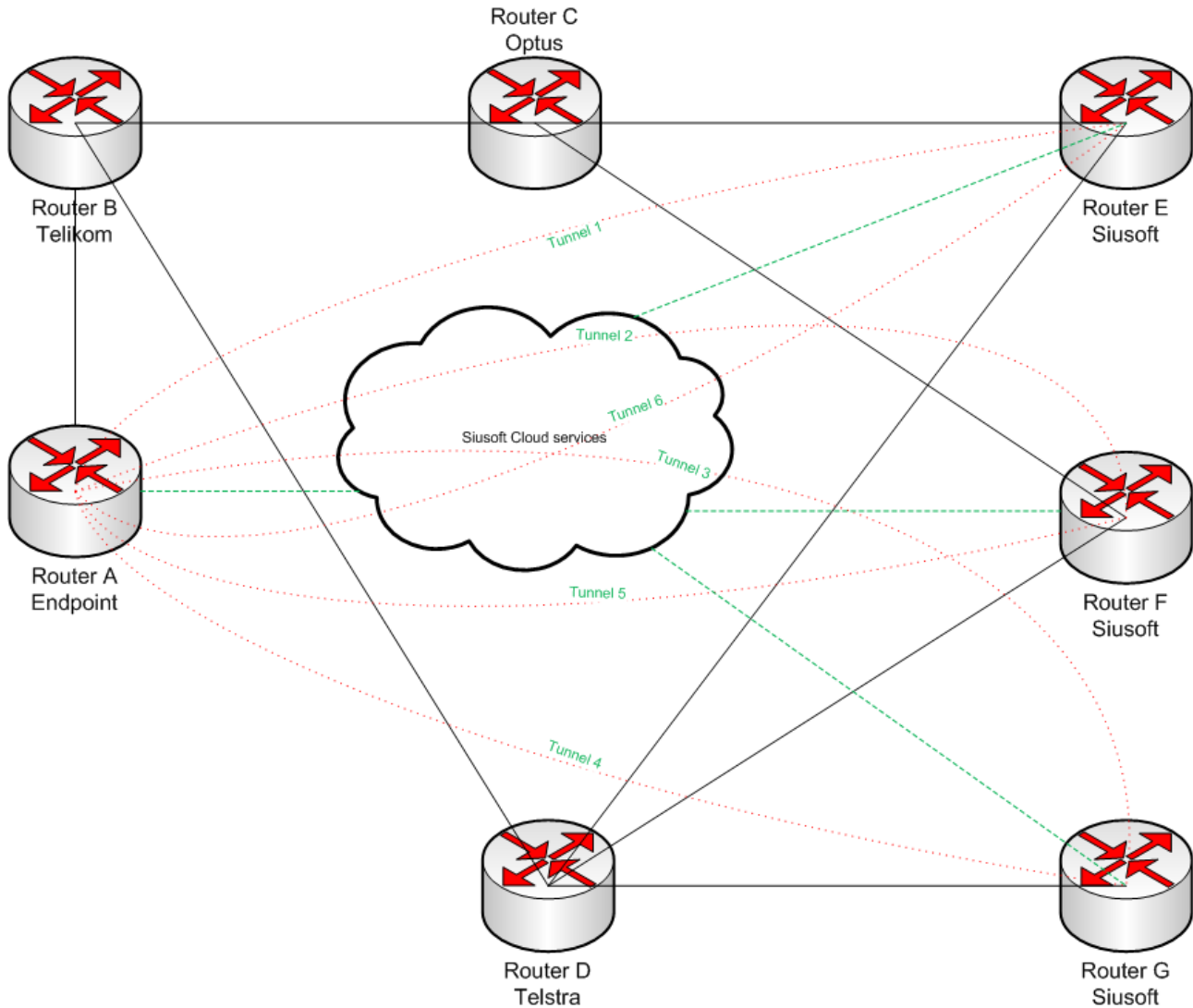


## UNIFIED COMMUNICATION CONNECTIVITY

Unified Communication services supply to endpoint center requires connectivity by routers and servers. Connectivity between endpoint router and Siusoft router is required, through which connectivity is established for each V2 Server can be installed for Unified Communication at endpoint center in un-served and underserved areas in Port Moresby and Papua New Guinea.



