



Leaders in IT Management Infrastructure

Rediscover Resilience with
Enterprise-grade Ops for the
Data Center, Branch, & Edge

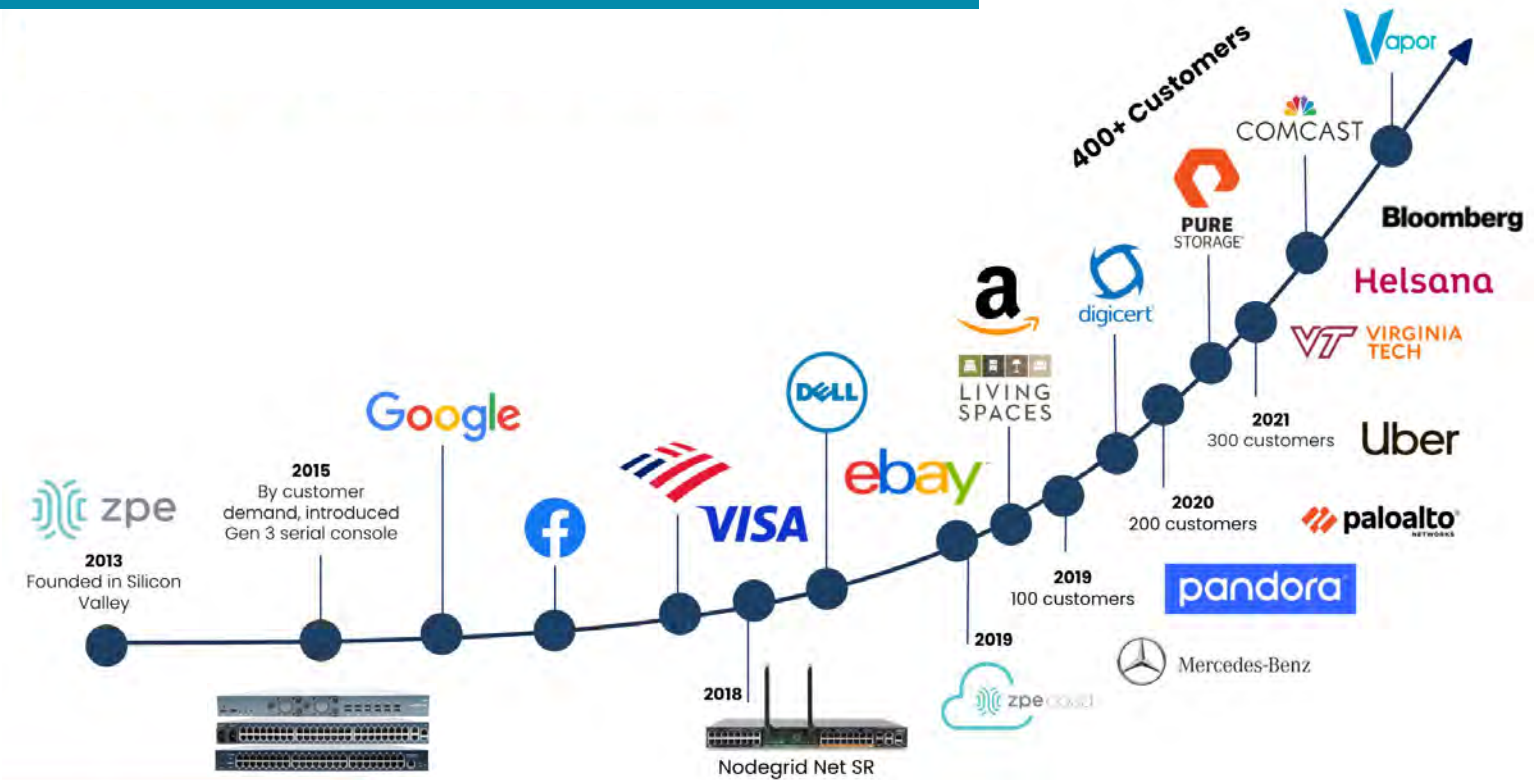
TRUSTED BY
6 OF THE **TOP 10**
MOST VALUABLE
GLOBAL TECH GIANTS



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Cut workloads, reduce errors, and mitigate attacks. ZPE Systems delivers Big Tech's resilience practices on an infrastructure & management platform made for any organization

The ZPE Systems Journey



ZPE Systems addresses Big Tech's need for operational excellence by delivering a secure isolated management infrastructure.

The extensible, secure-by-design Nodegrid platform served as the drop-in solution for achieving remote troubleshooting to Infrastructure- as-code and hyperautomation, while providing an isolated control plane for resilience against outages and cyberattacks.

Together with Big Tech, we've perfected Nodegrid and the best practices they use to cut their workloads, automate operations, and quickly patch and recover from ransomware.

We now serve 6 of 10 top tech giants, and we're helping 400 other customers achieve operational excellence through Big Tech's best practices for infrastructure and management.

Founded: 2013, Private

Headquarters: Silicon Valley - Fremont, CA

Offices: Brazil, Ireland, India, France

Global & Enterprise Customers: >400

Employees: 140+

Sales region: Global, 100% channel

Gartner
Peer Insights.

SYNOPSIS



Validated



Management Infrastructure from Data Center to Edge

ZPE Systems provides the physical and cyber platform to enable **Big Tech's Best Practices** for data center, branch, and edge network operations. Our Nodegrid Serial Consoles and Services Routers give you a drop-in solution for secure out-of-band access, while the onboard Nodegrid OS hosts your choice of apps, tools, and automation. ZPE Cloud gives you a bird's-eye view of every site, where you can click in to perform routine maintenance, push automation scripts, or fully rebuild environments to fight off cyberattacks.

