

MarketScope for Network Configuration and Change Management

Published: 31 October 2011

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Network configuration and change management products are being investigated by network managers to improve staff efficiency and address network compliance audit requirements. Use this MarketScope to understand the range of vendors and technology alternatives available in this category.

What You Need to Know

The role of network configuration and change management (NCCM) tools for the enterprise market is changing. Once exclusively the domain of element management systems from network equipment manufacturers, they are becoming the province of vendors with multivendor network device configuration management, change detection and compliance audit capabilities. Chief drivers of this change are corporate audit and compliance initiatives ranging from specific compliance regulations — such as the Sarbanes-Oxley Act (SOX), the Health Insurance Portability and Accountability Act (HIPAA) and PCI — to general corporate compliance guidelines put in place to satisfy auditors' requirements.

New pressures are coming from cloud implementations, where policy-based network configuration updates must be made in lockstep with changes to other technologies, such as servers and storage, to initiate the end-to-end cloud service. Network managers will increasingly be called on to replace manual processes with automated NCCM tools to monitor and control network device configurations, thus improving staff efficiency, decreasing downtime, reducing risk and enabling the enforcement of compliance policies.

Use this MarketScope to help you decide which vendors to select, and to establish enterprise strategies for NCCM. Prior to investing in tools, establish standard network device configuration policies to reduce complexity and enable more-effective automated change.

MarketScope

NCCM has primarily been a labor-intensive, manual process involving remote access (for example, via Telnet or SSH) to individual devices, and typing commands into vendor-specific command-line interfaces that are fraught with the possibility for human error, or creating homegrown scripts to

ease retyping requirements. With its "just get it running" approach, the enterprise network operations team gave little consideration to rigorous configuration and change management, compliance audit or disaster recovery rollback processes when executing network configuration alterations, although these changes were often the root causes of network issues. However, corporate audit and compliance initiatives have sometimes forced a shift in this behavior. In addition, the increased frequency of network configuration changes and patch updates required for security purposes is causing network engineers to rethink their manual approach.

A new generation of NCCM vendors has created tools that operate in multivendor environments, enable automated configuration management and bring more-rigorous adherence to the change management process, as well as compliance audit capability. The market has progressed to the point where many of these startups have been acquired, with market consolidation activities taking two forms, which focus on two types of technology integration:

- Vendors with a presence in other network management disciplines, such as network fault management, have expanded their portfolios to cover the network configuration management discipline. For example, EMC acquired Voyence to add to its EMC Smarts network fault management product (now both part of the EMC Ionix product family), and IBM acquired Intelliden to add to its Netcool-based network fault management product.
- Vendors with a presence in change management or configuration management for other technologies, such as servers, are expanding their portfolios to cover network devices. For example, prior to HP acquiring Opsware, Opsware acquired Rendition Networks to add to its server provisioning product; and BMC Software acquired Emprisa Networks to add to its server provisioning and configuration management, client configuration management, change management, and configuration management database (CMDB) offerings.

Enterprise network administrators will likely be more interested in NCCM's staff productivity and efficiency improvements and, in the short term, tactical integration with other network management disciplines, such as fault and performance management. Gartner clients and NCCM customer references have improved their ratio of full-time equivalents to the number of network devices managed by a factor of two to as much as 10 times the number of devices as before. However, productivity and efficiency improvements are not solely due to NCCM product deployment. A level of infrastructure standardization and documented configuration policies is required to achieve the most-significant improvements.

Senior enterprise IT management will likely be more interested in NCCM's compliance reporting and, in the long term, strategic integration with companywide configuration and change management processes, and the promise of having compliance visibility across all data center infrastructure components from a single dashboard, where networking is just one component. Currently, NCCM tends to be a discipline unto itself; however, interest in cloud is forcing it to increasingly be considered part of the configuration and change management processes for an end-to-end IT service, and viewed as an enabler for cloud implementations and the future real-time infrastructure (RTI). This requires participation in the strategic, companywide change management process (usually implemented through IT service desk tools); integration with configuration management tools for other technologies, such as servers and storage; and an ability to execute model-based, policy-based, automated configuration updates.

