

Northland Communications

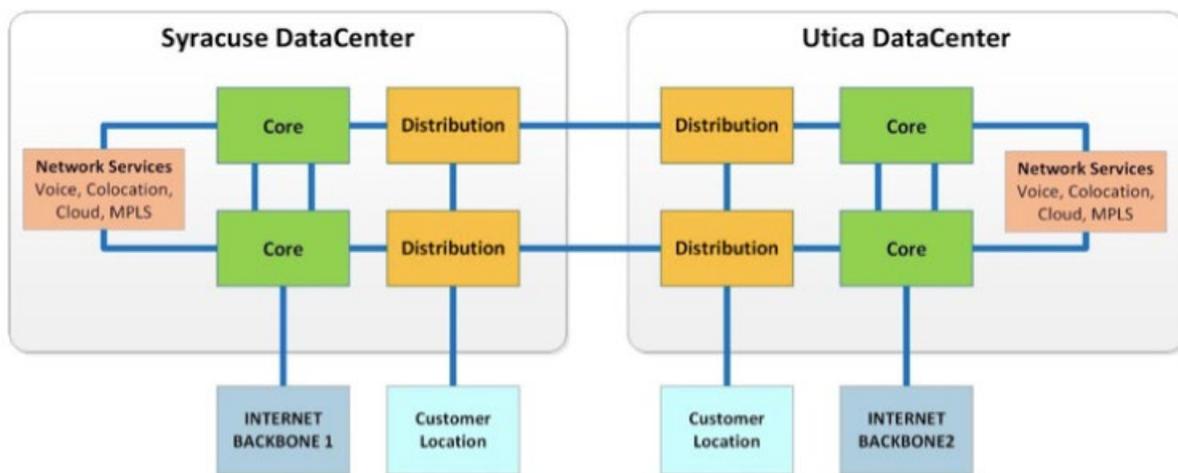
Core Network

Revision 05.04.22



Reliable systems that monitor every aspect of the Data Center

Northland's voice and data network possesses extraordinary capabilities that are reliable, flexible and secure. Our customers enjoy having local management—meaning our employees are fully aware and vested in their clients' accounts. Northland not only has the network capable to run your business, but also has your back. Our voice and data network is the foundation of our relationship with our customers. Without it, everything else is irrelevant.



DATA	VOICE
<ul style="list-style-type: none">+ Large Capacity Public Internet IPv4/IPV6 Routing+ Full BPG4/6 Peering+ MPLS IP/VPN Routing for Multi-Site WAN+10G+ Internet Bandwidth from Multiple Upstream Providers+ VOIP/QoS Capable+ MEF Compliant Carrier Ethernet Services+ Virtualized Redundant Cloud Computing Platform	<ul style="list-style-type: none">+ Local PSTN Call Termination+ Long Distance and 800 Termination+ T1, PRI and CAS+ DS3, OC3, OC48 Interfaces+ SIP Trunking over Ethernet

Reliability Features

System Backup

Should any single component in a redundant system fail or if an entire redundant system fails, there is an identical active redundant system that can take over instantly.

Redundant Upstream Internet Connections

We maintain separate upstream internet backbone connections with different providers that are completely diverse from each other. These connections are also geographically diverse into different Northland datacenters. Should any provider fail, all internet traffic is almost instantly rerouted through other providers.

Internet Exchange Peering

In addition to standard internet peering, Northand also maintains peering connections in major internet exchanges including QiX and NYIIX. These exchanges provide direct routing to major cloud and content providers including Microsoft, Amazon, Network and many others. The advantage to our customers is in reduced latency and performance compared to traditional internet connectivity options.

Diverse Power Connections

Each redundant system is separately powered by two diverse power connections. The source of the power is provided by multiple large onsite batteries. In the event of a power outage, the battery will provide uninterrupted power for several hours until either our generators take over or power is restored. We maintain and regularly test multiple truck mounted generators.

Hot-Swappable Components

Should any single component fail, we have a full stock of spare components that are hot-swappable—meaning they can be replaced while the system is operable.

Multiple Air-Cooling Systems

We have multiple air-cooling systems in each data center that back each other up. This allows us to take one system offline for maintenance when we needed or continue to provide adequate cooling if one system fails.

24/7 Monitoring and Response

Our telemetry systems continually monitor every aspect of the datacenter including the status of all devices and their components, power status, environmental conditions, water sensing and security. Our staff is notified and responds 24/7 to any event outside of normal conditions.

Emergency Notification System

Should there be any event that limits our communication with customers, we maintain an emergency notification system that provides updates to customers through Email, a website that is external to our network or through backup telephone connections that we can switch over. We also maintain a separate internal backup communications system in the event that our internal systems are disrupted.