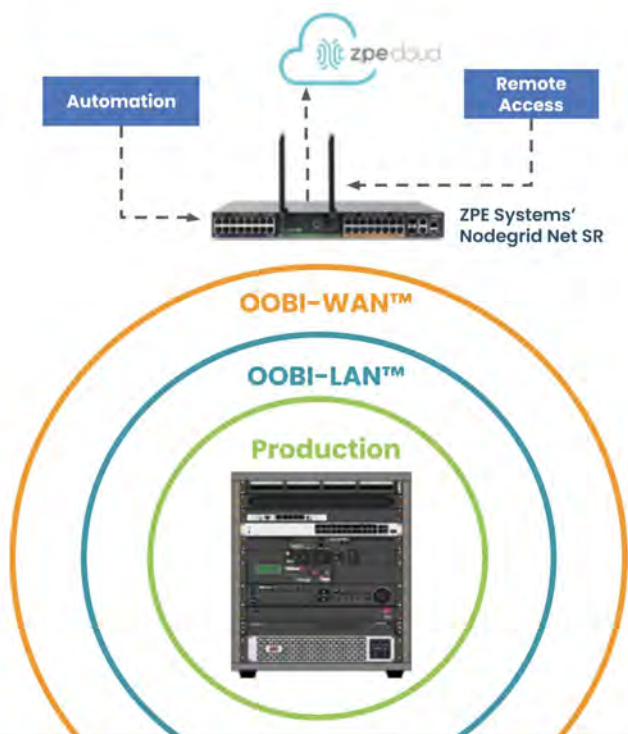


Image: OOB-LAN and OOB-WAN control planes are the Double-Ring Architecture, which allow for isolated control and automation of production and management equipment.

Deploy revenue-generating IT in hours

Multi-function Nodegrid devices run automation tools of your choice. Instead of deploying an entire stack, just install a single Nodegrid, and let your automation chain bring services online in hours.

Cut ops workloads by 50%

The IMI control plane lets you test configurations and automations before pushing to production. Ensure system integrity without guesswork, and get peace of mind knowing you can instantly undo mistakes.

Seal out risk

The IMI fully segments the management network from production, enables automated patching, and ensures clean recovery. This blocks attack movement, locks out the latest threats, and prevents reinfection.

Never pay the ransom

Recovery – not defense – is the key to combating modern threats. The IMI lets you quickly deploy an Isolated Recovery Environment to decommission, cleanse, and restore affected gear, so you can shrug off ransomware.

Download the
Blueprint



"Nodegrid is like having extra engineers on the team"

—Frank Basso, Vapor IO

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Without resilience, you've got *too much and too little problems*

Too much work, too little staff



Federal Aviation
Administration

An overworked contractor unintentionally deleted files, delaying flights nationwide for an entire day

Too much complexity, too little room for error



A firewall configuration change caused 16,000 flight cancellations and cost the company ~\$1 Billion

Too much gear, too little recovery



MGM RESORTS

IT teams lacked recovery systems, allowing attacks to persist for weeks and cause millions in losses per day

Customer Challenges Solved by ZPE Systems

Data center disaster & downtime recovery, scaling, sustainability

Reducing device sprawl by combining switching, firewall, jumpbox, routing, IoT gateway, 5G, OOB

Simplifying remote infrastructure deployments, reducing ongoing ops costs, downtime, & truck rolls

Eliminating complexity by consolidating devices and centralizing control of multi-vendor environments

Recovering quickly from cyberattacks and ransomware

Reducing ops friction with a platform to deploy any app, anytime, anywhere

✓ **1. Automation Infrastructure**

✓ **2. Services Delivery Platform**

Why resilience is a struggle for operations

83%

Of IT teams are understaffed, forcing them to focus on ops instead of business goals

205+

days pass between patches, because teams don't know if they'll break systems

\$4.5M

in damages on average, with 70% of orgs unable to recover in under 2 weeks



Our customers rely on ZPE Systems for Remote Access, Resiliency, Security to operate their business critical infrastructure



Hyperscale Data Center & Colocations

Optimize services and increase resiliency

- Secure Isolated Management Infrastructure
- Anxiety free datacenter automation with 'undo' button

digicert



Utilities

Maintain strict SLAs and reduce capex / opex

- Remote jumpbox access and out-of-band
- Collapse 6 appliance in-1 ZPE Net SR Nodegrid

Vapor



Retail

Set up stores fast and stay online with just 2 IT staff

- Day 0 automation – skip staging
- Out-of-band in each MDF for large square footage

LIVING SPACES



Campus / Education

Reduce MTTR and automate troubleshooting

- Central MDF & IDF access
- Compute & add-on cards

VIRGINIA TECH.



Remote Critical Infrastructure

Eliminate truck rolls and leverage critical data

- Host 3rd party SD-WAN, NGFW, apps, agents
- Sensors for IoT/OT and environmental monitoring

slb



Branch Offices

Prevent cyber attacks and ensure continuity

- Remote troubleshooting from ZPE Cloud
- 4G/5G for out-of-band shared as 2nd WAN

