Automated Network Lifecycle Management

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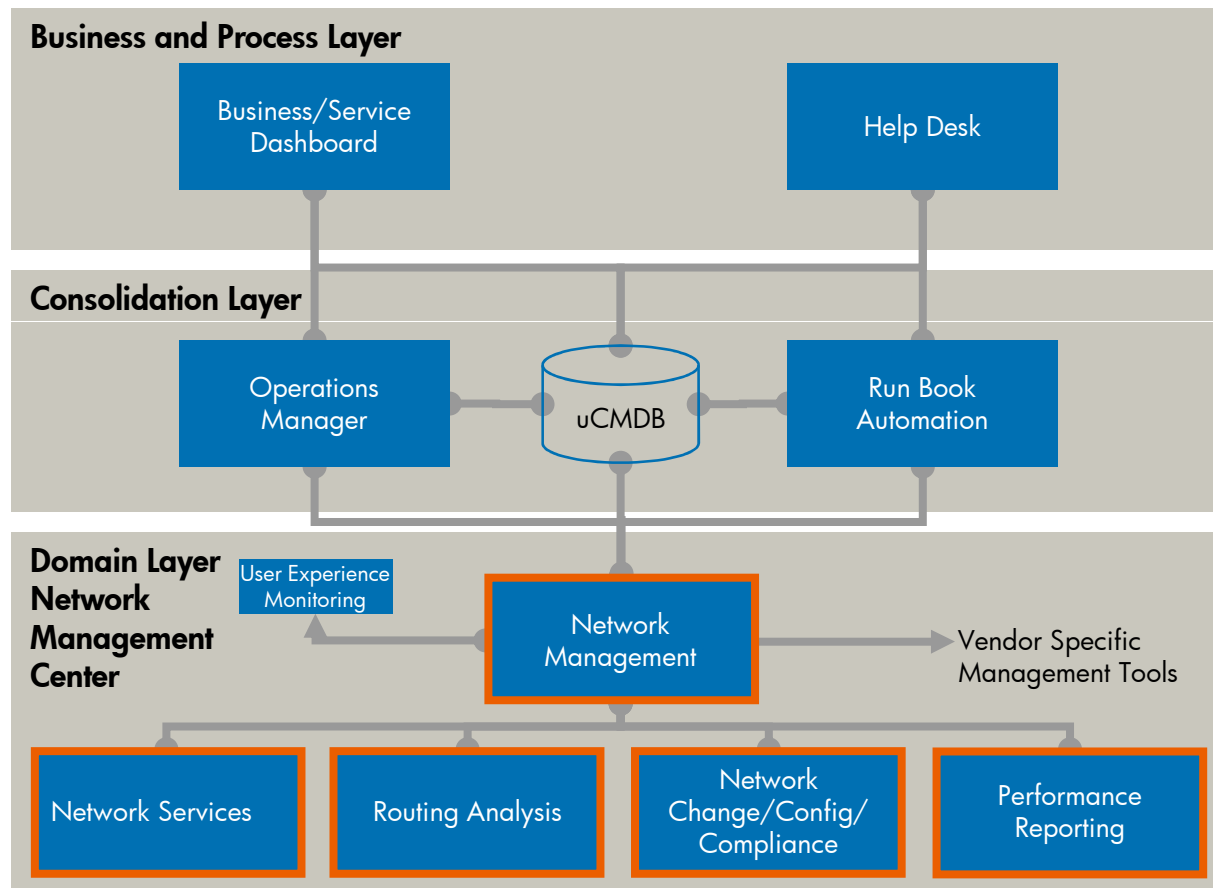**Solution Consultant**

HP Software

Abstract

Reducing costs and increasing efficiency are key initiatives for managing today's complex networks.

The traditional approach for deploying point tools to address network management is inefficient, as are the manual processes which are prone to human error.

This session will show how the HP Software Automated Network Lifecycle Management solution can address these network management challenges.

