



DISN NetOps Service Assurance 2012 Customer Forum

Network Services Directorate
March, 2012



Agenda

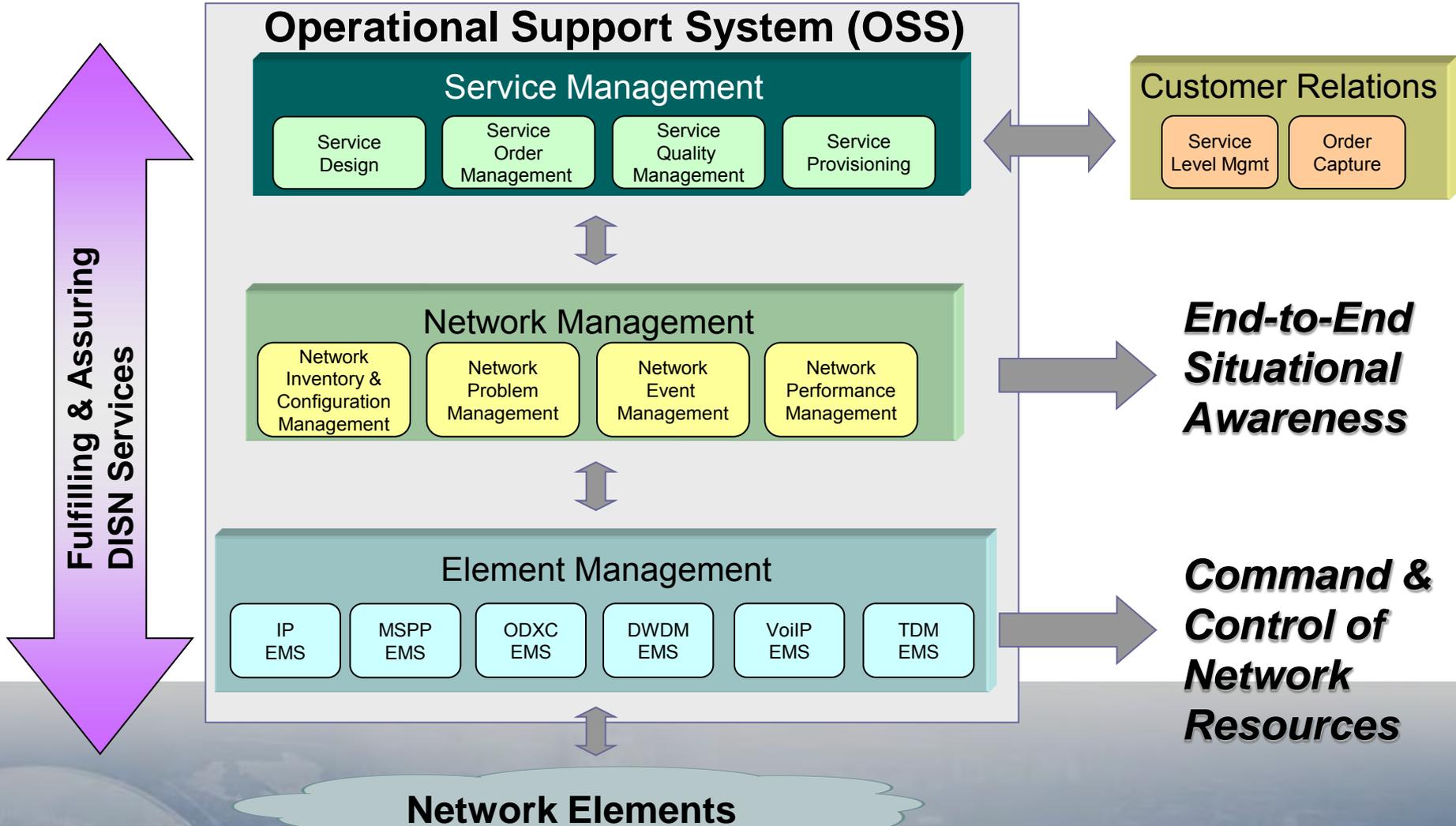
- DISN OSS
- SERVICE ASSURANCE
- DISN ISS
- OSS Central
- Web Services

What is the DISN OSS?

- **All the systems that automate operations, administration, maintenance, and provisioning (OAM&P) functions:**
 - Service Fulfillment Functions: Inventory and Configuration Management, Order Management, Network Activation and Service Provisioning
 - Service Assurance Functions: Alarm and Fault Management, Performance Management, Incident Management, and Release Management
- **The management network that connects DISN operators, management systems and network devices**
- **Information sharing services that provide DISN service health and status information to management, engineers, operators, and customers**



OSS Functions



Service Assurance

- Troubleshooting = Reactive analysis of disassociated application, control and transport data to address an incident or problem
- Service Assurance = Proactive monitoring and support activities to ensure that services provided to customers are continuously available and to SLA or QoS performance levels.
- Service Quality Management = Historical performance, incident and customer experience data correlated to quantify service quality over time

Service Assurance

- **What it means to the customer**
 - Pro-active mitigation of service-affecting conditions
 - Enhanced service reliability over time
 - Less mission impact from impaired services
 - Help desk staff have a current, comprehensive view of service health

Service Assurance Realization

NS8 is defining end-to-end Service Assurance Designs for all 28 DISN Services managed by NS8. Service Assurance Designs are developed through:

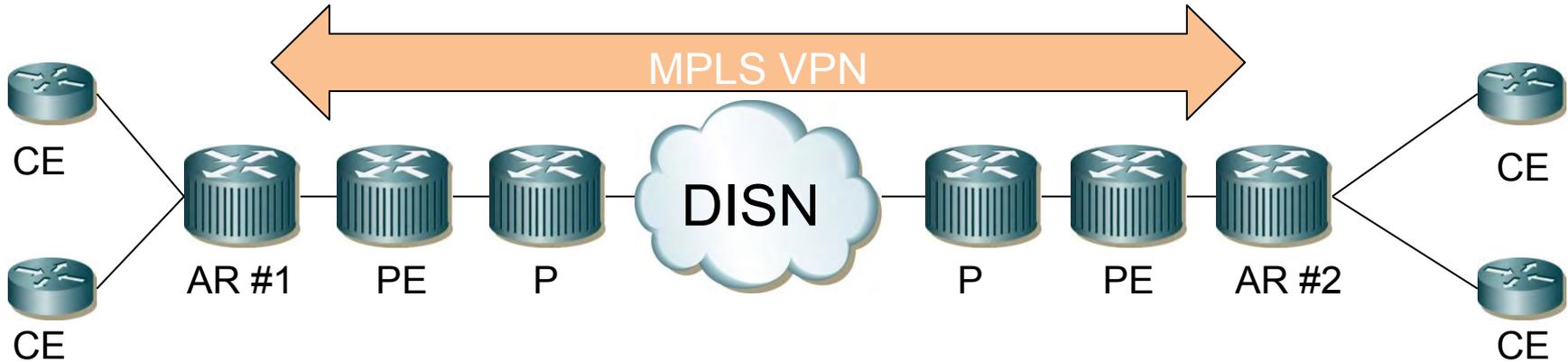
Analysis of:

- The devices and technologies used to deliver a service
- Their relationship to each other in order to provide the service
- Their current state and how it affects the service
- SLA parameters for the service

Design of:

- Management/monitoring solution to gather current state data about devices and technologies
- Analytics / Correlation solution to build the relationships and factor SLA parameters
- Reporting / Visualization solution to display service level performance, SLA compliance and trending. Network / Device levels accessible for more granular views

