Data Sources and Tools provided by Cisco to support ITIL processes

BRKNMS-2011

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Cisco Networkers 2007

HOUSEKEEPING

- We value your feedback, don't forget to complete your online session evaluations after each session and complete the Overall Conference Evaluation which will be available online from Friday.
- Visit the World of Solutions on Level -01!
- Please remember this is a 'No Smoking' venue!
- Please switch off your mobile phones!
- Please remember to wear your badge at all times including the Party!
- Do you have a question? Feel free to ask them during the Q&A section or write your question on the Question form given to you and hand it to the Room Monitor when you see them holding up the Q&A sign.

Session Focus

- Look deep into selected ITIL workflows and get an understanding of the relationship between Data, Tools and Processes
- Focus on the main Enterprise Cisco Tools
- Understand how Cisco Tools and Data Sources support these ITIL Processes
- Show how to reuse the Cisco Data Sources and demystify access to Cisco Tool Databases

What is not covered

- ITIL processes in depth
- Detailed Blueprints
- Organizational issues

Agenda:

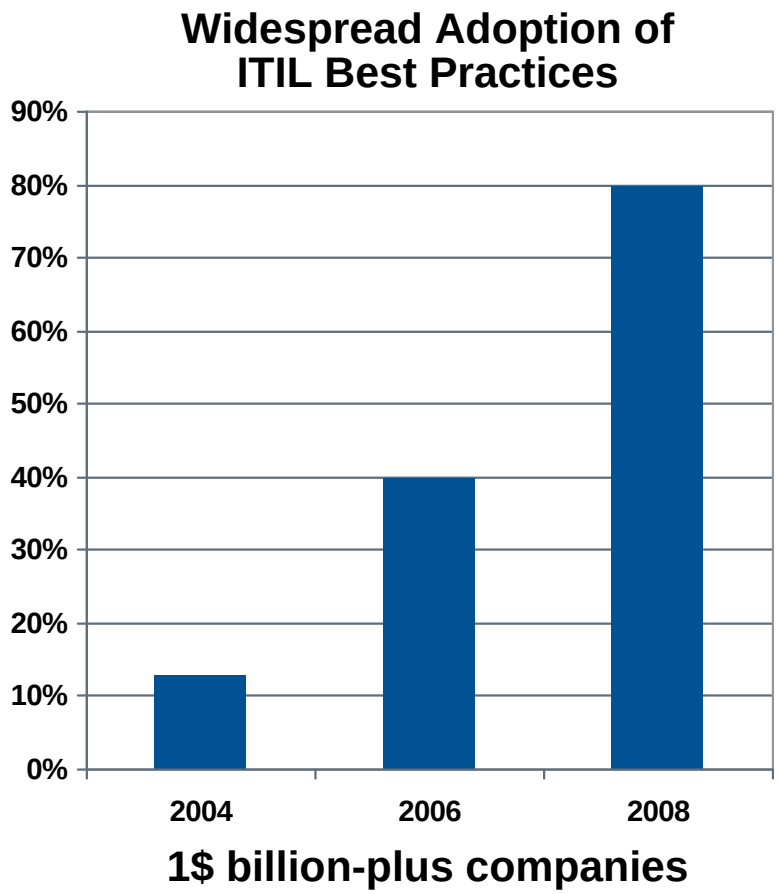
- Introduction 5min

- Some ITIL Basics 10min
- Configuration and Change Management 20min
  - Use the RME as part of the CMDB
- Service Support Processes 20min
  - Focus Incident and Problem Management
- Service Delivery Processes 25min
  - Network Application & Service Management

- Q&A 10min

Informal poll

- How many of you have implemented at least some of the ITIL framework?
- How many plan to implement in the next 12 months?
- How many are implementing a different framework, such as eTOM or CobIT?
- How many people aren't doing anything related to this?



Source: Forrester Research

The CIO & CFO challenge

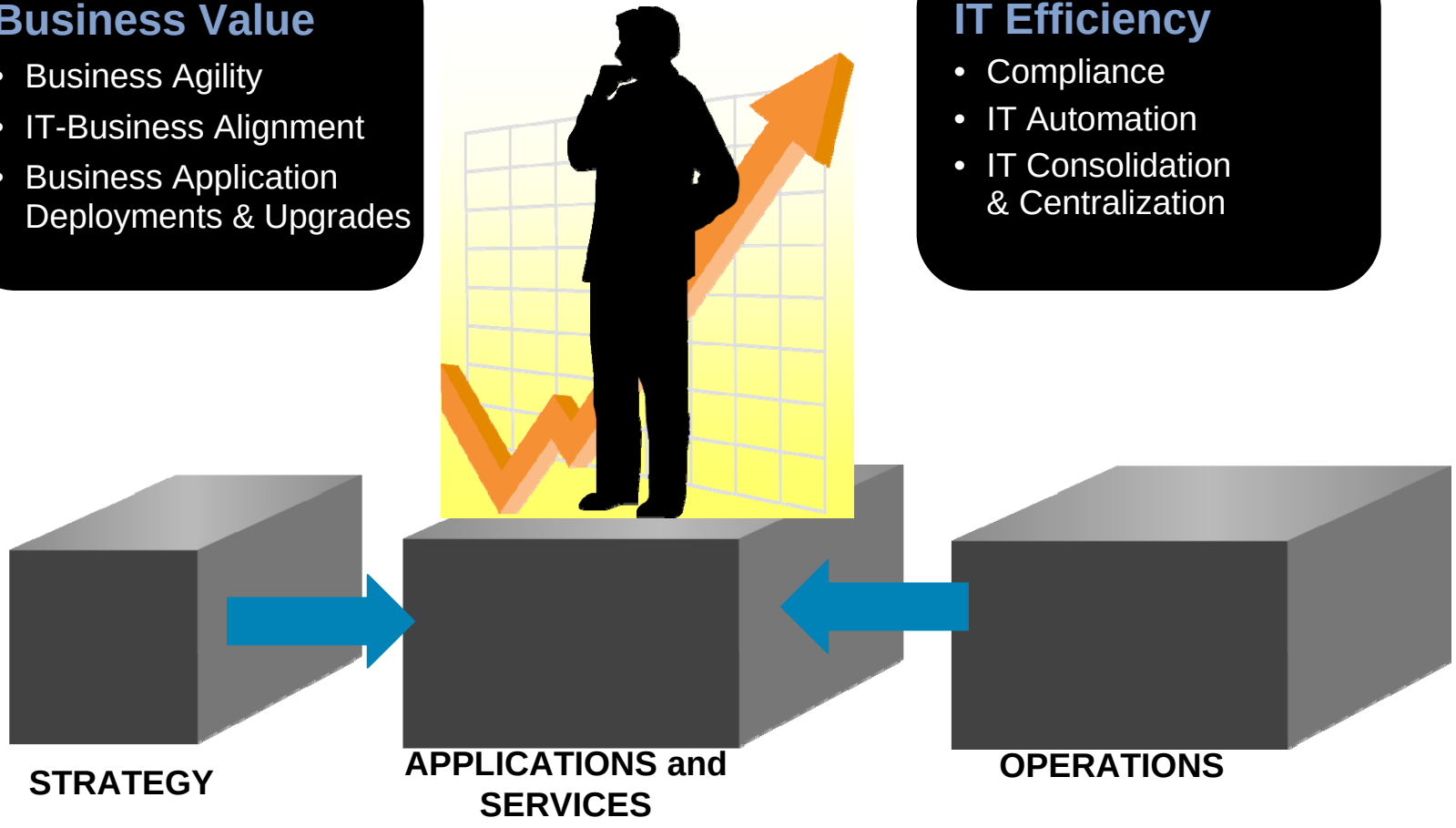
Running IT like a business to support the business

Business Value

- Business Agility
- IT-Business Alignment
- Business Application Deployments & Upgrades

IT Efficiency

- Compliance
- IT Automation
- IT Consolidation & Centralization



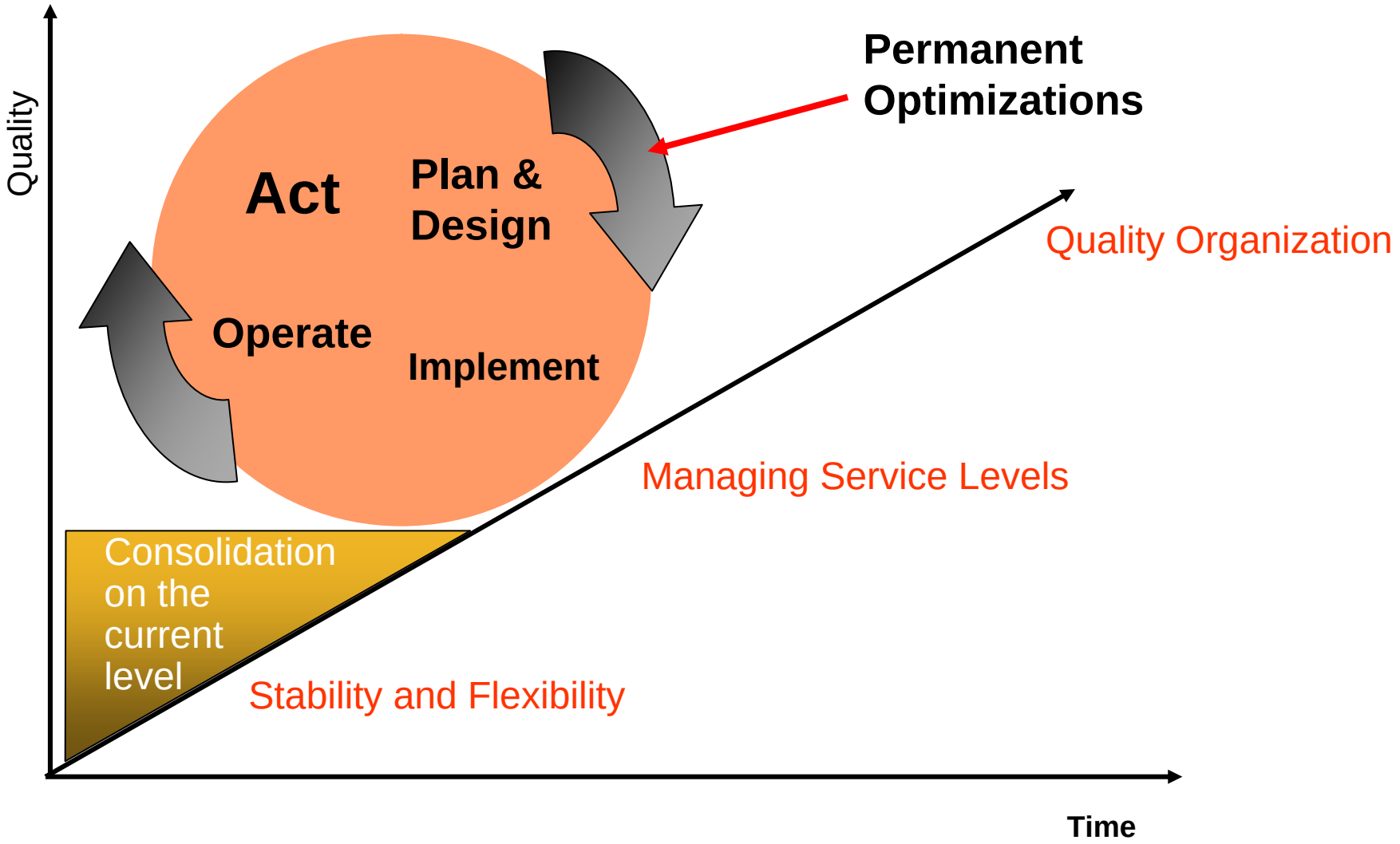
Business Benefits of ITIL

- Develop IT department from technology driven to customer centric organization
- Widely accepted process framework for IT and Network departments
- IT Departments need to justify their work, this requires Key Performance Indicators (KPI) – ITIL provides this KPI
- Accumulated structural and process deficiencies needs to be consolidated – ITIL supports in this regard
- Structured Change Management can help to save a lot of cost

Why do IT organizations implement ITIL?

Problems	ITIL Benefits
Need to eliminate network downtime & instability	Reduces downtime & instability
Need to control IT as a cost center	Lower IT operating costs & improves productivity
Need to provide quality IT services	Improves quality of IT services
Problems from change activity have increased	Improves customer satisfaction