The market consolidation activity at the high end has left an opening for new vendors to enter the market, particularly evident among vendors that focus on small or midsize businesses (SMBs). Ipswitch and Quest Software, new entrants to this MarketScope, join ManageEngine and SolarWinds in offering NCCM products that are downloadable, easy to use and affordable (sometimes with free, entry-level options). These "cheap and cheerful" products don't appeal only to companies with smaller-scale networks. With the cost-consciousness that pervades the economy, even large enterprises are investing in these "good enough" NCCM products, rather than focusing on strategic, scalable, long-term implementations.

Market/Market Segment Description

The ideal NCCM product for the enterprise network has the ability to:

- Discover, backup and restore network device configurations
- Provision new network devices
- Distribute software updates
- Make configuration changes
- Detect and alert on changes
- Perform a differential audit between configuration versions
- Establish and enforce compliance with network device configuration policies
- Provide role-based access to network devices and configuration functions
- Report on all aspects of network device configuration and change management

Not all vendors provide this comprehensive set of functions. The NCCM tools in this MarketScope provide the basic features of: (1) capturing a backup of network device configuration files; (2) detecting and comparing configuration changes; and (3) pushing out configuration updates to network devices. However, there are significant differences in delivery (software, appliance and cloud), scope (number of vendors/models and types of technology supported), scale (the architectural robustness to scale to very large network environments, such as those found in telco/carrier-class networks) and vendor size to address global support requirements. Some vendors have developed their products to offer additional sophistication — for example, performing the initial provisioning of a network device (that is, a bare metal install), providing an automation wizard to guide the user through changes to network devices and to automatically generate, and perhaps even execute, the resulting configuration commands, comparing network device configurations with the policy or gold standard for that device, automatically remediating devices back to policy compliance and providing out-of-the-box compliance reporting.

The product features examined in this MarketScope include the three core functions of backup, compare and update. Many vendors have similar capabilities and achieved similar product ratings in these core functions. To uncover the subtle differences among vendors, we also examined the more-sophisticated provisioning, policy, compliance and breadth of multivendor network device

coverage features. We evaluated product strategy and market responsiveness to changing requirements, such as cloud computing and software as a service (SaaS). In addition to the requirements of mature IT organizations with large-scale networks, we also took into account the appeal that simplicity, ease-of-use and affordability of commodity NCCM capabilities have in the broader market. In some cases, a vendor's weaknesses in one area balance strengths in another, resulting in similar ratings for multiple vendors, although the vendors may have very different products and strategies.

Inclusion and Exclusion Criteria

Vendors are included in this MarketScope evaluation if they had an NCCM product that shipped by 1 August 2011, and that has the ability to:

- Capture a baseline (or backup file) of current network device configurations
- Detect and alert on network device configuration changes
- Perform a differential audit (or comparison) between network device configuration versions
- Make configuration changes to network devices, which can include (but are not required to include) distributing software updates and rollback to a previously known good configuration

The NCCM MarketScope focuses on a *single* NCCM product from each vendor (this MarketScope does not assess product portfolios). Vendors were instructed to submit the product they consider to be the most strategic and best at meeting the NCCM evaluation criteria.

Four vendors were added since the previous NCCM MarketScope:

- CA Technologies entered the market through an OEM relationship with Infoblox.
- Ipswitch released its WhatsConfigured product after the required ship date of the previous MarketScope.
- NetBrain Technologies has emerged as a new alternative in the market.
- Quest Software entered the market through its acquisition of the network management company PacketTrap.

Four vendors were removed since the previous NCCM MarketScope:

- LogLogic's Security Change Manager product, originally from the SolSoft acquisition, is no longer generally available.
- Netcordia's acquisition by Infoblox resulted in a change of focus toward RTI automation and away from a pure NCCM positioning. Infoblox has established an alternate route to market for Netcordia's NCCM product through a commercial relationship with CA Technologies, which has been added to this MarketScope.
- Pari Networks was acquired by Cisco, which already appears in this MarketScope.

- Uplix offers a number of NCCM capabilities; however, its focus is to augment centralized management products (including NCCM) with what it calls "Local Management" via direct device access through the console port.

Rating for Overall Market/Market Segment

Overall Market Rating: Promising

Pressures from corporate audit and compliance initiatives are forcing network managers to investigate NCCM tools, which should push this market to a higher overall rating. However, network management buyers are reluctant to change their standard operating procedures. Network configuration management is often a "black art" practiced by "router gurus" who are the only ones familiar with the arcane command-line interfaces for their various network devices. These specialists feel it provides job security for network managers who can use the arcane commands. In addition, many network managers don't want to be burdened by any kind of rigorous change-management process, or are unwilling to leverage configuration automation, even though it can reduce failures in error-prone tasks. It takes a top-down effort from senior IT management and a change in personnel performance review metrics to convince these sometimes recalcitrant network managers about the business importance of documented network device configuration policies, rigorous change-management procedures and tested disaster recovery capabilities. These inhibitors constrain the market rating to Promising and limit the current total market size (see Table 1 and Figure 1).

Evaluation Criteria

Table 1. Evaluation Criteria

Evaluation Criteria	Comment	Weighting
Product/Service	Core goods offered by the vendor that compete in the defined market. This includes current product capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships.	high
Offering (Product) Strategy	The vendor's approach to product development and delivery, which emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.	high
Overall Viability (Business Unit, Financial, Strategy, Organization)	Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.	high
Sales Execution/ Pricing	The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel.	standard
Market Responsiveness and Track Record	The vendor's ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.	standard

Source: Gartner (October 2011)

Figure 1. MarketScope for Network Configuration and Change Management

	RATING				
	Strong Negative	Caution	Promising	Positive	Strong Positive
AlterPoint		X			
BMC Software					X
CA Technologies			X		
Cisco				X	
Dorado Software			X		
EMC				X	
HP					X
IBM Tivoli					X
Ipswitch		X			
ManageEngine			X		
NetBrain Technologies		X			
Quest Software		X			
SolarWinds				X	

As of 31 October 2011

Source: Gartner (October 2011)

Vendor Product/Service Analysis

AlterPoint

AlterPoint declined to participate in the data-gathering phase of this MarketScope evaluation, but confirmed that it is still an active software business vendor with hundreds of customers. Gartner rated AlterPoint based on other data sources, including publicly available product information and inquiry calls with Gartner clients that use AlterPoint's NCCM capabilities. Founded in 2001, AlterPoint was acquired in February 2009 by Versata, a wholly owned subsidiary of the privately held Trilogy, based in Austin, Texas. AlterPoint still operates as a stand-alone entity focused on NCCM, but is now a much smaller company, with many of the original AlterPoint personnel gone, including most of the executive team. AlterPoint can tap into Versata's extensive network of development resources, and shares marketing and executive management resources with its parent company. Under Versata, AlterPoint's primary objective is customer satisfaction and expansion within its installed base. It is not focused on new customer acquisition. Although aligned with its objectives, the fact that AlterPoint has not gained new customers negatively affected its sales execution ratings.

To demonstrate its continuing commitment to the NCCM market after the Versata acquisition, AlterPoint released NetworkAuthority 7.0 in September 2009. This was almost a year after the planned release date, but AlterPoint explained that the delay was based on Versata's new internal quality metrics, thus the product code was more stable and reliable than it would have been. The 7.0 release included a number of new capabilities, such as a Web console, improved topology

visualization and router redundancy analysis. Except for the introduction of a cloud-based service to back up device configurations to AlterPoint's redundant off-site data center, there have been no additional updates so the pace of innovation has slowed. As in the previous MarketScope, AlterPoint received strong ratings for its core product; however, its lack of recent feature/function enhancements and no communications regarding its product road map going forward negatively affected its market responsiveness and product strategy ratings.

