

Remote Management Solution Overview

Today's IP-based satellite technology is relied on to provide critical always-on connectivity in the most demanding and harsh environments. Whether it's providing communications to crew and workers onboard a vessel, an oil rig in the middle of the ocean, or a remote rural village – it's essential to economic growth, quality of life and improved operational efficiencies. As the demand increases for IP applications in remote locations and with sometimes extreme environments, so does the complexity of the network infrastructure.

The infrastructure at remote sites often requires multiple communication devices including wireless equipment, satellite routers, antennas and cellular access points, as well as terrestrial equipment such as switches, routers, firewalls, power controllers and VoIP PBX. Managing all these devices can be complex and costly, especially when a problem occurs.

Service providers incur significant costs when these extremely remote sites experience network outages. For example, when a cellular network experiences service degradation at a rural site, the resulting loss of coverage can cause potential economic, social and even medical issues until it is restored. Communications equipment problems and service outages onboard a maritime vessel is similarly disastrous. It often involves transporting an IT specialist to a vessel at sea or delaying maintenance until the vessel comes to port, which can leave the ship with limited or no communications for an extended period of time. And routine network maintenance, such as re-provisioning a wireless access point or upgrading the router's operating system with the latest security patch often necessitates on-site visits. As communication networks grow, so does the complexity of monitoring and operating different configuration and network management tools for all of these devices.



For high reliability and to minimize management costs, the operator needs a proactive approach to monitor, control and repair the entire remote communications infrastructure from one central point.

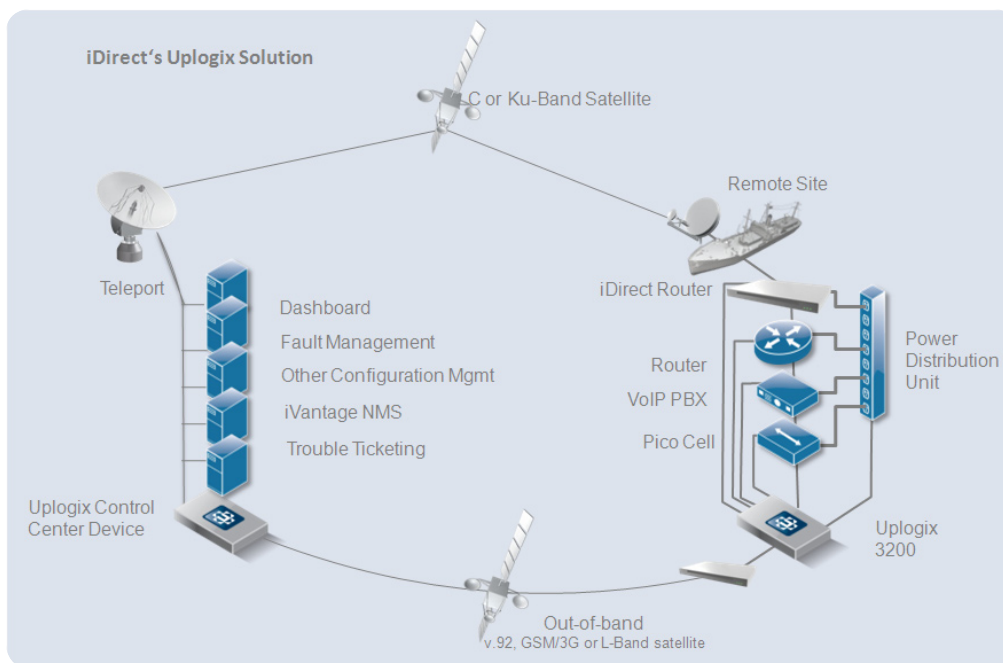
The iDirect Solution

iDirect's Remote Management Solution built on Uplogix

iDirect's secure remote management solution, built on Uplogix, enables operators to remotely monitor and control both satellite and terrestrial-based networking equipment from a single integrated system.

At the remote site, a device co-locates and connects serially with satellite and network equipment. This device automates numerous support, maintenance, configuration and recovery procedures, reducing the time, cost and potential error associated with manual on-site support.

Operations staff can manage the devices via a control center solution; this unifies all network configurations, monitoring data and controls, into a centralized web-based portal. The control center serves as the central repository and reporting interface for all collected data, both real-time and historical, greatly facilitating fault analysis and execution of automated and manual recovery tasks.



At the Operations Center the Uplogix Control Center device provides IT staff a single, integrated centralized, web-based portal that interconnects with all network and device management systems. At the remote site, the device co-locates and connects serially with network and satellite communications equipment to provide non-stop local management and control.

The automated remote management capabilities include:

- Detecting and correctly diagnosing equipment and communications failures
- Measuring and continuously testing the quality performance of applications from an end-user perspective
- Raising alerts and alarms in case of performance deterioration
- Routinely collecting and analyzing device configuration data
- Executing pre-defined, best practice recovery procedures
- Locally correlating service-level data with infrastructure performance data to pinpoint and correct service-related problems
- Frequent archiving and storing of all configuration files in order to quickly restore last known "good" configuration
- Providing centralized operations staff with a detailed report of actions completed as part of the automated recovery tasks
- Performing scheduled network maintenance and upgrades to all appliances

Automates as much as 70% of the numerous network support, maintenance, configuration and recovery procedures.

In addition to the automated steps iDirect's Remote Management Solution provides the operation staff with immediate local access to all devices to perform in-depth diagnostics and troubleshooting above and beyond the routine recovery and maintenance tasks. This access is being provided over a satellite communication path.

In the case of an outage, the remote device will automatically establish an alternate communications path via a dial-up connection (i.e. an external L-Band modem) to reestablish access to the operation center. This will allow a quick restoration of the broadband satellite connectivity, never leaving the remote site without vital connectivity.

Solution Components

Network Management Device

- ◆ Uplogix Control Center - Web-based, centralized point of control for all Uplogix devices and managed appliances

Remote Device

- ◆ Uplogix 430- Compact design, available as a fixed 4-port device
- ◆ Uplogix 3200 - Enterprise scalability and performance, available in 4-, 8-, 16-, 24-, or 32-port as a rack-mounted device

Operating System

- ◆ Uplogix Integrated Remote Management Operating System (RMOS)

Support

- ◆ 24/7 Technical support from iDirect's Technical Assistance Center (TAC)



Key Advantages

Operations and Management Efficiencies

- Lowers the complexity of managing communications equipment at remote locations with little or no access to expert IT staff - further reducing the time and cost associated with manual support
- Automation procedures reduces the time and IT resources spent on network maintenance, support and recovery by as much as 70%
- Centralizes and standardizes control of core and remote terrestrial and satellite network infrastructure

Powerful, Centralized Data Collection

- Centralized storage and reporting interface for all data collection and audit logs provided by all devices within the terrestrial and satellite infrastructure

Improved Operational Data Integrity

- Comprehensible record and historical data keeping easing compliance and auditing processes

Increased Reliability and Improved SLAs

- Increases business availability by providing “always-on” network monitoring and management
- Consistent security and procedures enforcement even during network outages ultimately shortening down time and improving service levels (SLAs)



iDirect's Remote Management Solution brings new levels of monitoring, control and automation to remote IT and communications equipment to strengthen network reliability. With this solution, service providers can confidently manage remote locations without worrying about network downtime or the time, cost and potential errors associated with providing manual on-site IT support.

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