CA Spectrum Infrastructure Manager Roadmap

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Abstract

CA Spectrum Infrastructure Manager: Time for a Roadmap Update.

Where is CA's Spectrum Infrastructure Manager solution headed? What helpful new functionality and capabilities will be included to help you be more efficient in your job? At this session, we will provide a technical product roadmap and layout our solution plans.
What Your Peers Tell Us
Barriers to Optimal IT Infrastructure Management

- High stakes exposure to the business
- Technology silos prevent end-to-end management
- Lack of integrated tools
- Determining root cause is difficult
- Performance becoming most significant service issue
- Little or no predictive visibility
- Growing demands leave little time to optimise
CA Spectrum Infrastructure Manager
Value Proposition

> Align ITs to the business
  - Communicate value IT is delivering against internal SLAs

> Improve service availability proactively
  - Rapidly identify infrastructures and impact on IT Services
  - Increase Mean Time Between Failures (MTBF)

> Improve productivity through rapid problem resolution
  - Improve Operator productivity → Reduce Mean Time to Repair (MTTR)
  - Increased automation → Lower administrative complexity and overhead
CA Spectrum Customer Benefits

> World Class Functionality
  - Best in class change-aware Root Cause Analysis
  - Large patent portfolio in the areas of network management and event correlation

> Rapid Time to Value
  - Industry recognised Operations Console enabling rapid Operator productivity
  - Technology relationship mapping covering a wide variety of vendors, protocols and technologies
  - Out-of-the-box self certification to enable rapid deployment of new services, products and technologies

> Increased Service Availability Management
  - Service-centric management of the infrastructure
  - Provides insight to the health of the critical IT infrastructure services and applications
CA Spectrum Infrastructure Manager
A Simple Set of Guiding Principles

> Reduce total cost of ownership
  - Simplify management of your infrastructure
  - Deliver your enhancements and greater out-of-box value
  - Increase the scalability and resiliency of your management system
  - Deliver tight integration with your other CA and third party solutions

> Enable agility and competitiveness
  - Support your new platforms and network technologies
  - Manage your newly deployed applications and services

> Deliver it on time and with high quality
CA Spectrum r9.1.0
Release Summary

> CA Spectrum r9.1.0 is a minor release
  - Ensure CA Spectrum manages next generation datacenters and infrastructures
  - Focus on the underlying subsystems that strengthen and expand the core Spectrum solution

> Release features
  - New Virtual Host Manager
  - New MPLS Transport Manager
  - New EITM Integrations
    - CA IT PAM – Spectrum (for Remedy Service Desk Integration)
  - Enhanced EITM Integrations
    - CA Service Desk (for automated service desk Integration)
    - CA Wily Introscope (for Application Performance Management)
  - Core Platform Enhancements
    - Cisco Nexus Switch Certification, Alcatel Discovery Protocol Support, New Integration Package Utility, Multilink Physical Connection Monitoring
CA Spectrum in a Virtualised World
Virtualisation Management
The Challenges

> Need for Operational Visibility
   Integrated view of virtual and physical infrastructure
   Controlling virtual sprawl while reducing costs
   Address the need to use specific tools and to train more people to manage the virtual environment

> Availability Challenges
   Root-cause analysis is more challenging when resources are shifting
   How is utilisation affecting my availability?

> Heterogeneity
   Deliver seamless visibility across next generation multi-vendor, multi-technology virtualised datacenters
Virtualisation Management
The Key to Broad Virtualisation Rollout

Management “Tipping Points”

- Few management needs
- Little executive visibility
- No process impact
- Few compliance, security concerns

- P+V Systems Management
- Performance Management
- Business Continuity
- Provisioning, Change & Configuration Mgt.

- Integrated Network Mgt.
- Application Performance
- Compliance & Security
- Chargeback
- Capacity Planning

- Private & Public Clouds
- Application/Top-Down
- Predictive Orchestration
- Next Generation DC
- Real time Infrastructure
- Self Service
Spectrum Virtual Host Manager
Value Proposition

> What It Does

- Enable you to monitor and visualise the virtualised infrastructure
  - Discover and monitor ESX servers and their VMs
  - Visualise the logical relationships between ESX servers and VMs
  - Detect VMotion and automatically update topology in real-time
  - Perform intelligent Fault Isolation to suppress alarms on logical VMs when physical servers fail
  - View broad range of real-time data such as physical resource allocation and utilisation to aid Operations troubleshooting and triage

- Leverages comprehensive vCenter management API
  - VMware actively develops and supports Web Services based management APIs as a replacement for SNMP-based APIs

- Offers multi-vendor Virtualisation Management
  - Support heterogeneous virtualisation platforms and technologies

> What It Means To You

- Comprehensive management for your virtualised environments leveraging your existing management tools
Spectrum Virtual Host Manager

> Clear
  - Consolidated hierarchical view of the virtual infrastructure (e.g. VMware VCs, DCs, ESXes, Clusters, RPs, and VMs; Solaris Zones)

> Consistent
  - Complete topology of fast-growing virtual environment integrated with existing physical infrastructure

> Simple
  - Avoids acquiring, learning and maintaining additional domain management tools
Spectrum Virtual Host Manager
Model-based Assurance & RCA

> Spectrum’s object model extended to support virtual infrastructures
  - vCenter
  - ESXes
  - Data Centers
  - Clusters
  - Resource Pools
  - Virtual Machines

> Automated discovery of the integrated physical and virtual infrastructure eliminates manual efforts and ensures accuracy
Spectrum Virtual Host Management

> Introduce management of virtual systems to combine with physical/virtual infrastructure

- Operators can easily distinguish the virtual from the physical with a halo ghost-like image

- New Virtual Host Manager icons represent state of datacenter, clusters & resource pool icons; to represent the virtual hierarchy
Integrated Physical & Virtual Topology

- vCenter Server
- ESX Server
- Physical Switch
- Virtual NIC
- Virtual Machines
Adapts to Dynamic Virtual Environments

> Spectrum automatically tracks VMotion activity
> When VMotion occurs...
  > Spectrum receives VMotion updates
  > Affected VMs are automatically moved and re-associated with their new ESX hosts
  > Connections in the Spectrum topology and navigation panel are automatically updated
> Provides up-to-date and real-time view of the integrated physical and virtual infrastructure without manual intervention
VMotion Handling – Illustrated

Pre-VMotion
Note: VM is currently hosted by PRES-NC 2 ESX server and the topology reflects this

Post-VMotion
Note: VM connection moved from PRES-NC2 ESX server and is now hosted on the DRUM-NC2 server
Root Cause Analysis

- Root Cause Analysis to isolate faults to physical servers and intelligently suppress symptomatic alarms on virtual machines
- A single alarm is provided to the Operations team
- Intelligent Alarm Correlation
  - Correlated alarms listed as “Symptoms” of the root cause
- Impact Identified
  - Virtual entities impacted will be listed as under Spectrum’s Impact Subview
Spectrum Virtual Host Manager
Information Views

> Real-time configuration, performance and inventory information

> Obtain performance data without SNMP
Spectrum Virtual Host Manager
Thresholds & Status Monitors

> Variety of thresholds and status monitors configurable right from OneClick
  - CPU and memory utilization
  - Heartbeat, power off, connection state, sensor status
  - Disk accessibility, free space, NIC Link Status

> Natively recognizes “power off” with unique alarm
CA Spectrum
r9.1.1, r9.1.2 & r9.1.3
Service Pack Highlights
Overview

> Virtualisation Enhancements
  ▪ Support for Solaris containers

> IP Services Enhancements
  ▪ BGP Internal Peer Session Monitoring

> New & Updated Certifications

> OneClick Usability Enhancements
Virtualisation Enhancements

Features

- New Solaris Container support
- Ability to distribute management of large VMware environments across multiple Spectrum servers
- Simplified Virtual Host Manager configuration

What It Means To You?

- Comprehensive and heterogeneous support for your virtualised environments
Spectrum Virtual Host Manager
New Solaris Container Support

> What Is It?

- Spectrum Virtual Host Manager extended to support Solaris virtual environments (in addition to VMware environments)
- Consolidated hierarchical view of all Solaris hosts, global zones and non-global zones

> What It Means To You

- Management of VMware and Solaris virtual environments from the familiar OneClick console
- Avoids acquiring, learning and maintaining additional domain management tools
Spectrum Virtual Host Manager
Model-based RCA

> What Is It?
  - Spectrum’s object model extended to support Solaris virtual infrastructures
    - Solaris Host
    - Global Zones
    - Zones

> What It Means To You?
  - Automated discovery of the integrated physical and virtual infrastructure
  - Eliminates manual efforts and ensures accuracy
New BladeSystem Support

> What Is It?
  - Support for Blade technologies
  - New Chassis icon that consolidates blades in the chassis
  - New OneClick Information Tab to present, blades and interfaces (e.g. Chassis Location, Slot, Serial Number, etc)

> What It Does?
  - Maps the physical hardware to the OS software

> What It Means To You?
  - Expanded visibility of the virtualised datacenter using existing toolsets
New and Updated Certifications

> **New Certifications**
  - r9.1.2
    - Alcatel Service Router, OmniSwitch and OminStack Support
    - Fujitsu ServerView, HP BladeSystem, Lancom WAN Router
  - r9.1.3
    - HP Procurve and Checkpoint Firewall

> **Updated Certifications**
  - r9.1.2
    - Updates to Liebert UPS and APC UPS (Green IT support)
    - Updates to support Cisco Unified Communications Manager
      - Formerly Cisco Call Manager / Call Manager Express
      - Follows up Siemens’ HiPath Unified Communications support in r9.1.1

> **New Simple Certifications**
CA Spectrum and Layer 3 Management

The Power of the Path!
Spectrum IP Routing Manager

Motivation

> You have been asking for a layer 3 topology view and some visibility into routing protocols like OSPF

> Spectrum understands Layer 2 physical connectivity relationships, and some logical relationships between network elements, but has limited visibility into the path that data takes between point A & B

> Understanding the path that data takes will strength Spectrum’s correlation of alarms to their root cause
Spectrum IP Routing Manager
Overview