Rating: Caution

BMC Software

BMC Software entered the NCCM market through its 2007 acquisition of Emprisa Networks, founded in 2003. Although BMC Software is a large, publicly traded company and one of the Big Four IT operations management software vendors, it has limited focus on network management overall, so it has no upsell opportunity from an existing network management installed base. Its vision of NCCM is as an integral component of full-stack provisioning and network assurance for business service management in dynamic IT environments, transitioning to cloud computing operating models. Relative to the previous NCCM MarketScope, BMC showed improvements in each of the five criteria evaluated: current product capabilities, product strategy, overall viability, sales execution and market responsiveness.

BMC Software's primary strategy is leveraging BMC Network Automation to integrate with its strong Atrium CMDB, its service assurance products (including those from BMC MarketZone partner Entuity), and across an end-to-end IT service by linking to BMC Remedy Service Request Manager and BMC Atrium Orchestrator to provide self-service provisioning. In addition, BMC Cloud Lifecycle Management leverages BMC Network Automation, with its "network containers" developed jointly with Cisco, to enable policy-driven, automated provisioning of secure, multitenant cloud services. Even with its focus on integration, BMC Software continues to invest in keeping its stand-alone NCCM product competitive. For example, the vendor continues to enhance Emprisa's SmartMerge capability, which automatically generates change scripts required to implement complex, mass configuration changes. BMC Software has an installed base of 264 customers for its NCCM product.

Rating: Strong Positive

CA Technologies

CA Technologies entered an OEM relationship with Infoblox in July 2011 to private label and resell the appliance-based Infoblox NetMRI product as CA Network Automation. NetMRI appeared in last year's NCCM MarketScope under the company Netcordia, which was acquired by Infoblox after the previous MarketScope was published. Infoblox has 450 customers for its NCCM product. The new OEM relationship should improve NetMRI's market presence by capitalizing on CA sales and support staff worldwide, as well as the network management market experience CA has.

CA Network Automation takes advantage of the database of rules, policies, networking best practices and industry best practices that Netcordia built into its NetMRI product, enabling users to audit, analyze and automate NCCM, without requiring a high level of network expertise. Leveraging

NetMRI's history in the NCCM market, CA gets good ratings for current product capabilities. It has a sound product strategy, and its long-term investments and goals focus on end-to-end business service and application delivery. However, since CA is late coming to the NCCM market and has extremely limited market execution and customer installed base, due to the short time since it signed the OEM agreement with Infoblox, its sales execution and market responsiveness ratings suffered, resulting in an overall rating of Promising. With more time to execute its NCCM strategy, CA has the potential to improve its rating in future research.

CA Technologies has strong product offerings in the related disciplines of network fault and performance management with its CA Service Assurance products Spectrum, NetQoS and eHealth. The addition of CA Network Automation completes CA's network management offering by covering the configuration management discipline. In future versions of the CA Network Automation product, CA plans to focus on stronger integration with its CA Service Assurance and CA Server Automation products.

Rating: Promising

Cisco

Cisco entered the NCCM market in 1998 with Cisco Resource Manager (CRM), which was later rebranded Resource Manager Essentials (RME) and bundled with CiscoWorks LAN Management Solution (LMS), now renamed Cisco Prime LMS. Cisco invests in NCCM to accelerate the adoption of Cisco architectural plays and make it easier to deploy Cisco network technologies. LMS is for Cisco devices only and includes inventory, configuration archive, change audit, configuration deployment and approval workflow for change control. Cisco provides best practice assessment of Cisco architectures, technologies and device features. One of the commitments of the new Cisco Prime branding is a "Day One" support model where device drivers and best practice content is downloadable and made available on the same day a new Cisco device ships. The Cisco Prime products also include a much-needed revamped user interface, which Cisco is standardizing throughout its management software.

Cisco received high marks for overall viability and sales execution, due to the overwhelmingly large installed base of 30,000 LMS customers. Cisco's NCCM strategy and vision is well-thought-out and correct for a network equipment manufacturer; however, its product and strategy ratings were somewhat constrained, because only Cisco devices are supported. Cisco acquired Pari Networks for NCCM technology to use in services and products, and LMS will begin utilizing this in 2012.

