

# rednesp Selects ZPE Systems to Deliver Always-On, High-Performance Research Connectivity

## Customer Summary: rednesp (São Paulo Research and Education Network)

*rednesp operates as critical infrastructure for the scientific community, where network performance and availability directly impact research outcomes. As such, rednesp is designed to support real-time collaboration, high-speed connectivity, and enormous volumes of data traffic.*

## The Challenge

Operating a research and education network at scale presents unique challenges:

- **Zero Tolerance for Downtime:** Researchers rely on continuous connectivity for experiments, simulations, and collaboration. Any outage disrupts critical work and delays innovation.
- **High Performance Expectations:** Users need ultra-fast, low-latency connectivity for transferring large datasets, accessing cloud resources, and running distributed workloads.
- **Distributed Network Infrastructure:** rednesp spans multiple institutions and locations, requiring consistent management across a complex, geographically dispersed environment.
- **SLA Pressure and User Experience:** Maintaining strict service level agreements (SLAs) is essential for uptime and delivering consistently high-quality experiences.

### About rednesp

**rednesp** (São Paulo Research and Education Network) is a high-performance academic network initiative supported by FAPESP. It connects more than 20 universities, research institutions, and innovation centers across Brazil, enabling collaboration, data sharing, and access to advanced scientific resources.

### CHALLENGES

- **Maintaining uptime for 20+ sites**
- **Ensuring ultra-fast connectivity**
- **Strict Service Level Agreements (SLAs)**

### SOLUTIONS

- **Out-of-Band for Guaranteed Access**
- **Immediate Remote Troubleshooting**
- **Secure, Centralized Management**

### OUTCOMES

- **Superior End-User Experience**
- **Reduced Operational Disruptions**
- **Stronger SLA Commitments**

# The Solution

**rednesp** leverages ZPE Systems' out-of-band (OOB) management platform to ensure continuous network availability and high performance that users can feel. The process was supported by ZPE's strategic partnership with Mastery Consulting, an integrator specialized in Datacenter integration

## Key Capabilities Include:

- **Always-Available Network Access** Independent management connectivity ensures engineers can access and control infrastructure, even during primary network outages
- **Rapid Fault Detection and Recovery** Immediate troubleshooting and remediation capabilities reduce downtime and maintain service continuity
- **Centralized Network Control** Unified visibility and management across all connected institutions and network nodes
- **Secure, Isolated Management Plane** Separation from the production network enhances both reliability and security

## Business and User Experience Benefits

### Superior End-User Experience

Researchers and institutions experience a consistently fast and reliable network that provides uninterrupted collaboration and innovation. Users report that they can feel the high quality of the network.

### Stronger SLA Commitments

rednesp confidently delivers and maintains high service levels, reinforcing trust with member institutions.

### Reduced Operational Disruptions

Minimized downtime ensures research projects stay on track, and resources are fully utilized.

### Maximized Value of Network Investments

High availability and performance ensure that infrastructure investments deliver their full potential.

According to the coordinator of the rednesp-FAPESP project, "The operational advantages of using ZPE are immense, enabling our remote control of all sites, with secure and guaranteed access, serving as our 'remote hands.' The first phase was implemented successfully and transparently, encompassing the main rednesp site at USP, as well as Unicamp, ITA, and others; we are now ready for a new implementation phase, which includes the FATECs distributed throughout the state of São Paulo."

## Why it Matters

For rednesp, the network is the backbone of scientific progress. By implementing ZPE Systems' out-of-band management, rednesp ensures that:

- Connectivity is always available and reliable
- Performance remains consistently high
- Users experience seamless, high-speed access to critical resources

ZPE Systems enables rednesp to deliver an always-on, high-performance research network where uptime, speed, and user experience are never compromised

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– Solution Architect  
**rednesp**

Contact Us today to explore the full capabilities of Nodegrid and ZPE Cloud.

Email [Sales@zpesystems.com](mailto:Sales@zpesystems.com) for more information.