How ITIL works longterm

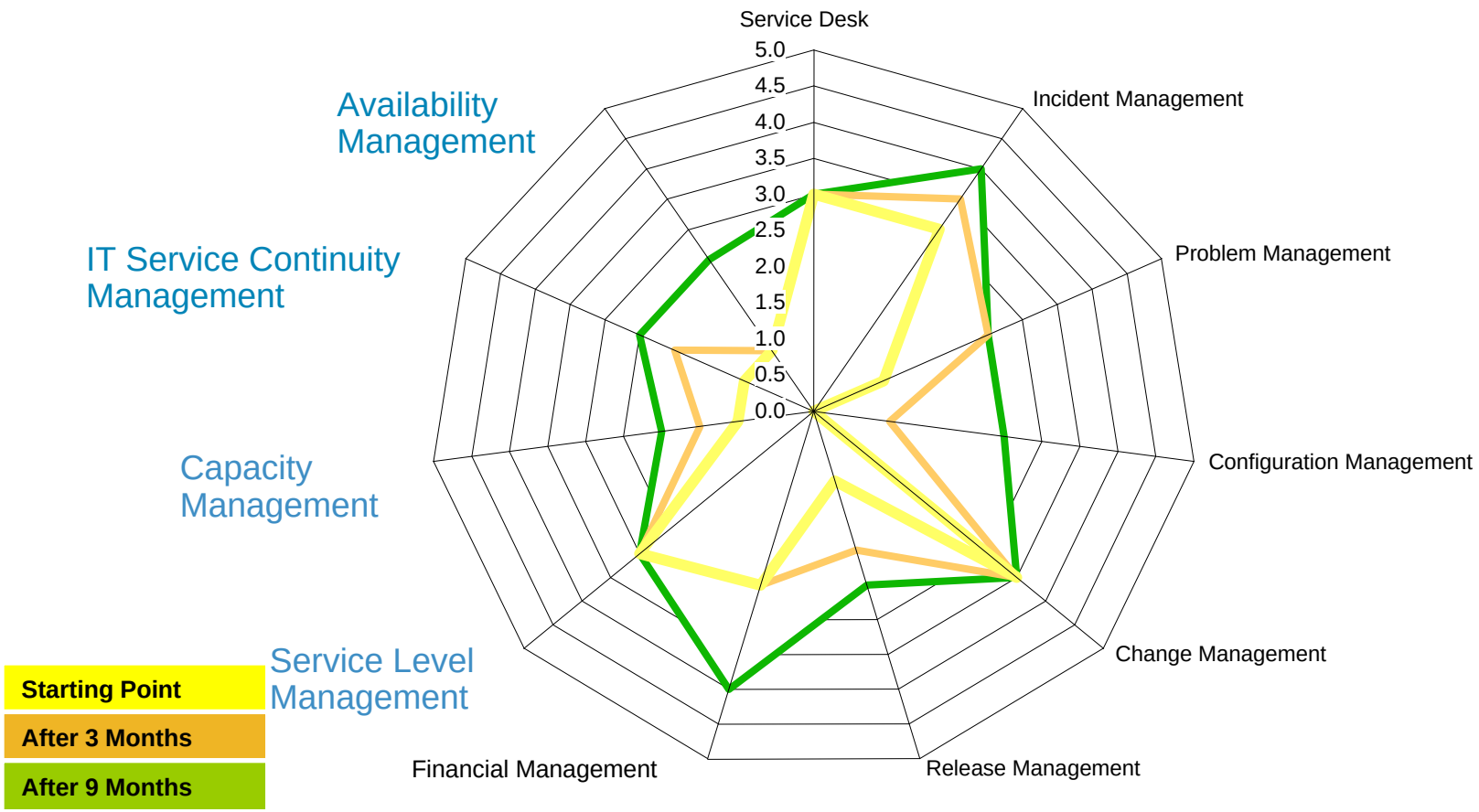


Process Maturity Model

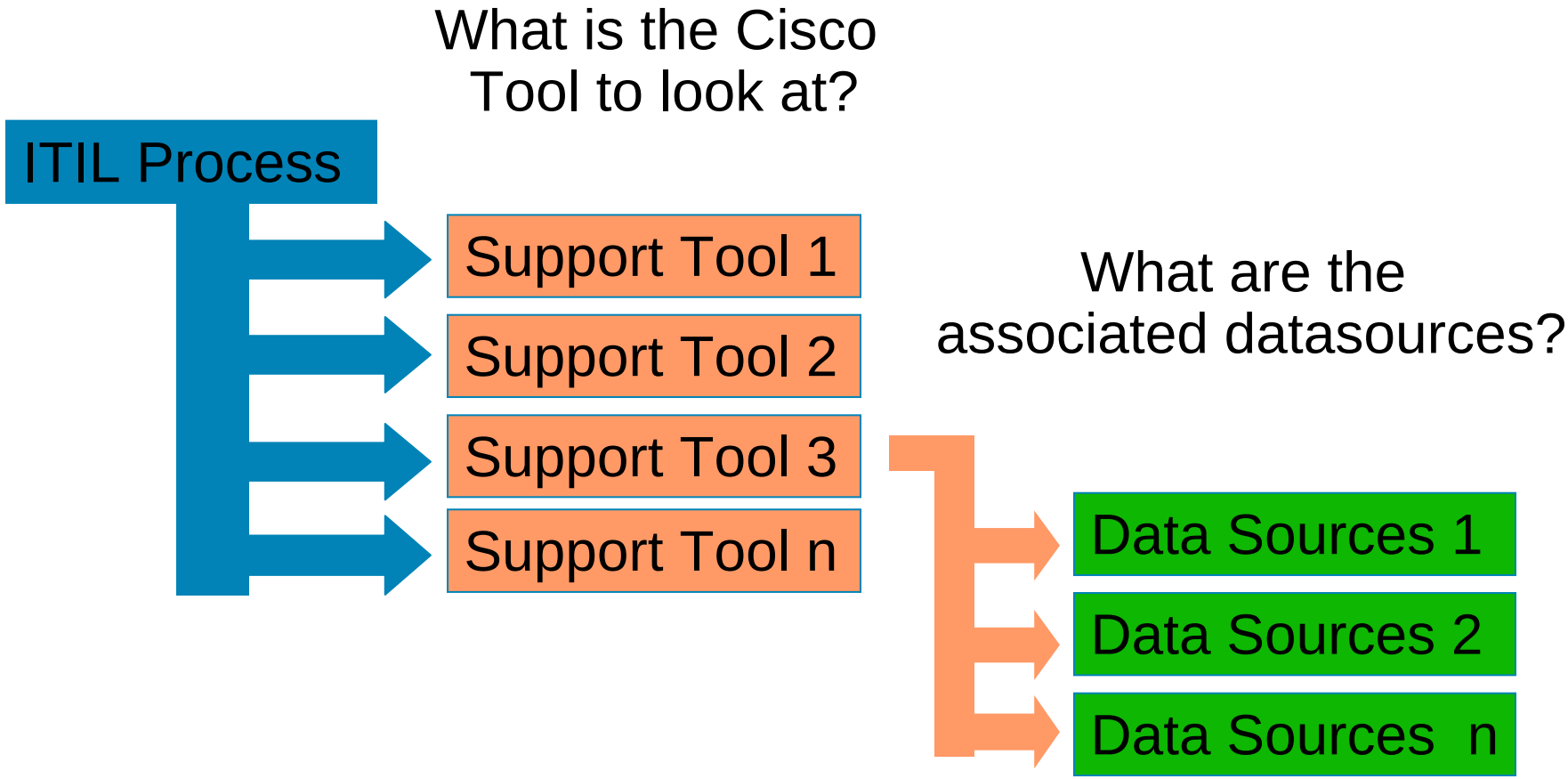
ITIL Maturity Measures

Level	Name	Description
5	Optimizing	Continuous improvement with feedback
4	Managed	Metrics for deliverables and processes -supported by automated tools
3	Defined	Documented, standardized policies and procedures
2	Repeatable	Proactive, trained people
1	Initial	Ad-hoc, reactive, “firefighting”

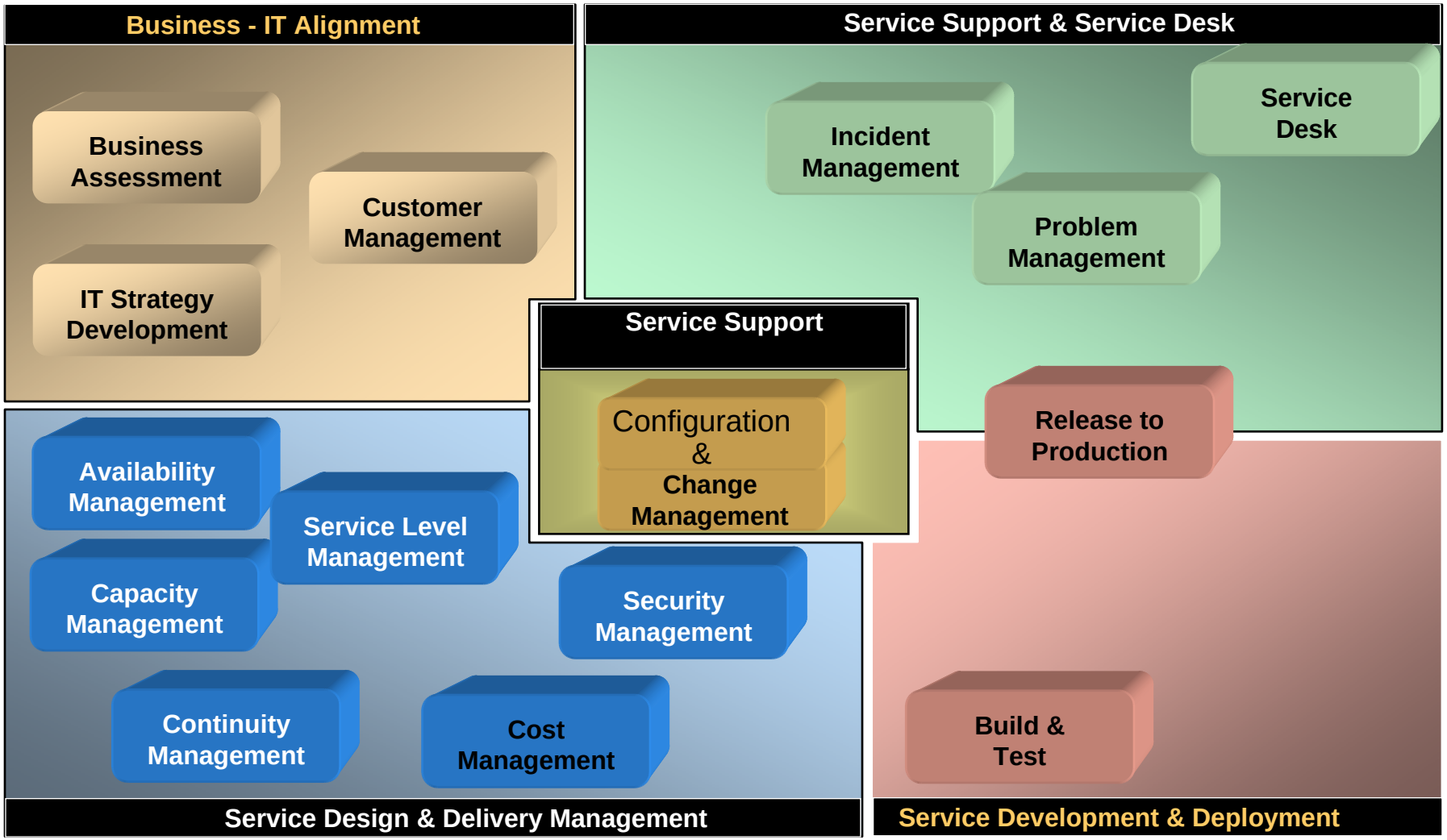
Best Practices
ITIL Maturity Measures



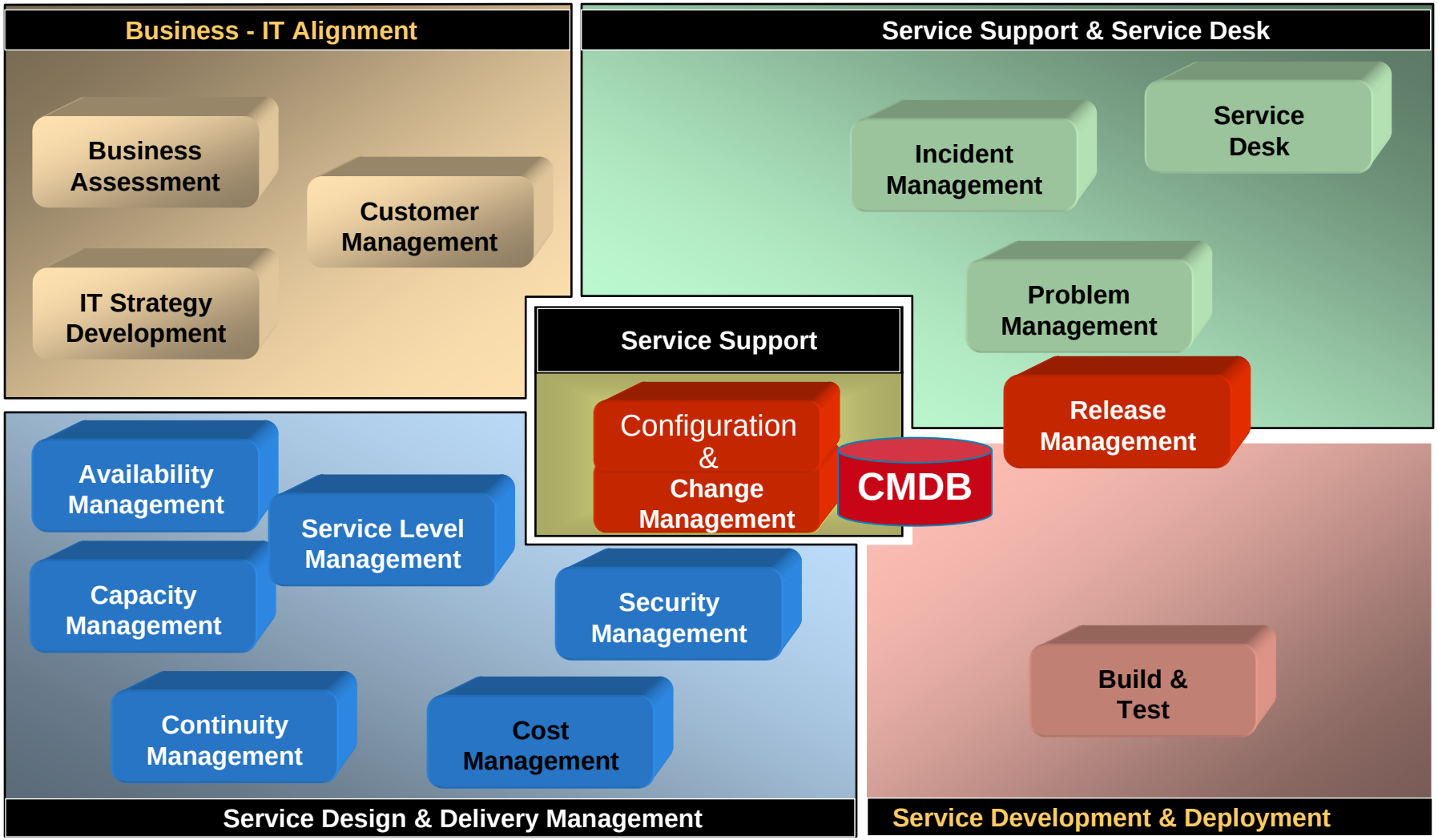
Generic Approach for Tools and Datasources



