



# Choosing a NOC Partner

Everything You Should Consider When Outsourcing  
Your Monitoring Services

# Foreword

This eBook is dedicated to IT professionals and business decision makers. Both groups understand the value of partnering with outsourced Network Operations Center (NOC) providers.

IT professionals realize the benefits of augmenting their teams with experienced partners dedicated to network monitoring. Decision makers trying to balance IT demands and projects, with limited staff and budget dollars, know that outsourcing just makes good sense.

Your organization's IT network is the backbone and lifeblood of your business, so you can't simply trust it to just any service provider. You need to know what questions to ask and what answers to expect.

Once the decision to partner with an outsourced NOC is made, you need a clear-eyed evaluation of the criteria involved in choosing the best NOC provider. This eBook is both a guide and checklist to help you choose that NOC partner.



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Reviews why organizations typically outsource network and infrastructure monitoring. It also highlights the cost considerations of in-house vs. outsourced monitoring.

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# Introduction

Professionals choose to outsource network monitoring primarily because outsourcing is more efficient and cost effective. IT staffs have more valuable and productive work to do than trying to implement and maintain one or more monitoring platforms, suffering through on-call shifts to ensure 24x7 availability, and responding to nuisance (false positive) trouble alerts; all the while trying to meet their other IT obligations, projects, and deadlines.

While claiming to be easy to deploy and manage, most network monitoring platforms can often be burdensome and may require additional skillsets to effectively implement. There are also the high costs of attrition, training, and (if you wish to be 24x7) pay packages for additional IT staff to consider.

Recognizing these challenges, you cannot lose sight of the fact that downtime can be incredibly expensive. [i] Gartner studies have estimated that network downtime can cost businesses \$5,600 per minute or \$300K for each hour offline, not to mention the less tangible costs like damage to your reputation, employee morale, and customer satisfaction. An outsourced NOC services partner allows you to mitigate these risks and challenges at very attractive price points.

Whatever formula you use for estimating your IT costs, scenarios where it is cheaper to implement effective in-house network monitoring are rare. Your challenge, then, is to find the best outsourced NOC services partner to fit your company's needs.

Let us begin that journey by applying the 7 criteria listed in Part 1 of this eBook.



## PART 1

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# WHAT TO LOOK FOR IN A CUSTOMIZED NETWORK MONITORING PARTNER

Not all NOCs are the same. [ii] They differ in many ways, for many reasons. The most important differences relate to the types and levels of service they offer, their areas of expertise and where they're located. While many offer a wide variety of services, some may focus only on specific types of systems or equipment manufacturers.



Look for a NOC partner that offers a wide variety of customization options, allowing them to readily meet the unique needs and monitoring challenges of your business.

# HERE ARE 7 HIGH-LEVEL CAPABILITIES A CUSTOMIZED NOC SERVICES PROVIDER SHOULD OFFER YOU

## 1 The capability to monitor your complex environment

In addition to doing what is normally expected, the NOC partner must be able to do the truly difficult things, with support for custom scripts, SQL queries, standard monitoring protocols like SNMP and JSON, and the ability to poll for relevant data at both the macro and micro levels, for example.

The NOC partner must also be able to handle your older, legacy equipment and applications. Your older systems may not support standard monitoring protocols, and may require the ability to monitor systems via CLI polls, special commands, and screen scraping, for example.

## 2 The ability to implement synthetic transactions

Synthetic transactions not only check that your system is ready and available, but also validate the actual operation of applications on your network.

Examples include validating the send/receive functions of your email platform, logging into an Internet/Intranet portal, adding a product to an online shopping cart, or verifying that backups and replication are working.

Your NOC provider should be able to create synthetic transactions unique to your processes and business procedures. If they can, they will be able to elevate your business beyond what's possible with passive monitoring, actively proving that your business is up and running 24x7.

Synthetic transactions also typically fall outside the scope of most commercial monitoring software platforms, but should be readily available through an experienced, expert NOC service partner.

## 3 Flexibility in *HOW* they alert

Your NOC partner should offer network monitoring which includes a flexible, customizable set of alerting options. Those options should include emails, texts, and telephone calls from an experienced NOC technician.

