

How to Build a NOC & Help Desk Without Going Broke!

By Charles Weaver, CEO of MSPAlliance



Sponsored by

Summary & Objectives

For companies getting into cloud or managed services, one inescapable obstacle must be confronted: what are you going to do about your NOC & help desk? Perhaps no other obstacle causes more concern to MSPs than how they are going to monitor, manage, and service their clients. Choosing how to build your NOC and help desk can be a daunting task. What best practices do I follow? How expensive will it be? These are all very important questions that need to be answered before you begin. In this paper we will explore the following:

- What is a NOC? What functions does it perform for a cloud/MSP practice?
- What is the help desk and how does it support your practice?
- How does the NOC and help desk interact with one another and what best practices should you be implementing
- How should early stage MSP/Cloud companies approach the building of a NOC and Help Desk?
- Easy steps to building a NOC and Help Desk cost effectively without skimping on security or quality!
- Necessary tools to equip your NOC and Help Desk for maximum efficiency

Origins of the NOC

The NOC and help desk is the heart of the managed service provider. Capable of providing physical security, redundancy, and a secure collaboration area for technicians to monitor and manage customer environments, the NOC is an important part of a MSP's service delivery model. But, where did the idea of a NOC come from? And, how did early MSPs come to rely on them? More importantly, with the advent of cloud computing, distributed work environments, and other technological and business process advances, how have these factors influenced the NOC for today's MSP and cloud provider?

The NOC has been around for a long time. Originally the NOC was a creation of the telecommunications industry, used for monitoring and managing telecommunications networks. Inside the NOC, technicians sit and receive real time information on the networks they are monitoring. The physical configuration of the NOC allows for a secure, intimate, and safe place for technicians to discuss and collaborate with other technicians on problems and issues that would otherwise be unsuitable or unsafe around other non-approved personnel.

When MSPs first came into existence during the mid 1990s, nearly all of these companies had a business plan that included a physically secure, 24/7 operational NOC from which to deliver their managed services. While the tools, configurations, and procedures used in each of these MSPs was different, the presence of the physical NOC was a consistent and important characteristic.

What is the help desk and how does it support your practice?

Many people confuse the terms NOC and help desk when in fact they serve two different but very important functions. The reason behind this confusion may be easy to understand when you look back at how the NOC and help desk came into being and how they have gradually been split apart in modern day managed services environments.

We have already looked at the important role of the NOC, but where does the help desk fit into this equation? The older NOCs actually integrated the help desk inside the NOC in order to maximize the benefits of redundancy, security, and collaborative work environments. The easiest and perhaps most simple way of defining and distinguishing between the two models is the NOC performs network and system based work, often around the monitoring and management of objects that are under management with the MSP. The help desk is more of a customer facing department, responsible for interfacing with end-users (or their agents) in order to respond to problems and reach resolutions. It may be easy to see why these two areas may seem very similar. In fact, depending on your business model, it may be not only cost effective but operationally more secure to house your help desk within the NOC. While these are ultimately choices each company must make on their own, it is important to understand that there is a distinction between the two and that they each serve an important operational function within a managed services practice.

How do the NOC and Help Desk Interact?

Now that we understand the difference between the two, we must now turn our attention to how the NOC and help desk ideally should interact with one another in a managed services practice. While we will examine the business deliverables of how NOC and help desks interact, we must acknowledge that there are many ways in which these two elements can co-exist. Ultimately, how well these two elements co-exist is a factor of the following areas of service delivery.

Help Desk Within the NOC

The advantages to having a NOC with a help desk should be self-evident. All of the MSP's physical and logical security controls are capable of being addressed in one physical space. How technicians login to client systems, physical access to work stations, log monitoring of secure access, change management, and a host of other important controls can be effectively monitored and enforced if the help desk resides within the NOC.

There have been configurations where the MSP creates an entire floor of their office building, complete with secure access, where the NOC and help desk teams work, albeit in different sections within that secure area. The purpose of co-mingling the NOC and help desk is primarily to take advantage of the security and process efficiencies. In other words, if you take the

security of your NOC and help desk in much the same way (which you probably should) then why build out two separate facilities when you can build it once?