**Figure 1.0** Connectivity between endpoint router and Siusoft router

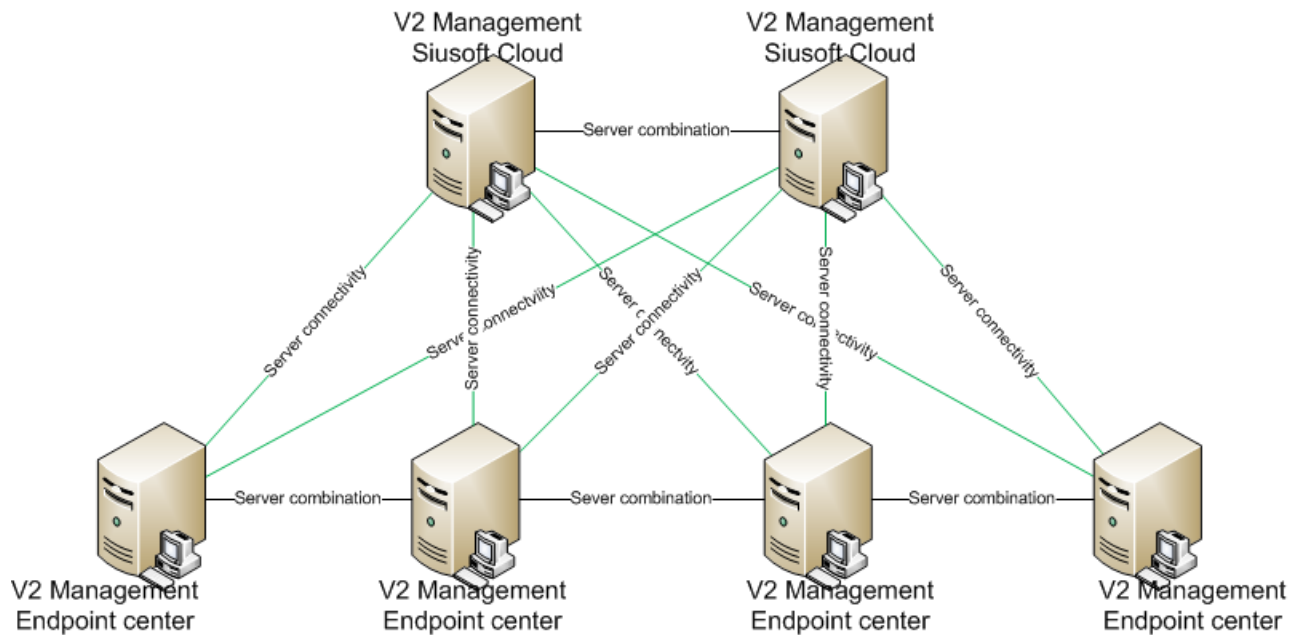
### 1. Network connectivity

```
Local-Router# configure terminal //Enter the configure terminal privileged EXEC command
Local-Router(config)#           to enter global configuration mode.
Local-Router(config)# interface serial n/0 //Enter the interface serial slot/port global configuration command.
Local-Router(config-if)#        The prompt changes to interface configuration mode.
Local-Router# telnet x.x.x.x255.0.0.0 //Use the telnet ip address command to enable
Remote-Router>                  communication between the local (near-end) port and the remote (far-end) port.
Local-Router(config-if)# dsu mode cisco //Enter the dsu mode cisco interface configuration
Local-Router(config-if)#          command.
Local-Router(config-if)# dsu remote subrate //Enter the dsu remote subrate interface configuration
Local-Router(config-if)#          command to set the local DSU bandwidth to subrate.
```

```

Local-Router> telnet y.y.y.255.0.0 //Enter the telnet ip address of the remote (far-end) DS3
Remote-Router> port to establish a direct connection.
Remote-Router# show controllers serial n/0 //Enter the show controller serial slot/port privilegedEXEC command.
Remote-Router# Write down the remote far-end interface configuration settings.
Remote-Router# exit //Type exit to end the telnet session and return to the local
Local-Router> enable (near-end) interface in user EXEC mode. Type enable to
Local-Router# enter privileged EXEC mode.
Local-Router# configure terminal //Enter the configure terminal privileged EXEC command
Local-Router(config)# to enter global configuration mode.
Local-Router(config)# interface serial n/0 //Enter the interface serial slot/port global configuration
Local-Router(config-if)# command. The prompt changes to interface configuration mode.
Local-Router(config-if)# dsu bandwidth 44210 //Enter the dsu bandwidth bps interface configuration command to
Local-Router(config-if)# change the local (near-end) bandwidth.
Local-Router(config-if)# dsu remote accept //Enter the dsu remote accept interface configurationcommand so the
Local-Router(config-if)# local (near-end) interface will accept incoming requests from the remote
(far-end) port.
Local-Router(config-if)# exit //Type exit to return to user EXEC mode.
Local-Router>
Local-Router(config-if)# clock source line //Enter clock source interface configuration command for the local near-end
Local-Router(config-if)# interface. Set the remote (far-end) clock source to a setting that is the opposite
of the near-end clock source.
Local-Router(config-if)# exit //Type exit until you return to privileged EXEC mode.
Local-Router(config)# exit
Local-Router#
Local-Router# copy running-config startup-config //Enter the copy running-config startup-config EXEC command to write
the local (near-end) configuration settings to memory.

