Network Management in Mixed IP and SNA Networks: Using CiscoWorks Blue

Session 2703
Agenda

- SNA/IP Paradigm
- CiscoWorks Blue Products
  Internetwork Status Monitor (ISM)
  Maps
  SNA View
- Update on Next Release
- Customer Scenario
- Cisco/Tivoli/IBM Partnership
- Summary

Network Management Paradigm Shift

- Mainframe
- Mini/WAN
- Integrated Mgmt.

Web-Based Management 1990–2000s

- 1960–1970s
- 1970–1980s
- 1980–1990s
Today's Network Operations Centers

- Web Tools
- Sniffers
- SNMP Manager
- NetView
- LAN Mgmt.

Enterprise Solutions

SNA-Centric
- APPN/HPR
- DSPU
- DLUR
- FRADs
- TN3270
- WebConnect
- WebClient
- Database Connections
- APPN
- CIP

IP Transport
- DLSw+
- APPN
- STUN
- ALPS
- CSNA
- CIP
- Cisco IOS/ 390
- TCP Assist
- CIP

IP Client

IP-Centric
Management Platform Choice

Mainframe Management
- Router visibility, monitoring and control
- CIP and interface monitoring
- Investment protection
- Lower operation costs

SNMP Management
- SNA/IP integrated
- Control of SNA resources
- Integration with CiscoWorks and CiscoView
- Manage from ONE console

CiscoWorks Blue Family

1. Internetwork Status Monitor
www.cisco.com/go/ism

2. SNMP

3. SNA View
www.cisco.com/go/snaview

VTAM
NMS or Web Client
LU 6.2 or TCP/IP

Maps
www.cisco.com/go/maps
CiscoWorks Blue
Internetwork Status Monitor (ISM)

- Router visibility from VTAM
  Manage, monitor, and control the router from the host
- True "service point"—not gateway
  RUNCMDS and NMVT responses
- Dynamic, up-to-date status
- Investment protection and low operation cost

View Your Router Network from Your Host Platform

ISM Status Summary

- Router management
  Management by exception
  Filtering by group, status...
  Interface monitoring
- Performance monitoring
- Security
ISM Router Command Menu

Current Status: ALERT
Extended Status: T
Host Name: colona
Status Change: 07/25/90 07:41 INOP
Hardware: 68 SOFTWARE (357-AUW-M)
ISS Level: 11.1(10)

1. Command Interface
2. Show Protocols
3. ISM Router Administration
4. Total Events (NPDA)
5. VTAM Display
6. Router Config. History
7. Collect Router Config.
8. Last Alert (NPDA)
9. Refresh/Reset Status
A. Router Performance History
B. Show Command Menu
C. Router Interfaces Status
D. Router Memory Dump
E. LIST CPUIDS

ISM Performance Monitoring

- Utilization
- CPU/memory
- Real-time data
- Logging
- Archiving
ISM Display of CIPs/CPAs

<table>
<thead>
<tr>
<th>ISM CLI</th>
<th>Cisco Mainframe Channel Connections</th>
<th>CMIOL</th>
<th>07/25/96</th>
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<tr>
<td>Router</td>
<td>Slot</td>
<td>Version</td>
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<tr>
<td>SYR561</td>
<td>3</td>
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<td>218.40</td>
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<td>218.40</td>
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<td>218.40</td>
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<td>ACT0V</td>
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SNMP support
Expands ISM management
Cisco switches can be managed
Better performance than RUNCMDs

Web browser support
For mobile administrator
Key ISM panels and commands

SMF logging of data

TN3270 support for CIP/CPA

OSA express MIB support
Tivoli/IBM
CiscoWorks Blue Family

1. Internetwork Status Monitor
   www.cisco.com/go/ism

2. CiscoWorks Blue Maps
   - SNA protocols in logical maps
     RSRB, DLSw+, APPN maps
   - Consolidate management consoles
     SNA and IP on one map
   - Dynamic, up-to-date status
   - Web console capability
   - Runs on Sun Solaris, HP-UX, AIX

3. SNA View
   www.cisco.com/go/snaview
   LU 6.2 or TCP/IP

NMS or Web Client

Maps
www.cisco.com/go/maps
Views for Each Protocol

Manage SNA and IP from a Single Console

DLSw Map

- Number of peers
- Virtual rings
- Peer partners/status
- Link status
- Traffic details
- Traffic statistics
Web-Based Management

- Web interface for quick problem determination
- Manage from your office, home, anywhere...

