How to Choose the Correct Network Operations Model for Your Enterprise

Published 24 March 2021 - ID G00740014 - 12 min read

By Analysts Ted Corbett, Danellie Young, Neil Rickard

Initiatives: Cloud and Edge Infrastructure; IT Services and Solutions

I&O leaders want predictable operations performance and costs from networking investments, but considerations for using DIY, MNS or custom NOC for cloud and edge infrastructure management are often misunderstood. This research helps I&O leaders choose the model that best fits requirements.

Overview

Key Findings

- Many enterprises struggle to accurately assess the capabilities and costs of their DIY NOC model, resulting in unmet expectations while limiting their ability to deliver predictable service quality to the business.

- I&O leaders seeking standardized MNS-led network enablement to support multicloud, IoT, edge computing and software-enabled capabilities encounter a wide range of service delivery performance in the MNS market, making it difficult to choose an appropriate provider.

- Gartner clients with custom NOC offerings have expressed dissatisfaction with unexpected costs, service delivery quality and, most commonly, difficulties in governance activities.

Recommendations

When choosing among DIY NOC, MNS or custom NOC services, I&O leaders focused on cloud and edge infrastructure should:

- Confirm their DIY NOC capabilities and maturity by using Gartner’s IT Score tool to identify their organization’s service delivery strengths and weaknesses.

- Validate MNS providers’ service-delivery capabilities by confirming process efficiencies, degrees of automation and performance across KPIs that are critical to consistent service delivery.

- Increase visibility into custom NOC outsourcing services by requiring providers to disaggregate bundled service elements. This increased visibility improves governance activities by revealing specific performance levels (KPIs) and costs aligned to the provider’s service activities.
Strategic Planning Assumptions

By 2024, 80% of enterprises that align network operations plans to business-led objectives will grow faster than their competitors that do not, up from 25% in 2020. By 2024, 70% of enterprises will delay at least one major business-enabling IT initiative due to the inflexibility of their chosen network operations model, up from 30% in 2020.

Introduction

Many I&O leaders focused on enterprise cloud, edge and infrastructure operations have turned to software-defined capabilities for network innovation. These capabilities can position I&O leaders to achieve predictable performance levels and costs for cloud, WAN edge, and LAN-delivered applications and services.

But most struggle to identify the appropriate approach to achieve business objectives. The DIY, self-managed NOC model is common in North America, with over 60% of enterprises choosing DIY. Managed network services (MNS) is more common in the European and Asia/Pacific regions, with over 70% of enterprises in these regions consuming MNS. Custom NOC outsourcing offers represent the smallest subset of the market, at less than 10% globally. Choosing the wrong network operations model can result in underperforming network operations, poor service delivery quality and excessive costs, thereby inhibiting business initiatives (see Note 1).

Meanwhile, an enterprise network operations scope represents the end-to-end life cycle operations for all networking products, and network services for all users and applications regardless of location. These components include operating network hardware, software, maintenance products and network services (for example, WAN transport connectivity with numerous features and capabilities from carriers). Gartner defines the MNS and network services markets separately as presented in Note 1 and 2. The two markets differ fundamentally since WAN transport services ownership and provisioning are not included in the MNS market.

How can I&O leaders identify an approach that will optimize network service delivery quality and control costs? This research helps I&O leaders identify the network operations model that is most appropriate for their organization.

Follow the process in Figure 1 to inform your selection.
Analysis

Validate Your DIY NOC Abilities

The DIY approach is appropriate for any enterprise, whether it views network operations as a commodity or as mission-critical for their business model.

To succeed with network operations using a DIY model, enterprises must have in-house a level of process maturity, tooling and skilled resources commensurate with their business objectives (see Figure 2). I&O leaders should use Gartner’s IT Score to assess and confirm the organization’s level of maturity, identify strengths and weaknesses, and inform action steps for their network operations functions (see IT Score for Infrastructure and Operations).
Perform an internal cost analysis on your DIY network operations. The results of this analysis step is commonly understated due to difficulty assessing costs related to immaturity in processes, tools and skills. Accurate cost estimates that are necessary for informed decisions are not revealed within accounting cost centers or annual budgets. Gartner IT Score provides deeper analysis that reveals relative maturity and gaps in process functions, which can then lead to identifying actual costs of network operations using internal and/or subject matter expert assessment teams.

Across the landscape of industries, Gartner commonly sees enterprises either underinvested in or overspending on labor. A minority of organizations have aligned objectives and investments and maintain this balance. Overspending on labor is typical for those underspending on process efficiencies, tooling and automation. This causes labor costs to be higher. Underspending is more common where service levels and performance of network operations is adequate to meet objectives. Results are good enough to meet needs, but not typically positioned to embrace significant improvements in service delivery quality.

