

# Automated Network Lifecycle Management

**Lynne Mullis**  
Solution Consultant  
HP Software



# Abstract

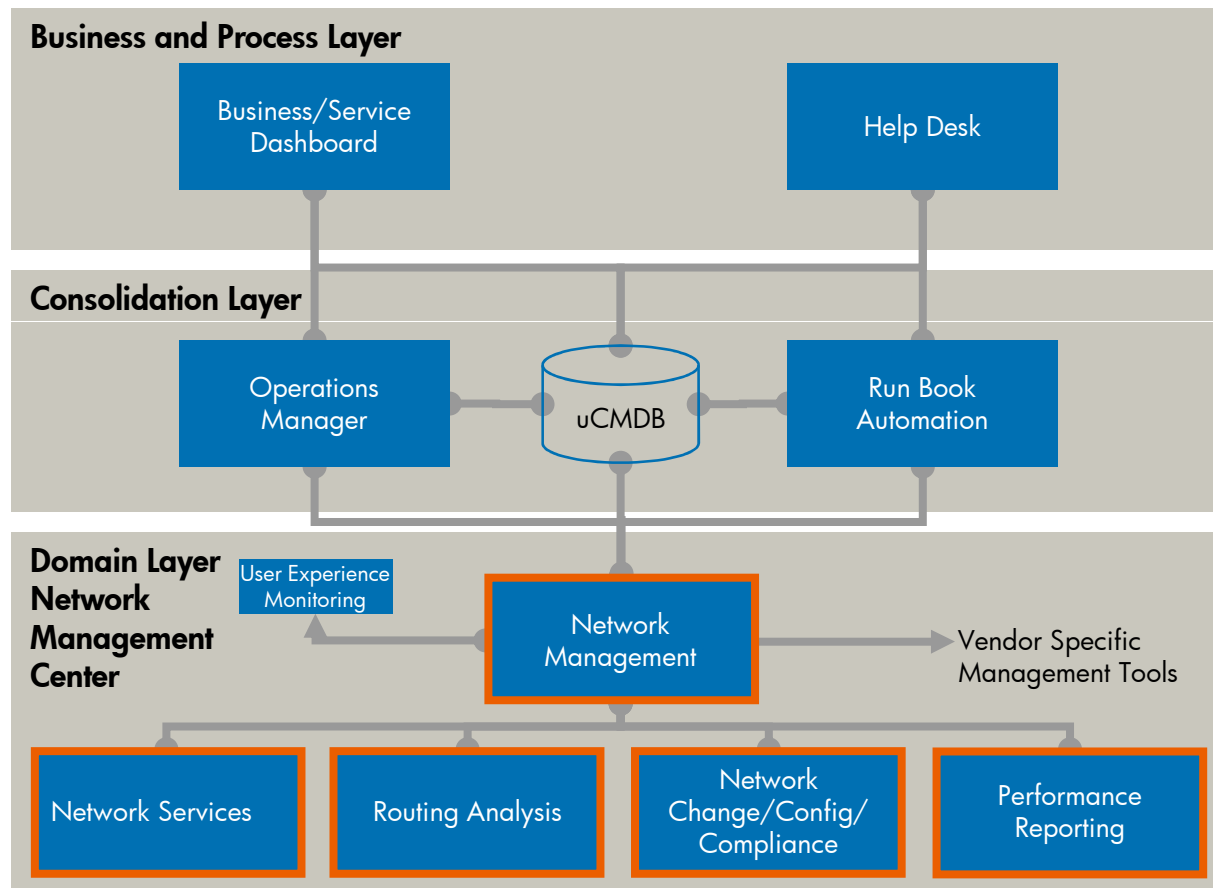
Reducing costs and increasing efficiency are key initiatives for managing today's complex networks.

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.