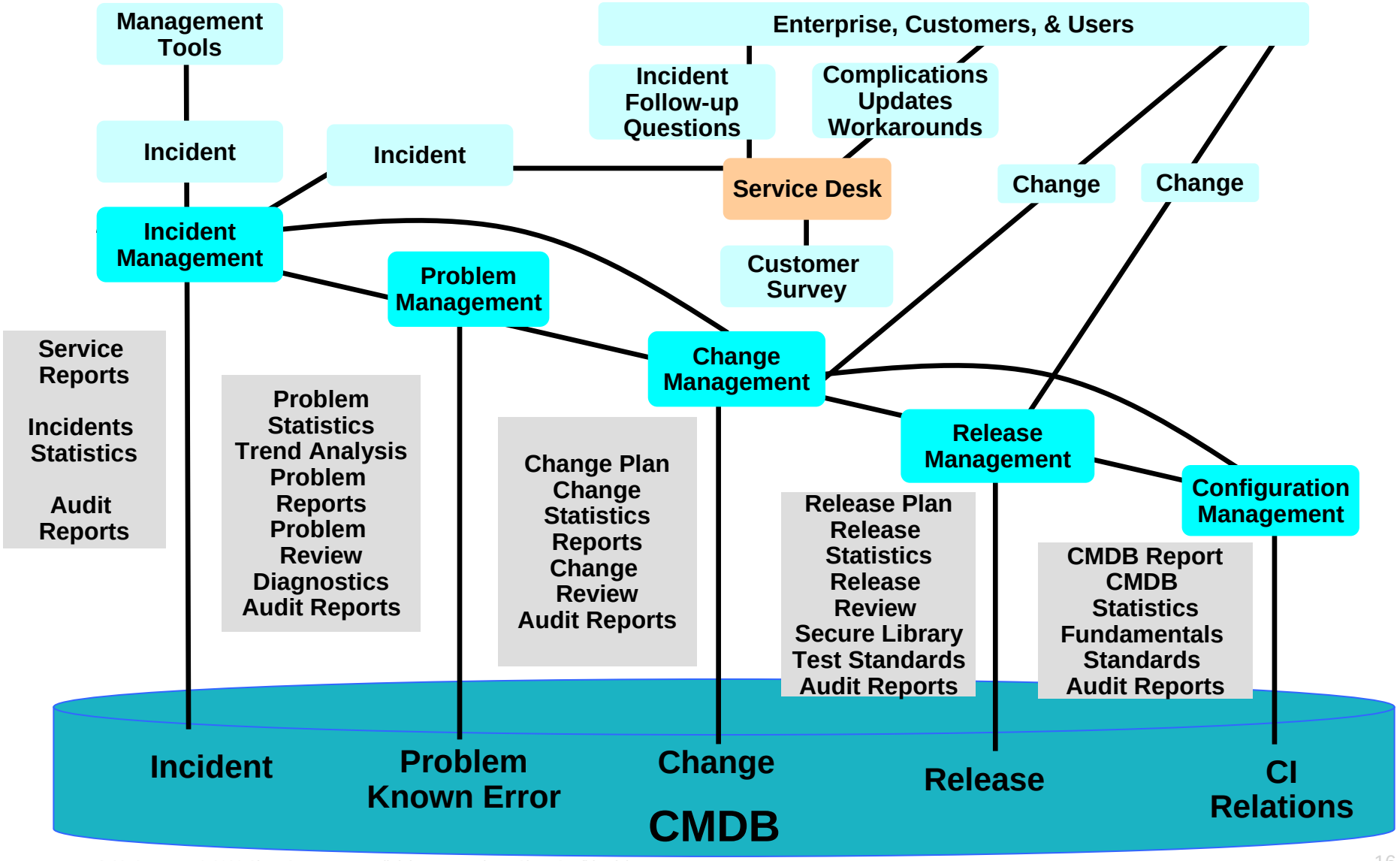
ITIL Process Overview



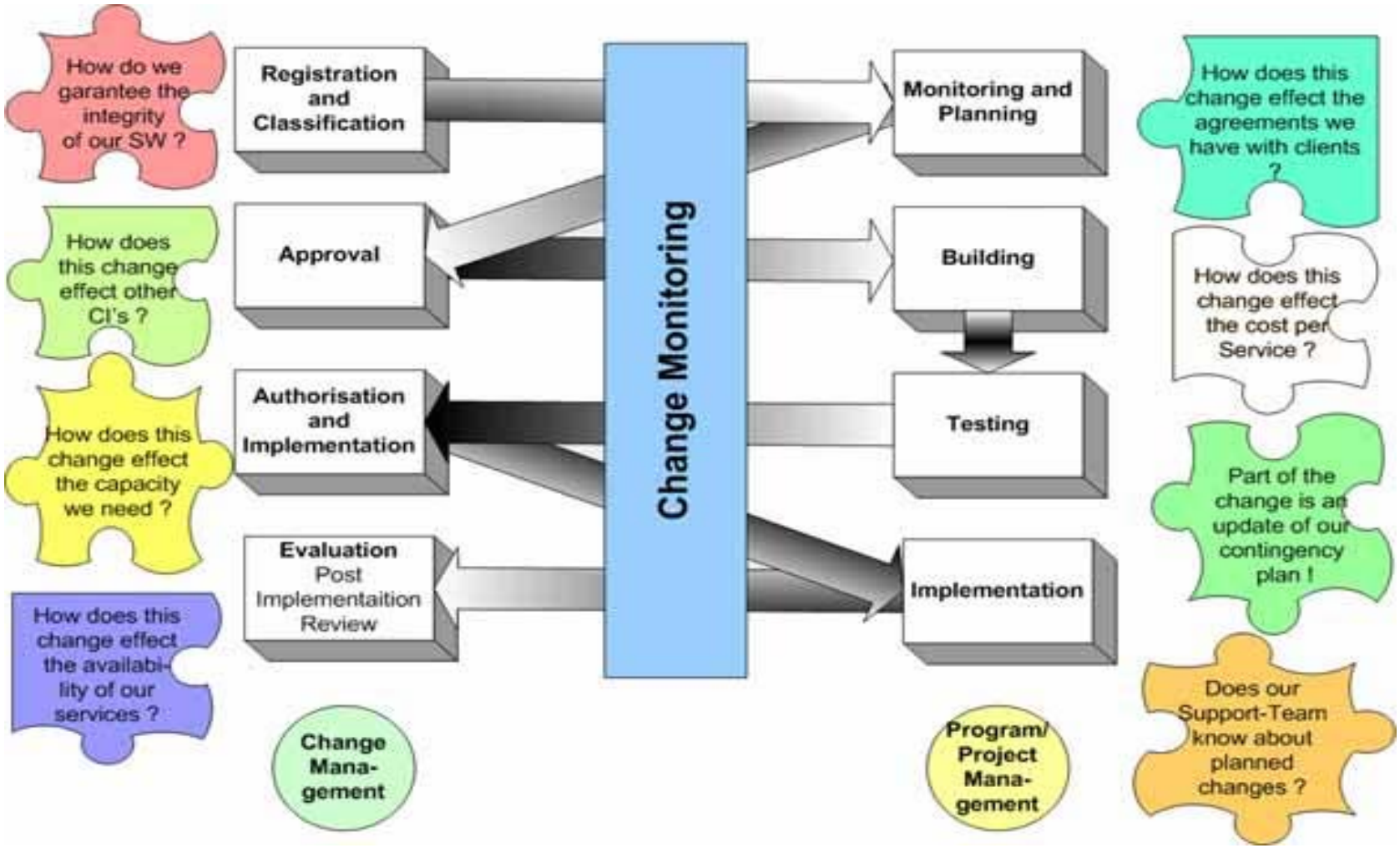
Configuration and Change Management



Overview on Service Support



Change Management



Change Management

Mission : Ensure that standardized methods and procedures are used for efficient and prompt handling of all changes, in order to minimize the impact of Change-related incidents upon service quality, and consequently to improve the the day-to-day operations of the organization

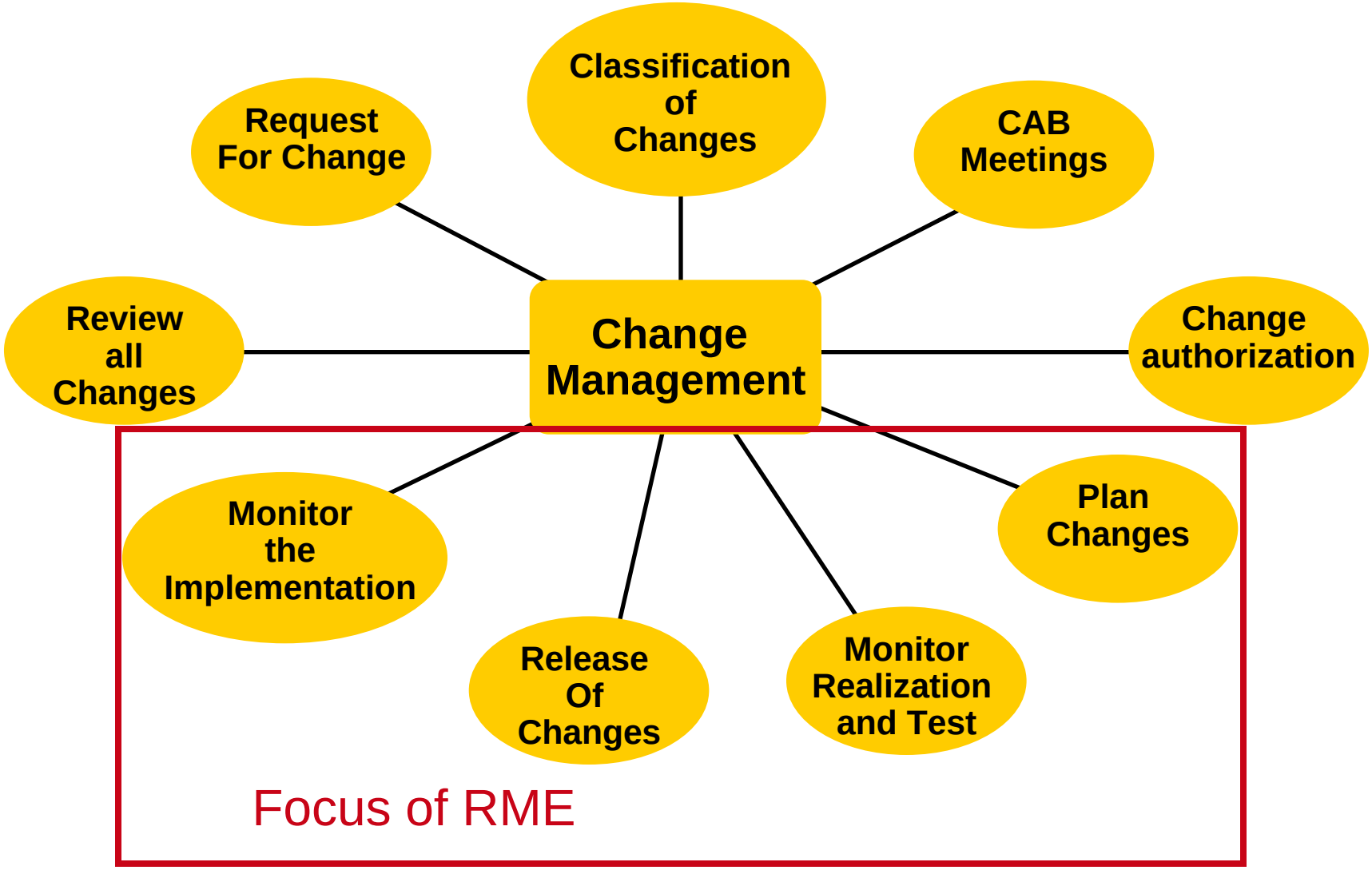
Activities

- Accept Changes
- Prioritize and classify changes
- Coordinate change impact assessment
- Coordinate approval of changes
- Coordinate scheduling
- Coordinate implementation of changes
- Conduct post implementation reviews
- Provide management information about Change Management quality and operations Key Performance Indicators (KPIs)

Benefits

- Better alignment of IT service to business requirements
- Increased visibility and communication on changes to both business and service support staff
- Improved risk assessment
- Reduced adverse impact of changes on the quality of services and on SLAs
- Improved problem and availability management through the use of valuable management information relating to changes
- Fewer changes to be backed-out

Change Management



Release Management

Mission: Implement changes to IT services taking a holistic (people, process, technology) view which considers all aspects of a change including planning, designing, building, testing, training, communications and deployment activities.