SCHOOLS FIRST
FEDERAL CREDIT UNION

What resiliency looks like with Nodegrid

50%

fewer work-hours using Nodegrid's remote access and automation

0 days

between patches using Nodegrid's IaC integration & config 'undo' button

100%

uptime using Nodegrid's dedicated environment for instant response & recovery

Hyperscale Data Centers



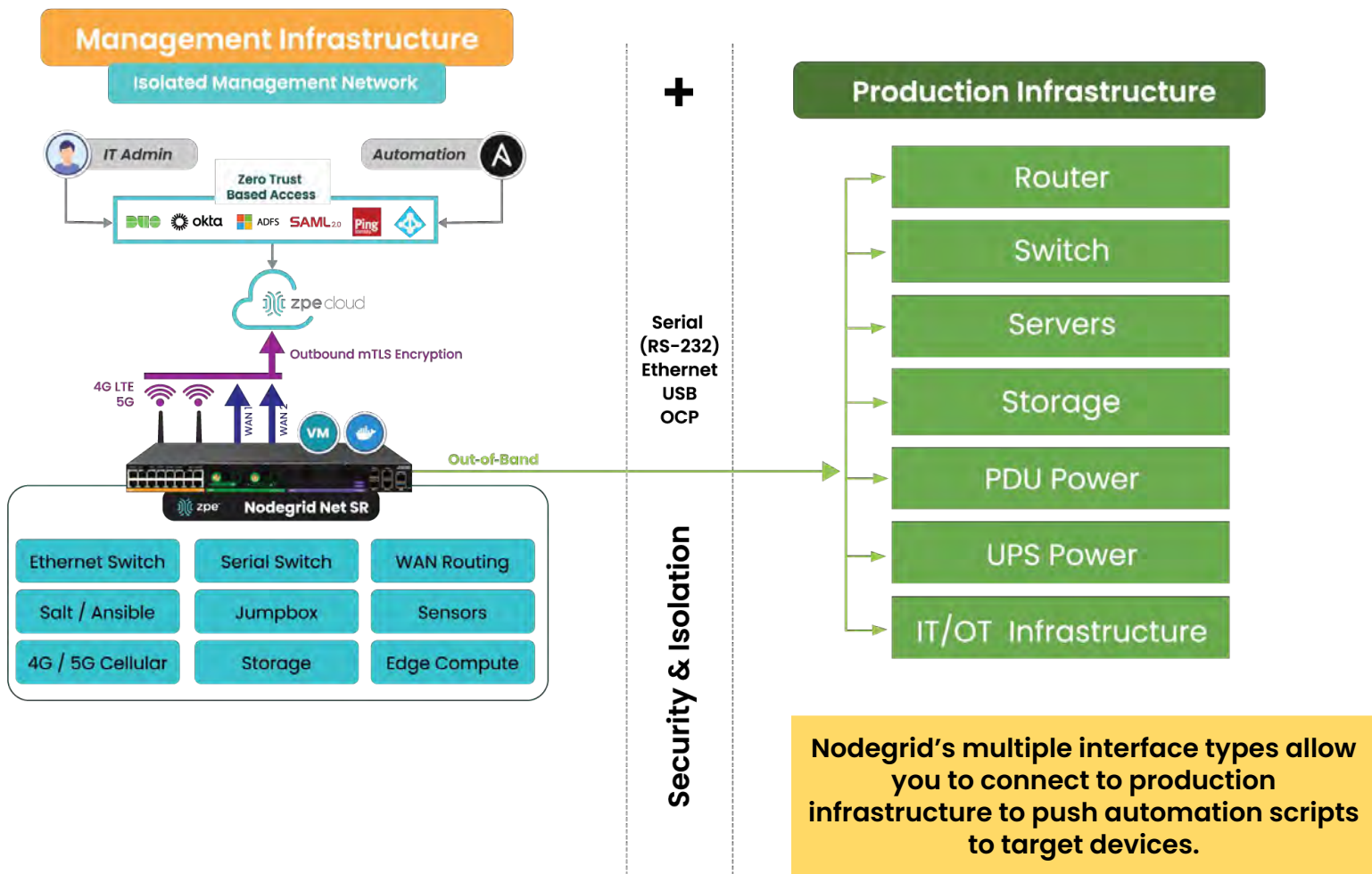
Why Hyperscale Data Centers need Gen 3 Serial Consoles and Isolated Management Infrastructure

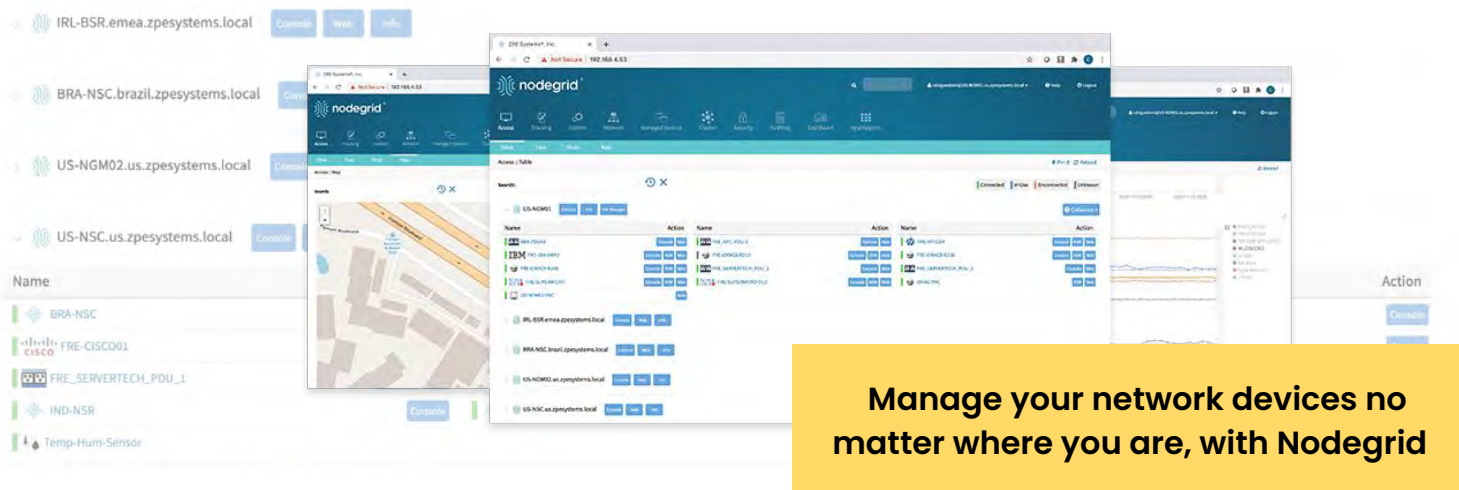
Instead of using production networks for admin tasks, an out-of-band management network (or Isolated Management Infrastructure, as written by CISA), gives admin access to devices via a fully independent network. This mitigates the risk of human errors or security threats taking your production network offline. IMI simplifies and accelerates remediation, and Gen 3 serial consoles offer a drop-in approach to deploying an IMI.

Why IMI is crucial to the data center:

- You get 24/7 remote access to your critical data center infrastructure, even if your WAN link goes down, so you can troubleshoot and recover without expensive truck rolls.
- You can fight through cyber attacks using full remote access to isolate, cleanse, and recover production gear without exposing yourself.
- You can avoid performance impacts on the production network and end-users, by performing resource-intensive network orchestration on the IMI's dedicated management plane.

CISA defines Isolated Management Infrastructure as the 'Best Practice' to network design





Benefits for the Data Center

- Maintain and manage target devices, including PDUs, without rolling trucks
- Reach every node in the data center with low-level remote access
- Get one UI for mixed environments, regardless of pin-outs or management software
- Shrink training times & fatigue with normalized commands across all solutions
- Work efficiently with clustering to access distributed locations and devices
- Stay invulnerable to supply chain attacks with provisioning of factory-default boxes
- Save specialized staff for value-add tasks by automating routine jobs

NEW Nodegrid Serial Console Plus

Front



Back

Connect 16, 32, 48 or 96 (*Patent No. 9,905,980*) serial devices and quickly scale to millions of nodes. Dual SFP+ and dual Ethernet ports keep data free from slowdowns, while the multi-core Intel CPU delivers blazing responsiveness. Built-in 5G/4G LTE and Wi-Fi options give you reliable cellular failover and secure out-of-band access, so you can keep it all online all the time.

Popular SKUs	
ZPE-NSCP-T48R-STND-DAC	ZPE Systems Nodegrid Serial Console Plus – 4-Core Intel CPU, 4GB DDR4 RAM, 32GB Storage. 48-Port Serial RJ45, 2x 1GbE, 2x SFP+, 4x USB (2x USB 2.0, 2x USB 3.0.) Dual DC (DAC)
ZPE-NSCP-T48R-STND-DDC	ZPE Systems Nodegrid Serial Console Plus – 4-Core Intel CPU, 4GB DDR4 RAM, 32GB Storage. 48-Port Serial RJ45, 2x 1GbE, 2x SFP+, 4x USB (2x USB 2.0, 2x USB 3.0.) Dual DC (DDC)
ZPE-NSCP-T48R-STND-DAC-4G	ZPE Systems Nodegrid Serial Console Plus – 4-Core Intel CPU, 4GB DDR4 RAM, 32GB Storage. 96-Port Serial RJ45, 2x 1GbE, 2x SFP+, 4x USB (2x USB 2.0, 2x USB 3.0.) Dual DC (DAC) 4G LTE with Dual SIM
ZPE-NSCP-T96R-STND-DDC-4G	ZPE Systems Nodegrid Serial Console Plus – 4-Core Intel CPU, 4GB DDR4 RAM, 32GB Storage. 96-Port Serial RJ45, 2x 1GbE, 2x SFP+, 4x USB (2x USB 2.0, 2x USB 3.0.) Dual DC (DDC) 4G LTE with Dual SIM

Colocations

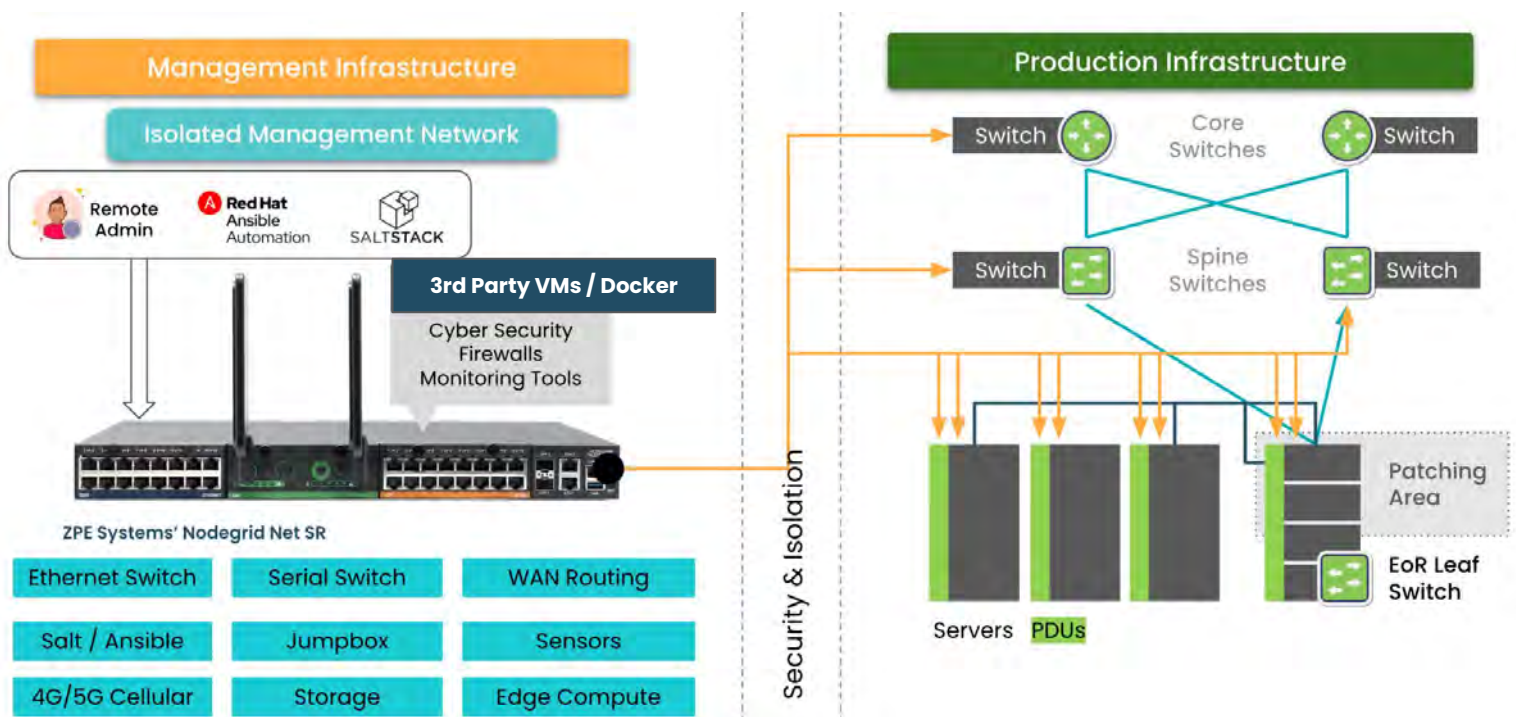


How Gen 3 out-of-band via IMI reduces deployment times, cuts costs, & meets changing requirements

Colocation deployments often require hours of on-site work and ongoing maintenance, and significant overhauls to solve new use cases. Nodegrid's Gen 3 out-of-band via IMI is lean yet powerful. Multi-function devices shrink the stack to save valuable rack space. The open Nodegrid OS integrates into any automation, IaC, or DevOps environment, for zero-touch deployments and true lights-out management. The extensible OS and modular hardware also allow you to address new requirements with code or simple field maintenance.