They should offer the ability to specify a “class of service” for monitored devices, calling on critical outages, for example, while emailing for others. They should also be able to follow escalation protocols and specify different alerts for different systems.

For example, you may want them to contact infrastructure staff for a server issue, but application staff for issues with applications running on a server.

**Your NOC partner should offer network monitoring which includes a flexible, customizable set of alerting options.**



## 4 Flexibility in *WHEN* they alert

Often the When can be as (or more) important than the How. Your NOC partner should be able to accommodate your internal business hours, holidays, and on-call schedules.

They should support notification delays built around time-based or duration-based thresholds, and be able to suspend alerting during known maintenance windows.

You should also expect the ability to temporarily silence alerts when outages do occur, without the risk of forgetting about them.

All of these capabilities are intended to help reduce false-positive, nuisance alerts, while guaranteeing actionable alerts get through to the people who need to see them.



# 5 Available Tier-1 Remediation

Monitoring and detection are the first step. Preventing outages, or quickly bringing your systems back online following an outage, are the ultimate end-game and probably one of the primary reasons you decided to outsource in the first place.

You need a NOC partner offering both the skill and manpower to actually fix problems when they occur. Tier-1 remediation requires the ability to troubleshoot and fix outages and impairments, following processes and runbooks defined by you and your NOC partner.

## A NOTE ABOUT RUNBOOKS

- ✓ Closely related to outage remediation is how well the processes documented in runbooks evolve and grow with your changing network and business needs.
- ✓ Your NOC services partner needs to stay on top of runbook evolution to find, evaluate and document what works and what needs improvement.
- ✓ Your NOC partner should be able to take on as much tier-1 remediation as needed to give you and your staff both peace of mind, and a good night's sleep.





## 6 24x7 Call Support

Your NOC services partner should be available to field your calls 24x7. If they can field customer calls, that's a bonus. Many providers offer NOC support utilizing on-call personnel.

That typically means that when you call for support after hours, you have to leave a message and wait for a call back. If 24x7 support and fast response is important to you, look for a partner who's staffed and able to field your calls 24 hours a day.



## 7 An attention to continuous improvement

A skilled NOC partner should continuously improve their monitoring as they learn more about your business, your network, and your people.

This requires patient troubleshooting and monitoring of recurring or unexpected network problems in partnership with your staff.

Continuous improvement can range from developing better monitoring methods for early detection, to postmortem analysis of log files following a system crash, allowing intervention to occur early and preventing recurrence.



# WHAT TO CONSIDER, AND QUESTIONS TO ASK, WHEN CHOOSING A NOC PARTNER

The following is a checklist of 15 technical and service-related questions you should ask before choosing your NOC provider:

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### 1. What is the provider's primary business? Is providing NOC services their main service offering or is it an "add-on" to some other primary offering?

We mentioned elsewhere that not all NOCs are the same. If the provider's primary business isn't monitoring and network operations, that could be a red flag.

A NOC partner who provides these services as their primary business will likely offer a more responsive, efficient, and valuable service to you than a partner who does it part-time.

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### 2: What is the location of their NOC?

Many organizations prefer to outsource to U.S.-based network operations providers, while still others are required to do so.

Aside from legal or contractual requirements, a U.S.-based NOC services partner may be more likely to comply with U.S. tax, security, and business continuity requirements.

Other potential considerations include communication/language/cultural difficulties, service lag times, outage response times, etc., that often accompany hiring off-shore or near-shore service providers.

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### 3. Can they scale to support your business? Is there a minimum?

Major advantages of outsourcing include flexibility and scalability. One size does not fit all and you should only have to pay for the services and support you receive. You should ask about their existing customers, and whether they have customers of a similar size to your own.

Be aware that some NOC providers have high minimum billing requirements and charge additional fees for onboarding, hardware, runbook development, updates, customizations, and other services.

If a NOC provider's minimum level of service and fees exceed your requirements and budget, look elsewhere for one that better suits your needs. Pricing should be clear and easy to understand.



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### 4. Is their staff on-call or on-site? What are the NOC's hours?

You decided to outsource your network monitoring for full 24x7 coverage, but some NOC providers support their customers via an on-call rotation.

Is on-call really the 24x7 coverage you're looking for? The longer it takes someone to put eyes on a problem, the costlier that problem may become.