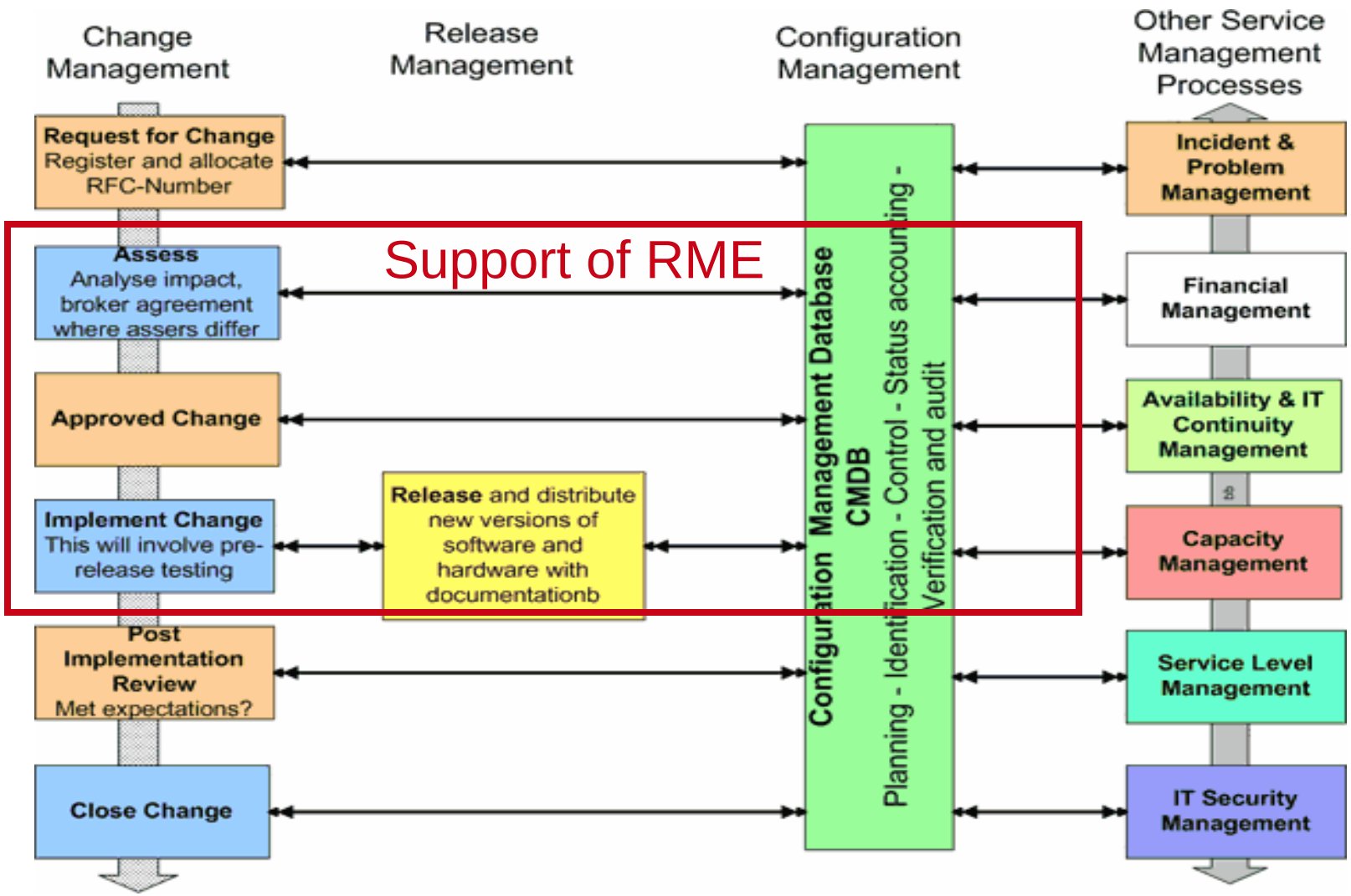
Best Practice

- When Installing Software, only Software out of the DSL can be installed
- Integration of Release-, Change-, Configuration Management, SW Development and Project Management

Advantages

- Better Service Quality because of predictable Release Changes
- Consistent Release Management
- Better Quality a sonly Certified SW and HW will be used
- Consistent HW and SW trough out the Company
- Better guidance of expectations trough a Release Outlook

Configuration Management Database



Configuration Management

Mission: Providing information on the IT infrastructure to all other processes and IT management. Enabling control of the infrastructure by monitoring and maintaining information on all the resources needed to deliver services

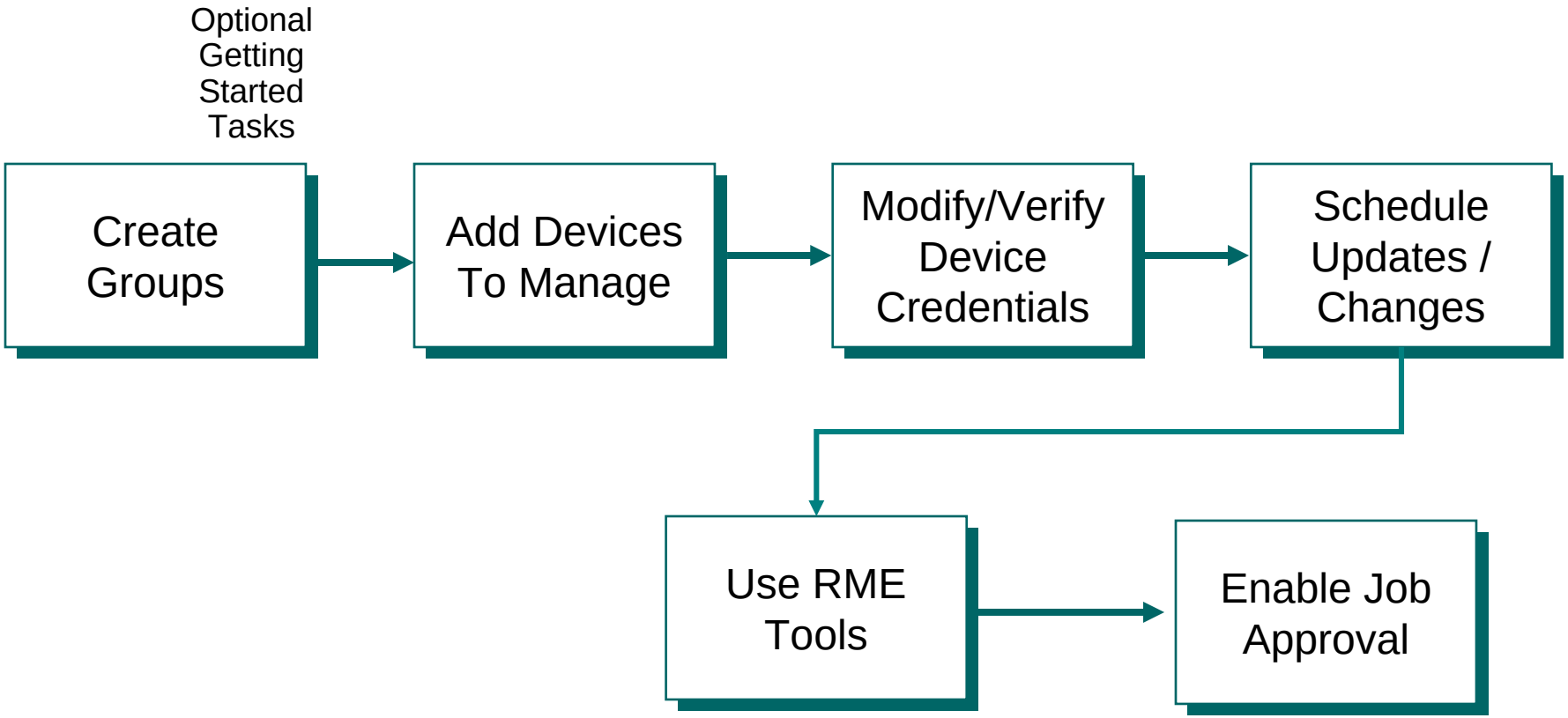
Activities

- Plan for Configuration Management databases and activities
- Identify Configuration Items
- Control Configuration Item information
- Perform status accounting
- Perform verification and audit of Configuration Management databases
- Provide management information about Configuration Management quality and operations

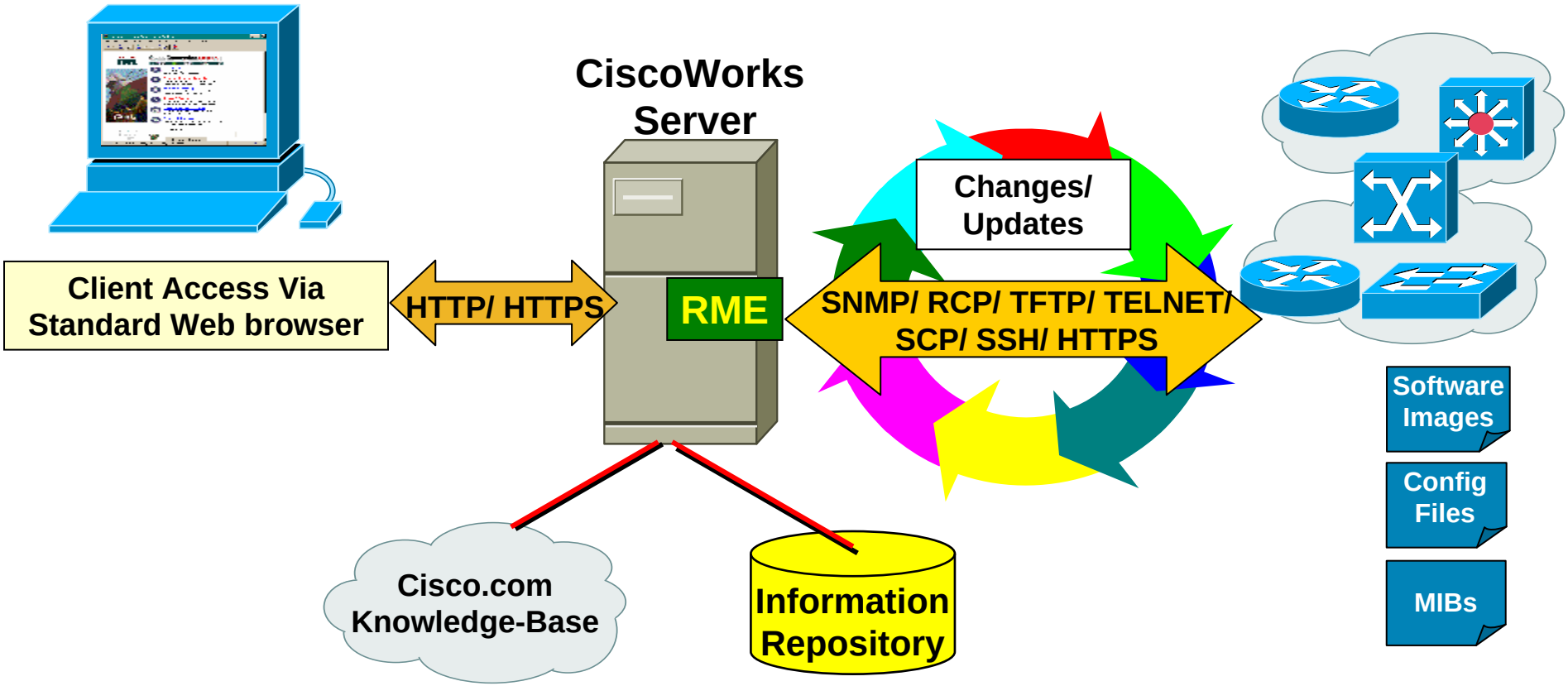
Benefits

- Providing accurate information on Configuration Items (CIs) and their documentation
- Controlling valuable CIs
- Facilitating adherence to legal obligations
- Helping with financial and expenditure planning
- Making software changes visible
- Contributing to contingency planning
- Supporting and improving Release management
- Allowing the organization to perform impact analysis and schedule changes safely and efficiently
- Providing problem management with data on trends

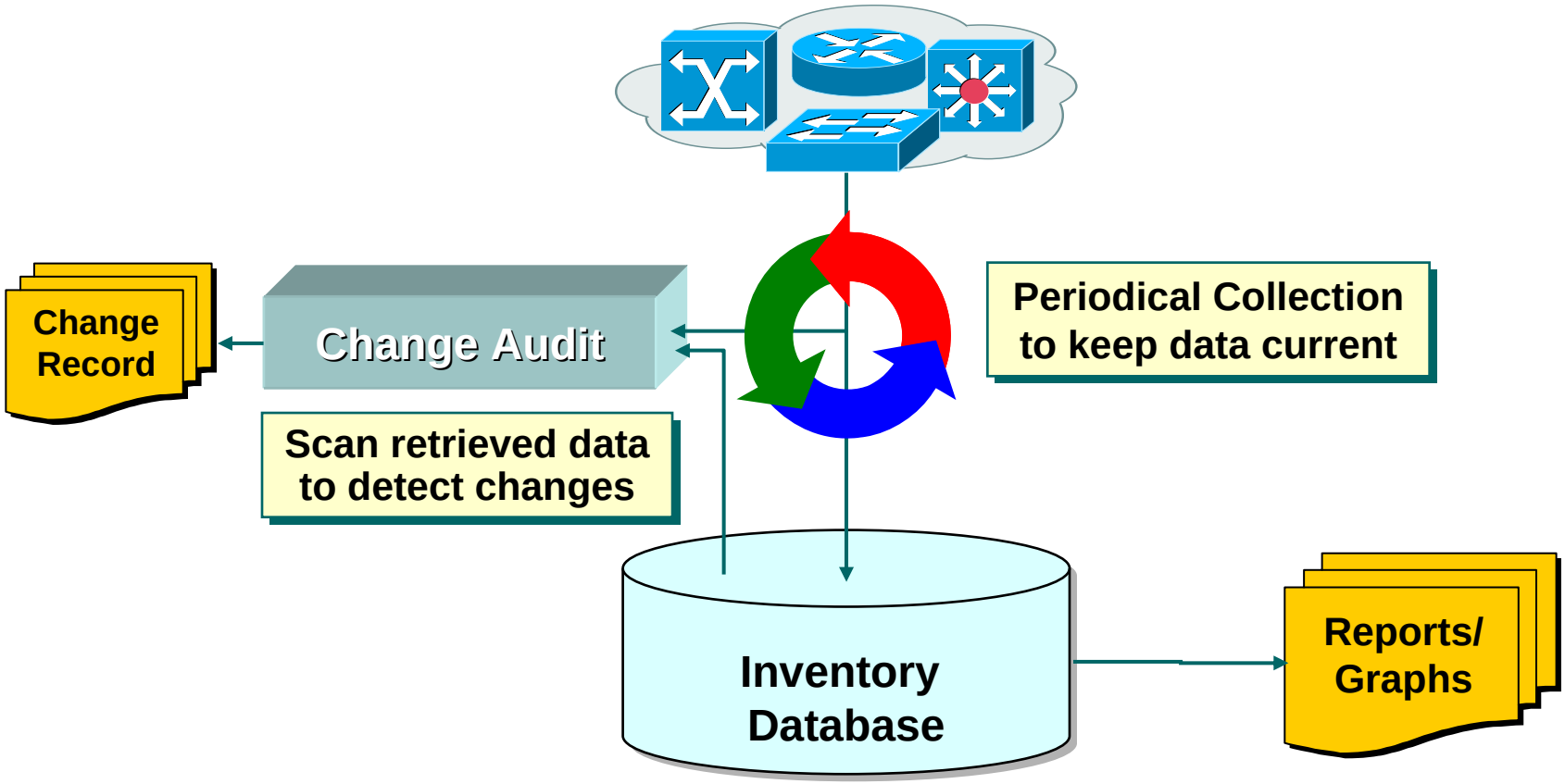
Resource Manager Essential Workflow



Functional Flow
Resource Manager Essential



Inventory Management
Resource Manager Essential



Inventory Management
Generating and Scheduling Reports

- 24 Hour Inventory Change Report
- Chassis Slot Details
- Chassis Slot Summary
- Chassis Summary Graph
- **Detailed Device Report**
- Hardware Report
- Hardware Summary Graph
- MultiService Port Report
- Software Report
- Software Version Graph