There are other benefits to having this configuration as well. Naturally, any interaction between the NOC and help desk is much easier when they are both physically located within the same secure area. If anything should happen to the facility (storms, power or connectivity outages), then the same redundancy and business continuity plans should work for the help desk as well as the NOC.

Help Desk Outside the NOC

Typically in larger MSP environments we will see a help desk that resides outside the NOC. While this is not uncommon, whether this configuration is right in your MSP practice depends entirely on your unique situation.

The instances where we have seen a help desk that is not located within the NOC occurs generally when the company is large enough that the help desk team would not realistically fit within the NOC or where the help desk must exist in a distributed environment. Usually, MSPs that need to have multilingual or multi time zone help desks do not centrally manage the MSP but will frequently have several help desk facilities located in different geographic locations. Naturally, to build a full NOC around each of these help desk areas is not always needed. Therefore, help desks can and do exist outside of and independently from the physical controls that govern the NOC.¹

Regardless of how you configure and operate your help desk and NOC, there should be adequate controls that deal with how these two business elements interact with one another. Documentation must exist on how trouble tickets are handled, how redundancy of power and connectivity are handled within the MSP organization in order to maintain operational effectiveness.

Even if the help desk is outside the NOC, it should enjoy many, if not all of these same attributes as the NOC.

What Makes a NOC?

No matter on which side of the issue you stand there are few who would dispute that a facilities based managed services model offers the most security and control for the client. The rationale behind building a NOC should be evident. The NOC, if built and operated correctly, provides an enclosed and secure space for the MSP to view its managed services operations. Think of it as a mission control center where the MSP not only views the client's IT network but also manages all the activity taking place across the MSP's entire network of clientele. For many years the NOC has come to represent one of the integral characteristics of MSPs.

Naturally, in order to be effective the NOC must possess certain characteristics. These characteristics, while each MSP has their own interpretation, tend to be quite similar when compared side by side. More importantly, for those MSPs who are just starting out (or for those

¹ While it may be outside and independent of the NOC, the help desk should be governed by process and security controls.

companies just starting a managed services practice), there are cost effective methods for achieving each of these important NOC characteristics.

Security

A NOC must be secure. But what does this mean? Many smaller MSPs have visions of very large and expensive NOCs and as a result of these preconceived notions never undertake building a NOC of their own. In actuality, a NOC does not have to cost millions of dollars in order to be effective. A NOC should be enclosed; it should be limited only to those employees who have access to client networks. Furthermore, the facility should have security controls in place to ensure that only those authorized employees are actually entering the NOC. This means you must have locks that work and people or systems watching those technicians who enter, work within, and leave the facility.

Backups and Redundancy

A NOC built on sand is worthless. The NOC has come to represent stability, security, and integrity for those MSPs possessing one as well as to those clients who rely on them. A well-built NOC should take into account the natural order of things, including how unforeseen problems can occur throwing an MSP's entire world into chaos. Natural occurrences like earthquakes, storms, and even power disruption, can wreak havoc on an unsuspecting MSP. Redundant Internet connectivity and backup power are just a few of the characteristics that will make a NOC truly viable and effective.

Sharing of the Minds

A NOC can do more than just provide physical security and other backup and redundant capabilities. A properly run NOC can offer an MSP something far more important than technological benefits; I am talking about the collaboration of an MSP's technicians in a central location working together to solve problems. Technicians who are physically proximate to one another not only can work together in solving client issues but they can also share information that furthers the collective education of the MSP. As an MSP, one of the most important traits the company can possess is education and expertise related to technology and business. Sharing information via email and through other methods is no match for being in the same room.

Building a Virtual NOC

As we have discussed, many new MSPs (primarily those servicing the SMB market) are choosing to forego building a physical NOC in favor of constructing a virtual NOC. You may be wondering what is involved in building a virtual NOC for it is a very natural and good question to ask. In order to answer this important question it is necessary to consult the Unified Certification Standard (UCS) as this is the only existing template addressing how MSPs should employ a virtual NOC in a managed services environment.

