Ensuring Service Levels in the Clouds
Monitoring across virtualized, private, public, and hybrid environments

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AGENDA:

• Ensuring SLAs for private, public, hybrid clouds
• Real-time monitoring, management
• Connecting to cloud APIs

BIO:

• Leads design, delivery of CA Nimsoft’s cloud monitoring, management
• Works with 1,000 enterprise and MSP customers
• 13+ years in IT operations (Unisys, IBM, etc.)
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How do you ensure service levels?

Required: A Single View and Monitoring Infrastructure
Here’s your goal ... Now how do you get there?
For SaaS, PaaS and IaaS - Getting the data you need is a real challenge

- Minimal data exposed in cloud dashboards
- More Detail - Connections to Cloud APIs
- IaaS instances - Need more than the Cloud exposes
- Performance and Availability
  - Need service measurements from where your customers are
SaaS and PaaS – API data available

PaaS
- Dedicated instance status, storage
- Subscription status, users vs. contract, user patterns, queues
- End user experience, transactions
- URL and web service response, SLA/SLO

SaaS
- Average transaction speeds / latencies
- Your resources status: Storage - Data - Files - concurrent users - Login speeds - Query and response times
- End User experience, web services response
- Compliance to Cloud SLA/SLO

Secure API link to Exposed Data
IaaS

Use exposed Cloud API data
- Virtual server data
  Network, CPU, Storage details - read/write
- IaaS performance data
  Server start up times, Availability, Subscription data

Server and App Monitoring
- Servers and Applications
  Processes, logs, performance, Exchange, Tomcat/Apache, Notes, Active Directory, IIS, DB, etc.
- Web environments
  WebSphere, WebLogic, Multi-tier web application views, End user experience and transactions
Customers aren’t just outside the cloud provider’s site

Required: Real time and historical performance from around the world
Challenges for Monitoring Virtualization and Private Clouds

- Dense compute power / Converged Infrastructure
- Self-service orientation
- Shared infrastructure
- Elasticity
- Mission critical applications and services
- Providing proof of value to the business
Compute density has increased
- Traditional and converged hardware
- Virtualized environment highly dependent on physical resources
- Traditional single purpose tools expensive & resource heavy

Success requires a complete unified view
- Virtual hosts / Machines / Managers
- Operating systems and applications on VM guests
- End user response times
- Networking devices and bandwidth, Physical systems, Storage
Auto-Monitoring of VMs

- Self-service, highly variable environment drives new requirements
- Auto-discover new VM guests
  - Register and detect new VMs as they become available
  - At VM host or VM manager level
- Auto-apply monitoring
  - Agentless – CPU, Memory, Disk, Network
  - Apply monitoring by policy / template to VMs
  - Alerts and Quality of Service measurements
- Auto-display
  - Gracefully add and remove VMs from reports and displays
  - Policy controls alerts for removal vs. failure to report
Self service, highly variable environments drive new requirements

Base level
- VM Host / Guest health
- Network, CPU, Disk, Memory
- Auto-correlate and display

Extended
- Under usage
  - No significant operation — instance not used
  - Alert and notify to free resources
- Over-commitment — “Noisy Neighbor”
  - Correlate to identify VMs that overuse common resources — i.e. network, CPU, disk

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VMware ESX Server Summary
Resource pooling, availability and performance drive elastic behavior

Virtualization features:
- High Availability (all)
- VMware specific: vMotion, HA, DRS

Auto adjust on resource change
- % vs. fixed values
- CPU, memory, disk, storage

Seamlessly retain monitoring
- When moved

Awareness to alert on action
Extended Data Collection

- Add Agent-based monitoring for SLA compliance
  - Applications – Exchange, DB, WebSphere / WebLogic, etc.
  - Physical networks, chassis, power
  - Transactions, end-user experience
  - Global availability, performance
- Auto-discover, deploy and configure

Extended Data Use

- Correlation and Display
- Intelligent alerts – Baselining
  - Single items and Service as a whole
Integration Capabilities

- Private Cloud and Virtualization elements of wider DC
  - Have dependencies
  - Backend database clusters
  - ERP and Mainframe apps

- Must be able to integrate with DC IT infrastructure tools
  - Service Desk, CMDB, Manager of managers
  - Data, workflow and presentation layer access may all be required

Nimsoft - APIs and integration points at every level of the monitoring solution stack
Self service tools often considered “free” … Can break the IT value chain

Traditionally:
- Order server through IT
- Wait for delivery,
- Physically install, configure, maintain and update

Now:
- Self-service request
- “We already own the resources ...”
- Isn’t it free?”

Solution ... Monitoring solutions must:
- Meter / report on usage
- Integrate for billing/chargeback if desired
Minimal Tool Sets

- Separate tools each require their own:
  - Training
  - Resource requirements
  - Infrastructure
  - Maintenance, displays ...

- Will kill the economics of your cloud / virtualization implementation
  - Creating additional expense
    - not saving money
  - Using critical infrastructure and resources

Multiple Tools

Requirement:
- A minimal solution set to support all the elements
- Physical and virtual
- Network, application, storage, chassis, environmental, power, user experience, …
And for the Data Center ...
Ideal for monitoring and management from the data center to the clouds

- Complete single tool – Unified IT Monitoring
- Meets the challenges organizations encounter for DC / Cloud / Virtualization
  - Dense infrastructure
  - High variability
  - Mission critical application and service support
  - Integration requirements
  - Cloud user experience monitoring
- Results in
  - Accelerated implementations and quick ROI
  - Fast problem resolution
  - Optimized IT Service Delivery
  - Meeting your SLAs for cloud and virtualized environments
Nimsoft Unified Manager

A best practice, modular Service Desk and Monitoring solution

- Modular functionality ... accelerates incident detection and resolution
  - Unified views and reports
  - Pre-integrated alarms and incidents
  - Auto-suppression (maintenance)
  - Common configuration

- Service catalog ready to support Virtualization/Private Cloud

- Real world experience-based ITIL v3 best practices framework

- Easy to buy, deploy and manage
Questions & Answers

Q&A
CA Nimsoft Cloud Monitor – Product Details

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Demos
http://www.nimsoft.com/solutions/demos.html

Customer Case Studies

Nimsoft Blog
http://blog.nimsoft.com/