Report can be generated for one or more devices

Detailed Device Report

Generated on Jan 03 2005 15:55:46

Total number of devices:	1
Devices with Report Data:	1
Devices without Report Data:	None

Device Name : nmtg-hq-core-3725.cisco.com

System Information

Updated At	System Name	Domain Name	Description	Serial Numb
Jan 03 2005 12:41:37	nmtg-hq-core-3725		Cisco IOS Software, 3700 Software (C3725-IPBASE-M), Version 12.3(4)XD2, RELEASE SOFTWARE (fc1) Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2004 by Cisco Systems, Inc. Compiled Mon 12-Apr-04 02:33 by cmong	JMX0709L4(

Chassis Information

Index	Description	Chassis Serial Number	Chassis Vendor Type	Chassis Model Name	Physical Entity Name	Slot Configuration	Manu
0	Two Network Module slot, three WIC slot, two Fast Ethernet port MARS router	JMX0709L4QR	c3725				

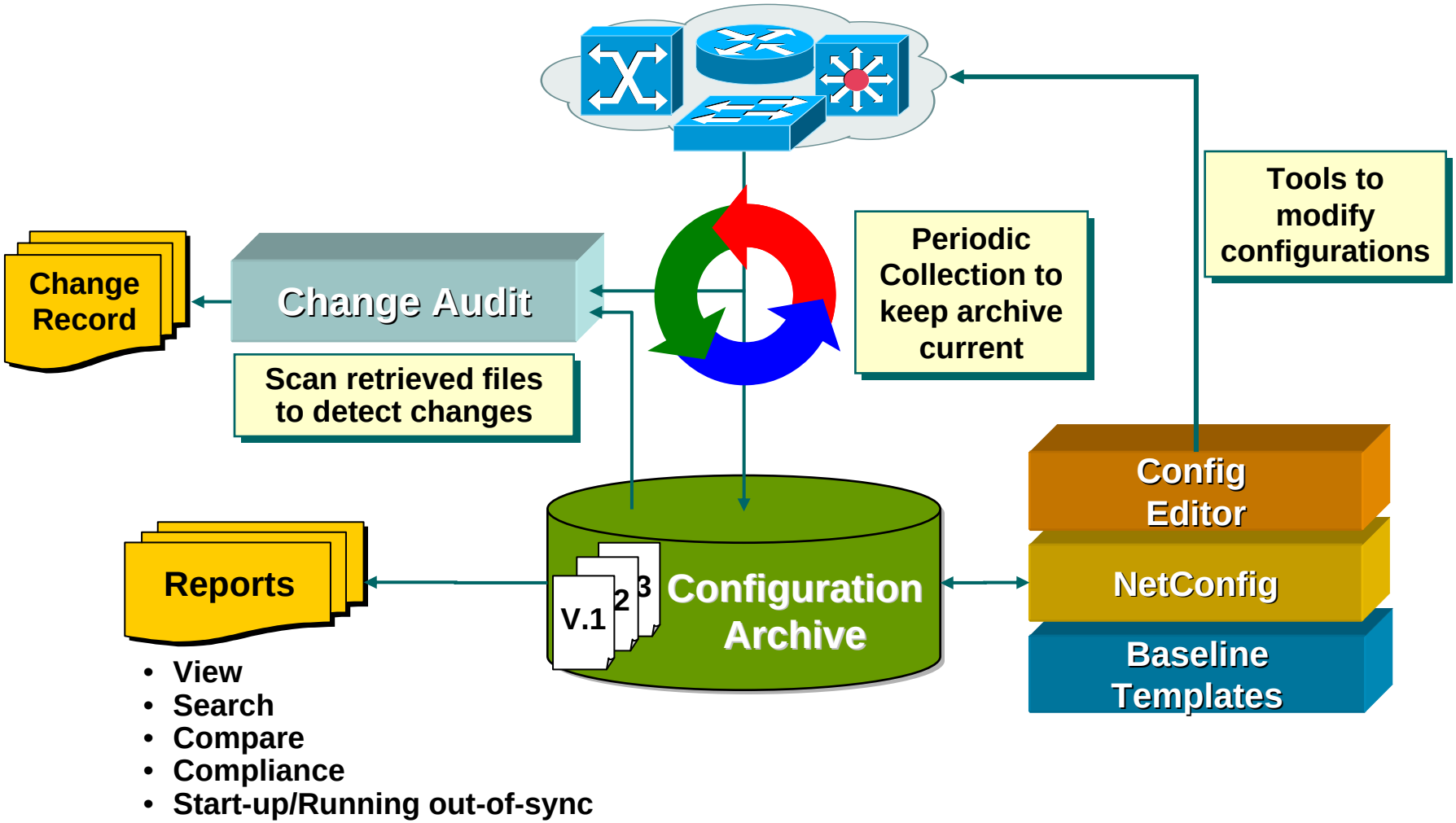
Bridge Information

Base Bridge Address	Number of Ports
00:0b:5f:30:40:18	0

Processor Information

Index	Parent Index	Parent Type	Slot Number	Description	Serial Number	Vendor Type	Model Name	Physical Entity Name	Slot Configuration	Manufacturer Name	Operational Status	RAM Size (MB)	NVRAM Size (KB)	NVRAM Used (KB)	Config Register Value	Reboot Config Register Value	HW Version	SW Version	FW Version	Number of Slots	Nu P
1	0	chassis	0	c3725 Motherboard with Fast Ethernet	0	cpu-c3725-2fe					OK	96.00	55.99	5.47	0x2102	0x2102	0.1				

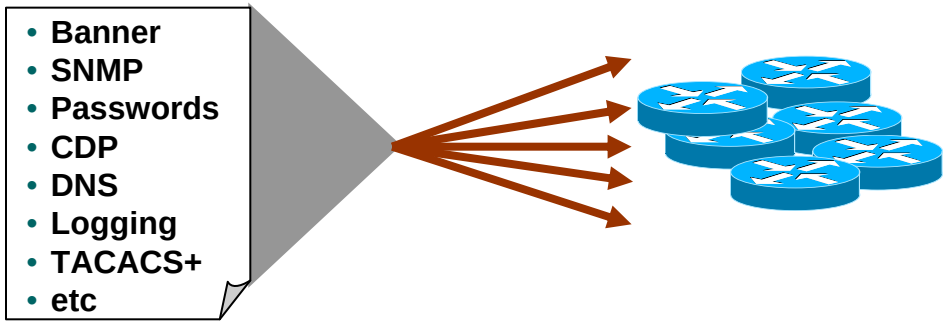
Device Configuration Management
Resource Manager Essential



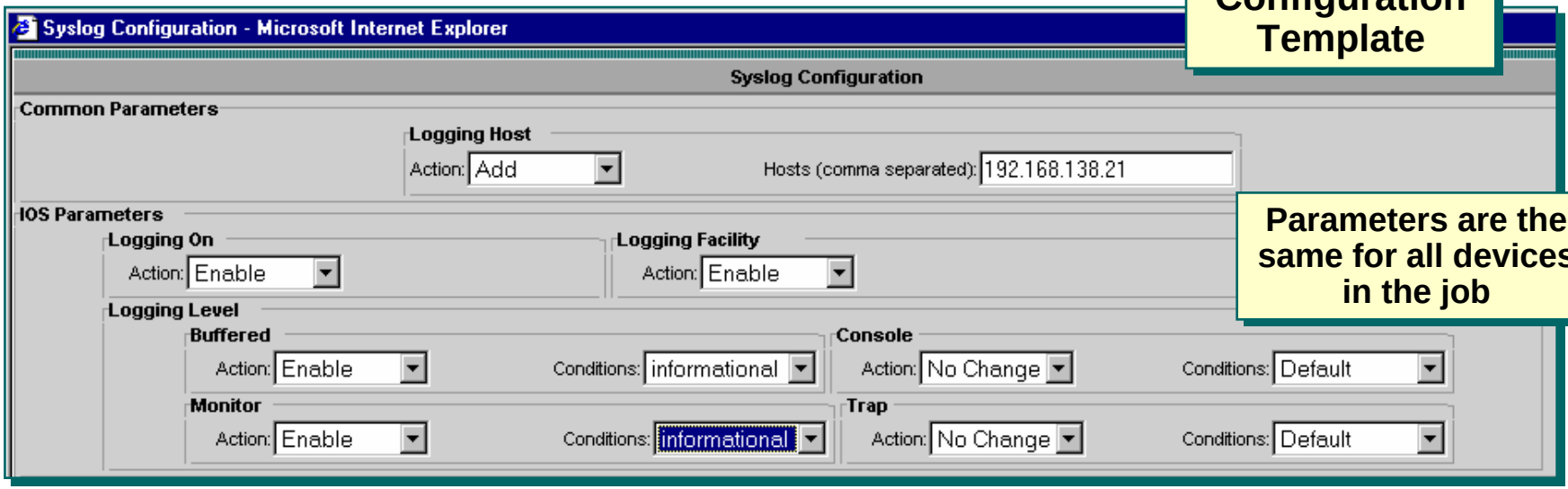
- View
- Search
- Compare
- Compliance
- Start-up/Running out-of-sync

Device Configuration Management
NetConfig Example (Resource Manager Essential)

- **NetConfig**
  - ☑ Same change(s) to multiple devices in one highly controllable download job
  - ☑ Template-based configuration changes to eliminate typos and the need to memorize syntax
  - ☑ More than 30 pre-defined templates including an Adhoc (blank) template. Administrator can also create new templates



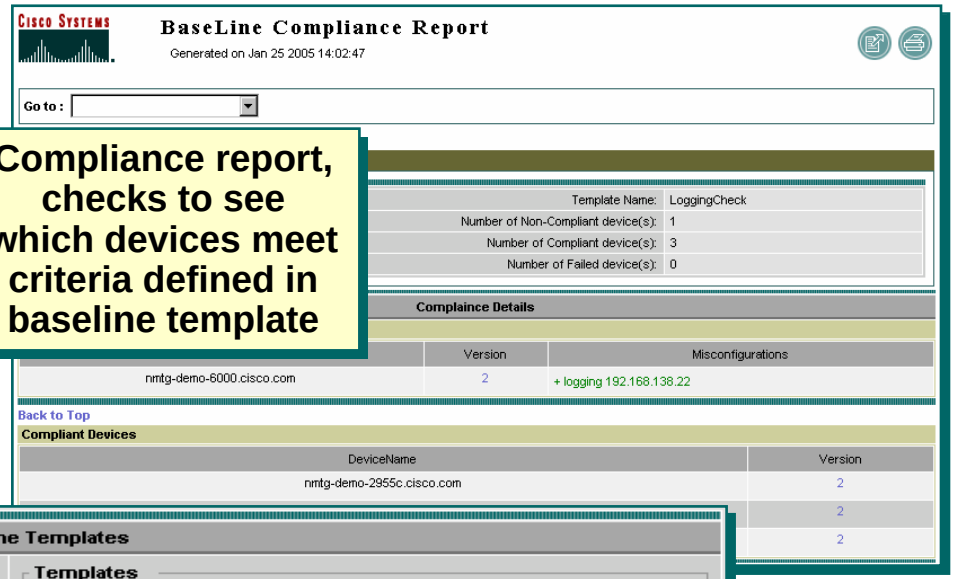
Syslog Configuration Template



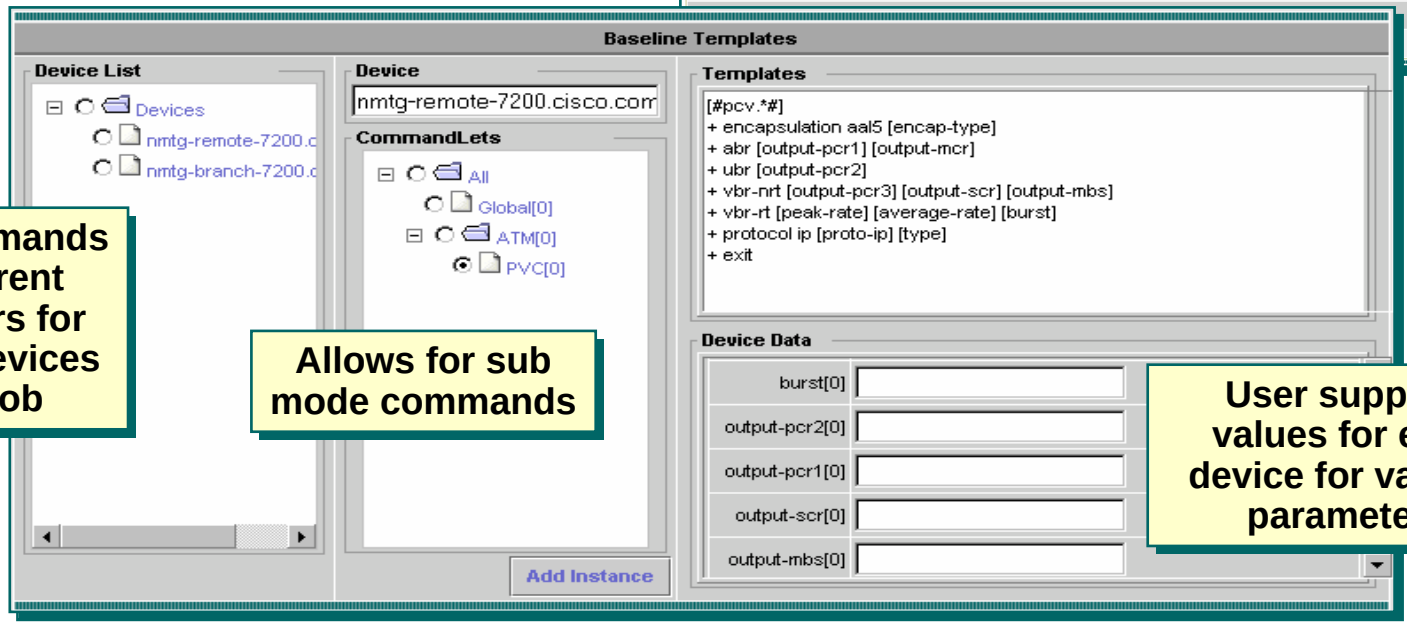
Parameters are the same for all devices in the job

Device Configuration Management
Baseline Templates Example (Resource Manager Essential)

- **Baseline Templates**
  - ☑ Set of commands containing placeholders for device-specific values to be substituted.
  - ☑ Use to add baseline commands to a new device being brought on-line
  - ☑ Use to check that all devices comply with company regulations for specific configuration practices



Compliance report, checks to see which devices meet criteria defined in baseline template



Same commands but different parameters for multiple devices in one job

Allows for sub mode commands

User supplies values for each device for various parameters

How to access RME data? (1)

Data Extracting Engine (cwexport –config ……) Contains SW configuration:

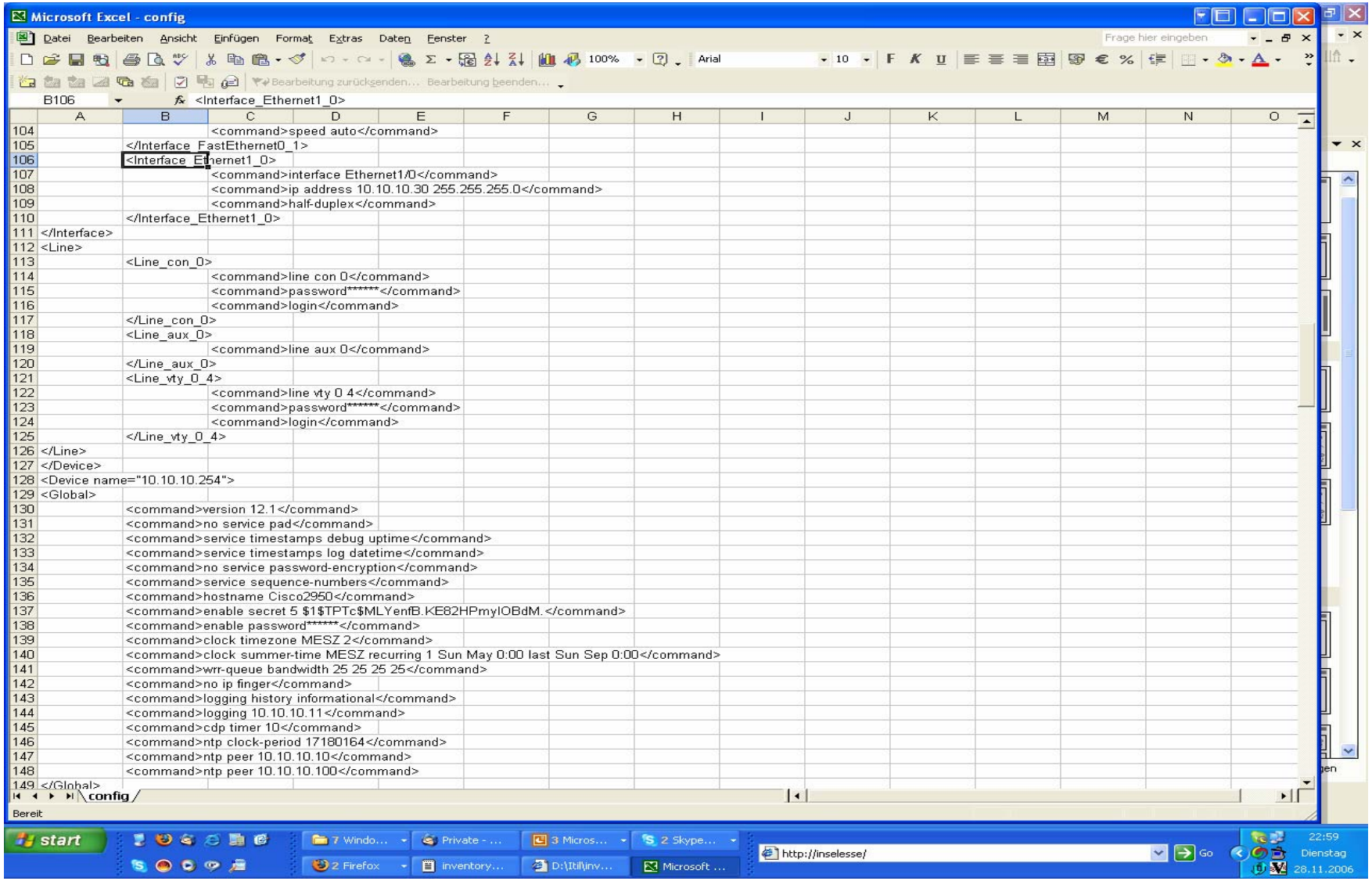
```
<ConfigArchive>
<RMEServer><Name>LMS-2</Name>
<TimeStamp>Mon Nov 27 02:11:39 GMT+01:00 2006</TimeStamp></RMEServer>
<Device name="10.10.10.40">
<Global>
    <command>! Last configuration change at 01:45:11 UTC Mon Mar 1 1993</command>
    <command>! NVRAM config last updated at 01:28:53 UTC Mon Mar 1 1993</command>
    <command>version 12.1</command>
    <command>no service single-slot-reload-enable</command>
    <command>service timestamps debug uptime</command>
    <command>service timestamps log uptime</command>
    <command>no service password-encryption</command>
    <command>hostname R2600-MCH-1</command>
    <command>enable secret 5 $1$vDqU$02DZG7HfjSivkCaArd87r1</command>
    <command>no ip domain-lookup</command>
    <command>ntp master 6</command>
    <command>ntp server 10.1.107.206</command>
</Global>
<Interface>
    <Interface_Loopback0>
                <command>interface Loopback0</command>
                <command>ip address 10.10.20.40 255.255.255.0</command>
    </Interface_Loopback0>
    <Interface_FastEthernet0_0>
                <command>interface FastEthernet0/0</command>
                <command>ip address 10.1.107.10 255.255.255.0</command>
                <command>rate-limit input access-group 102 32000 32000 32000 conform-action set-prec-transmit 1 exceed-
action drop</command>
                <command>speed 100</command>
                <command>full-duplex</command>
    </Interface_FastEthernet0_0>
    <Interface_FastEthernet0_1>
                <command>interface FastEthernet0/1</command>
                <command>no ip address</command>
```

How to access RME data ? (1)

….and the HW inventory (cwexport –inventory …) as well….

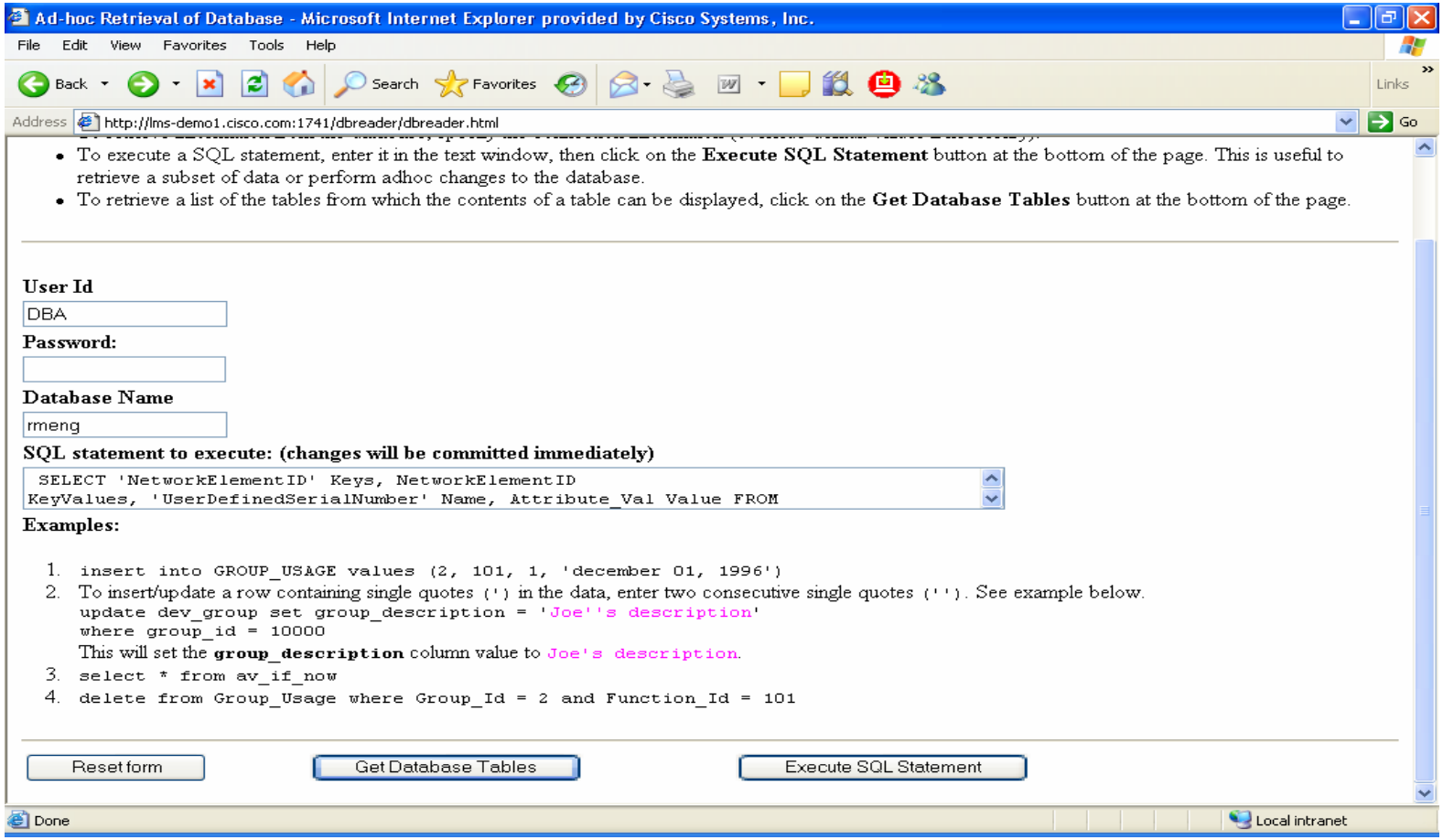
```
<InvDetails>
    <SchemaInfo>
        <RMEServer>VMS-2</RMEServer>
        <CreatedAt>Mon Nov 27 02:12:30 GMT+01:00 2006</CreatedAt>
        <SchemaVersion>1.0</SchemaVersion>
    </SchemaInfo>
    <RMEPlatform>
        <Cisco_Chassis>
        <InstanceID>1</InstanceID>
        <HardwareVersion>0x100</HardwareVersion>
        <SerialNumber>JAD0647063M (3349967766)</SerialNumber>
        <ChassisSystemType>c2611XM          </ChassisSystemType>
        <NumberOfSlots>2</NumberOfSlots>
        <Cisco_Card>
                <InstanceID>1</InstanceID>
                <SerialNumber>0</SerialNumber>
                <LocationWithinContainer>0</LocationWithinContainer>
                <CardType>cpu-2600                  </CardType>
                <HardwareVersion>1.0</HardwareVersion>
                <Description>C2600 Mainboard</Description>
        <NumberOfSlots>2</NumberOfSlots>
        <SoftwareIdentity>
        </SoftwareIdentity>
        <Cisco_FlashDevice>
                <InstanceID>1</InstanceID>
                <InstanceName>flash</InstanceName>
                <Size>33554432 Bytes</Size>
                <NumberOfPartitions>1</NumberOfPartitions>
                <ChipCount>4</ChipCount>
                <Description>System flash</Description>
                <Removable>false</Removable>
               <Cisco_FlashPartition>
               <InstanceID>1</InstanceID>
               <InstanceName>flash:1</InstanceName>
               <Upgrade>direct</Upgrade>
               <NeedsErasure>false</NeedsErasure>
               <PartitionStatus>readWrite</PartitionStatus>
```

RME XML Config in Excel



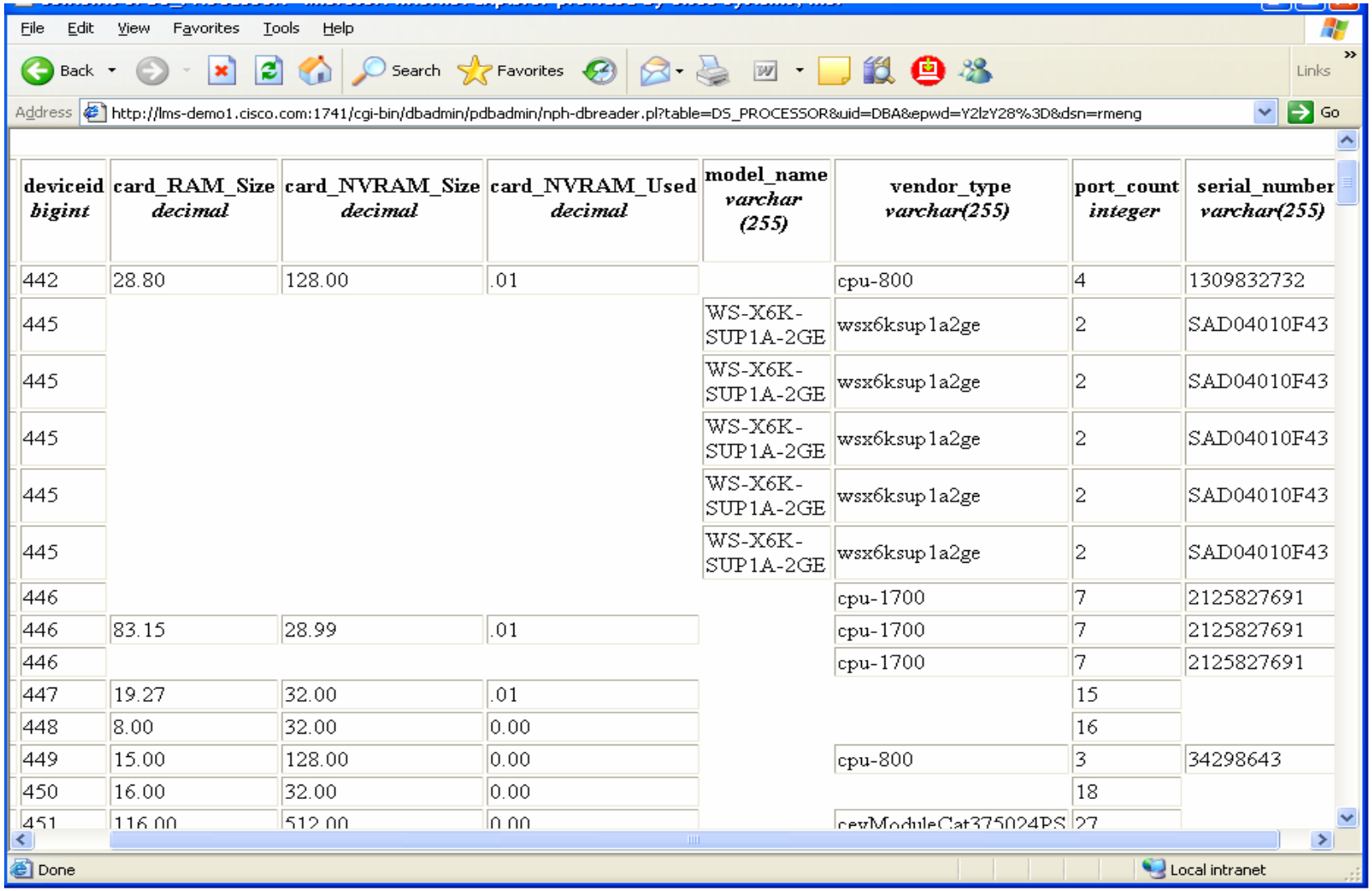
How to access RME data ? (2)

use dbreader to explore the RME DB



How to access RME data ? (2)

