Driving Automated Insight to Business Applications with EMC Smarts

Glenn O’Donnell
Automated Insight to Applications with EMC Smarts

Automation based on application behavior

EMC Smarts application-oriented products

New! EMC Smarts Application Discovery Manager

Future developments at EMC Smarts
Applications: The Business Service Proxy

Applications are tangible services to users

Business processes are increasingly embodied in applications

- (e.g., SAP, Siebel, web apps, middleware)

Monitor applications and you monitor at least some level of business service

- Relevance to business service depends on application sophistication
- Triage focuses on application monitoring to prioritize action

© Copyright 2006 EMC Corporation. All rights reserved.
Driving Automation

Comprehensive automation is years away

Incremental automation is realistic
  – Indeed this happens all the time

Automated discovery
  – Populate CMDB to ensure freshness and accuracy

Automated analysis

Automated action
  – Not just HOW to adapt, but also WHY and WHEN to adapt

Leverage EMC virtualization
EMC Smarts Operational Benefits

Streamline ITIL adoption

EMC Smarts provides process automation
  – Reduce costs
  – Improve reliability

Incident management: the best first step
  – Many tasks and tools in place

Triage: a crucial early stage of incident management
  – Automation is a great opportunity

ITIL is exploding

Most significant issue facing management strategy: Implementation of ITIL

Source: META Group

© Copyright 2006 EMC Corporation. All rights reserved.
Automating Incident Triage

Incident Management is:
- Isolation
- Escalation
- Restoration

Triage is:
- Identifying the cause
- Directing resolution properly
- The right person ⇔ the right job

Reduce finger-pointing

Accelerate resolution
- Lower operational costs

Applications provide context for decisions

The Impact of Automated Triage

67% MTTR Improvement!
Automated Insight to Applications with EMC Smarts

Automation based on application behavior

EMC Smarts application-oriented products

New! EMC Smarts Application Discovery Manager

Future developments at EMC Smarts
The Power of the EMC Smarts Object Model

Captures an accurate description of the real world

Complete service chain
- Infrastructure
- Logical overlays
- Applications
- Services
- Service users

The heart of a CMDB

Drives myriad automation mechanisms

No other vendor can boast such a robust, unified model
Application Connectivity Monitor (ACM)

Entry-level application-oriented monitor

Automatically discovers applications and monitors for availability
  - Preconfigured to discover hundreds of applications

Maps applications to hosts
  - Leverages these relationships for automated analysis

Rapid time to value
  - Quick and easy install
  - Intuitive customization GUI
ACM Version 2.1

New Version Available Now!

Support for redundancy groups
  - e.g., load balanced servers

New topology builder
  - GUI for mapping services to hosts
  - Also maps redundancy groups

Stronger third party event integration

Load Balancers are Application-Aware Infrastructure

Load Balancer
available

Load Balancer
reduced

Load Balancer
at risk (threshold = 3)

Load Balancer
all down
Automated Insight to Applications with EMC Smarts

Automation based on application behavior

EMC Smarts application-oriented products

**New!** EMC Smarts Application Discovery Manager

Future developments at EMC Smarts
**New!** Application Discovery Manager (ADM)

Available Now!

Illuminates the “darkness” within applications

Automatically discovers and maps application relationships

“Topology” presents app-to-app relationship map

Phase I of delivery: Visibility
  - Automated discovery and presentation

Phase II of delivery: Drive analysis
  - Beginning Q3 of 2006
  - Model linkage to analysis products
ADM Appliance Packaging

OEM technology from nLayers

Re-branded and supported as EMC product by EMC
  - Benefit from the stability, trust, and financial strength of EMC

Appliance is a generic 1U Intel server plus software

Additional development by EMC will evolve rapidly
  - New development team dedicated to application-oriented products
  - Integration into the Smarts ICIM object model is the first step

Rapid time to value using appliance packaging
  - No need to acquire server, administrators, patches, etc.

Passive network traffic capture and analysis
Why EMC Chose nLayers for OEM

nLayers prevailed in an extensive EMC analysis
  – Twelve vendors considered
  – Top choice in ForresterWave on Application Mapping

Model-based approach aligns with EMC Smarts
  – Enables faster product integration and CMDB expansion

Hybrid model is more secure than pure active approaches
  – Less intrusive
  – Easily customized based on customer needs

Ample “Fingerprints™” can identify complex applications

Activity/usage data enhances EMC’s performance strategy
Intuitive ADM User Interface

Web-based access and GUI

Server showing resident applications

Application relationship showing protocol info

Light usage

Heavy usage

Intuitive command buttons

Zoom views

Navigation aid

Slider control to view usage over time
ADM Testing at EMC

Installed at EMC’s live data center in Westborough, MA

Discovered 30,000 nodes, 13,000 apps and 75,000 application-to-application relationships within three hours

SMARTS fingerprint created in 20 minutes
  – Flagged as “unclassified”
  – Config files were not necessary nor could they capture the dynamic nature of SMARTS app

Another custom EMC business application was found
  – Fingerprint created in 30 minutes
Building on ADM for Application-Oriented Management

Integration with ICIM and feeding analysis is a dramatic differentiator from all competitors
- Including others who OEM nLayers

Configuration management is central to IT Operations
- ADM is a critical enabler in a comprehensive CMDB solution

Automated monitoring will be guided by discovery
- Initiate appropriate monitoring actions
- Measurements based on app characteristics

EMC is a trusted virtualization/adaptation powerhouse
- Application context determines WHEN and WHY to adapt
Automated Insight to Applications with EMC Smarts

Automation based on application behavior

EMC Smarts application-oriented products

New! EMC Smarts Application Discovery Manager

Future developments at EMC Smarts
Other Future Developments at EMC Smarts

Application-Oriented Management: strategic to EMC
- Smarts is the epicenter
- Collaboration with other EMC units

Rich third-party integration capacity
- Optimizes triage automation

Broader service management solutions
- Additional ITIL automation

Storage Insight linkage
- Unmatched services-through-infrastructure capability
Other Future Developments at EMC Smarts

Performance monitoring
- For both infrastructure and applications
- Application performance monitoring will benefit greatly

Configuration management for process discipline
- Configuration already inherent in the model
- Partner ecosystem
Hooking into Business Process Management

Business processes embody one or more applications
- SAP, Oracle, etc. automate business logic

Instrumentation standards must proliferate
- Legacy application are black holes
- Web services, SOA, BPEL all hold promise

Follow the flow of business process execution
- Tracking transactions accurately is not easy, however

EMC is following or participating in these developments
- Our management tools will support these new technologies
- EMC Documentum already offers impressive BPM capabilities
EMC Smarts Value Proposition

Automated triage for incident management
- Reduced cost of operations
- Quicker incident resolution

Business impact analysis
- From infrastructure and applications
- Thanks to our unique object model

New ADM product offers incomparable visibility into application behavior
- Potent catalyst for unrivaled product evolution

The ultimate engine for automation