> New Spectrum IP Routing Manager Application
  - Optional Spectrum application
  - Integrates with Packet Design Route Explorer (REX)

> Key Features
  - Discovery and visualisation of Layer 3 Topology
  - OSPF Spotlighting
  - End-to-end Layer 3 Path visualisation
  - Ability to watch and alert on critical paths
  - Layer 3 routing events and alerts
  - Complementing Spectrum Core Discovery (Unmanaged Devices)
Spectrum IP Routing Manager
OneClick Integration

> New IP Routing Manager
> All L3 topology and paths listed under IP Routing Manager icon
> Support distributed Spectrum environments
  - Ability to view entire L3 topology across all Spectrum landscapes
  - Ability to monitor critical paths across Spectrum landscapes
Spectrum IP Routing Manager
Layer 3 Spotlighting

> Navigation-based spotlighting

> Operational workflow

- User selects OSPF area in the OneClick navigation panel
- All routers, LANs and links that are members of the selected OSPF area will be spotlighted
- Rest of the topology view will be dithered out
- Spotlighted router icons will display protocol-specific annotations such as “Area Border Router”, etc.
Spectrum IP Routing Manager
Unmanaged Devices

> Routers in the L3 topology not currently in CA Spectrum will appear as new "unmanaged router" icons
> Right-click on icon and immediately model it
> Ability to specify discovery settings
> New router place in the "New Devices" container
Additional IP Services Enhancements
IP Services Management
Other Enhancements

> What Is It?
- VPLS Management
  - Support for Metro Ethernet Virtual Private LAN Service (or VPLS)
  - Juniper support only at the moment
- Multicast Manager – Cisco Rate Counter Support
- Spectrum IP Services Discovery now integration with core discovery

> What It Means To You?
- Increase visibility into the IP infrastructure
- Ease to use for your Operators
- Reduced administration for your Administrators
CA Spectrum & Network Change and Configuration Management
Spectrum Network Configuration Manager
NCCM Strategy

> Determine what role change and configuration play in network service failures and degradation
  ▪ Extend root cause analysis to factor configuration change as a cause of network service failure or degradation

> Administer configuration changes to network elements
  ▪ Automate the administrative tasks of implementing configuration changes to network elements

> Monitor compliance & enforce change control policies within a diverse infrastructure
  ▪ Provide data and tools to run compliance reports, track & remediate violations, and view history of changes
Spectrum Network Configuration Manager
Cisco IOS firmware uploads

> Your #1 requested feature
> New tasks to automate Cisco IOS firmware updates

- Support for Cisco IOS/IOS-SSH device families
- Tasks follow the “firmware upload pipeline” to perform this multi-step operation:
  - Load Firmware
  - Reload Device
  - Cancel Reload request
Spectrum Network Configuration Manager
Expanded Configuration Comparison

> Allows customers the ability to compare any two configurations
  - Compare configs across different devices
  - Compare configs across different Spectrum servers
  - Leverages right click menu to “start compare”

> Provides customers with more choices when doing comparisons
Spectrum Network Configuration Manager
Improved Change Detection

> Expanded change detection to include SysLog Messages
  - Ability to capture:
    - What device has changed
    - Who made the change
    - When was it made
    - How was it made
    - What changed in configuration file
  - Provides a single correlated event that includes all change detail

> Increases change awareness
> Addresses customer need for increased change detail
> Streamlines information into an easy to view format
CA Spectrum and Ad-Hoc Reporting

... You Want Your Own Reports!!!
Spectrum Report Manager
Motivation

> Address your need to deliver management reports to other groups beyond the Operations teams
  - Provides you greater reporting flexibility
  - Provides you greater access to Spectrum data

> Significant integration milestone with eHealth
  - Delivers a single shared BI Engine
  - Simplifies your integrated eHealth/Spectrum environment
  - Provides you a common Reporting Console

> Update to the latest CA supported version of Business Objects
  - New BOXI support for Windows 2008, Red Hat 4, 5
Spectrum Report Manager
Self Service Reporting

> What Is It?
  - A new out-of-the-box reporting authoring application
  - A fully documented reporting schema
    - Spectrum Report Manager Database API or SRMDBAPI

> What It Does
  - Enables you to define your own new reports
  - Enable you to extract Spectrum's reporting data and generate reports using your own report authoring tools

> What It Means To You?
  - Get the management reports you need, no waiting until the next Spectrum release
Spectrum Report Manager
Business Objects WebIntelligence (WebI)

> New ad-hoc report development environment

- Web-based self-service report development
- Intuitive ‘drag & drop’ user interfaces
- Geared towards multi-dimensional analysis
- Reports can be created, saved, scheduled, etc...
Spectrum Report Manager
Business Objects WebIntelligence (WebI)
Final Thoughts...
Summary

> CA Spectrum has seen significant growth in the market – we continue to invest to ensure it remains the market leader in infrastructure management.

> We continue to further CA Spectrum capabilities to manage your diverse infrastructures while simplifying management itself and reducing your total cost of ownership.

> Your enhancement requests and participation in CA user groups like the CA User Communities and Development Exchange programs help us shape the future of IT management platforms.
Thank You

Question & Answer