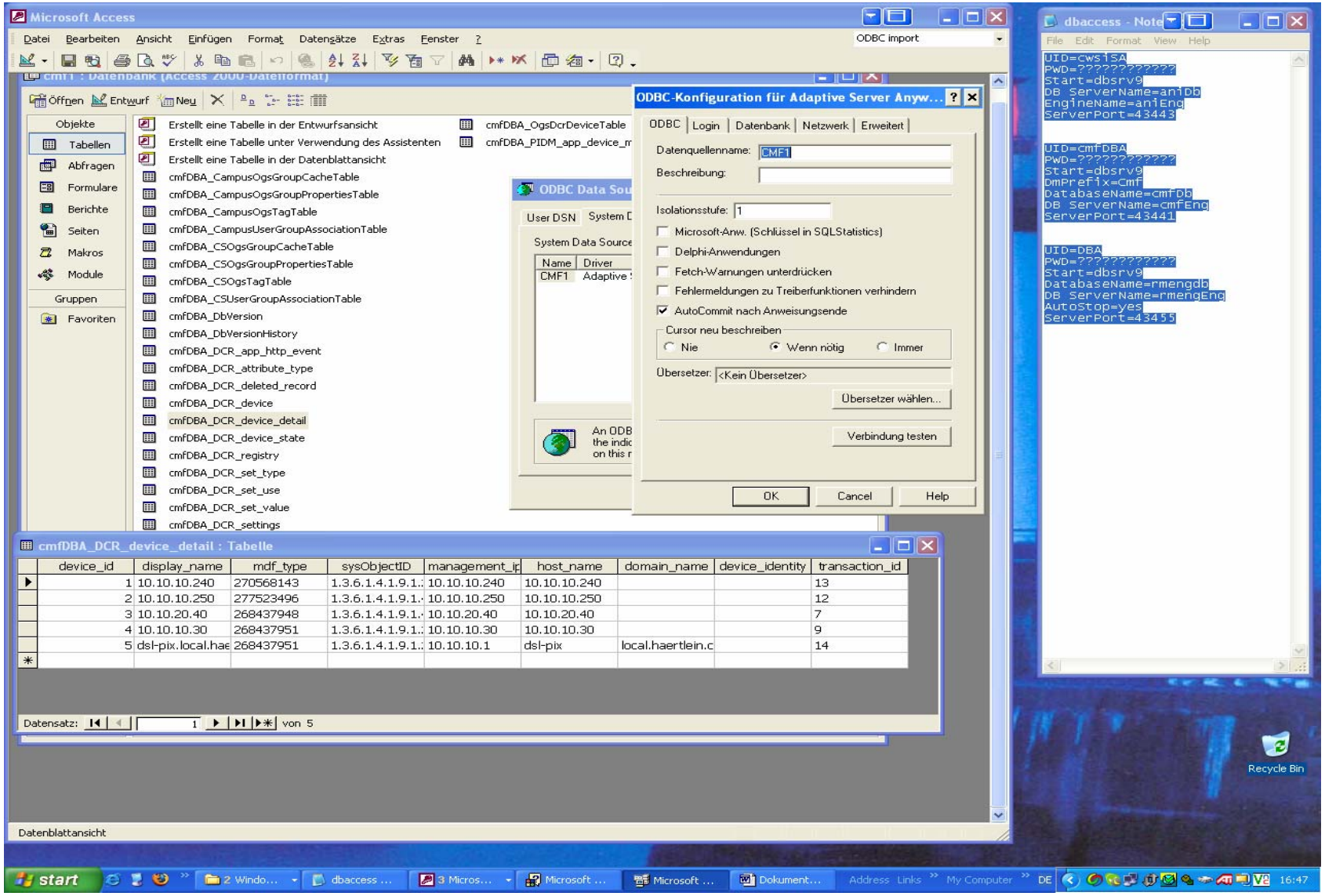
use dbreader to explore the RME DB (Chassis inventory)



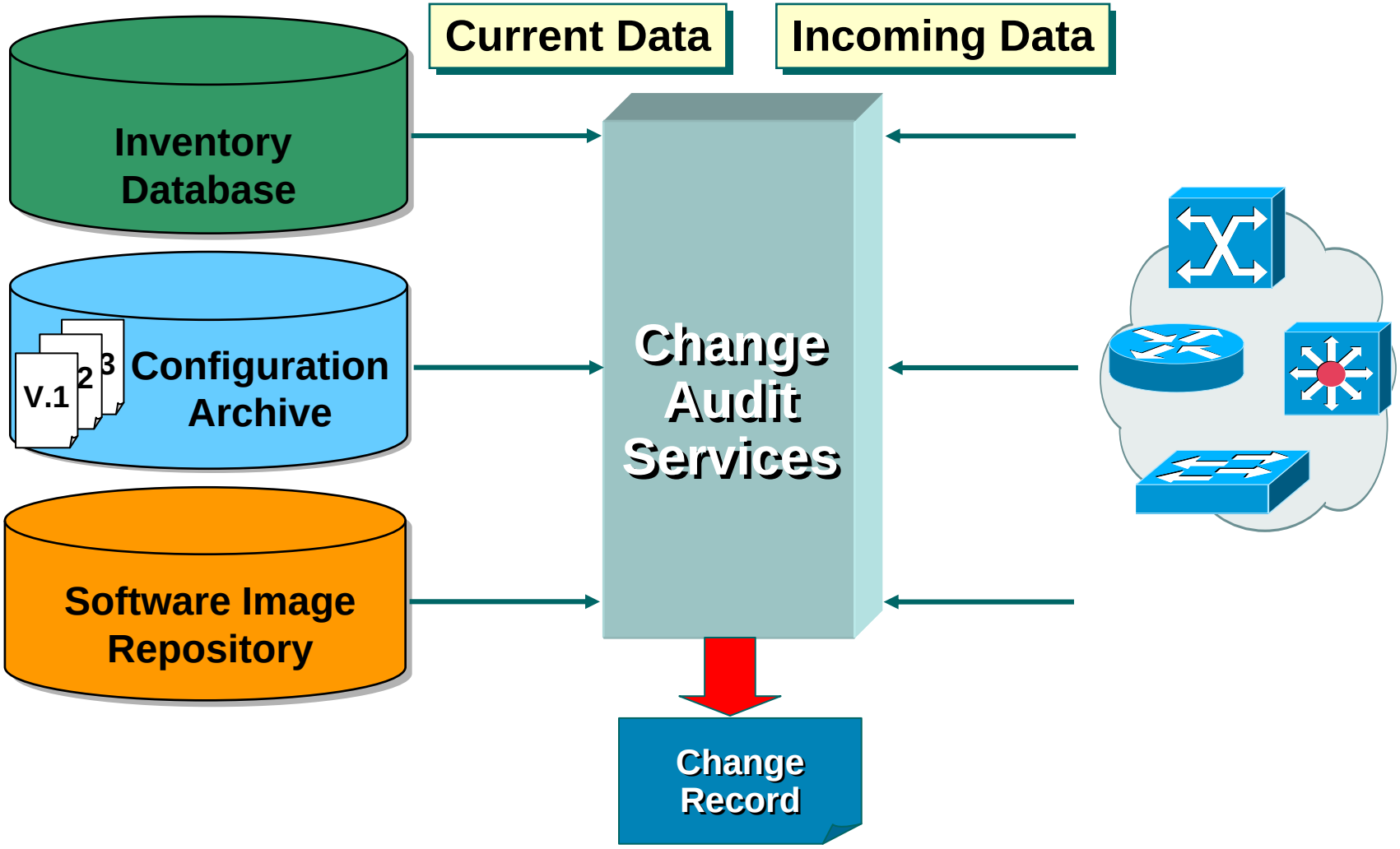
deviceid *bigint*	card_RAM_Size *decimal*	card_NVRAM_Size *decimal*	card_NVRAM_Used *decimal*	model_name *varchar (255)*	vendor_type *varchar(255)*	port_count *integer*	serial_number *varchar(255)*
442	28.80	128.00	.01		cpu-800	4	1309832732
445				WS-X6K-SUP1A-2GE	wsx6ksup1a2ge	2	SAD04010F43
445				WS-X6K-SUP1A-2GE	wsx6ksup1a2ge	2	SAD04010F43
445				WS-X6K-SUP1A-2GE	wsx6ksup1a2ge	2	SAD04010F43
445				WS-X6K-SUP1A-2GE	wsx6ksup1a2ge	2	SAD04010F43
445				WS-X6K-SUP1A-2GE	wsx6ksup1a2ge	2	SAD04010F43
446					cpu-1700	7	2125827691
446	83.15	28.99	.01		cpu-1700	7	2125827691
446					cpu-1700	7	2125827691
447	19.27	32.00	.01			15	
448	8.00	32.00	0.00			16	
449	15.00	128.00	0.00		cpu-800	3	34298643
450	16.00	32.00	0.00			18	
451	116.00	512.00	0.00		cevModuleCat3750X24PS	27	

How to access RME data ? (3)

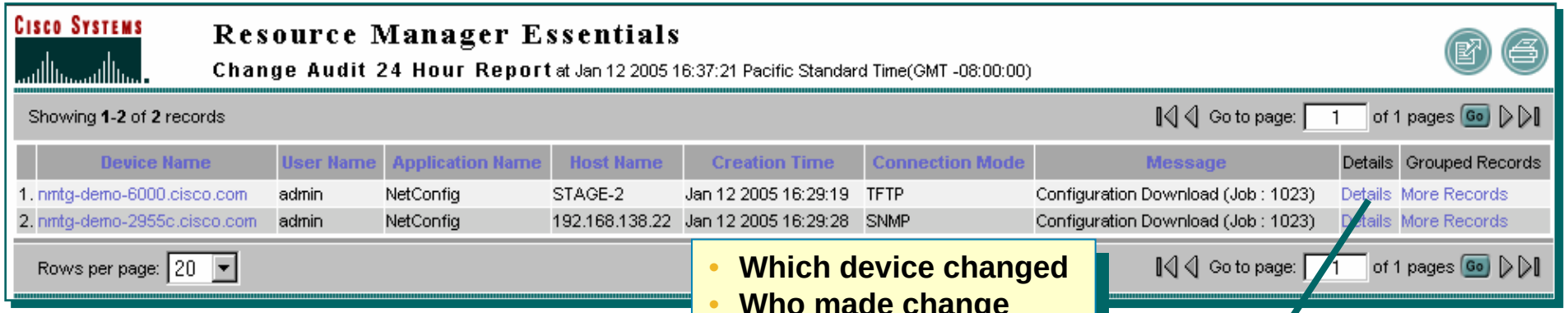
Direct DB Access via ODBC



Change Audit
Resource Manager Essential



Change Audit
Sample Report (Resource Manager Essential)



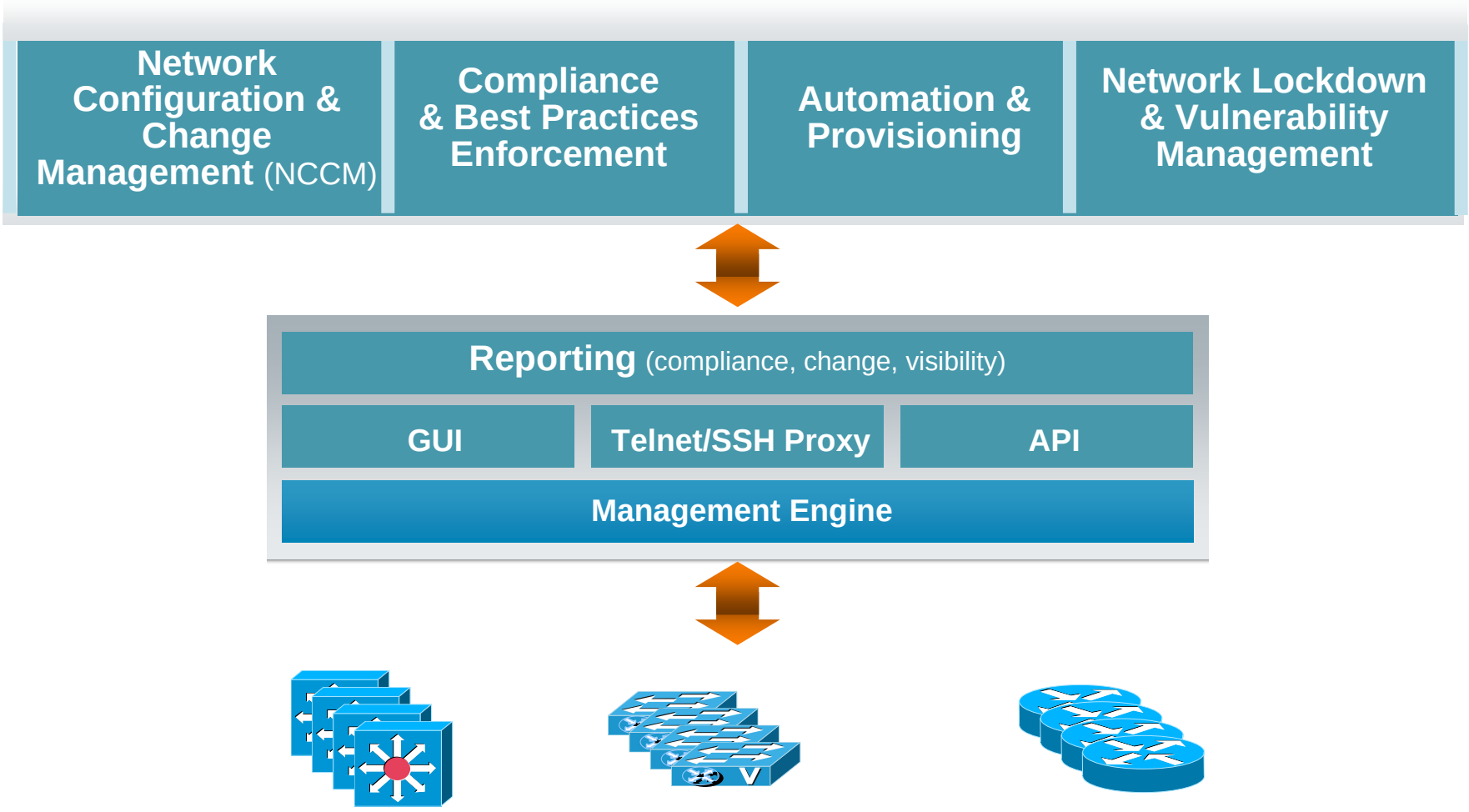
- Which device changed
- Who made change
- Type of change
- From what host
- Time of discovered
- How change made
- How change was found

Details of change

CiscoWorks finds the changes for you!