HP Automated Network Lifecycle Management

Service Transition → Service Operation → Service Improvement

Business and Process Layer

Business/Service Dashboard

Help Desk

Consolidation Layer

Operations Manager

uCMDB

Run Book Automation

Domain Layer
Network Management Center

User Experience Monitoring

Network Management

Vendor Specific Management Tools

Network Services

Routing Analysis

Network Change/Config/ Compliance

Performance Reporting

⊃ Comprehensive solution for managing the entire lifecycle of your network
⊃ Advanced integrations provide maximum automation
⊃ Supports ITILv3

1 Unified fault and performance management (HP NNM i-series)
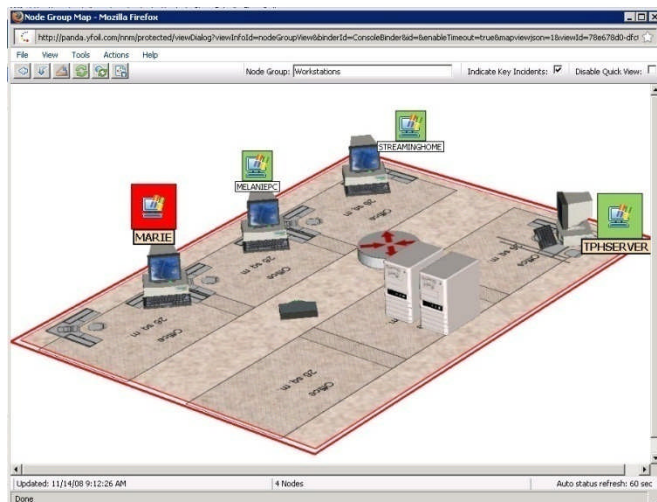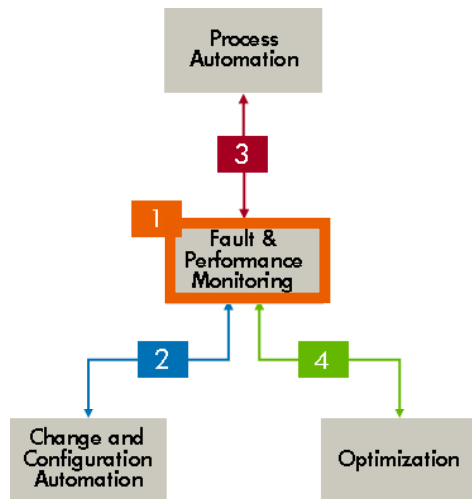
Solution Overview

Key Challenges
- Large, distributed and dynamic networks – expensive to map and maintain
- Rapid adoption of new technologies
- Event storms and lack of biz impact visibility

Key Capabilities
- Continuous network discovery
- Unified fault and performance management
- Automated root cause analysis
- iSPIs: Perf. ,IPT, Multicast, MPLS, NET

Key Differentiators
- Integrations: NLM, BSM and ITSM
- Automated root cause analysis for dynamic networks
- Brand new state-of-the-art architecture

2 Change and configuration automation
(HP Network Automation)
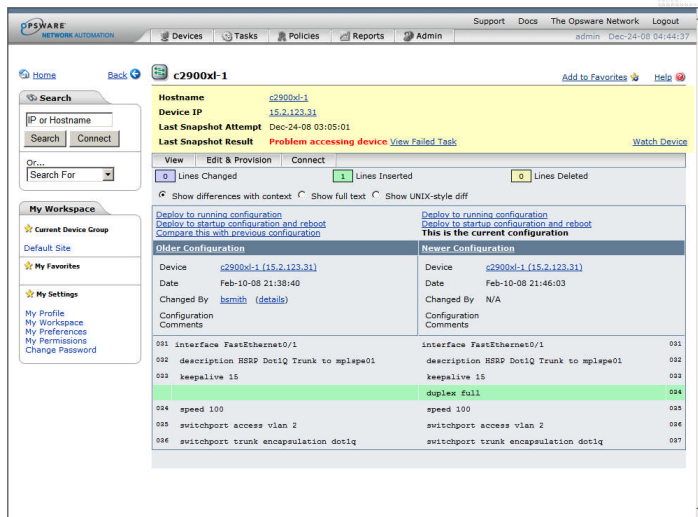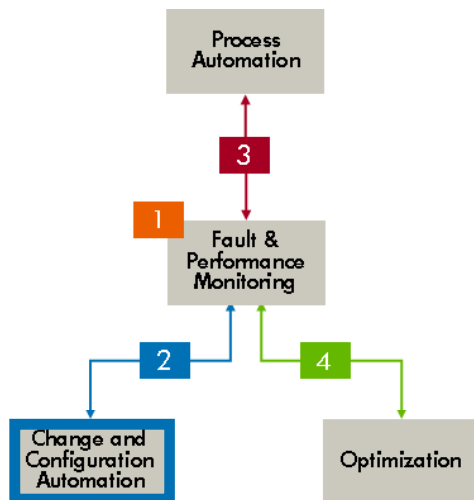
Solution Overview

Key Challenges
- Explosive growth of network and complexity
- Compliance and security burden
- Eliminating time-consuming and error-prone manual tasks

Key Capabilities
- Automated change and configuration management for heterogeneous networks
- Policy-driven compliance and security mgmt
- Reduced costs and increased reliability

Key Differentiators
- Pre-integrated with NNM for provisioning/incident resolution
- Broadest network device support
- Unique Cisco/Nortel endorsement & deep integration to largest NEPs
- Multi-master for HA and scalability

3 Process Automation (HP Operations Orchestration)
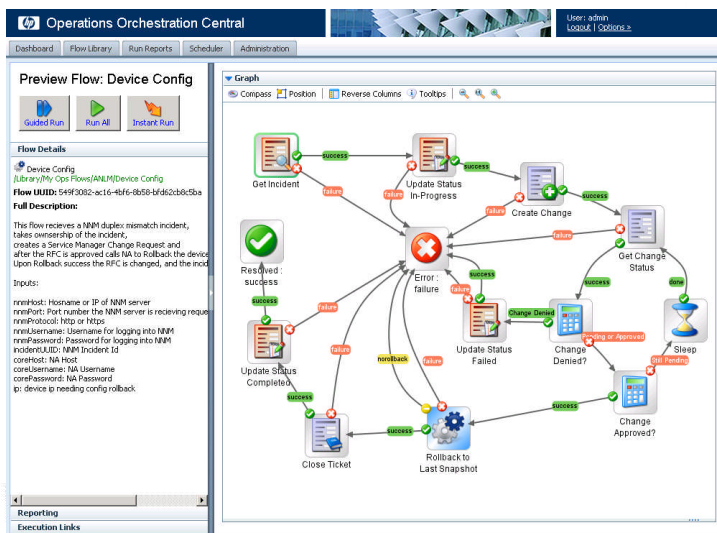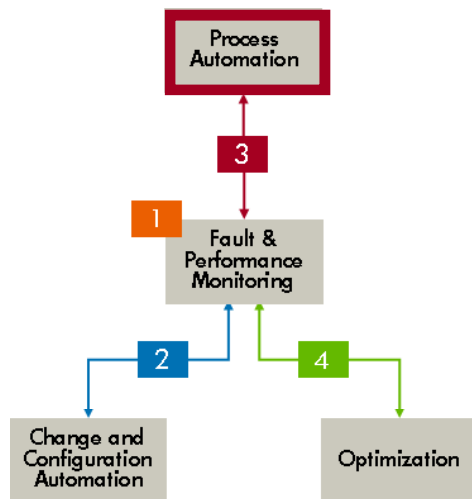
Solution Overview

Key Challenges
- Inability to enforce best practices/ITIL
- Errors and delays due to inconsistent hand-offs between systems, tools, and groups
- Increasing alert volumes with slowing time to discovery and incident resolution
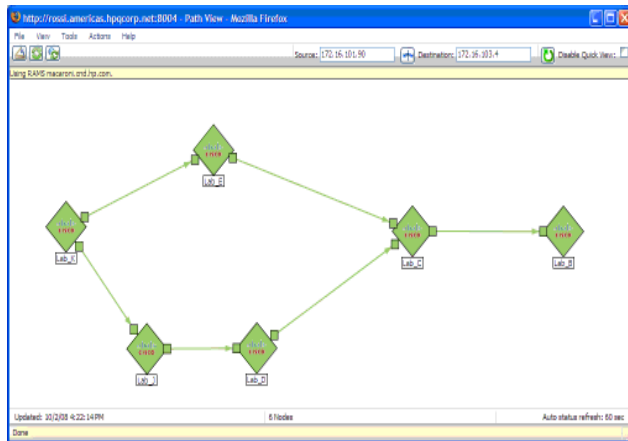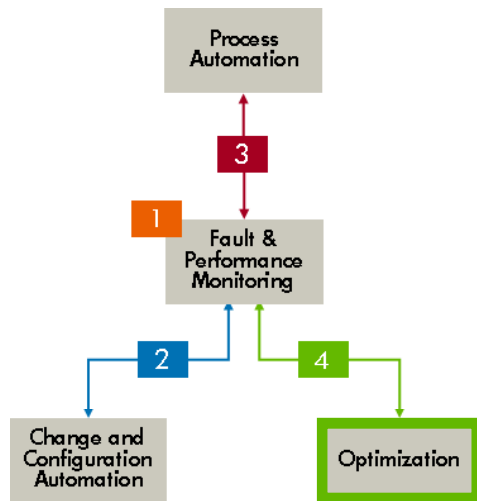
Key Capabilities
- Intuitive friendly UI for flow design
- Automation of key processes, such as incident resolution and change orchestration
- Informative guided workflows