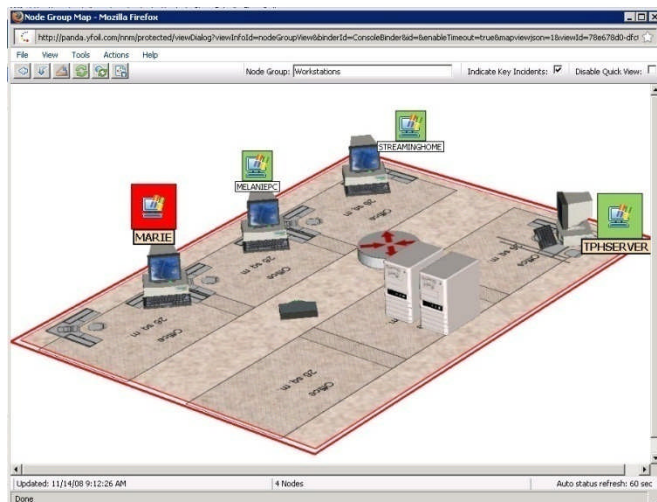
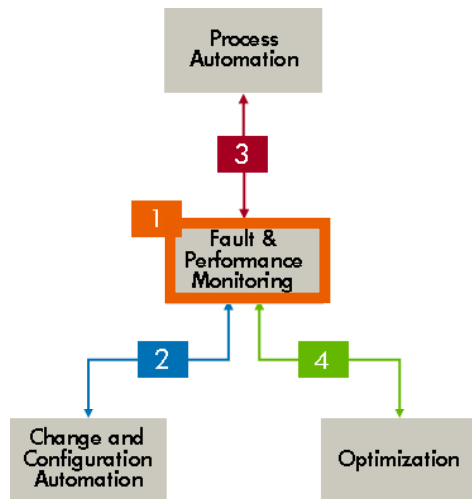
# HP Automated Network Lifecycle Management



- ➔ 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

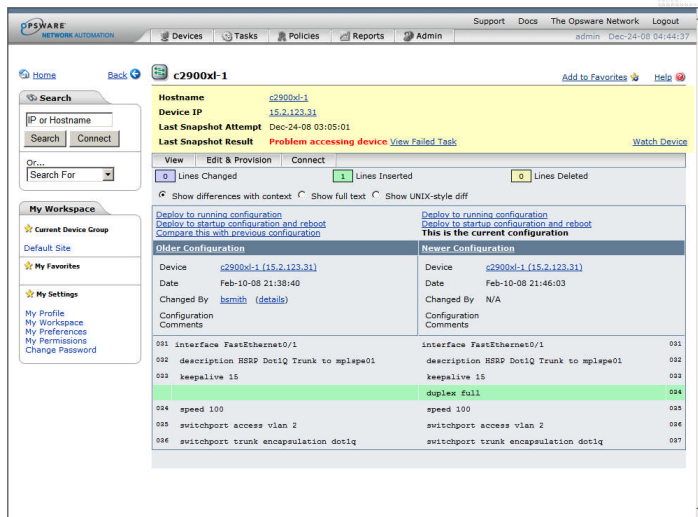
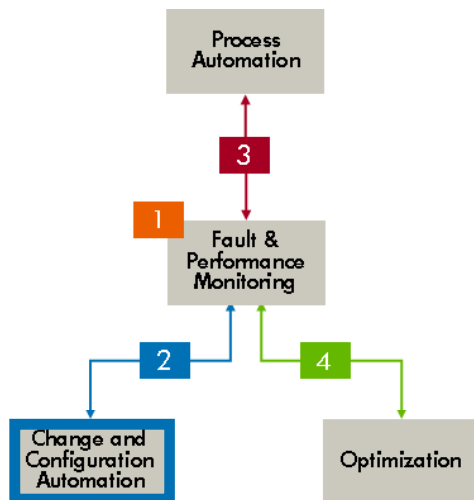
- Continuous network discovery
- Unified fault and performance management
- Automated root cause analysis
- iSPLs: Perf. ,IPT, Multicast, MPLS, NET

### 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

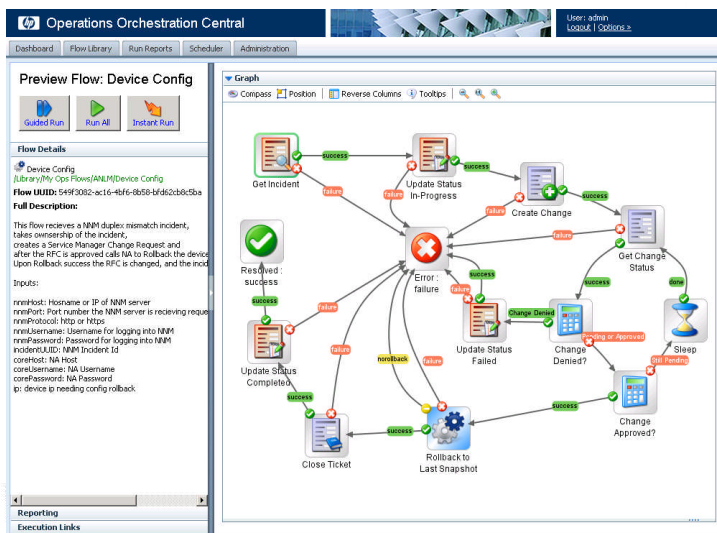
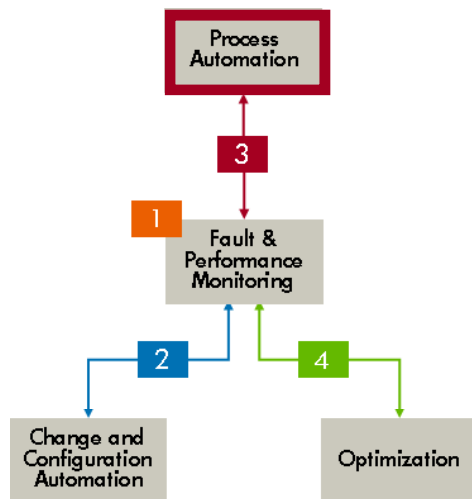
- Automated change and configuration management for heterogeneous networks
- Policy-driven compliance and security mgmt
- Reduced costs and increased reliability

#### 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

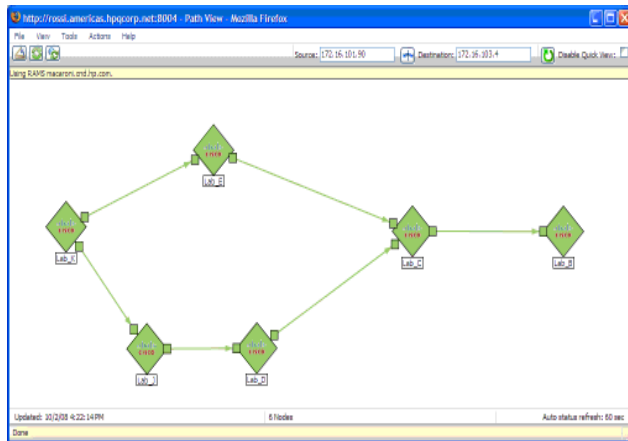
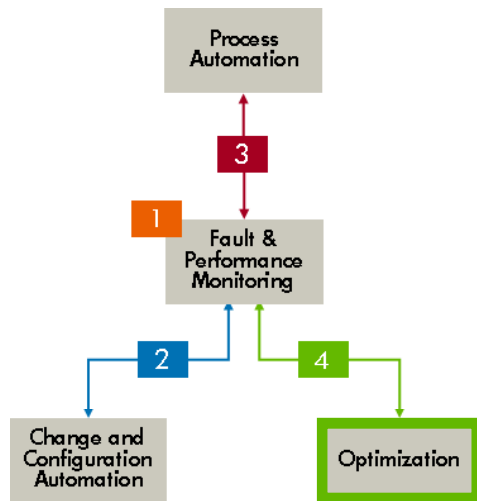
- Intuitive friendly UI for flow design
- Automation of key processes, such as incident resolution and change orchestration
- Informative guided workflows

#### 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

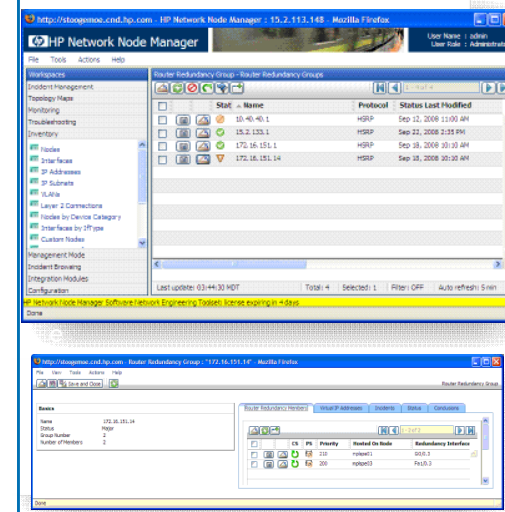
- HSRP Failover has occurred
- No Standby HSRP router
- No Active HSRP router
- Two Active HSRP routers

## Business Impact

- Loss of HSRP service or Loss of HSRP redundancy will place business critical network applications at risk

