Best Practices for Monitoring VMware with System Center Operations Manager

Pete Zerger
Managing Principal Infront Consulting

Cameron Fuller
Principal consultant for Catapult Systems

Alec King
Director, Product Management @Veeam
Admin

- For questions please use the virtual Q&A panel.
  - This webinar is recorded and available for replay after a few days.
  - At the end of the webinar, we can raise virtual hand for dialog questions.

- **Stick around** until the end of the webinar!
  - We will ask one question on the webinar content…
  - First **10** to answer will receive a choice of books!
Agenda

- Topic overview
- **Six key concepts**
  - Monitor with the “virtualization stack” in mind
  - Consider data sources and solution architectures
  - Sort actionable alerts from alert noise
  - Understand override behavior and best practices
  - Create a dynamic user experience
  - Provide Reporting for Trending and Right-sizing

- Questions and answers
- Drawing and wrap-up
Monitor with the “virtualization stack” in mind
Consider data sources and solution architectures

Four Datasources for vSphere monitoring -

- SNMP
- Syslog
- vmcontrol-based APIs
- Web Service SDK

**Bottom Line:** Web Service SDK provides most complete picture of infrastructure and application performance and health with the best scalability
Understand override behavior and best practices

- Override Precedence in OpsMgr 2007 R2
  - Most specific wins:
    - Group over Class
    - Instance over Group
  - Enforced over non-enforced
  - Unsealed over sealed
  - Class overrides from contained or hosted over class overrides of an instance
  - Instance overrides of a higher depth over instance overrides of a lower depth
  - Random!
Best Practices for Overrides

- Use classes where possible
- Target to a group versus an entity
- Use Dynamic Groups
- Follow MS best practices
- Create Groups for entities not just servers
Sort actionable alerts from alert noise

- OpsMgr “Catch-22” – Too Noisy versus Doing It’s Job
  - Not all alerts need to email
  - What is critical – Environment specific
  - Proper tuning with groups: Webinar & WhitePaper:

How To Manage System Center Operations Manager Using Groups

http://www.veeam.com/whitepapers.html
http://www.veeam.com/videos.html
Create a dynamic user experience

- Types of groups: Dynamic & Static, Subgroups
- Group best practices:
  - Use a naming convention
  - Create groups for a business need
  - Limit the number of groups
  - Keep dynamic memberships simple
  - Have a strategy for how to use groups in your environment
Reporting for Trending and Right-sizing

- Using the OpsMgr Data Warehouse
- Historical trending
- Right-sizing your environment
The Management Solution – Veeam nworks MP

- Microsoft System Center
  - Operations Manager 2007
  - Operations Manager 2012
  - MOM 2005

- nworks Management Pack
  - nworks Collector
  - Ops Manager Agent
  - Agentless
  - Scalable
  - Centrally managed
  - Fault-tolerant

- VMware
  - vSphere 4 and VI3
  - vSphere 5.0

- VEEAM
  - Microsoft Partner
  - Gold Systems Management
  - Silver Virtualization
  - TECHNOLOGY ALLIANCE

- VMware PARTNER
Enterprise strength

- **Horizontal “no-limits” scalability**
  - Distributed architecture
  - Configurable data collection and delivery

- **Centralized management**
  - Administration of multiple collectors
  - Pre-deployment planning and ongoing analysis

- **Fault tolerant**
  - Automatic failover and load balancing
  - Continuous delivery of monitoring data
Complete integration

- Enable all Ops Mgr functionality
  - Targeted Alerting
  - Diagrams & Dashboards
  - Reporting & Auditing
  - Notifications & Responses
Detailed health model

- Standard VMware metrics:
  - Cluster memory %
  - Host CPU %
  - VM CPU ready %

- Unique Advanced metrics:
  - Memory pressure
  - Disk pressure NEW!
  - Memory swap file I/O
  - Disk IOPS
  - Total network traffic

- 250+ vCenter events:
  - Cluster status
  - vMotion issues
  - Storage connectivity

- Agentless Hardware alerts:
  - Power supply failure
  - Temperature sensors
  - Fan status
  - RAID disks
  - DIMM errors NEW!
Knowledge base

- VMWARE “expert in a box”
- Elevates front-line monitoring staff, without additional training
- Ensures correct escalation path and reduces time to resolution
End-To-End Monitoring

- ‘Metal to App’ visibility:
  - Hardware to hypervisor
  - Hypervisor to VM
  - VM to application

- See all relationships & dependencies

- Enable root-cause analysis
Advanced Ops Mgr features

- Full topology diagram of the VMware environment
  - See all dependencies and relationships
  - Sophisticated staged & cascaded discoveries

- Efficient ‘cooked-down’ datasources
  - Each Collector can monitor up to 1000 VMs and their Hosts

- Optimized performance data publication
  - Minimize Ops Mgr DB footprint
New nworks 5.7 – Release Candidate available now!

- Support for vCenter 5.0
  - >130 new metrics and events
- New method of hardware monitoring
  - Gathered directly from ESX(i) Hosts
- Re-written and new MP Reports
  - Including Right-Sizing for CPU and Memory
- Enhanced load-balancing
  - Seamlessly split and balance the largest clusters

- Visit the landing page and register to get the RC – [http://go.veeam.com/veeam-nworks-v5.7.html](http://go.veeam.com/veeam-nworks-v5.7.html)
Additional Resources

Monitoring VMware vSphere Performance

Whitepaper: Effective Monitoring Strategies for vSphere (vSphere KPIs explained here)

nworks MP on www.veeam.com

nworks Resources (Sizing calculators, Best Practices,&c)
http://www.veeam.com/vmware-microsoft-esx-monitoring/resources.html
Questions and Answers

- Winners receive a choice of the following books

Available as a Kindle e-book

Available as a paperback

- Thank you for attending!
- Resources: