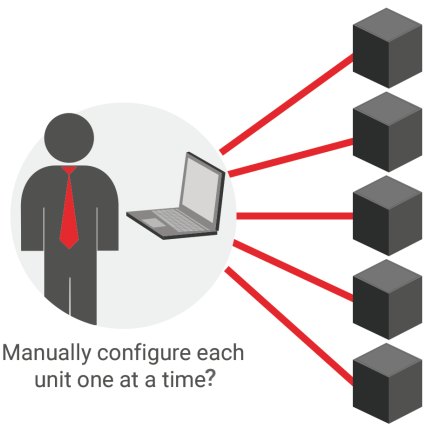
ZERO TOUCH PROVISIONING (ZTP)
with Out-of-Band Deployments

Are Traditional Out-of-Band Deployments Out of Touch?

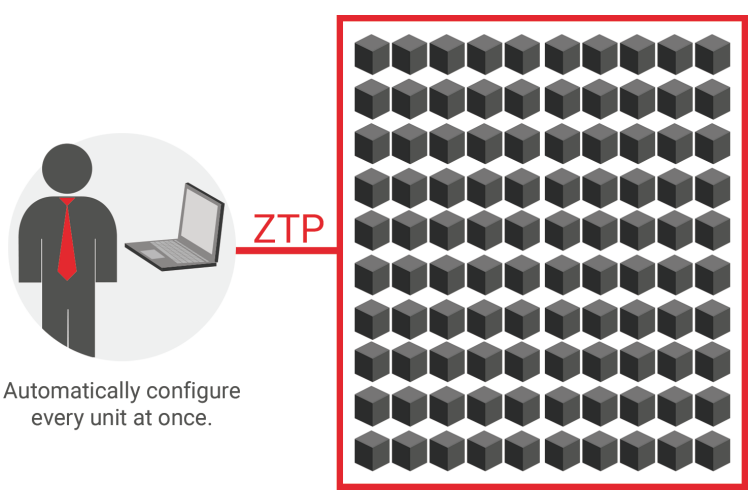
Smart Out-of-band management solutions (OOB) enable secure monitoring, access and remediation to virtually any IT appliance remotely and securely. Whether this is being used in a small or hyperscale data center, these scalable solutions make your network more resilient, secure and intelligent.

In traditional deployments, network administrators configure each device one at a time - logging into an individual unit via CLI and configuring all the necessary settings - and then rinse and repeat. IT organizations are becoming more agile, and the needs of a company can easily shift, so the network also needs to adapt at the same pace. Unfortunately, this old way of deploying equipment can limit the ability for new networks to come online, and could potentially limit the growth of the company.

Another drawback of traditional deployments is the time consuming and labor intensive task to verify the installation. In an out-of-band scenario, this can cause serious issues during critical failures if mistakes are made during the configuration process. Configuration errors that are not caught before deploying, if left undiscovered, can prevent administrators from accessing the network via out-of-band during a critical incident, or even cause a security risk to your network.



Manually configure each unit one at a time?



Automatically configure every unit at once.

Advantages of Zero Touch Provisioning

- Reduce costs and save time for deployments
- More efficient use of staffing resources
- Minimize configuration errors
- Reduce number of tools required
- Adhere to compliance and security policies
- Leverage existing hardware for OOB deployment
- Eliminate the need for extra equipment

Use ZTP for Fast, Effective Deployment

One solution is the use of automation and provisioning tools to assist in the configuration and verification process. These tools may already be in use by your group to deploy the primary IT infrastructure, and can now be used to deploy your out-of-band network. Zero Touch Provisioning (ZTP) simplifies repetitive tasks, reduces the need for human touch points and is scalable to any size deployment.

For example:

If a company plans to deploy out-of-band in 5 remote sites, these devices could be configured locally and then shipped off to each location to be racked and cabled. But if the scenario were to deploy to 200 remote sites within a year, manually configuring identical settings in each of those units would be a daunting and repetitive task. By using Zero Touch Provisioning instead, the time to deploy 5 or 200 sites would essentially be the same, and the risk of errors drastically reduced.

The ZTP process is simple:

Post Config File > Apply Config File > Upgrade Firmware

Need Verification?

After the initial deployment, automating the verification process can prevent fatal errors from being left unchecked. Link Layer Discovery Protocol (LLDP) does this by checking the neighbors of the installed device, and the configuration (device name, port speed and name of port). If a mistake is found it makes troubleshooting quicker and easier. In large scale deployments, this also becomes a significant time saver and eliminates manual checking, which could have allowed errors to be easily overlooked.

Opengear and Zero Touch Provisioning

ZTP can be used with Opengear console servers to automate the deployment and configuration of any connected IT infrastructure. In combination with asset management tools or provisioning systems, the time it takes from hardware deployment to a fully functional system can be greatly reduced. Configuration files can be simple text or XML based files named to the serial number or MAC addresses of devices. Custom bash scripts can be deployed inside the configuration files to customize the deployment.

With Opengear ZTP that there is no proprietary method of deployment, and it adapts to your current method of automation allowing you utilize standard processes and security policies and eliminating the need to validate new tools and processes.

Opengear ZTP Advantages

- Adaptable to existing provisioning systems in place
- Text based config file for easy editing
- Scalable
- Supports Shell commands within config file
- Custom Scripting and config files
- Automates firmware upgrades
- Adjacency verification and troubleshooting via LLDP/CDP
- Reduces the number of tools and the need to validate new ones

ZTP Speeds Up Data Center and Remote Location Deployments

An Opengear customer was deploying out-of-band management in a number of large and remote data centers across the country. Each location required 4 units of the IM7248 Infrastructure Manager, providing out-of-band access to a total of 192 end devices per site. The customer was initially configuring each device manually which took 2 days. With the use of Zero Touch Provisioning, they brought that time down to 2 hours.

Deployment Method	Description	Methodology	Benefits	Time
Manual CLI deployment	Manual configuration via console port	Login via CLI and configure	None. Standard Procedure	**2 Days**
Deployment with ZTP	Opengear IM7200 devices	Rack and cable, basic configuration and deploy via ZTP	Eliminate errors. Save time and onsite resource	**2 Hours**

Opengear Product Overview

Data Center

The Opengear Infrastructure Manager IM7200 and the Console Server CM7100 streamlines remote management of network, server and power infrastructure in data center and remote environments, ensuring business continuity, secure and reliable access and monitoring.

- 8 – 96 Console ports
- *Smart* OOB™ with Failover to Cellular™
- Built in ZTP
- Redundant Gigabit and SFP Fiber
- Embedded WiFi and PSTN Modem
- AC and DC power options
- Environmental monitoring

Remote Site

The Opengear Resilience and Remote Site Gateway ensures uptime at branch offices, retail stores, kiosks and other remote sites. Identify and remediate issues at the network edge before they become failures with *Smart* OOB.

- 4 – 8 Console ports
- *Smart* OOB with Failover to Cellular
- Built in ZTP
- Redundant Gigabit and SFP Fiber
- Compact
- Embedded PSTN Modem
- Scalable