```



**Figure 2.0** Server connectivity

## 2. Tunneling

```

router(config)# ipcef [distributed] //Enable CEF for best MPLS forwarding performance.
router(config)# mpls traffic-eng tunnels //Enable MPLS traffic engineering tunnels.
router# show ipcef summary //Verify CEF has been configured properly.

```

### 3. Security Firewall

```
router# configure terminal          //Enter the configure terminal privileged EXEC command
router(config)#                    to enter global configuration mode.
router(config)# enable secret 5 <elided>          /*Security
router(config)# no ip source-route
router(config)# no cdp run          firewall*/
router(config)# ip inspect name STOP tcp          /*Traffic
router(config)# ip inspect name STOP ftp
router(config)# ip inspect name STOP smtp
router(config)# ip inspect name STOP h323
router(config)# ip inspect name STOP rcmd          inspection*/
router(config)# access-list 105 deny ip host 255.255.255.255 any //Deny broadcast messages
router(config)# acl 105 deny ips.s.s.s0.0.0.255 any //Add anti-spoofing protection
router(config)# access-list 105 permit icmp any any echo-reply          /*ICMP traffic
router(config)# access-list 105 permit icmp any s.s.s.s 0.0.0.255 time-exceeded
router(config)# access-list 105 permit icmp any s.s.s.s0.0.0.255 packet-too-big
router(config)# access-list 105 permit icmp any s.s.s.s 0.0.0.255 traceroute
router(config)# access-list 105 permit icmp any s.s.s.s 0.0.0.255 unreachable          control*/
router(config)# access-list 105 deny ip any any //Deny any traffic
router# configure terminal          //Enter the configure terminal privileged EXEC command
router(config)#                    to enter global configuration mode.
router(config)# interface serial n/0          //Enter the interface serial slot/port global configuration
router(config-if)#                    command. The prompt changes to interface configuration mode.
router(config-if)# ip address y.y.y.255.255.255.0 //Set local interface
router(config-if)# no ip directed-broadcast          /*Dialer
router(config-if)# no ip address
router(config-if)# no ip directed-broadcast
router(config-if)# encapsulation ppp
router(config-if)# dialer pool-member 1
router(config-if)# isdn switch-type basic-5ess          profile*/
router# configure terminal          //Enter the configure terminal privileged EXEC command
router(config)#                    to enter global configuration mode.
router(config-if)# interface Dialer0          /*Monitor traffic
router(config-if)# ip address negotiated
router(config-if)# ip access-group 105 in
router(config-if)# no ip directed-broadcast
router(config-if)# ip inspect STOP out
router(config-if)# encapsulation ppp
router(config-if)# dialer remote-name <ISP router>
router(config-if)# dialer idle-timeout 500
router(config-if)# dialer string <elided>
router(config-if)# dialer pool 1
router(config-if)# dialer-group 1
router(config-if)# ppp authentication callin          through dialer*/
router(config)# interface serial n/0          //Enter the interface serial slot/port global configuration
router(config-if)#                    command. The prompt changes to interface configuration mode.
router(config-if)# ip route 0.0.0.0 0.0.0.0 Dialer0 //Route traffic to dialer
router(config-if)# dialer-list 1 protocol ip permit //Include dialer list protocol entry
```