



## Opengear helps Ascolta students learn Anytime, Anywhere

### SUMMARY



**Industry:**  
Education

**Customer Profile:**  
Founded in 1987, Ascolta is recognized as a leader in technical training, empowering network professionals through education, information and community. As a Cisco Learning Solutions Partner, Ascolta offers instructor-led, e-learning, and custom learning solutions. Prior to this year's award, Ascolta has been named Training Partner of the Year for two consecutive years.

**Objective:**

- ▶ Provide secure remote access to serial console management ports on for thousands of students.
- ▶ Aggregate serial console management ports in a high density form factor to reduce impact on available rack space.
- ▶ Provide for high reliability, ease of management, and low cost

**Network Solution:**  
Opengear secure IM4200 & CM4100 advanced console management appliances.

**Results:**

- ▶ Enhanced remote access for use in virtual classroom courses.
- ▶ Reduced power consumption while preserving rack space.
- ▶ Approximately 304 serial console ports connected to IM4200 & CM4100 advanced console servers.

### CHALLENGES

Ascolta Labs are at the heart of the company's success. They are a dynamic environment with thousands of users and hundreds of devices, each of which has different needs that require different devices and configurations. With thousands of active students worldwide accessing these devices remotely, Ascolta needed a reliable console management solution that would securely connect students to the Ascolta lab equipment for a unique hands-on lab experience.

By virtually every measure, electronic learning at Ascolta is experiencing unprecedented growth and will continue to do so for the foreseeable future. This growth required Ascolta to standardize on a flexible serial console management platform that could maintain the quality of offerings and services and scale to meet new demands.

It was imperative that Ascolta address the challenge of how to cost-effectively extend remote serial console access to the students, as well as to faculty and staff. The obstacles cited by Ascolta to provide more comprehensive remote training, are increasingly easy to overcome by choosing an advanced console server solution that offers a secure way to deliver, manage and monitor remote users accessing lab equipment.

- ▶ Reduce costs and increase efficiency in managing lab infrastructure remotely.
- ▶ Enable instructors to shadow students on serial console management ports.
- ▶ Integrate into existing TACACS environment for authentication.
- ▶ Reduce overhead and maximize resources.

“We have a unique scenario in which we support a high number of students spread out across the country. The CM4148 and the IM4216 provides the perfect solution for lab access to a high density of Cisco gear and gives the ability for our instructors to shadow the students on the console providing a much richer learning environment.”

– Brandon Carroll  
Ascolta Chief Technology Officer

### Low Total Cost of Ownership and increased efficiency

A single high-density Opendgear appliance manages several full racks from a single RU, with simple cabling and installation with no disruptive impact on operating infrastructure. The Opendgear appliance uses an optimized solid-state system with power draw of less than 30 watts. This makes it the most efficient remote serial console management solution available, allowing Ascolta conserve resources & quickly realize ROI.

### Collaborative SSH sessions expand instructor influence

Opendgear appliance allows multiple SSH sessions per serial console port to allow for real time training on live systems. This unique, flexible feature allows the Ascolta instructor to extend hands on training with multiple students connected to the same target device. This propels student understanding and comprehension of instructor led device management sessions.

### Seamless integration into existing TACACS Authentication environment

The Opendgear management appliance delivers enterprise-grade security for remote monitoring, access and control. Opendgear's management appliances support the industry's most stringent security, encryption and Authentication, Authorization, and Accounting (AAA) requirements, ensuring that management policies are always enforced, even during a network outage. Ascolta relies on the Cisco TACACS server for AAA and found a seamless integration in the Opendgear appliance to extend true AAA down to the serial console port level.

### Prepared for future growth

There are many benefits to standardizing on a specialized Infrastructure Management appliance from Opendgear. Several key attributes of Opendgear's solution and how its flexibility could benefit Ascolta labs in the future:

**Comprehensive** – Consolidated management of the widest range of data center infrastructure, including:

- Rack mount, blade chassis servers and service processors
- Storage and SAN
- Network routers, switches, load balancers and UTM
- Telecommunications systems, carrier Ethernet and fiber
- Power distribution and backup power infrastructure

**Vendor Neutral Power Management** – Opendgear console servers control the widest selection of PDU and UPS devices. Remote power cycling of managed infrastructure via inline hotkey inside the console management session, gives remote users virtual remote hands for absolute control over their lab infrastructure, and delivers best-in-class remote management and exceptional user experience.

**Smart** – An integrated smart software stack is built-in to each appliance, enabling secure remote access and control over SSH or enterprise-grade VPN, distributed monitoring with integration into your existing NMS such as Nagios or Solarwinds Orion, advanced fault detection and automatic remediation actions, and notification with smart escalation logic to minimize the cost and incidence of false alarms.

**Open** – Built around a fully customizable open management system using open standards and open tools which means future value-added solutions can design-in extensibility from the start, free from concerns of vendor lock-in.

The virtual remote presence and control capabilities of an Infrastructure Management appliance drastically reduces the time and labor costs associated with physical site visit, and eliminates the process overheads of raising a trouble ticket, scheduling resources and validating the fix, required to service traditional remote hands requests. A virtual remote hands service empowers Ascolta to perform tasks like:

- Bare metal and systems provisioning
- Restore network connectivity after a switch misconfiguration
- Cisco IOS recovery from ROMmon
- Hard power cycle to recover a locked server or device

Virtual remote hands offers Ascolta the peace of mind of maintaining total autonomy over their lab infrastructure, securely, from anywhere in the world.

“The IM4216 uses our TACACS server for authenticating student access; and its Web interface is intuitive and easy-to-navigate as we build out our racks.”

– Brandon Carroll  
Ascolta Chief Technology Officer

Key Features: Opendgear IM4200

- ▶ Remote management for serial console ports, network hosts, UPS and PDU's from one single interface
- ▶ 8, 16, 32 or 48 serial ports, dual USB and dual Ethernet
- ▶ Secure In-Band and Out-Of-Band access for dependable remote management
- ▶ 3G Cellular, Heartbeat Monitor with Automatic Failover
- ▶ Enterprise grade security compliance with data center access and security policies

About Opendgear:

Opendgear develops smart solutions for critical infrastructure management.

Our Data Center Infrastructure Management (DCIM) and Remote Infrastructure Management (RIM) appliances secure and simplify remote monitoring, access and control of critical IT & network, and Operations Technology (OT) & industrial control systems.

Our smart appliances integrate next-generation automation and true out-of-band management technologies, ensuring our customers maintain complete control over critical infrastructure - wherever, whenever

Opendgear is privately owned with offices in USA, UK and Australia. For more information, please visit [www.opendgear.com](http://www.opendgear.com).

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