Maps Web Views

- Key devices view
- Global view
- Focus view
Maps…Router/Connection Summary

- Router summary
- Connection summary

Maps…Peer Routers

- Routers
- Peer routers
- Connection state
- Statistics
Maps...Statistics

General
- Status: CONNECTED
- Local Address: 172.16.0.10
- Remote Address: 172.16.10.15
- Transport: TCP
- Flow Control Mode: RXONLY
- Circuit Created: 5/10
- Active Circuits: 1

Details

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<th></th>
<th>In</th>
<th>Out</th>
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<tr>
<td>Data Packets:</td>
<td>44434</td>
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<td>Data Octets:</td>
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<table>
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<td>NETBIOS:</td>
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<td>0</td>
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<tr>
<td>NETBIOSNR:</td>
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</table>

Maps...Connection Details

Active Connections
- Connections by status
- Peer routers
- Peer statistics
CiscoWorks Blue Family

1. Internetwork Status Monitor
   www.cisco.com/go/ism
   - VTAM

2. Maps
   www.cisco.com/go/maps
   - SNA View
     www.cisco.com/go/snaview
     LU 6.2 or TCP/IP
     - NMS or Web Client

3. How SNA View Works
   - SNA information from VTAM hosts
     PU/LU information from VTAM exit
   - SNMP information from Cisco IOS
     APPN, DLSw, RSRB
   - TN3270 information from TN3270 servers

SNA View Server

VTAM

Cisco IOS R11.0+

TN3270 Server
Search for SNA Resources

- Basic search panel
- Search based on SNA, LAN, or TCP/IP info

Advanced Filter Screen

- Search based on:
  - Combination of parameters
  - Protocol type
  - PU status
  - Wildcarding
Search Results

Summary

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<tr>
<th>PU States</th>
<th>Number of Sessions</th>
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<tr>
<td>Connectable</td>
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<tr>
<td>Pending</td>
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<td>Finishing Active</td>
<td>0</td>
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<td>Pending Inactive</td>
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Total number of sessions: 17

Sessions (Exact Match)

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<th>Session Path</th>
<th>PU Name</th>
<th>State</th>
<th>CPE MAC Addr</th>
<th>Destination MAC Addr</th>
<th>CP Name</th>
<th>Study Name</th>
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<tr>
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<td>4001</td>
<td>10909 2005/46</td>
<td>10937 441 11591E/46</td>
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<td>BTA_DAN/01</td>
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Match based on search criteria

End-to-End Session View
Integration with Other Tools

Tivoli NetView
CiscoView

TN3270 Monitor
Maps

CiscoWorks Blue Family

VTAM
SNA View
www.cisco.com/go/snaview
LU 6.2 or TCP/IP

Internetwork Status Monitor
www.cisco.com/go/ism

1

NMS or Web Client

2

Maps
www.cisco.com/go/maps

3

Cisco.com
A Customer Scenario

Customer Deployment...
Cisco-IBM Alliance

The World's Largest
Information Technology Company

The World's
Leader in Networking for the Internet

Cisco-IBM Alliance

Strategic Alliance to Deliver World-Class Customer Solutions

IBM Global Services
the Global Leader in E-Business Services

Cisco, the World Leader in Internetworking Products

- IBM global services will further enhance its worldwide Cisco offerings and support
- Cisco acquisition of IBM routing and switching technology
- Jointly developed migration path to Cisco solutions
- Tivoli is a reseller of CiscoWorks Blue
- Cisco InterWorks Business Division and IBM S/390 collaboration
  - Testing end-to-end solutions
  - Joint development—standards-based IP solutions
  - CiscoWorks Blue joint development and marketing with Tivoli/IBM
CiscoWorks Blue Web Site

Web URL
www.cisco.com/go/snaview

Sales Tools
Interactive Presentation
Standalone Demonstration
Evaluation Copy from Web
Documentation

CiscoWorks Blue Summary

- Choice of management platform
  Mainframe or Distributed
- End-to-end visibility and control
- Web-based

Faster Troubleshooting
Save Time and Money
Questions?

Prereq Information
**ISM Prereqs**

- **Mainframe hardware requirements**
  - Cartridge tape drive
  - 3380 direct access storage

- **Software requirements**
  - OS/390 running MVS/ESA 4.1 or later
  - SMP/E Release 7 or later
  - NetView Version 2.3 or later, or TME/10 NetView for OS/390
  - VTAM Version 4.1

- **Cisco IOS requirements**
  - RSRB support—Cisco IOS 11.0 or later
  - DLSw+ support—Cisco IOS 11.1 or later
  - RIF support, Cisco IOS 11.3 or later

**Maps/SNA View Prereqs**

- **Workstation requirements**
  - AIX, HP-UX, or Solaris
  - Optional NMS on the above platforms
    - NetView for AIX (Tivoli NetView for AIX)
    - HP OpenView
    - Sun Solstice site/SunNet/domain/Enterprise manager
  - Web Browser software
    - Netscape Navigator
    - Microsoft Internet Explorer
  - X Window System
  - TCP/IP or LU 6.2 connectivity between workstation and mainframe

- **Mainframe requirements**
  - MVS/ESA (OS/390) 5.5.2 or later
  - VTAM 4.1 or later
  - TCP/IP or LU 6.2 stack
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Please Complete Your Evaluation Form

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