Key Differentiators
- NNM embedded (NNM iSPI NET) for automated diagnosis and troubleshooting
- Broadest out of the box content including over 2000 pre-built flows
- User friendly GUI for workflow development
- Powerful dashboard and reporting

4 Optimisation
(HP Route Analytics Management Software)

Solution Overview

Key Challenges
- Lack of visibility to routing and traffic
- Transient routing problems are extremely difficult to diagnose
- Network routing changes are high risk

Key Capabilities
- Automated discovery and monitoring
- Topology and event capture for forensics
- Simulation and modeling for routing changes

Key Differentiators
- Unique management approach – RAMS speaks the language of routing
- Real-time routing service monitoring
- Network wide traffic analysis requires very few collection points

Router Redundancy Protocol Problems

Problems ➤	Business Impact ➤	ANLM Solution ➤
• HSRP Failover has occurred • No Standby HSRP router • No Active HSRP router • Two Active HSRP routers	• Loss of HSRP service or Loss of HSRP redundancy will place business critical network applications at risk	• NNMi Advanced xRRP monitoring
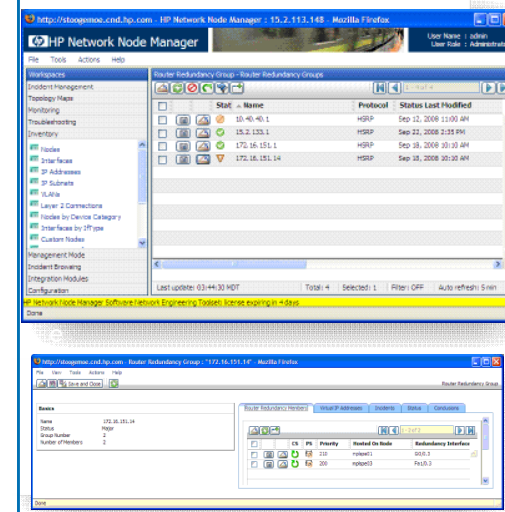
NNMi advanced automatically polls HSRP and VRRP group routers for redundancy service health

Device configurations do not adhere to established policies
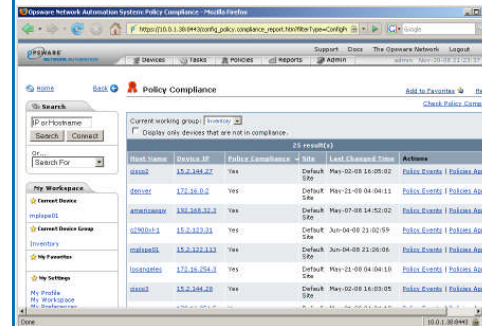
Problems	Business Impact	ANLM Solution
• Network Engineer creates a configuration that does not conform to corporate security standard.	• Creates a security risk for the business	• NA + NNM

NA automatically detects and reports configurations that are out of compliance. NA automates the process of remedying out of compliance configurations
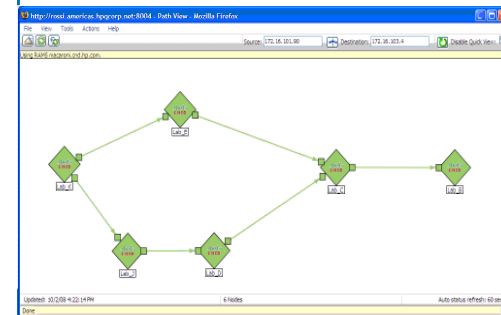
Routes Flapping

Problems	Business Impact	ANLM Solution
• Routes are flapping frequently	• Poor application performance across wide areas of the network lost user productivity	• NNMi + RAMS

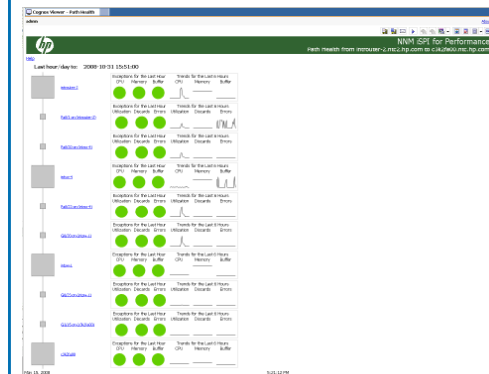RAMS detects common routing conditions such as route flapping