## ANLM Solution

- 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

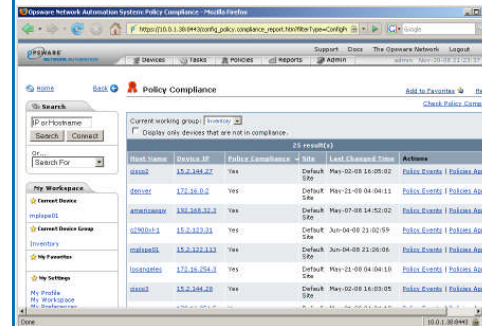
- Network Engineer creates a configuration that does not conform to corporate security standard.

## Business Impact

- Creates a security risk for the business

## ANLM Solution

- NA + NNM



The screenshot shows the 'Policy Compliance' section of the Openview Network Automation System. It displays a table with 25 results, showing device names, IP addresses, and compliance status. The table is filtered to show only devices that are not in compliance.

Host Name	Device IP	Policy Compliance	Last Changed Time	Actions
asa2	15.2.248.42	Yes	Default: May-02-09 12:05:02	Policy Events   Policies As
asa1	172.26.0.2	Yes	Default: May-21-09 04:04:11	Policy Events   Policies As
asa1000001	192.168.32.3	Yes	Default: May-07-09 14:52:02	Policy Events   Policies As
asa1000002	15.2.222.21	Yes	Default: Jun-04-09 21:00:59	Policy Events   Policies As
asa1000003	15.2.222.213	Yes	Default: Jun-04-09 21:00:59	Policy Events   Policies As
asa1000004	172.26.0.28	Yes	Default: May-21-09 04:04:10	Policy Events   Policies As
asa3	15.2.248.48	Yes	Default: May-02-09 16:03:05	Policy Events   Policies As

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

# Routes Flapping

## Problems

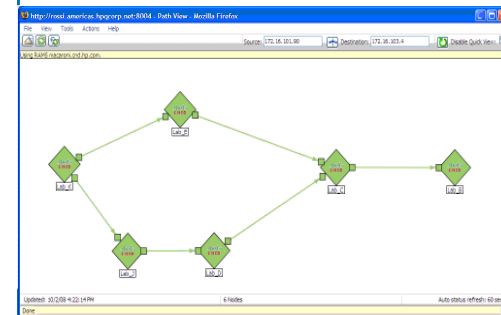
- Routes are flapping frequently

## Business Impact

- Poor application performance across wide areas of the network lost user productivity

## ANLM Solution

- NNMi + RAMS



RAMS detects common routing conditions such as route flapping

# Congested Links

## Problems

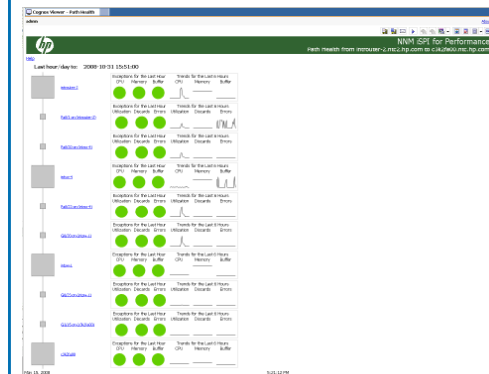
- High network utilization is congesting your network