Rating: Positive

Dorado Software

Dorado Software is a privately held company focused on service life cycle management for heterogeneous, multitechnology environments. Its Redcell family of products covers a broad spectrum of infrastructure administration and resource management, including network devices, PCs, servers (physical and virtual), storage and security, but is not exclusively focused on NCCM. Its differentiation is providing a single, unified console for all functions — health and performance

monitoring, as well as configuration and change management — which enables various scenarios. For example, after receiving a configuration change alert for a device, the Redcell user can pivot to a performance view to ensure that performance is not affected. Dorado Software expects that advanced topology, dependency mapping and service associations will become routine features in the daily operations of managing network configuration. Its long-term investments are focused on enabling management service providers (MSPs), cloud and other service providers to manage network configuration as services.

Dorado Software has more than 500 Redcell customers, and states that the majority of them use NCCM capabilities. Redcell can commission devices with initial configurations for the dozens of network hardware vendors that Dorado Software supports. In addition, the wizard-based Redcell Device Driver Factory enables users and channel partners to create drivers for other network devices (for example, legacy devices or new network technologies) without software coding. The latest release of Redcell is built on a new collaboration platform called Redcell Synergy, which leverages Web 2.0 technologies, including Wiki knowledgebase, IM, message boards, activity tracking and shared calendar. While a formidable architectural improvement, the enhancements are not specific to the NCCM market, which limits Dorado Software's product strategy and market responsiveness ratings.

Dorado Software has been in the NCCM market for 11 years, and historically had been focused on going to market with OEM partners (such as Dell and NEC) that private-label or embed its technology. Although this improved Dorado Software's viability rating, it limited the vendor's market visibility.

Rating: Promising

EMC

EMC entered the NCCM market through its 2007 acquisition of Voyence, founded in 2000. There was good synergy between Voyence and EMC's previous acquisition of Smarts (now both part of the EMC Ionix product family), because of their network management market focus on enterprise and service provider customers. The acquisition enabled Voyence to take advantage of EMC's sales team, which includes a specialized sales overlay team for network management software, and to leverage EMC Ionix channel partners to expand its addressable market. It also provided an opportunity for EMC to upsell the Ionix Network Configuration Manager product (formerly known as VoyenceControl) to customers of the Ionix for IT Operations Intelligence product (formerly known as Smarts). EMC has approximately 140 Ionix Network Configuration Manager customers.

Since acquiring Voyence, EMC has capitalized on the opportunity for integration across the network management disciplines of fault and configuration. Through the integration, a network device configuration change recognized by Ionix Network Configuration Manager can be sent as an event to the EMC Ionix for IT Operations Intelligence network fault management product, and a user can drill down in context from the network fault topology/map view to Ionix Network Configuration Manager to examine the recent configuration changes made to a device, as well as invoke it to perform configuration remediation, if needed.

The most recent version of Ionix Network Configuration Manager shipped in mid-2009, with 13 minor device support updates being released since then. With no major feature/function improvements in two years, the pace of NCCM-specific innovation has slowed, and, as a consequence, EMC's market responsiveness rating suffered. EMC states that through 2013, Ionix Network Configuration Manager will see new investment in capabilities focused on multivendor network device configuration change automation, automated response to dynamic network changes caused by virtualization technologies, improved business intelligence, and managing new technologies, such as the Cisco UCS. These are consistent with EMC's previous product road map, but it has been pushed out by two years, which negatively affected EMC's product strategy rating. Balancing EMC's very good ratings in product capabilities and overall viability with these challenges, EMC dropped from a Strong Positive rating in 2010 to Positive in 2011.

Rating: Positive

HP

HP entered the NCCM market as a result of its acquisition of Opsware in 2007. Opsware had also acquired its way into the NCCM market when it purchased Rendition Networks in 2004. Network Automation, HP's NCCM product, received superior ratings in each of the current product capability categories evaluated for this MarketScope. The product automates previously manual network device configuration tasks, and can enable proactive policy enforcement and compliance reporting. HP is continuing to extend the product with an aggressive road map of new features, such as providing configuration and compliance content to assist in troubleshooting fault and performance alerts. HP's plans to expand market share are centered on leveraging the integration of NCCM with its market-leading network management products and across its considerable portfolio of change management, configuration management, release management and CMDB products. HP Network Automation already integrates with the HP Network Node Manager product and contributes to the HP Business Service Automation (BSA) portfolio, enabling end-to-end provisioning of an application by preparing server, network and storage as one workflow. HP's vision recognizes NCCM's importance to cloud computing and self-service provisioning of the converged infrastructure, and the need to analyze the effect of network change on network fault and performance.

HP has an installed base of 800 to 900 NCCM customers, including those gained through its OEM agreement with Cisco. HP is actively cultivating closer relationships with other network equipment providers, as well as providers of cloud infrastructure, which will be important, because its NCCM relationship with Cisco has cooled due to Cisco's NCCM acquisitions and HP's networking acquisitions that put Cisco and HP into competition.

Some Gartner clients report difficulty getting well-trained support staff in the field who are qualified to deploy some of the more complex and sophisticated aspects of HP Network Automation. The product is only a small piece of the broad software portfolio that HP field support engineers are required to understand. Another challenge that HP faces is changes in leadership at the HP Software and corporate levels that may alter the strategy or affect HP's ability to execute.

Rating: Strong Positive

IBM Tivoli

IBM Tivoli entered the NCCM market through its 2010 acquisition of Intelliden, founded in 2000. It has an installed base of over 70 customers for its IBM Tivoli Netcool Configuration Manager (TNCM) product, including many service providers that manage the network device configurations for large numbers of end customers. TNCM capabilities are being leveraged to carry out network automation as part of a broader service orchestration within IBM's cloud offerings.

TNCM integrates with the Tivoli Network Management portfolio, providing access to configuration change and compliance data in context with event and network management data, improving problem resolution time. Its preemptive compliance feature can validate configuration changes against relevant policies prior to sending the configuration change to the device, helping prevent the violating changes from being sent to the device. The most recent release of TNCM leverages IBM's Cognos technology (as used in Tivoli Common Reporting) for improved compliance and custom reporting. It also adds the ability to launch TNCM within the common Tivoli Integrated Portal (TIP) used across the Network Management portfolio, driving a more seamless user experience.

Prior to IBM's acquisition, most of Intelliden's success was with service provider and telco customers that required reliability, accuracy, robust architecture and large-scale service activation capabilities. For the types of network devices that telcos use, IBM Tivoli's SmartModel approach has deep device knowledge that allows it to do bare-metal provisioning; however, that depth comes at the price of sacrificing some breadth, with a smaller range of vendors and models supported through SmartModels. A wider range of network device vendors and models is covered with standard support, but not at the depth of the SmartModel approach. IBM Tivoli provides sophisticated functionality, such as the ability to roll back a device to a previous configuration without having to reboot the device if a configuration change fails halfway during the process. This is accomplished by sending only those commands to the device needed to bring the device configuration back into the desired (good) state, rather than by pushing out the entire configuration.

Rating: Strong Positive

Ipswitch

Ipswitch was founded in 1991 to bring IT management software to SMBs that lacked the time and resources to learn the large-enterprise-scale software, which was all that was available at that time. Its WhatsUp Gold network monitoring software is deployed on more than 100,000 networks at mostly midsize companies, along with some larger enterprises and government agencies. It provides automated discovery, mapping, real-time monitoring, alerting, troubleshooting and reporting. Ipswitch entered the NCCM market in 2009 through its acquisition of HourGlass Technologies, which it leveraged to deliver its WhatsConfigured product that can be used as a stand-alone product or an integrated module for WhatsUp Gold.

WhatsConfigured addresses the three core NCCM functions of backing up network device configurations, comparing configuration changes and pushing configuration updates out to network devices (although distributing software updates or patches requires custom scripting).

WhatsConfigured lacks some of the advanced capabilities found in the more mature NCCM products, such as detecting configuration changes in real time to determine policy compliance,

providing an automation wizard to guide the user through changes to network devices, automatically remediating devices back to policy compliance, and providing out-of-the-box policy content and compliance reporting.