Why IMI is crucial to colocation operations:

- You get plug-n-play deployments, with a secure environment dedicated to Day 0 - 3 operations.
- You put operations on autopilot, because Nodegrid supports automation, IaC, and DevOps regardless of your environment, for a true lights-out management approach.
- You meet changing requirements, with the extensible Nodegrid OS and modular hardware that allow you to deploy the apps and services you need, anywhere, anytime.



Benefits for Colocation Operators

- Always-ready remote access to systems, even if physical access is not possible
- Resilience through main-line failures and misconfigurations, with separate 4G/5G WAN
- Save physical space & energy by combining 9+ functions into one Nodegrid box
- Cut deployment times to 1 hour with secure, automated provisioning via ZPE Cloud
- Save time, money, and effort by automating Day 0 – 2 operations
- Get point-and-click access to your distributed fleet, including PDUs, using ZPE Cloud
- Focus on business by integrating into CI/CD environments, to put ops on autopilot
- Quickly adapt to new requirements with the modular, 1RU Nodegrid Net SR
- Deploy any app or service, anywhere, at any time via the IMI's Services Delivery Platform



"Now, we deploy in one hour using one box instead of five, and it fits into our CI/CD pipeline so well that we can do proper lights-out management of all our sites. I'm still finding more ways that it frees up my engineers and trims costs."

—Frank Basso, Vapor IO

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16-Port GbE



16-Port USB Serial



16-Port Serial



16-Port GbE SFP



Compute



8-Port SFP+



Storage Card



M.2 Cellular / Wi-Fi / SATA



8-Port PoE+

Popular SKUs

ZPE-NSR-48-SAC	ZPE Systems Nodegrid Net SR – 4-Core Intel CPU, 8GB RAM, 32GB Storage. Network Ports: 4 – 2x 1GbE, 2x SFP+ (Management), 3x USB [2x USB 2.0, 1x USB 3.0], Single AC (SAC) Chassis
ZPE-NSR-816-DAC	ZPE Systems Nodegrid Net SR – 8-Core Intel CPU, 16GB RAM, 32GB Storage. Network Ports: 4 – 2x 1GbE, 2x SFP+ (Management), 3x USB [2x USB 2.0, 1x USB 3.0], Dual AC (DAC) Chassis
ZPE-NSR-832-DDC	ZPE Systems Nodegrid Net SR – 8-Core Intel CPU, 32GB RAM, 32GB Storage. Network Ports: 4 – 2x 1GbE, 2x SFP+ (Management), 3x USB [2x USB 2.0, 1x USB 3.0], Dual DC (DDC) Chassis

Branch & Remote Edge



Scale on demand with efficient operations, no matter how small your team

Lean IT teams are spread thin by branch operations, with inflated device stacks, complex admin processes, and limited support for automation. Nodegrid and ZPE Cloud solve these challenges by eliminating the need for dedicated devices, centralizing administrative control, and enabling automation for any skill level. You get the agility to deploy on demand using a secure platform that scales to the needs of your team and your business.

Why IMI via Nodegrid is crucial to the branch:

- You collapse your stack by consolidating 6+ functions into one device, for an agile solution that's easy to deploy and adapt to your needs.
- You get centralized access at each site, with a single point-of-entry that makes jobs point-and-click simple while minimizing your attack surface.
- You reduce manual and repetitive tasks, by safely testing and deploying automation based on your skill level.

Consolidation & High Availability

Router / SD-WAN



Dual Cellular



Switch



Firewall



Out-of-Band
Console Switch



Automation &
Jumpbox Server
& VM server



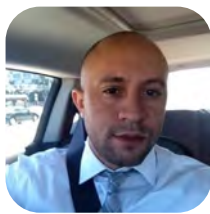
ZTP and recovery via
factory reset button

Prolonged downtime, truck rolls

Near 100% uptime, agility, cost savings

Benefits for Branch and Remote Edge

- Scale on demand with compact and agile devices that consolidate 6+ functions
- Save time and eliminate staging risks, with automation that builds full environments from ZPE Cloud
- Don't wait to generate revenue — bring sites online without a main line, using strong 4G/5G links
- Eliminate truck rolls, with ZPE Cloud giving you point-and-click access to every site from the NOC
- Keep customers online and revenues flowing with diverse failover links, like cellular, MPLS, & more
- Secure and optimize services by directly hosting any security, connectivity, and monitoring app
- Gain crucial insights by collecting sensor data and analyzing with edge computing
- Save specialized staff, by automating deployments and ongoing maintenance



“Nodegrid cut costs by \$75k per year and that was just the beginning. Nodegrid lets us operate 50 stores in a regular work week. We use ZPE Cloud to push scripts that automatically configure new sites. For everything else, we just click into a location and do what we need — reboot hanging gear, apply patches, update software, you name it.”

— Blake Johnson, Network Architect, Living Spaces Furniture

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Gate SR



Bold SR



Hive SR



Link SR



Mini SR

Popular SKUs

ZPE-LSR-24-4G-W5	ZPE Systems Nodegrid Link SR – 2-Core Intel CPU, 4GB RAM, 32GB Storage. 1x Serial RJ45, 1x 1GbE (PoE In), 1x SFP+, 2x USB 2.0. 4G LTE (CAT 12) with Dual SIM, Wi-Fi 5, Power over Ethernet (PoE Input) or Single DC (SDC) Power Configurations. (AC Power adaptor not included, order ZPE-LSR-PSU separately.)
ZPE-BSR-48-4G	ZPE Systems Nodegrid Bold SR – 4-Core Intel CPU, 8GB RAM, 32GB Storage. 8x Serial RJ45, 4x 1GbE (Switch), 1x 1GbE, 4x USB (2x USB 2.0, 2x USB 3.0.) 4G LTE (CAT 12), Single AC (SAC) Power Configuration
ZPE-GSR-48-D128G	ZPE Systems Nodegrid Gate SR – 4-Core Intel CPU, 8GB RAM, 32GB (Disk 1) + 128GB (Disk 2) Storage. 8x Serial RJ45, 8x GbE Switch (4x PoE+ Output), 1x GbE, 4x USB (2x USB 2.0, 2x USB 3.0). Dual DC (DDC) Power Configuration with PoE+ Output (AC Power adaptor not included, order ZPE-GSR-PSU separately.)
ZPE-HSR-816-GW	ZPE Systems Nodegrid Hive SR – 8-Core Intel CPU, 16GB RAM, 16GB (Disk 1) Storage. 2x 1GbE Copper/SFP, 4x 2.5GbE, 2x 10GbE SFP+, 2x USB 3.0, Single DC (SDC) (Ships with Gateway Profile for ZTP)

