Application Note

A New Approach to Remote Router Control

Background

In the past, some systems have required router control from remote locations. The way this was accomplished was to tie a remote GUI software panel to the house net of the local router using TCP/IP. Figure 1 shows two systems. Remote GUI panels in each facility control the routers in the other facility. Signals from the routers are connected over backhaul tie lines. This solution works very well but its user interface is restricted to a GUI panel only.

Figure 1.
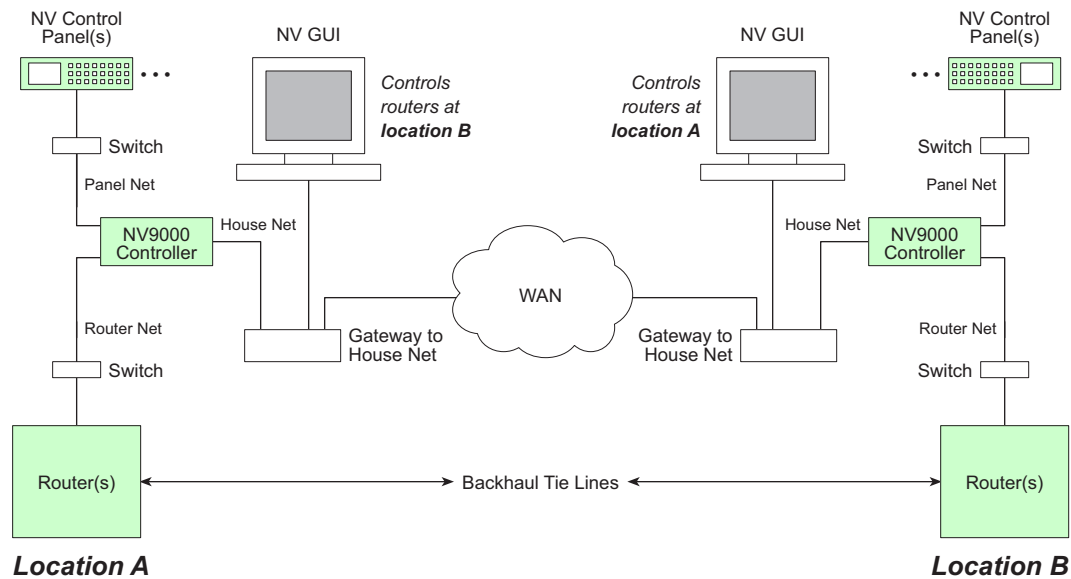
A major content provider installed NVISION series routers in two facilities that were located about five miles apart. Part of the project scope was to allow operators to access both local and remote routers from any panel position in either facility.

Solution

One solution (Figure 2) ties the independent 'Router Net' subnets from the two locations through gateway devices. This network architecture allows operators to see and control remote routers (in addition to local routers) through their local NV9000 control servers.

Signal paths between the two locations consist of 20 tie lines (10 lines in each direction) on a dark fiber service. NVISION tieline-management software controls the tie lines. (Tie line management software is an NV9000 router control system option.)

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Solution

Figure 2.

Location A *Location B*

Variation

Figure 3 shows a variation from the system in Figure 2. This configuration is a solution when there is only one control system at a location. Operators in location *A* control routers in location *A* as well as the routers in location *B*. In this case, tie lines are uni-directional coming from the routers at location *B* back to location *A*.

Figure 3.

Location A *Location B*

Summary

The systems shown in this study can be designed using NVISION series routers. For detailed technical information regarding system design, contact Miranda technical support.