## Business Impact

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

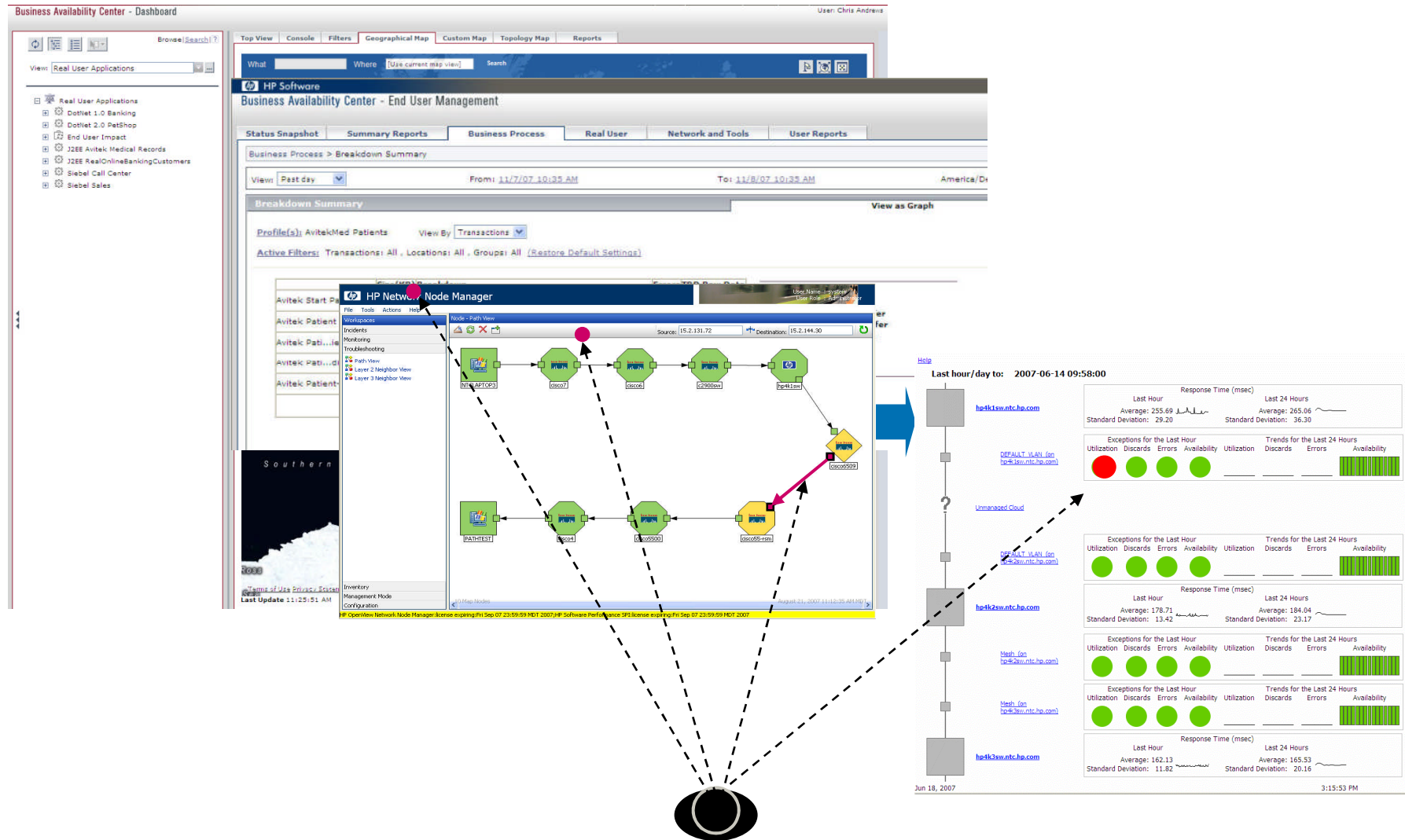
## ANLM Solution

- 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**

# 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](http://www.hp.com/go/NNMblog)

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

➞ [www.hp.com/go/ANLM](http://www.hp.com/go/ANLM)

The screenshot shows the HP Communities website interface. At the top is an orange header with the HP logo and 'HP Communities' text, along with a 'Contact HP' link. Below this is a search bar and a language selector set to 'United States-English'. A navigation bar includes links for 'Home', 'Blogs' (which is highlighted), and 'Control Panel'. The main content area is titled 'Network Management Center' and shows a date separator for 'Tuesday, November 11, 2008 04:04 PM'. The first blog post is titled 'NNM helps South Africa' and includes a Facebook share link, a description of an article about South Africa's State IT Agency, and metadata about the author and tags. A second date separator shows 'Sunday, November 09, 2008 09:47 PM'. The third blog post is titled 'Can a 10-year-old figure out your network management tool?' and follows a similar format with a share link, description, and metadata. A third date separator shows 'Tuesday, October 28, 2008 04:14 AM'. The fourth blog post is titled 'Management by exception, current fad or real trend?'. On the right side of the page, there are several widgets: 'Common Tasks' with links to 'Current Blog Home', 'About', 'Control Panel', 'Write a Blog Post', and 'My Blog Dashboard'; a 'Calendar' for November 2008; 'Tags in this blog' including 'Customer', 'ease-of-use', 'NNM', and 'NNMi'; and 'Recent Posts' listing the three blog posts shown in the main area.



Technology for better business outcomes