Ipswitch's primary differentiators are its price and its WhatsUp Gold installed base. It provides a good-enough NCCM capability that's inexpensive, easy to purchase and a logical addition to WhatsUp Gold, which can be leveraged for upsell opportunities. The WhatsConfigured product already has 500 customers in the two years that it has been available, gaining it very strong sales execution ratings. However, its limited time in the market and minimal capabilities negatively affected its product and market responsiveness ratings, resulting in an overall Caution rating. If Ipswitch executes its planned product strategy, it has the potential to improve its rating in Gartner's future MarketScope research.

Rating: Caution

ManageEngine

ManageEngine is a division of privately held Zoho. DeviceExpert, which is ManageEngine's NCCM product, was introduced in 2005 and has an installed base of 2,100 customers. It's part of ManageEngine's network management product portfolio, which also includes OpManager, Network Performance Management and NetFlow Analyzer, each of which can be leveraged for upsell opportunities. DeviceExpert is inexpensive and generally appeals to SMBs, although the channel strategy is to move DeviceExpert to the enterprise. ManageEngine has improved DeviceExpert's scalability since the last NCCM MarketScope, and reports deployments of more than 15,000 devices; however, typical implementations manage fewer than 500 network devices. Much of ManageEngine's DeviceExpert sales are direct download, "try it, then buy it" purchases through its website.

ManageEngine uses a rapid development process to turn out frequent product releases, adding new features and filling functional gaps. Future versions reportedly will add syntax checking before pushing configuration changes to the network, additional reporting customizations, including the use of Zoho Reports SaaS delivery, and automatic validation of configuration changes against policies. ManageEngine has limited marketing presence worldwide and needs to work at creating more awareness of the product with its target market.

Rating: Promising

NetBrain Technologies

NetBrain Technologies specializes in computer-aided network engineering (CANE), network documentation and visual troubleshooting. It has 110 customers for its NetBrain Enterprise Suite product. Although NetBrain's product satisfies the minimum inclusion criteria for this NCCM MarketScope, NCCM is not its primary focus. NetBrain leverages an autodiscovered, data-driven network map, enabling network engineers to extrapolate an additional level of knowledge about network interconnectivity, above and beyond what is usually found in NCCM-focused tools. Its ability to support an offline change planning environment and deploy an approved network plan to

production device configurations is a level of product sophistication not found in most NCCM products. However, this additional level of functionality is often used for troubleshooting and network design functions, rather than NCCM. NetBrain recognizes that it lacks some of the real-time change detection, policy control and network configuration change delivery capabilities found in other products in this MarketScope, and it intends to continue development to add the missing pieces. For example, the ability to push out configuration files to network devices is currently a hidden feature for security reasons, but likely will be exposed in future versions of the product.

For large enterprises, NetBrain plans to focus on automating network documentation and visual troubleshooting, while complementing other NCCM tools with an on-demand mapping capability. For midsize enterprises, NetBrain plans to provide an all-in-one product for NCCM, network documentation and visual troubleshooting. NetBrain enables third-party network consultants and managed service providers to assess their customers' networks through its data-driven map automation.

Rating: Caution

Quest Software

Quest Software offers a wide range of products for IT administration and automation, data protection, development and optimization, identity and access management, and performance monitoring for networks and applications. Quest entered the NCCM market in 2010 through its acquisition of PacketTrap. Quest Software's NCCM capability is delivered as part of its Foglight Network Management System (NMS), which is a network-monitoring product that provides a number of fault, availability and performance features, in addition to NCCM. Foglight NMS is easy to install and autodiscovers key metrics for network resources, including hardware, OSs and some virtual network infrastructure.

Foglight NMS uses a "freemium" business model with a free product to drive adoption, and premium features and scalability available for a fee. Since the July 2011 introduction of the freemium model, Quest Software has 4,500 customers using the solution, 150 of whom have been converted to commercial versions. Because Quest Software does not focus Foglight NMS exclusively on NCCM, many of its NCCM features are limited. For example, configuration updates can't be applied to groups of devices, configuration change reporting is limited to a single device at a time, and there is no ability to define a gold-standard policy for network device configurations. However, Quest Software has long-term investments and goals to address all aspects of network device configuration and change management. Its limited time in the market and minimal capabilities negatively affected its product and market responsiveness ratings, resulting in an overall Caution rating.