Nodegrid Serial Consoles

Nodegrid Serial Console – S Series



NSC-T48S-STND-DAC-B-SFP

NEW Nodegrid Serial Console Plus



NSCP-T96R-STND-DAC

The Nodegrid Serial Console (NSC) devices are Generation 3 Serial Consoles. These overcome the limited functionality of Gen 1 devices and the scarce automation capabilities of Gen 2. Modern enterprises are embracing IaC and NetDevOps. Only Gen 3 satisfies this need for greater automation and orchestration.

Gen 1 OOB Remote Access

- Simple connectivity for remote access

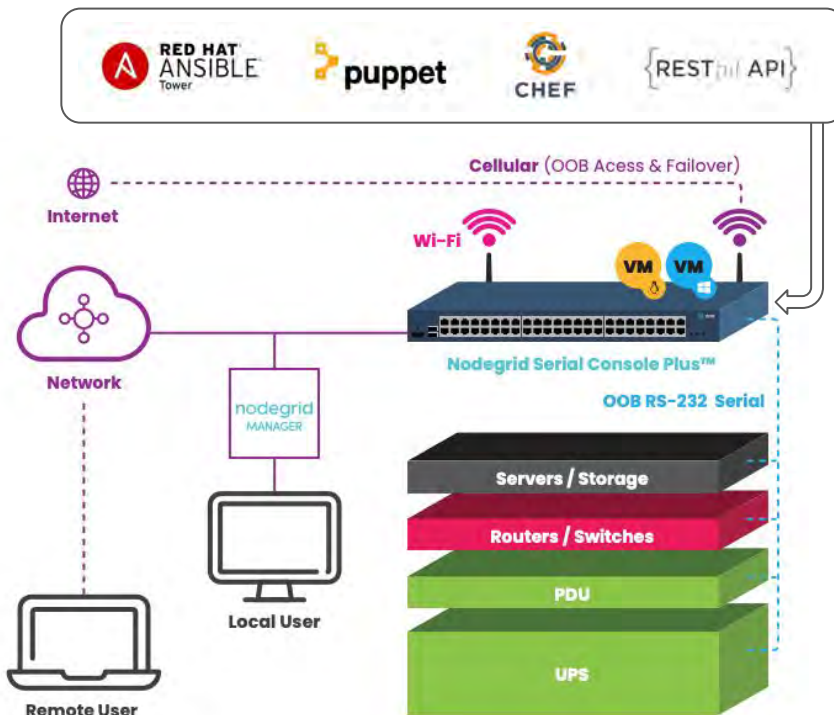
Gen 2 OOB Remote Access

- Limited scripts for automating troubleshooting

Gen 3 OOB End-to-End Automation

- Open architecture for full automation, security, routing and control

Get more done with Gen 3 Out-of-Band Solutions

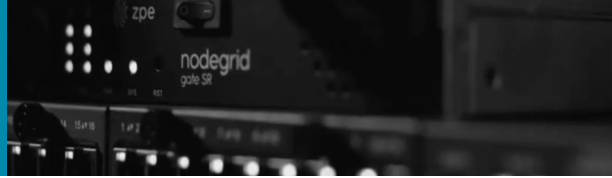


Gen 2 serial consoles don't support IMI, so teams can't leverage Big Tech's best practices

There's growing business demand for everything to work 99.999% of the time, and also more attack vectors that hackers can exploit. The network should just work — from installation through refresh. That's why we worked with many enterprises and the world's tech giants to gather the latest out-of-band requirements and create a blueprint for the Gen 3 serial console.

Gen 3 Serial Consoles implement current best practices and provide a separate management plane with remote access, services delivery, and automation capabilities, along with added layers of security that enable true ZTNA.

Nodegrid Services Routers



Put branch networks at your fingertips and savings in your hand

Nodegrid was built to overcome vendor lock-in and provide fully customizable networking. Our hardware features x86 architecture & the Linux-based Nodegrid OS, so you get an open platform backed by powerful internal components. The vendor-neutral Nodegrid Manager software ties everything together under one interface for simple, uncompromising branch management.

- Shrink your stack using all-in-one hardware that can host every function
- Choose solutions based on your exact needs, thanks to guest OS & application hosting / containers
- Simplify management onto one clean interface, regardless of your vendor solutions
- Stay future-proof with the flexible Nodegrid OS & robust add-on modules (Nodegrid Net SR)