Service Assurance Design Example MPLS VPNs



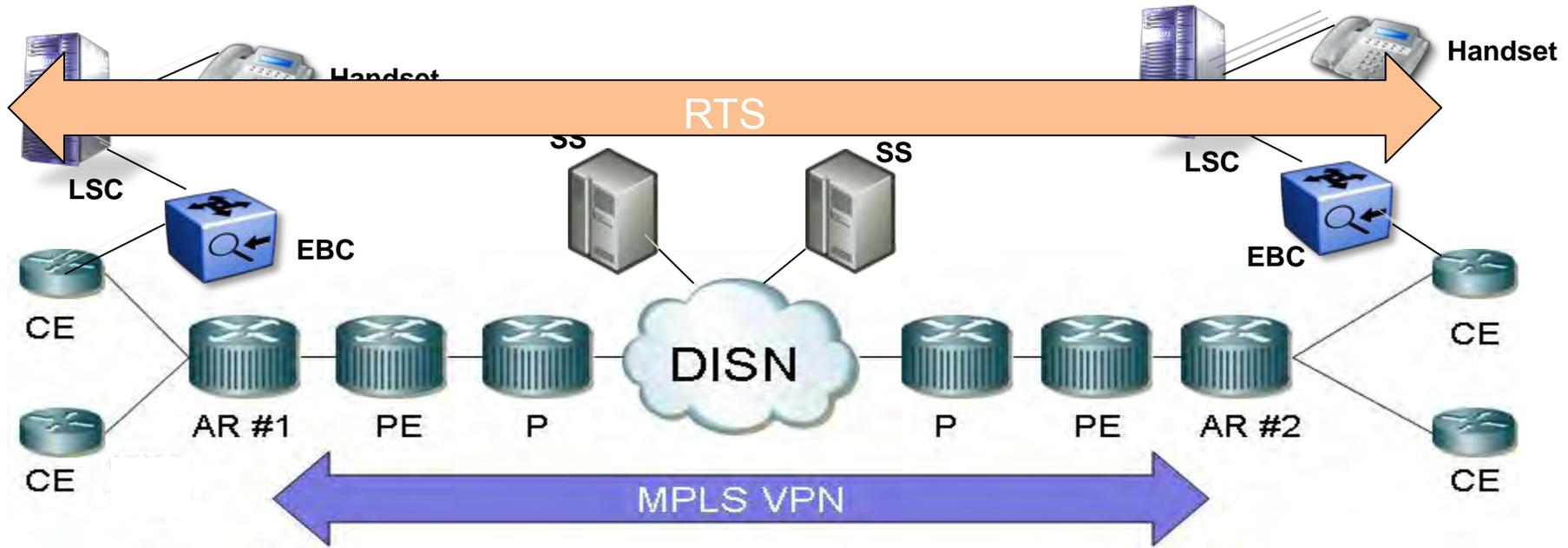
Analysis

- Devices and Technologies
 - Routers (OS, IF)
 - Queues, LSPs, BGP routes
- Relationships to Build the Service
 - Customers to VPNs
 - VPNs to LSPs
 - LSPs to Routers
- SLA Requirements for Devices and Services

Solution Design

- Management / Monitoring
 - EMS / NMS
 - FCAPS
- Analytics / Correlation
 - Device Fault to Service Outage
 - Performance Metric to SLA
 - ASI to Service Degradation
- Reporting / Visualization
 - SLA Compliance
 - SLA by Theater

Service Assurance Design Building Blocks



MPLS VPN Assurance Design used as a component of RTS Assurance Design where RTS utilizes MPLS VPNs

Situational Awareness

What is it?

- The ability to extract specific information about the DISN's readiness to support DoD operations

Situational Awareness Data Examples

- Current Order Status
- Trouble Ticket Status
- Inventory of Active Services
- Configuration of DISN Devices