Managed services certifications and audits like the MSPAlliance Unified Certification Standard™ (UCS) outlines the use of a virtual NOC as well as basic security and operational guidelines for technicians as they travel. The challenge of operating an MSP with a virtual NOC is that of maintaining adequate security. As virtual NOC technicians openly enter and leave the office, often traveling to client sites, going home, and other locations, keeping accurate security logs, physical security (on the laptops and other handheld devices they use), and maintaining high

standards of managed services excellence can be difficult. For this reason, the MSP must implement certain protocols that ensure the integrity of client data. Use of encryption technologies, strong authentication, poison pill technology, and other forms of common sense should be easily affordable by even the smallest of MSPs.

What this means in practicality is that a technician taking a laptop used for monitoring a client should be guarded jealously, both in the MSP's office as well as outside. The MSP must have a mechanism for auditing the work performed by its technicians wherever they may be. In short, many of the same security and audit procedures employed in running a physical NOC should also be used in operating a virtual NOC. What are missing are the physical security and redundancy backups that only a physical NOC can provide. Having a virtual NOC, while it may be growing in popularity, does offer more opportunities for a breakdown in the managed services service delivery process.

Obviously, whether or not the MSP using a virtual NOC model offers 24x7 monitoring will be dependent on the number of hours they are available to their clients. There are very few who believe that simply being on duty (as defined by being accessible by phone and email) is enough to constitute being a 24x7 MSP. And while there are examples of MSPs operating true 24x7 virtual NOCs, it is important that smaller MSPs not yield to temptation by claiming to possess this capacity when they do not.

Build vs. Partner

This brings us to an important issue that is consuming the attention of many young entrants to the managed services profession. Even with the opportunity to build a robust virtual NOC there are some MSPs who are deciding to partner with an existing MSP in order to leverage that MSP's NOC. The decision to partner with another MSP strictly in order to access a physical NOC is one that must not be taken lightly. Knowing all the facts is important to make the correct decision for your managed services practice.

Typically, young MSPs enter into these partnerships primarily for reasons having nothing to do with the existence of a physical NOC. It is generally a reason of business process and lack of confidence. But whatever the reason, MSPs should weigh this decision as the wrong choice can have dangerous repercussions. In the end, it is difficult to advise everyone about which path is the right one as each company's situation is unique. However, if a company decides to partner with an MSP who has a NOC then choosing a partner that has passed the UCS audit is one of the best methods of selecting a qualified and secure MSP. In these situations, selecting the wrong MSP can have very negative and far-reaching implications. This is especially true where there are many companies holding themselves out as experienced MSPs when in fact they are not. Particularly in an era when greater transparency and disclosure are becoming the norm, choosing a non-certified MSP can greatly impact, in a negative way, a young MSP's managed services career.

No matter what your decision, whether you build your own physical NOC, whether you construct a virtual NOC, or whether you partner with another MSP, the network operation center will continue to be the engine that runs a managed services practice.

FrontRange Solutions For Running a NOC and Help Desk

Naturally, each MSP will have a unique set of requirements that ultimately dictate their procedures and tools needed to run their practice. However, there are some very standard and common elements that tend to translate to MSP models of all shapes and sizes. FrontRange Solutions has been involved in the managed services profession for many years and has developed a number of cutting edge tools that are used by many of the leading MSP organizations throughout the world.

HEAT Help Desk Software

Built on more than 15 years of service management experience, award-winning HEAT help desk software integrates core service and support components into a complete help desk software solution to reduce costs and increase operational efficiency. HEAT offers a powerful and flexible solution, with one of the industry's lowest total costs of ownership.

Desktop & Server Management

The move towards Windows 7 and Hosted Virtual Desktops requires a next-generation approach to client computing. FrontRange Desktop and Server Management (DSM) is a single pane of glass solution for the management of physical and virtual IT assets across the multi-platform, multi-site network.

From procurement to retirement, FrontRange DSM reduces the cost of supporting and managing this next generation of client computing.

Conclusion

No matter how you approach the construction and operation of your NOC and help desk, there are a number of cost effective and practical methodologies that are proven, safe, and implement best practices, from which to choose. Choosing a method that meets the unique needs of your MSP practice and your clients, however, is important.

It is also important to select the right tools to manage your NOC and help desk. Companies like FrontRange Solution have been working with MSPs for many years to help bring cutting edge managed services solutions to thousands of clients. By combining the best tools and processes, you will be on your way to delivering highly valuable managed services in no time.