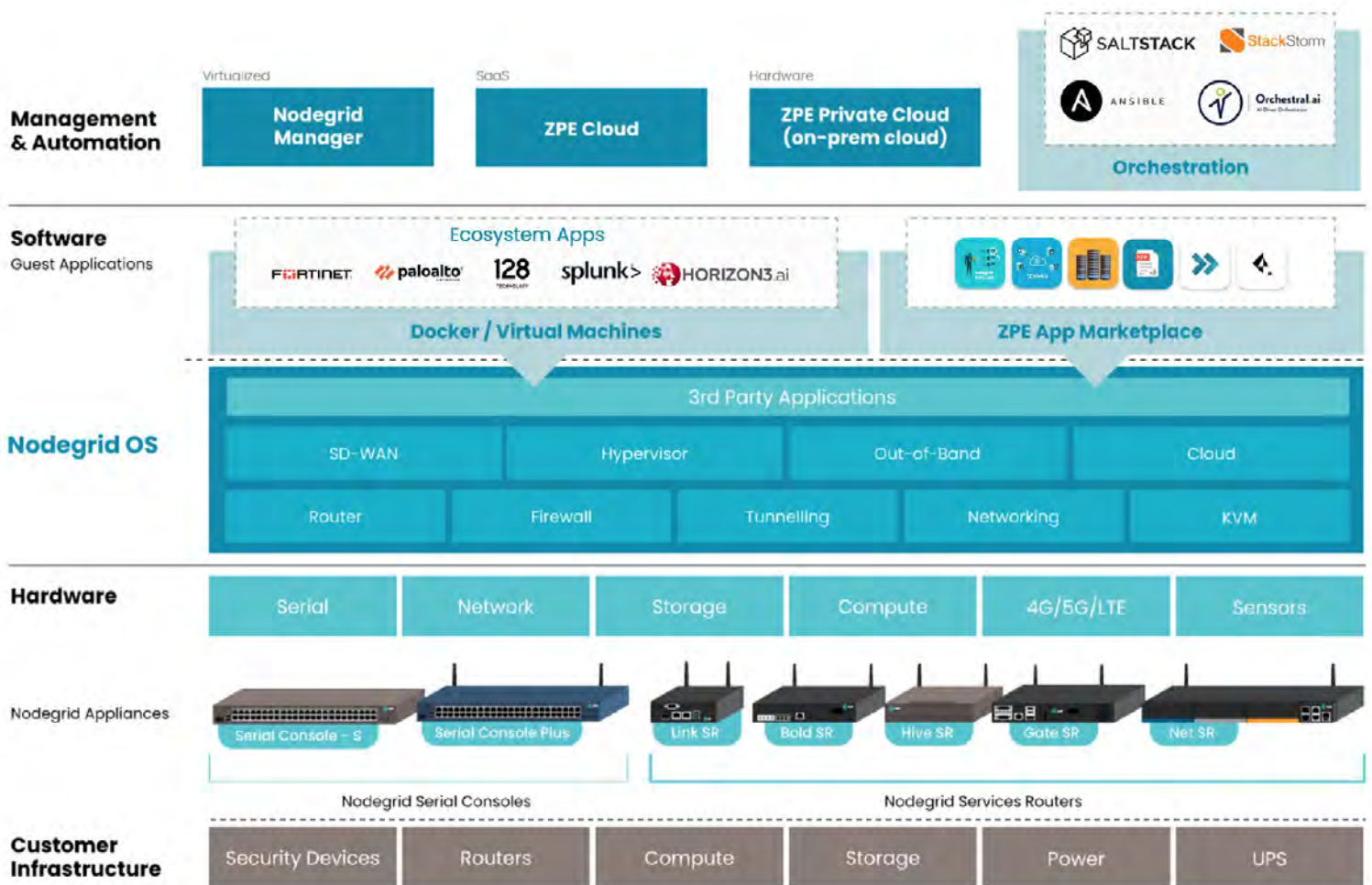
	Nodegrid Link SR	Nodegrid Bold SR	Nodegrid Hive SR	Nodegrid Gate SR	Nodegrid Net SR	Nodegrid Mini SR
CPU	2 Core - Intel x86_64	2, 4 Core - Intel x86_64	4 Core - Intel x86_64	4, 8 Core - Intel x86_64	4, 8, 16 Core - Intel x86_64	2 Core - Intel x86_64
Memory	4 or 8GB DDR3 DRAM	4 or 8GB DDR3 DRAM	16GB DDR4 DRAM	8, 16, 32, 64GB DDR4 DRAM	8, 16, 32, 64GB DDR4 DRAM	4GB DDR3 RAM
Storage - Disk 1 <i>*Optional Disk 2 Available</i>	16GB Hardware Encrypted SSD	32GB Hardware Encrypted SSD	16GB Hardware Encrypted SSD	32GB Hardware Encrypted SSD	32GB Hardware Encrypted SSD	16GB Hardware Encrypted SSD
VM / Docker Support	1-2	1-2	1-4	1-8	1-8	0
PoE+	PoE+ Input	-	-	4x PoE+ Output	-	-
4G/5G Dual SIM	1x 4G/LTE with 2 SIM slots	2 concurrent 4G/LTE modems with 4 SIM slots	2 concurrent 4G/5G modems with 4 SIM slots	2 concurrent 4G or 5G modems with 4 SIM slots	10 concurrent 4G/5G modems with 20 SIM slots	1x 4G/LTE SIM slot
Wi-Fi	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5 6 coming soon	Wi-Fi 5	Wi-Fi 5	Wi-Fi 5
GPIO	2 DIO, 2 Out	-	-	2 DIO, 2 Out, 1 Relay	-	-
Power	PoE -or- Single DC (SDC)	Single AC (SAC)	Single DC (SDC)	Dual DC (DDC)	Single AC (SAC), Dual AC (DAC), Single DC (SDC), Dual DC (DDC)	Single AC (SAC)
Mode	OOB	OOB	Gateway	OOB	OOB	OOB
ZPE USB Sensor support	Yes	Yes	Yes	Yes	Yes	Yes
ZPE Cloud Support	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces	1x Serial RJ45, 1x 1GbE (PoE In), 1x SFP+, 2x USB	8x Serial RJ45, 4x 1GbE Switch, 1x 1GbE, 4x USB (2x USB 2.0, 2x USB 3.0)	USB Serial, 2x 1GbE Copper/SFP, 4x 2.5GbE, 2x 10GbE SFP+, 2x USB 3.0	8x Serial RJ45, 8x GbE Switch (4x PoE+ Output), 1x GbE, 4x USB (2x USB 2.0, 2x USB 3.0)	Base Chassis - 2x 1GbE, 2x SFP+ (10G), 3 USB (2x USB 2.0, 1x USB 3.0)	2x GbE on RJ45, 4x USB

ZPE Cloud Centralized fleet management and orchestration

Device management, access and zero touch provisioning are paramount needs for enterprises. All Nodegrid devices in Gateway mode automatically connect to ZPE cloud and wait for automation scripts to kick off additional jobs such as software upgrades and detailed configurations. Additional apps such as Nodegrid Data Lake can store information from ZPE sensors and enable AI capabilities.