For larger enterprises, properly planned and executed DIY network operations typically cost less than other network-operations options. The larger the networking estate, the more likely that scale efficiencies apply and that overall quality and costs to enterprises can be optimized to meet business objectives.

To determine if the service delivery quality from their DIY network operations management service model can support their business objectives, I&O leaders should:

- Complete Gartner IT Score assessments. These should include the IT Score for Infrastructure & Operations across the five core functions within the tool.
Equipped with the results of internal analyses, enterprises can now determine their way forward. Valid steps are dependent on each enterprise’s business requirements, capabilities and costs. For example, no changes may be right for one enterprise, while significant changes may be best for others, whether these be increasing investments, decreasing them, or shifting to a different network operations model.

For example, an IT Score of less than 3 is common, as nearly 75% of all IT Scores are below 3. Still, scoring below a 3 should be of concern for all, depending on the degree of your maturity gaps, costs and business criticality. Any IT Score below 2 should be a critical cause for concern and potential actions, within the context of other individual circumstances. These actions may include incremental investments in the DIY model or switching to one of the different models available for network operations services, either MNS or custom NOC outsourcing.

Validate MNS Providers’ Service-Delivery Capabilities

Enterprises of all sizes use standardized MNS provider offers for network operations, regardless of their business objectives. Enterprises leveraging MNS benefit from provider improvements in service quality, automation and customer experience. However, performance across the range of MNS providers varies widely.

Many enterprises meet their objectives with standardized MNS-delivered network operations, and most value the predictability of costs and services delivered. Many enterprises prefer this predictability to internal investments in process efficiencies, tooling and skilled resources, which are present in a DIY model.

I&O leaders with business objectives that require network operations support for their network estate should select carefully from among the MNS providers, while focusing on those that demonstrate their MNS offerings’ ability to perform at a level of service quality and cost to meet business objectives (see Figure 3). Properly planned and executed MNS can cost less than DIY or custom NOC offerings. Enterprises with lower maturity across processes, available tooling and internal skilled resources may find that a standard MNS offering allows them to avoid expensive remedial investments.
To determine if the service delivery quality from their MNS can support their business objectives, I&O leaders should:

- Ensure alignment to business objectives for their network estate. Most MNS providers are able to support minimal objectives in a “run-the-business” type of alignment.

- Confirm process efficiencies, degrees of automation and customer experience performance across a range of provider-reported KPIs critical to consistent service delivery (see Magic Quadrant for Managed Network Services).

- Verify that the price paid for services aligns with the service-delivery quality, automation and customer experience expected from the selected MNS provider by comparing services delivered with Gartner market pricing research for MNS.

Equipped with the results of their MNS service delivery and cost analyses, enterprises can now determine their way forward. Valid next steps are dependent on each enterprise’s business requirements and costs and whether these are aligned appropriately for MNS delivery. For example, no changes may be right for one enterprise, while significant changes may be best for others, whether they be increasing investments, decreasing them, or shifting to a different network operations life cycle model.

Improve Visibility Into Custom NOC Services

Enterprises of all sizes employ custom NOC delivery models, but it is more common among larger enterprises, with a substantial labor component included. Satisfied enterprise buyers of custom NOC outsourcing invest significantly in alignment with the NOC outsourcer, actively drive business performance KPI improvements and govern these providers tirelessly.
Gartner sees some enterprises with custom NOC outsourcing deals that are satisfied with the service delivery quality, automation and customer experience. But most Gartner clients with custom NOC offerings have expressed dissatisfaction with unexpected costs, service delivery quality and, most commonly, difficulties in governance activities, confirmed by Gartner research surveys and validated by client interactions. For most enterprises, costs with custom NOC agreements are significantly higher than with DIY or MNS approaches.

Gartner frequently sees enterprises that expected and were sold a claim of a “standardized” MNS offering but actually received a custom NOC outsourcing offer or simply staff augmentation offers packaged by providers as a “managed service.” We have seen this in enterprises of all sizes. I&O leaders must confirm their provider arrangement with informed analysis; aligned objectives, expectations and costs; and seek any adjustments needed (see Figure 4). To do this, require providers to disaggregate service elements included and identify granular charges aligned to service delivery activities, including all monthly recurring charges (MRCs), labor rates/roles and labor hours applied to activities to identify any adjustments required.

Avoid placing owned and differentiated intellectual property (IP) into a custom NOC solution. In addition, differentiated IP created for and with buyers may expose the organization to the risk of having IP repackaged, leaked and applied to other enterprises, including to competitors.

To determine if the service delivery quality from their custom NOC agreement can support their business objectives, I&O leaders should:

- Confirm that all service delivery quality activities, required automation levels and customer experience KPIs are delivered consistently.
Equipped with the results of custom NOC service delivery, governance and cost analyses, enterprises can now determine their way forward. Valid next steps are dependent on each enterprise’s business requirements and costs and whether these are aligned appropriately for a custom NOC solution. For example, no changes may be right for one enterprise while significant changes may be best for others, whether these be increasing investments, decreasing them, or shifting to a different network operations life cycle model.

Evidence

Gartner analysts conducted more than 2,300 Gartner client inquiries on the topics of networking products, services, network operations centers (NOC), managed network services (MNS) for LAN and for WAN, and custom NOC outsourcing arrangements, between 1 January 2019 and 1 January 2021.

Gartner analysts conducted survey- and analytics-based research during 2020 that assessed over 30 global providers, including both managed network services as part of the Magic Quadrant and Critical Capabilities for Managed Network Services research process in 2020.

Gartner analysts conducted a research survey on MNS and collected metric data on custom NOC outsourcing client interactions, confirming challenges with both models related to service delivery quality, automation and customer experiences. Client concerns over unclear service definitions and lack of price transparency persist in the market in 2021 as formerly confirmed in 2018. See Market Insight: Enterprise Managed Network Service Providers Must Differentiate by Addressing New Adoption Drivers and Challenges for further guidance.

Note 1: Network Operations Models

Self-Managed (DIY) NOC

An enterprise that internally operates and manages their own network investments. The scope of these internal NOC operations commonly includes LAN and WAN estates (and the accompanying underlying OEM products) and network service provider (NSP) WAN transport services across the enterprise estate. Most operationally manage user-to-application experience regardless of location of users or workloads.

Managed Network Services (MNS)

The MNS market consists of globally capable providers of standardized MNS that provide service management functions for the operation of enterprise networks for two managed network services. MNS
are highly standardized services as the providers are focused on scale and quality efficiencies from volume operations business models:

- Managed LAN/WLAN services (that is, MNS for LAN) include the management of all in-scope enterprise LAN customer premises equipment (CPE), inclusive of single point of contact (SPOC) ownership for the life cycle management of these devices.

- Managed WAN services (MNS for WAN) include the management of all in-scope enterprise site edge networking CPE and WAN transport management. These services provide life cycle management for site edge CPE, such as routers and SD-WAN. Additionally, MNS providers provide an SPOC for troubleshooting ownership with all WAN transport services connecting client sites (see Magic Quadrant for Managed Network Services 2020).

Custom NOC Outsourcing

These type arrangements commonly have some standardized components, but dominantly are inclusive of customized network operations capabilities and specialized accommodations for individual enterprise buyers. These arrangements can include transfer of labor resources, technology assets and contract novations among a myriad of other components that make them custom in nature. Though enterprises of different sizes may choose this model, the vast majority are large and extra large enterprises.

Note 2: Network Services

Gartner defines the global network service market as the provision of fixed corporate networking services with worldwide coverage (see Magic Quadrant for Network Services, Global).

Document Revision History

DIY vs. MNS: Enterprises Must Reassess Their Network Sourcing Model to Prepare for SD-WAN - 8 September 2017

Recommended by the Authors

Cloud and Edge Infrastructure Primer for 2021
Magic Quadrant for Managed Network Services
Critical Capabilities for Managed Network Services
Toolkit: RFP Template for Managed and DIY SD-WAN Products and Services
Toolkit: RFP Template for Managed Network Services
IT Key Metrics Data 2021: Infrastructure Measures — Executive Summary
Market Insight: Enterprise Managed Network Service Providers Must Differentiate by Addressing New Adoption Drivers and Challenges
Five Ways to Save Money and Improve Performance When Sourcing Managed Network Services

Magic Quadrant for WAN Edge Infrastructure
Magic Quadrant for Wired and Wireless LAN Access Infrastructure

© 2021 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. It consists of the opinions of Gartner's research organization, which should not be construed as statements of fact. While the information contained in this publication has been obtained from sources believed to be reliable, Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner research may address legal and financial issues, Gartner does not provide legal or investment advice and its research should not be construed or used as such. Your access and use of this publication are governed by Gartner’s Usage Policy. Gartner prides itself on its reputation for independence and objectivity. Its research is produced independently by its research organization without input or influence from any third party. For further information, see "Guiding Principles on Independence and Objectivity."