Look for a NOC partner with 24x7 staff available to assist you and remediate issues at all hours.

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### 5. How will their NOC access your network? Is there a portal?

Does the potential partner require you to install monitoring agents everywhere or do they provide an appliance? If agents, what happens if the agent fails? [iii] Do they have processes in place to ensure uninterrupted monitoring?

If an appliance, do they offer high-availability redundancy options? Look for usage and support of secure access protocols that combine the best security practices with appropriate levels of permission, for example SSH (Secure Sockets Shell), Telnet, and SFTP.

Once connected to your network, does the provider offer any sort of visibility into its health and operation? Good NOC partners will offer an Internet portal or secure application that shows exactly what is being monitored, outage history, trending, reporting, and trouble tickets. The best NOC partners will also offer options to restrict visibility within their portal to areas of responsibility or job function, allow for silencing alarms during maintenance windows and offer multiple methods to reduce false-positive alerts.



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## 6. Is the platform flexible and customizable, or restricted to out-of-the-box functionality?

The best monitoring systems have the advantage of being customizable, satisfying your specific monitoring needs.

- ✓ Be sure to ask your potential partner about the ability to customize their platform to meet your unique requirements.
- ✓ Can they emulate traffic to a website or perform synthetic transactions to validate your applications?
- ✓ What if one of your systems doesn't support SNMP?
- ✓ Can they parse and monitor logfiles?

These are some of the tasks that many out-of-the-box network monitoring platforms cannot accommodate.

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## 7. How are runbooks developed and maintained?

IT professionals know the value of runbooks for documenting how their networks are built, how they operate, and how to fix the most common things that go bump in the night.

Typical remediation efforts include tasks such as restarting applications, rebooting hosts, executing CLI commands, and opening carrier/vendor tickets.

These common tasks will live in a runbook and when you outsource to a NOC partner, you'll need to share your accumulated head knowledge and be willing to delegate authority to keep things running smoothly.

Look for clear roles and responsibilities in runbook development and maintenance, especially early on in their development. Be wary of partners who demand high fees for development and maintenance.

Look for partners who can provide samples and feedback on best practices. You should also ask who owns the runbooks should you decide to go down a different path in the future.



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## 8. Does the NOC subcontract any coverage?

Believe it or not, some outsourced NOC providers actually outsource the very work you hired them for. Tasks the NOC provider outsources to third parties are a direct measurement of the NOC's servicing capability. Moreover, whatever costs the NOC provider incurs as a result of the outsourcing will be your costs as well.

Also, consider this maxim of security liability: You can delegate security coverage, but you are ultimately responsible for third-party security breaches. Apply the same level of due diligence to third-party subcontractors as you do with your prospective NOC provider. **[iv]** Look for assurances that the NOC provider's third-party agent is aware, compliant, and responsible.

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## 9. How does the NOC alert you and handle outage escalations? How can you communicate with the NOC?

In Part 1, we discussed the need for flexible alerts. That flexibility could involve different modes of problem notification depending on when the problem occurs—an email or SMS from 9 to 5, and an emergency phone call after normal working hours.

Those alerts should be dependent on the priorities you define, along with the potential seriousness of the problem.



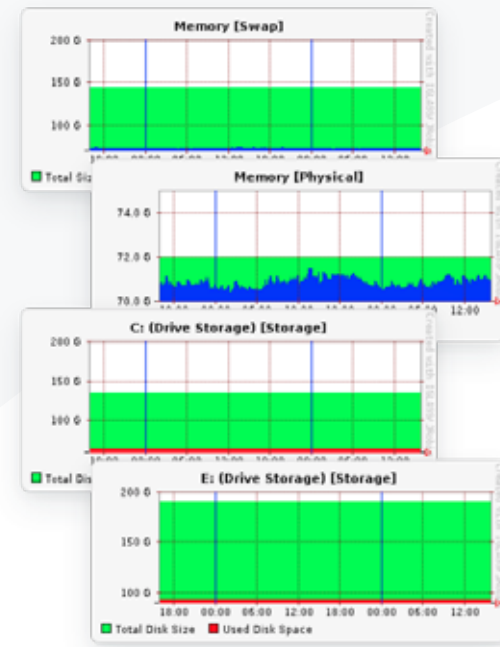
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## 10. Diagnostics and remediation: How quickly can they diagnose and remediate issues?