Congested Links

- High network utilization is congesting your network

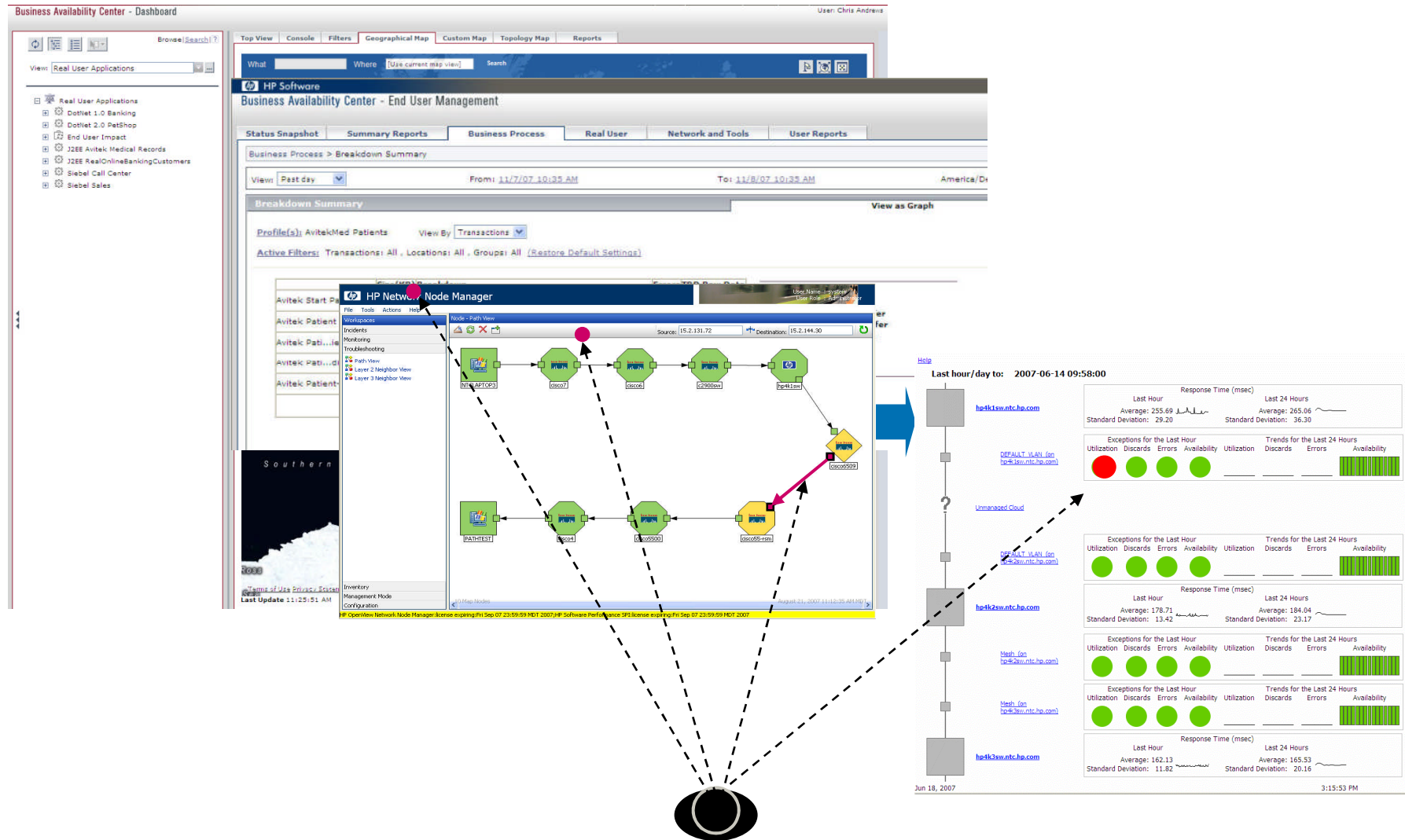- Business applications performance and user productivity impacted during peak traffic periods

- NNMi +iSPI for Performance

NNMi + iSPI for Performance detects high link utilization and sends a utilization incident and sets status on the map to operators.

Application Aware Network Management

HP AUTOMATED
NETWORK LIFECYCLE MANAGEMENT

Unified automation
across entire network operations

Maximum
service availability and
performance

Global compliance visibility
and enforcement

The only solution for end to end network management

hp

For More Information about HP Automated Network Lifecycle Management

- Visit the new Network Management Center blog for discussion topics and the latest news from the Network Management Center:

  ➲ www.hp.com/go/NNMblog

- Also, visit the ANLM website to download whitepapers and obtain additional information on ANLM:

  ➲ www.hp.com/go/ANLM

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