ZPE Nodegrid Building Blocks



Environmental Monitoring Sensors & Alarms



Automation Infrastructure Solution Comparison

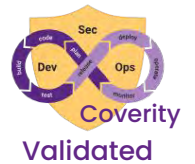
Vendors	Gen3 OOBI	OOBI-WAN and Security	Platform & Tools	Management	
				On-Prem	SaaS
ZPE Systems					
Vendor A					
Vendor B					
Intel NUC/Whitebox					



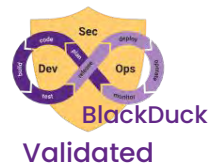
Security in Layers

		ZPE Systems	Others
Security Integrations	<ul style="list-style-type: none"> • CyberArk, Delinia, Horizon3.ai • PaloAlto, Fortinet, Cloudflare 		
Certification and Processes	<ul style="list-style-type: none"> • SOC2 Type 2, FIPS140-3, • PSIRT, Pentesting 		
Software & Cloud	<ul style="list-style-type: none"> • Latest Kernel and CVE patches • Zero Trust based access • SAML2 based SSO • MFA • Latest encryption standards 		
Software Development	<ul style="list-style-type: none"> • Dynamic Code Analysis • Static Code Analysis • Software BOM analysis including Open Source Software Composition • Continuous Security Assessments • Zero CVE Policy • Vulnerability Scan 		
Hardware	<ul style="list-style-type: none"> • Secure Signed OS • Password-protected BIOS and Boot Loader • TPM 2.0 • Self Encrypted Disk • Secure Boot • Geo Fencing Protected 		

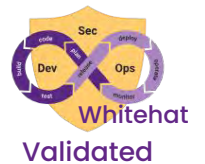
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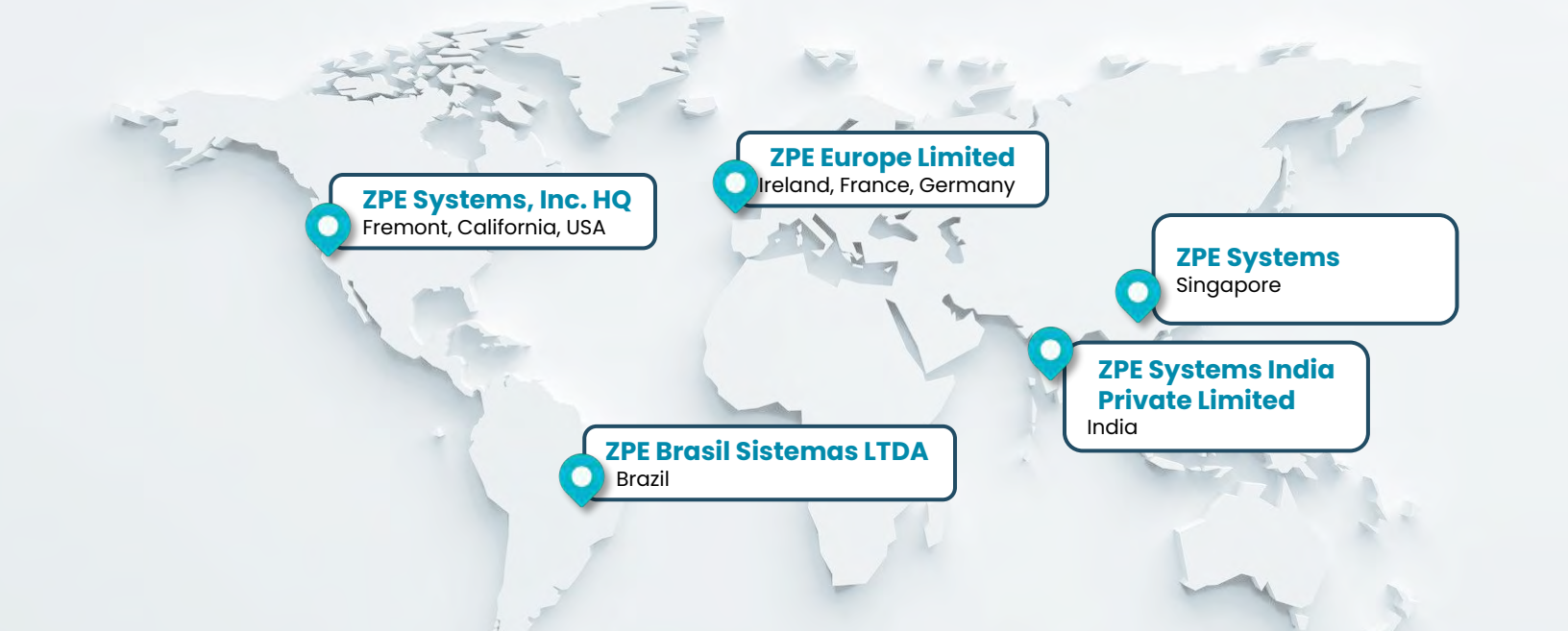


SYNOPSIS®



Validated Virtualized Applications





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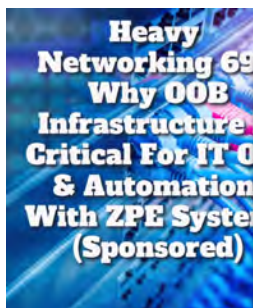
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Putting IT Operations on Autopilot

Jennifer Autry presents the story of Vapor IO. See how they used automation to reduce deployment times and make operations more efficient.

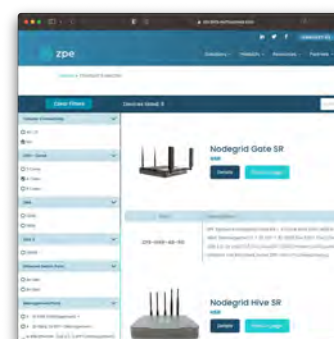


Heavy Networking 691: Why OOB Infrastructure Is Critical For IT Ops & Automation With ZPE Systems

Living Spaces details how ZPE Systems rethinks Out of Band so you can leverage this network for more than rebooting servers and configuring switches.



Product Selector



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