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Deploying Integrated Enterprise Network Monitoring solutions

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Introduction

Network Monitoring is a critical IT function that has come a long way since times when one associated it with network links being up or down. With businesses getting more and more customer- centric with their operations extending to 24x7 mode, it becomes absolutely important to have a network with 99 percent plus uptime which is only possible when there is good network management.

It is a broad area with several products and solutions offered by multiple vendors catering to various monitoring needs like Servers, Operating Systems, E-Mail, Website, Database, Network, Storage, Log, Cloud, Security, Protocol, Applications, Business Processes, Environmental, Power, Performance and many more However, there are hardly any solutions which are comprehensive and agile.

This whitepaper discusses several challenges and dilemma faced by organizations and the approaches towards addressing them.

Current Scenario

For all those organizations who want to focus on service alignment and revenue generation, network management is an important choice. Network monitoring tools come in various levels of complexity and many large organizations use proprietary tools from IBM, HP, BMC, EMC, CA and Microsoft for Network Monitoring. However, organizations – large, medium or small often realize that they are spending huge amounts but the solutions do not cater to all the needs of customers, causing spawning of multiple tools in their Enterprise.

While Network Monitoring is necessary for event management, there is also a need for tools to track these issues in terms of incidents, problems and changes. This can be taken care by ITSM tools which are based on ITIL standards and are complementary to Network Monitoring tools.

There are several factors to be considered by IT while selecting Network Monitoring solutions. Some of them are discussed below:

- Whether to continue using proprietary and expensive tools or to embrace open source based monitoring solutions like Nagios, Icinga, Cacti etc.
- Knowhow to implement and integrate tools in Fault Monitoring, Performance Monitoring, ITSM, Automation, Configuration, Orchestration tools, Performance trending, etc.
- Whether to decommission redundant tools when some of the existing tools can be enhanced
- Whether to outsource or develop NMS in-house

  How to address various monitoring needs like Application monitoring, Protocol Monitoring etc.
- Whether to go for on-premise or cloud based solutions
- Whether to go for Agent based or Agent less monitoring
- Whether SNMP based monitoring is enough or WMI needed
- Whether the solution is open, standards based and has enough community support

Enterprise network environments now involve multiple media types, multiple protocols and different platforms. They interconnect with public networks via ISPs or telecommunications companies. Complex network environments means potential for connectivity and performance problems in networks is also rather high.

Organizations often grapple with maintaining multiple tools for Fault monitoring and ticketing (ITSM tools) for their Enterprise and Client IT Infrastructure and applications. They are constantly challenged by Lowering IT Budgets, Reducing Downtime, Increasing ROI, Ensuring SLAs, and Detecting Problems before they occur, Empowering staff etc.

Some organizations implement affordable/open source based solutions and frameworks such as Nagios, Cacti, Sensu which are less expensive but require lot of expertise and vendor support. Some prefer Solarwinds, Nagios XI, Zabbix, OpenNMS, etc.

Nagios is like Linux in the world of Network Monitoring Systems. Implementing Nagios based solution requires lot of expertise learning curve which many organizations cannot t afford.. There are several vendors offering solutions based on Nagios: Nagios XI, OP5, Centerity, Groundwork, OpsView, AppFirst, Server Density, Datadog and the likes.

Market Trends

Enterprises are increasingly embracing cloud, by moving services like E-Mail (Office 365), CRM, Runtime, Database, Webserver, Developer tools, Virtual Servers, Storage, etc. This brought in many changes in their monitoring requirements which are not being met by their existing tools.

Besides, some enterprises are going for SaaS based ITSM tools like ServiceNow reducing their CAPEX expenditure and integrating with Fault Monitoring Systems. E.g. Integrating ServiceNow with Nagios.

Then there are few players like IPsoft who are specialized in Service Management and Enterprise Monitoring based on their own monitoring tool enabled with Automation capabilities.

Solution Approaches

The challenge that many network administration teams face in an enterprise is to determine how to evaluate the best Network Monitoring Solution fit for their organization's network needs.

While there is no one-size-fits-all solution, organizations can follow different approaches based on their requirements and resource availability. Organizations that are predominantly on Microsoft can consider Microsoft System Center suite of products such as SCOM, SCCM, Service Manager, etc.

Smaller organizations with limited resources and with in-house expertise can go for out of the box monitoring solutions that exist in market like Solarwinds, Nagios XI, Zabbix, etc. They can also go for Agentless monitoring if their monitoring needs can be duly met by solutions like OmniCenter from Netreo.

Medium to large organizations can opt for solutions that exist in the market or develop in-house, or outsource to develop integrated solutions with tools such as Nagios, ServiceNow, Request Tracker, Chef and Puppet. Employing these tools needs extensive knowledge as many of them are constantly evolving.

MSP's (Managed Service Providers) have unique requirements where they need to offer both standard and customized solutions for their customers. They are in need of a scalable, feature rich and flexible solution.

Conclusion:

Enterprises deploy multiple solutions based on their business and compliance requirements. Organizations over a period realized that deploying these solutions requires dedicated focus and deep expertise in the areas of Fault Monitoring tools, ITIL, ITSM tools, Cloud, Product Development, Solution Architecture, Integration, Application Development, and Support.

They have started outsourcing Network Monitoring to niche players like Happiest Minds who have rich expertise in building these solutions. Happiest Minds has been serving their clients using such a platform called iTaaS.

About the Author

Gowtam Nookala

Working as a Senior Tech lead for HappiestMinds technologies. He is an MCSE and has over 11 years' experience in supporting Wintel, AD, Exchange, IIS, SharePoint, VMware, Network Management Systems such as EMC SMARTS, SCOM, and cloud technologies. He evaluates different products and helps building practice in HappiestMinds.

Happiest Minds

Happiest Minds, the Mindful IT Company, applies agile methodologies to enable digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights. We leverage a spectrum of disruptive technologies such as: Big Data Analytics, AI & Cognitive Computing, Internet of Things, Cloud, Security, SDN-NFV, RPA, Blockchain, etc. Positioned as "Born Digital . Born Agile", our capabilities spans across product engineering, digital business solutions, infrastructure management and security services. We deliver these services across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.

Headquartered in Bangalore, India; Happiest Minds has operations in USA, UK, The Netherlands, Australia and Middle East.

Business Contact: business@happiestminds.com

Media Contact: media@happiestminds.com

E-mail: Business@happiestminds.com

Visit us: www.happiestminds.com

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