Situational Awareness Capability

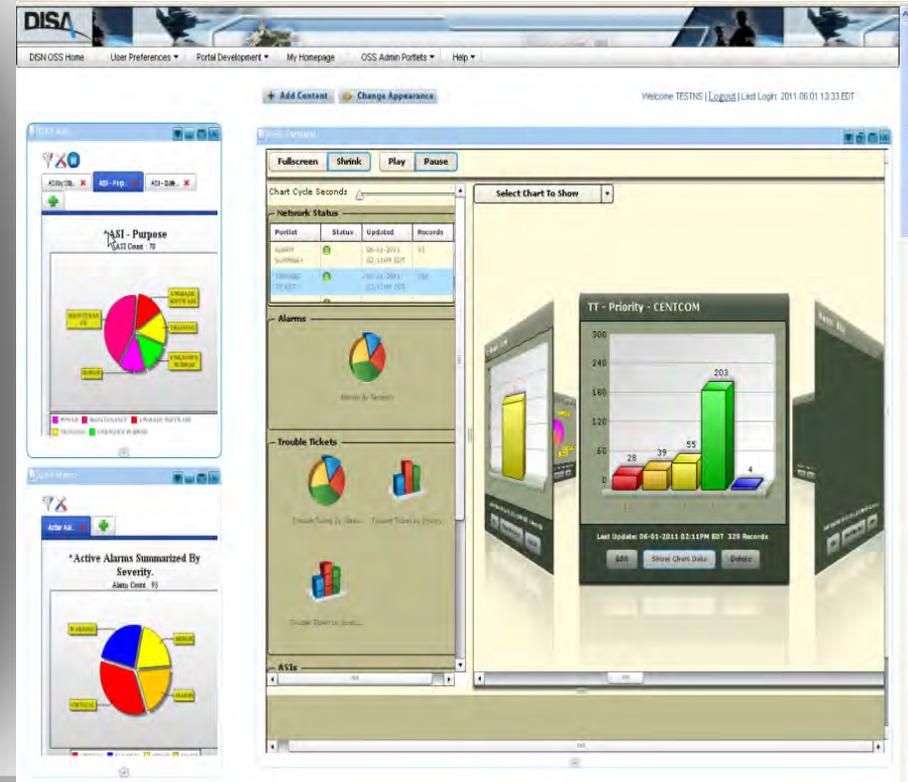
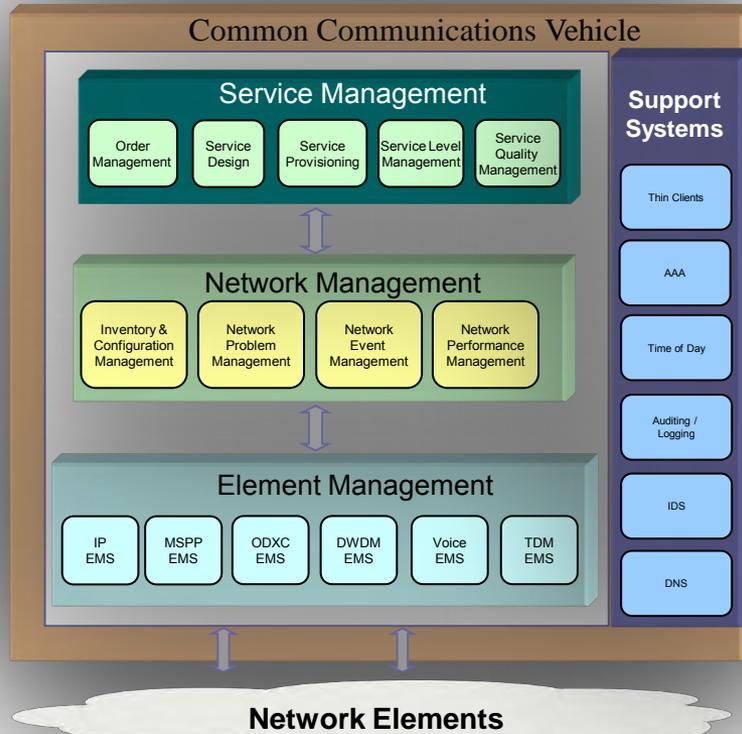
- Information Sharing System

DISN Information Sharing System

What is it?

- Provides both M2M and H2M methods of sharing DISN OSS data
- An enabler of
 - The Joint Concept of Operations (JCONOPS) for NetOps
 - DoD CIO NetOps Strategic Vision
 - GIG Enterprise Management (DoDI 8410.02)
- Discoverable & consumable data about the health & status of the DISN
- Centralized portal of DISN information
- E-bonding with customers, providers, & suppliers

Information Sharing Services



Customer Benefits

- Better end-to-end situational awareness of DISA's component of the GIG
- A scalable and more agile management infrastructure that can better adapt to varying mission requirements
- Human readable and machine readable modes to fit the appropriate operational model

H2M - OSS Central

DISA
DISN OSS Home | User Preferences | Portal Development | My Homepage | OSS Admin Portlets | Help