How long can your network stay offline without seriously damaging your business or reputation? Look for evidence that the NOC provider has the ability to quickly respond to outages and get your network back online to minimize downtime.

The best NOC partners will offer you a Service Level Agreement (SLA) specifying their expected response times, and should be held to those standards.

FEATURED GRAPHS



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## 11. Can the NOC monitor both existing and new technologies?

Just a few short years ago nobody knew what a VM was and the cloud was just something fluffy floating in the sky overhead.

Look for a partner offering experience and expertise monitoring across both legacy and today's newest platforms: Physical and Virtual Environments, Data centers and Cloud Platforms, and offering support for multiple operating systems (Windows, Linux, UNIX, OS X, etc.)

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## 12. Do you have to open and manage vendor or carrier tickets? Or can the NOC handle them?

Nobody likes to get woken up at 3:00 AM for a circuit outage or equipment failure. But for some NOC service providers, that's about as far as they're able to go. They verify the outage and wake you up.

The best NOCs will take it much further, opening tickets on your behalf, authorizing intrusive testing and dispatch, ordering spare parts, and following up at regular intervals.

Find out which optional services your potential NOC partner supports and look for one that will let you sleep at night.



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## 13. How long does it take to implement an outsourced solution?

Once agreements are in place, how long does onboarding typically take? Will your provider need several weeks or months or can they have you up and running quickly?

As one might expect, the bigger the network, the longer it takes to implement effective monitoring, but if initial deployment takes longer than a few weeks, you may wish to look for a different partner.

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## 14. Is the outsourced NOC price fixed, tiered, or will it vary with usage?

While this may go without saying, you should only pay for what's monitored in your network and the service the partner provides. Steer clear of providers with high fees per host that bundle in services you may not use.

For example, some providers bundle estimated remediation costs into the monitoring fee, even if you never need that service or even give them access to provide it. A preferred option would be to pay per remediated incident, with the ability to cap and control spend. The ideal billing combination is also one where fees scale with your needs.

Look for monthly plans based on your device population, network metrics (CPU, memory, bandwidth, etc.) and selected optional services. Look for quantity discounts and friendly business terms.

Be sure the contract terms allow you to increase or decrease the scope of services without change fees or penalties.



## 15. Can I view a demo? What about a free trial?

Look for real-time demos that go beyond flashy PowerPoints. Can they show you real alerts and how they responded to them? A demo should give you a good feel for what to expect from both their platform and their NOC staff.

Do they provide or offer any sort of free trial or proof of concept? A free trial should include ways to put their monitoring platform through its paces and give you a firsthand feel for what the partner is capable of.

A free trial also allows you to interact with their NOC staff, gauge how responsive they are and how they handle any challenges in your network.





## In Summary

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Outsourcing a time-intensive function like network monitoring makes good business sense for organizations large and small. Choosing the right partner, however, isn't always as straightforward and easy as you might hope.

When you outsource your network monitoring, you face critical decisions on who, what, where, and how your chosen NOC provider will support you. Poor performance on the part of the service provider could undermine your operation to the point where you lose revenue, incur additional expenses and suffer a loss of reputation.

The goal of this eBook was to present some of the most common considerations and questions to evaluate, enabling you to make the best decision for your own organization.



This eBook is sponsored by iGLASS Networks. We are a 24x7 NOC service provider, and our goal is to lift the weight off your team's shoulders. We focus on your network, so you can focus on your business.

## END NOTES

### Sources for this eBook include the following:

- [i] Learn more about network downtime in the [web article](#), "The Cost of Downtime," by Andrew Lerner.
- [ii] Read more about this and other misperceptions about [outsourcing NOC Services](#) in "10 Myths About Outsourcing NOC Services," by David Nizen.
- [iii] Read more on agent vs. agentless monitoring tools in the TechTarget.com [web article](#), "Agent vs. Agentless: Monitoring Choices for Diverse IT Ops Needs."
- [iv] For further information, see the CYBERSECURITY LAW & STRATEGY [article](#), "Third-Party Cybersecurity Strategies Critical to Preparedness," by David F. Katz, et. al.





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