

Improving Service Connectivity



Client Requirement Summary

- Devices mounted in cabinets
- Solve signal strength fluctuations
- Resolve unstable and poor connectivity in both rural and urban locations
- Use commercial mobile operators
- Use preferred operator where signal is strongest

Key Benefits

- SLA reports with daily graphs for latency, packet loss, signal strength and availability
- Alarms to alert to changes in stability or availability
- Operator lock
- Automatic operator selection
- Job queue feature to manage updates in poor or unstable locations
- QoS to prioritise traffic in low bandwidth locations
- Antenna diversity
- Wide range of external antennas

Requirement

A European client has a network of several thousand locations, both rural and urban. A number of locations suffered with frequent loss of service or no service, resulting in SLA penalties or even loss of income. The client needed a solution that would solve problems caused by poor or fluctuating signal quality, mobile technology, latency and packet loss.

Virtual Access Solution

A three-stage process was developed that used capabilities in the Virtual Access router combined with the VA centralised monitoring system to provide significant improvements in connectivity. First, Monitor's SLA reporting feature identified sites with connectivity problems. Next, a variety of internal and external antennas were monitored over a period of time followed by examining reports to chose the best option for antenna diversity. The issue of limitations of roaming SIMs causing poor connectivity was addressed by the router's automatic operator selector feature. This allows the router to switch to a second SIM where the first SIM's preferred operator is not ideal and the SIM will not roam automatically. The mobile module has the ability to scan available networks, while the router using mobile and multi-WAN packages finds available networks to create and sort interfaces according to their signal strength. These interfaces are used for failover purposes using configurable failover thresholds.