Rating: Caution

SolarWinds

SolarWinds was founded in 1998 and went public in 2009. IT provides easy-to-use, affordable network management software to more than 100,000 customers worldwide. Its NCCM product was introduced in 2005 and has more than 5,000 customers. It was called Cirrus when it was brought to

market, but has been renamed Orion Network Configuration Manager. SolarWinds acquired the New Zealand-based Kiwi Enterprises in January 2009, adding its Kiwi CatTools to SolarWinds' portfolio of NCCM alternatives. Orion Network Configuration Manager is SolarWinds' strategic entry for the NCCM market and, thus, was the product we evaluated for this MarketScope.

The Kiwi CatTools product and customer base were not included in this evaluation, except to recognize the market opportunity for SolarWinds to gain entry to the low end of the NCCM market. CatTools targets customers that have outgrown scripts, but can't afford or don't need more-sophisticated NCCM capabilities, and creates an upsell base for Orion Network Configuration Manager as those customers' configuration management needs mature.

SolarWinds' primary differentiators are its price and go-to-market model. It provides a good-enough NCCM capability that's inexpensive and easy to purchase — as simple as using a credit card and a download. Its large installed base and good market visibility form a solid foundation from which SolarWinds has succeeded in upselling and expanding. While the majority of Orion Network Configuration Manager customers are SMBs, there are quite a number of large enterprises represented. However, SolarWinds is not seen as a strategic network management supplier to large enterprises, and its challenge is to grow its product and marketing to change that view.

SolarWinds is not trying to be the "bleeding-edge" innovator in NCCM. Rather than experimenting with advancing the state of the art, it does a good job of adding required capabilities when the market need is well-understood, without the requirement to invest in expensive market education. SolarWinds' NCCM product is a logical addition to its Orion network management installed base, which can also be leveraged for upsell opportunities. SolarWinds' product road map includes plans for a single, unified Web console for its Orion Network Performance Management and Orion Network Configuration Manager products. SolarWinds plans to add compliance auditing and reporting regulations, such as for PCI and the Gramm-Leach-Bliley Act (GLB Act), and will address ITIL/COBIT governance by providing interfaces to integrate into standard workflows and process flows.

Rating: Positive

Recommended Reading

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"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that

we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Gartner MarketScope Defined

Gartner's MarketScope provides specific guidance for users who are deploying, or have deployed, products or services. A Gartner MarketScope rating does not imply that the vendor meets all, few or none of the evaluation criteria. The Gartner MarketScope evaluation is based on a weighted evaluation of a vendor's products in comparison with the evaluation criteria. Consider Gartner's criteria as they apply to your specific requirements. Contact Gartner to discuss how this evaluation may affect your specific needs.

In the below table, the various ratings are defined:

MarketScope Rating Framework

Strong Positive

Is viewed as a provider of strategic products, services or solutions:

- Customers: Continue with planned investments.
- Potential customers: Consider this vendor a strong choice for strategic investments.

Positive

Demonstrates strength in specific areas, but execution in one or more areas may still be developing or inconsistent with other areas of performance:

- Customers: Continue planned investments.
- Potential customers: Consider this vendor a viable choice for strategic or tactical investments, while planning for known limitations.

Promising

Shows potential in specific areas; however, execution is inconsistent:

- Customers: Consider the short- and long-term impact of possible changes in status.
- Potential customers: Plan for and be aware of issues and opportunities related to the evolution and maturity of this vendor.

Caution

Faces challenges in one or more areas.

- Customers: Understand challenges in relevant areas, and develop contingency plans based on risk tolerance and possible business impact.

- Potential customers: Account for the vendor's challenges as part of due diligence.

Strong Negative

Has difficulty responding to problems in multiple areas.

- Customers: Execute risk mitigation plans and contingency options.
- Potential customers: Consider this vendor only for tactical investment with short-term, rapid payback.

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