Welcome TESTNS | [Logout](#) | Last Login: 2011.06.01 13:33 EDT

+ Add Content | Change Appearance

DISA ASI

ASI - Purpose
ASI Count: 70

Purpose	Count
MAINTENANCE	~30
UPGRADE SOFTWARE	~15
TRAINING	~10
UNKNOWN PURPOSE	~10
POWER	~5

DISA Alarm

Active Alarms Summarized By Severity.
Alarm Count: 93

Severity	Count
WARNING	~30
MINOR	~25
MAJOR	~20
CRITICAL	~18

DISA Dashboard

Chart Cycle Seconds

Select chart To Show

Portlet	Status	Updated	Records
ALARM SUMMARY	OK	06-01-2011 02:11PM EDT	93
TROUBLE TICKET	OK	06-01-2011 02:11PM EDT	329

Alarms

Alarms By Severity

Trouble Tickets

Trouble Tickets by Status | Trouble Tickets by Priority

Trouble Tickets by Duration

ASIs

TT - Priority

Priority	Count
Low	28
Medium	39
High	55
Critical	203
Other	4

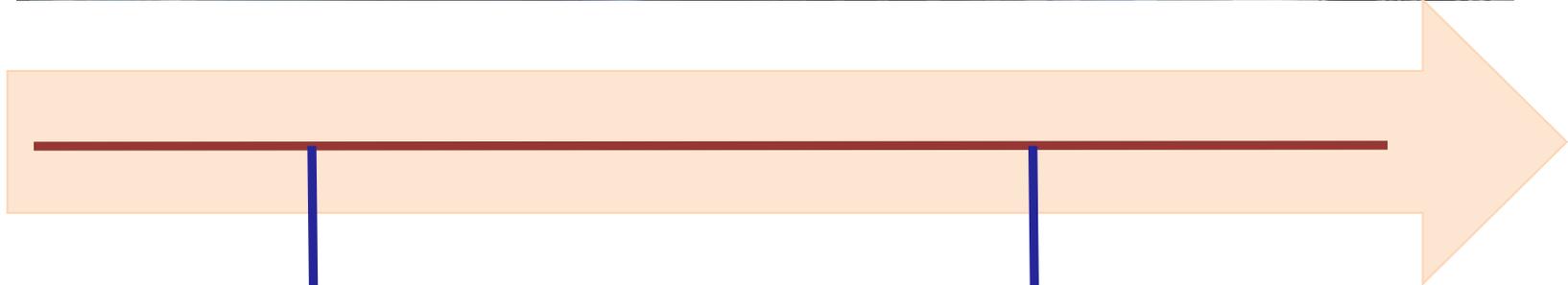
Last Update: 06-01-2011 02:11PM EDT 329 Records

Edit | Show Chart Data | Delete

OSS Central Features

- Trouble Ticket, ASI, Alarm, Resource Inventory, Order Status and Service Inventory portlets
- Content aggregation, with a common, unified view across all content
- Personalization, with persistence that tailors the content and portal layout to a user's preferences
- Single sign-on with ABAC and authorization for accessing all information
- Detailed logging and reporting to audit user activity for specific features and content

OSS Central Roadmap



Existing Portlets

- Incident Management
- Alarm View
- Configuration
- Order Status
- Graphical Circuit View
- SQM
- DVB-RCS
- Document Management
- EE SLA Reports

Future Releases

- OSS-C Web Portlet (Completion Reports)
- Order Status Enhancements (Order Detail)
- DVB - RCS Portlet
- SDLC Evaluation Review
- ASI Creation Portlet

M2M - Web Services

- Enable Services and COCOMS to consume DISN data to complete their “SA picture” using their own tools
- Standards based collection of web services for sharing the following types of data
 - Alarm
 - Performance
 - Resource Inventory
 - Service Inventory
 - Trouble Ticket
 - Authorized Service Interrupts (ASI)
- All Web Services are offered at the SECRET classification level
- Published on the Metadata and Service Registries
- User guide published on the Metadata Registry
- Are used by the DISN OSS portlets (we use them too!!)

QUESTIONS

