



# Network Monitoring Tools for the Modern Network

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Thank you for being here today

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# Network Monitoring Tools for the Modern Network

There has been a lot of talk about network monitoring tools in the ILTA community. See an in-depth comparison of network monitoring systems, product features and industry trends. What solutions might work best for your organization?



# What are your services doing at 5am in the morning?



- You can't afford to be down
- You can't afford to be slow
- Systems grow and scale beyond manual/human capacity
- Plan for growth
- Good admins no a baseline, how their systems behave and what's abnormal

# Industry Trends



- Addressing Cloud
- Application Performance Monitoring
- Web/user experience monitoring & testing
- Service-based monitoring
- Presentation of monitoring data to LOB application owners
- Integration of tools, CMDB
- Analytics
- Consolidation of monitoring tools
- Leveraging enterprise monitoring to be proactive not reactive



What do you need to monitor?

# Monitoring



- Check status
- Define limits
- Running?
- How to check?
  - Script
  - Status File
  - Agent
  - SNMP

# Agent vs Agentless



- Agent based
  - Impact on measurement
  - More detailed information
  - Some performance penalty
- Agent-less
  - Non-intrusive
  - Less detail
- SNMP



# Alerts / Notifications



Your monitoring system is only as good as it's notification plan

- Warning signal
  - E-mail, SMS, IM, other
- Chose based on situation
  - Time
  - Service
  - Performance
  - State of system
- Escalation
- SLA

# Reporting



- Dashboards, point in time status
- Up/Down
- Since
- Graphical overview
- Summary
- Executive reports

Easy to configure

Agentless

Auto-detection

Templates

Supporting GUI

Non-intrusive

Automatable

Self-healing

Consistent

Active community

SNMP integration

Highly available

**What do you want from a tool?**



**Are you sure you're using the right type of monitoring tools for your network?**

# Microsoft System Center Operations Manager 2012 R2



## Pros

- Very strong solution for heavy Microsoft product environments (Server, Exchange, Lync, etc)
- Microsoft product team developed management packs with optimal defined events, alerts, reports and management best practice rules
- Automatic discovery
- Support for heterogeneous workloads, not just windows (Linux, Apache, .NET, Java, network)
- Function dashboards for the Microsoft-centric environment
- Thing 5
- Enterprise class
- Deep product knowledge and resolution built-in
- Global-service monitoring from Azure datacenters (outside in)
- Full integration with other System Center solutions such as Configuration Manager, Orchestrator, Virtual Machine Manager, etc
- In-box DR/HA
- SQL license included

# Microsoft System Center Operations Manager 2012 R2



## Cons

- Tuning needs some knowledge and work to get out the “white noise”
- Network devices support strong for Cisco, needs work on other vendors
- Network monitoring cannot pull packet-level monitoring
- No automatic build of service views/distributed applications (extensible by a third-party)
- Heavier infrastructure requirements than most other solutions
- Licensing model disadvantageous for heavy physical environments
- Legacy systems (Windows 2000) not supported for agent
- Agentless monitoring doesn’t scale well
- Some third-party Management Packs don’t exist, so have to develop or work with vendor

# Solarwinds NPM & Orion



## Pros

- Fast installation, time to initial monitoring
- Easy user interface
- Meaningful/rich dashboards out of box
- Good alerting and suppression
- Strong agentless monitoring
- Low hardware cost
- Does offer integration to other monitoring systems such as SCOM for extensibility
- Less overhead maintain

# Solarwinds NPM & Orion



## Cons

- Expensive if you are looking to scale
- SQL license needed to scale
- Strong focus on networks, needs work around application & service monitoring
- Limited grouping
- No distributed architecture
- Scalability and performance
- Knowledge driven by vendor, community or self-built
- Does not have as much depth around various systems/technologies
- Need to purchase plug-ins for extended functionality
- No server-side application monitoring



# WhatsUpGold



## Pros

- Integration with Microsoft environment
- Client-side monitoring with scenarios
- Trends, logs, alerts based on thresholds
- Configure through web-client
- Configure own dashboards, web client
- Cheap licensing

# WhatsUpGold



## Cons

- Subscription based client-side application monitoring
- No server-side application monitoring
- No auto discovery of new applications on servers
- User authentication in application, not AD-integrated
- Built-in reports not very rich

# Nagios

# Nagios®



## Pros

- Open source
- Low cost
- Ease of implementation
- Large plugin library
- Tomcat, Apache support through plugins
- Create own dashboards easily in web interface
- Reporting through external plugin
- Great Linux support



## Cons

- Third-party agents & plugins
- Event log items through external agent, thresholds on performance counters, alerting
- Application monitoring limited
- User access defined in application, no AD integration
- Automatic discovery needs some work
- Configuration files
- Knowledge community based
- Enterprise support is fee-based
- Difficult to extend
- Depth of monitoring

1. Gather requirements
2. Are you going to be proactive or reactive?
3. Who is going to own monitoring and reaction?
4. Define services vs traditional individual server monitoring
5. Define service SLAs and make sure they are upheld
6. Have a process in place for monitoring new services/solutions
7. Consider Application Performance Monitoring for your business critical applications
8. Build a knowledge base
9. Define business criticality of monitoring, including High Availability and Disaster Recovery
10. Consider integration with other tools to consolidate monitoring solutions, less to manage can provide more value and save admins precious time!
11. Tune, tune tune!

**Steps for identifying the right solution for your organization and implementing successfully**

# Questions

*We'll now open it up for questions*

# Thank You