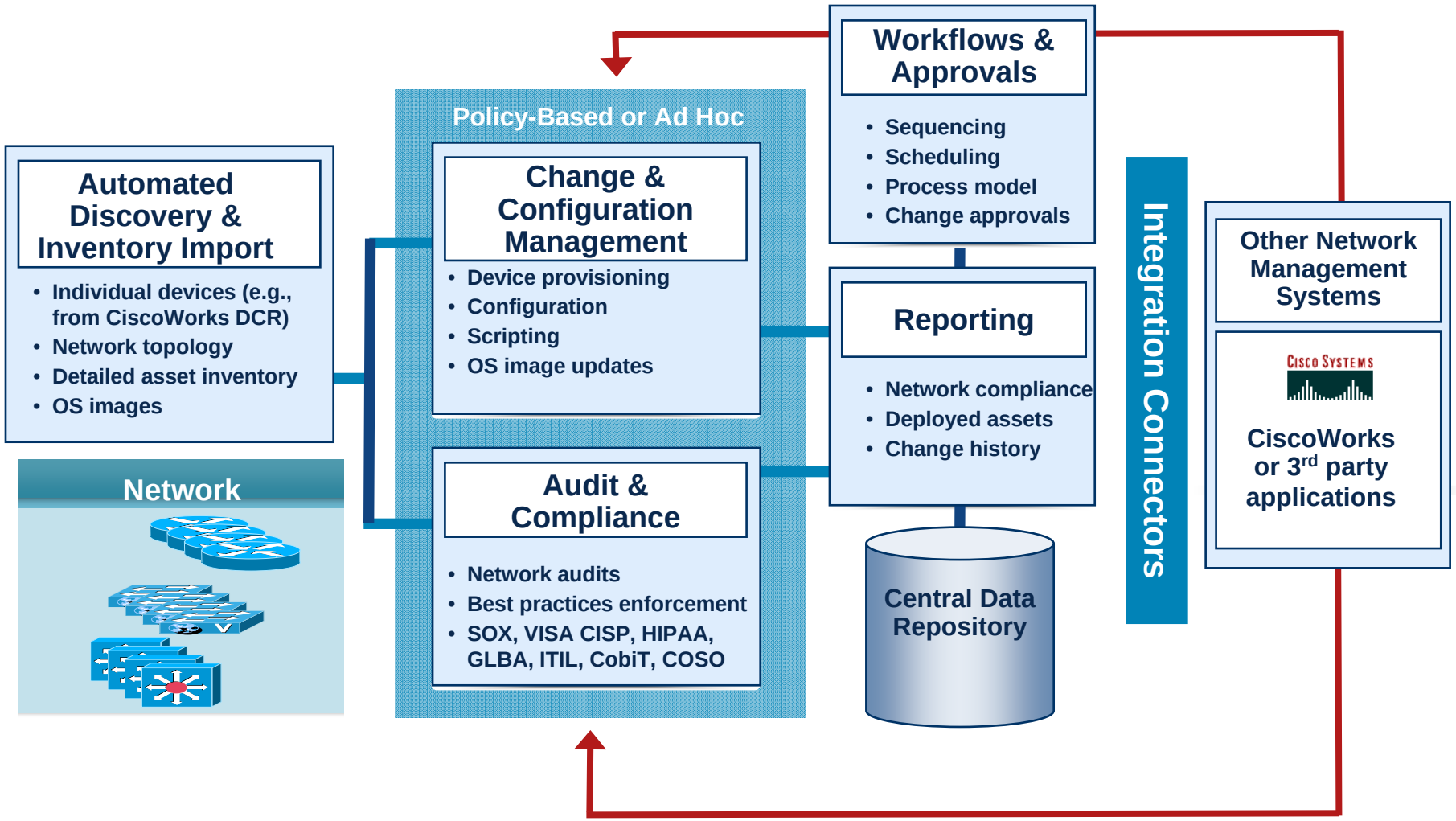
New line in config file

CiscoWorks Network Compliance Manager
Architectural Overview

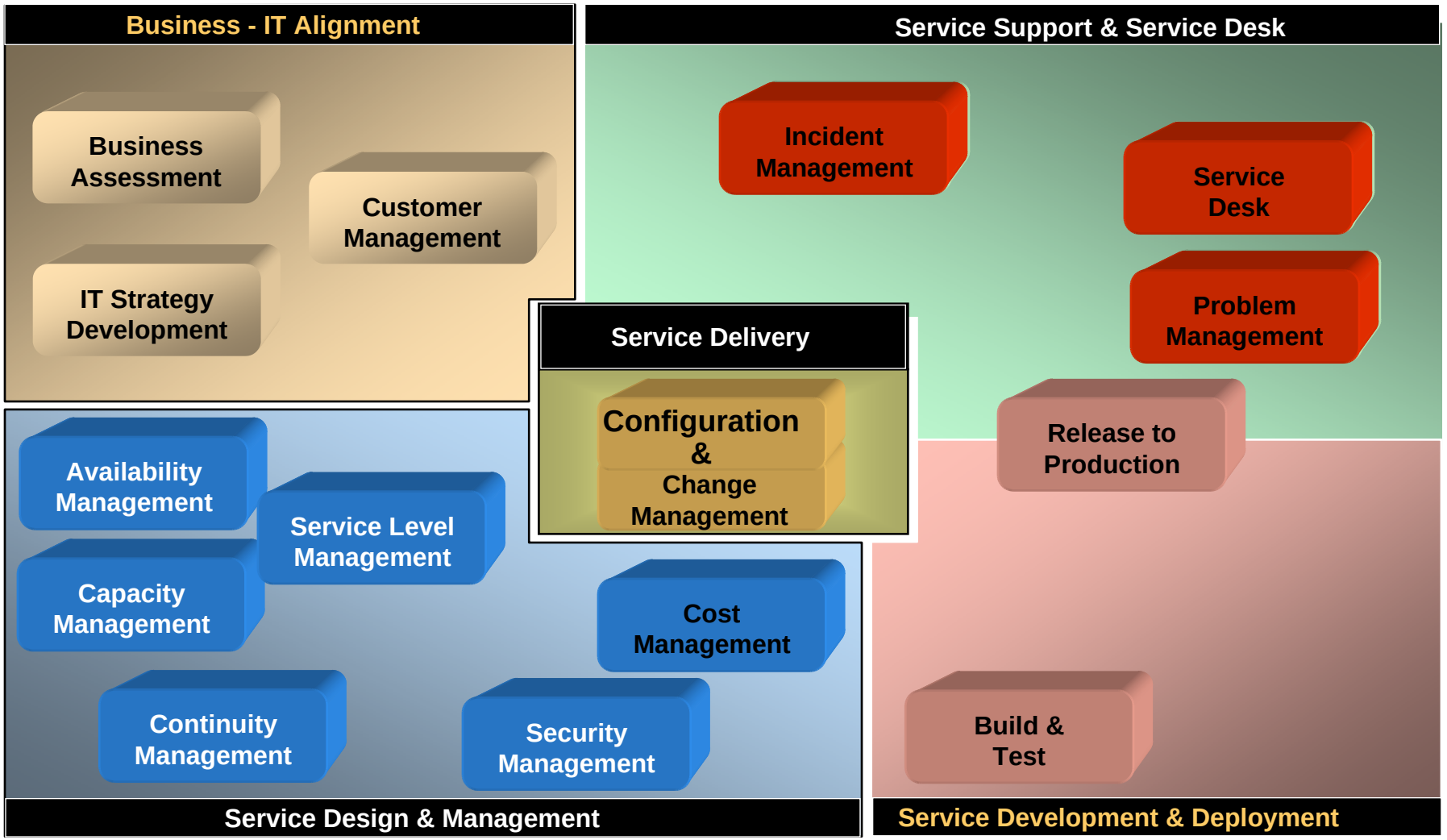


Routers, Switches, Firewalls, Load Balancers, Access Points (Cisco and 35 other vendors)

CiscoWorks Network Compliance Manager



ITIL Service Support



Incident Management

Misson:

Restore normal state IT service operations as quickly as possible to minimize the adverse impact on business operations.

Why Incident Management?

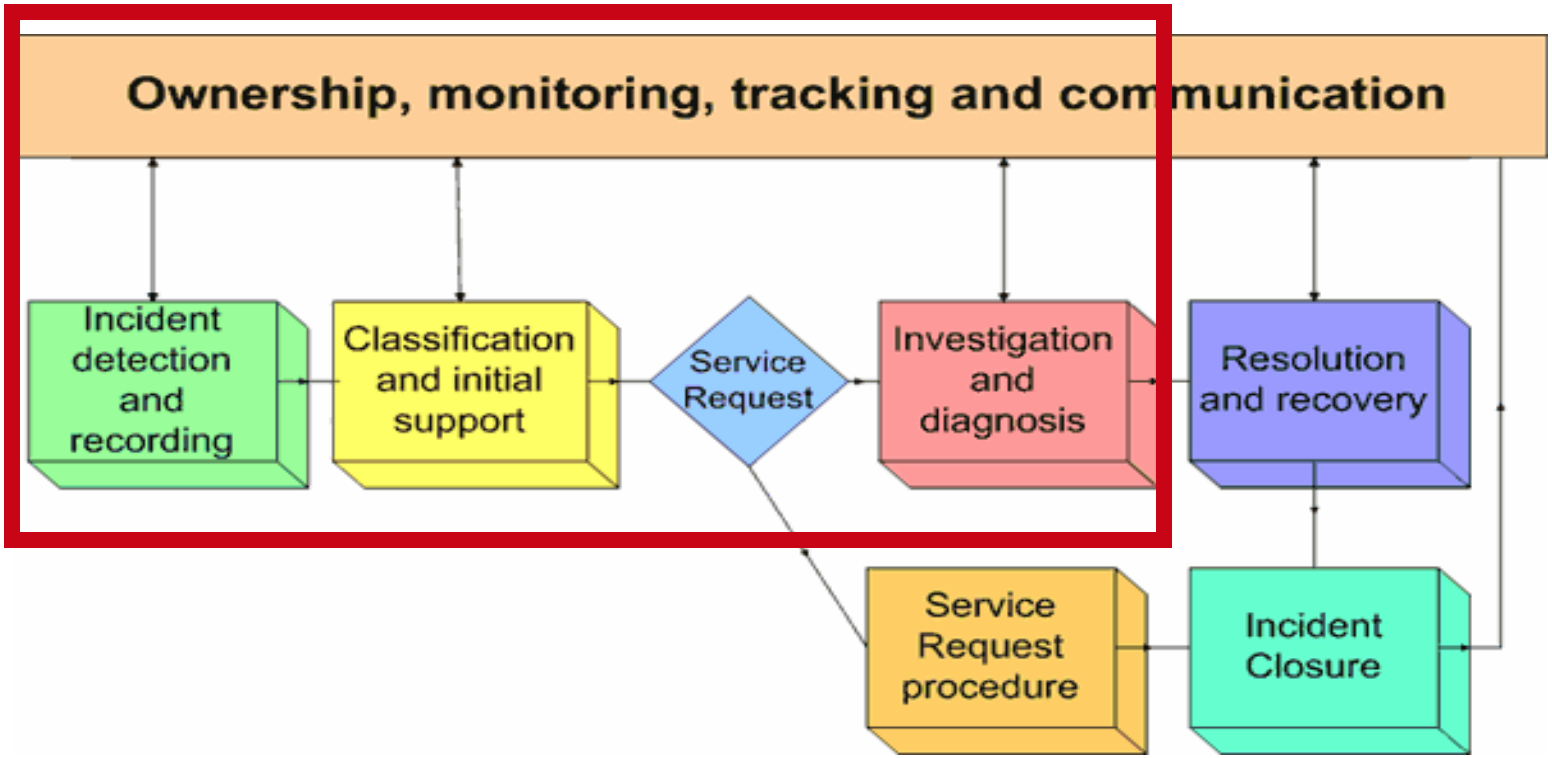
- Use the available Resources in the most economic manner in order to support the goals of the Enterprise
- Maintain helpful Documentations on all incidents
- Develop and use a consistent procedure used for all incidents

Responsibilities and Duties

- Registers all Incidents
- Classifies all Incidents
- 1st and 2nd Line Support
- Removal of Incidents
- Is the Owner of the Trouble Ticket

Incident Management (2)

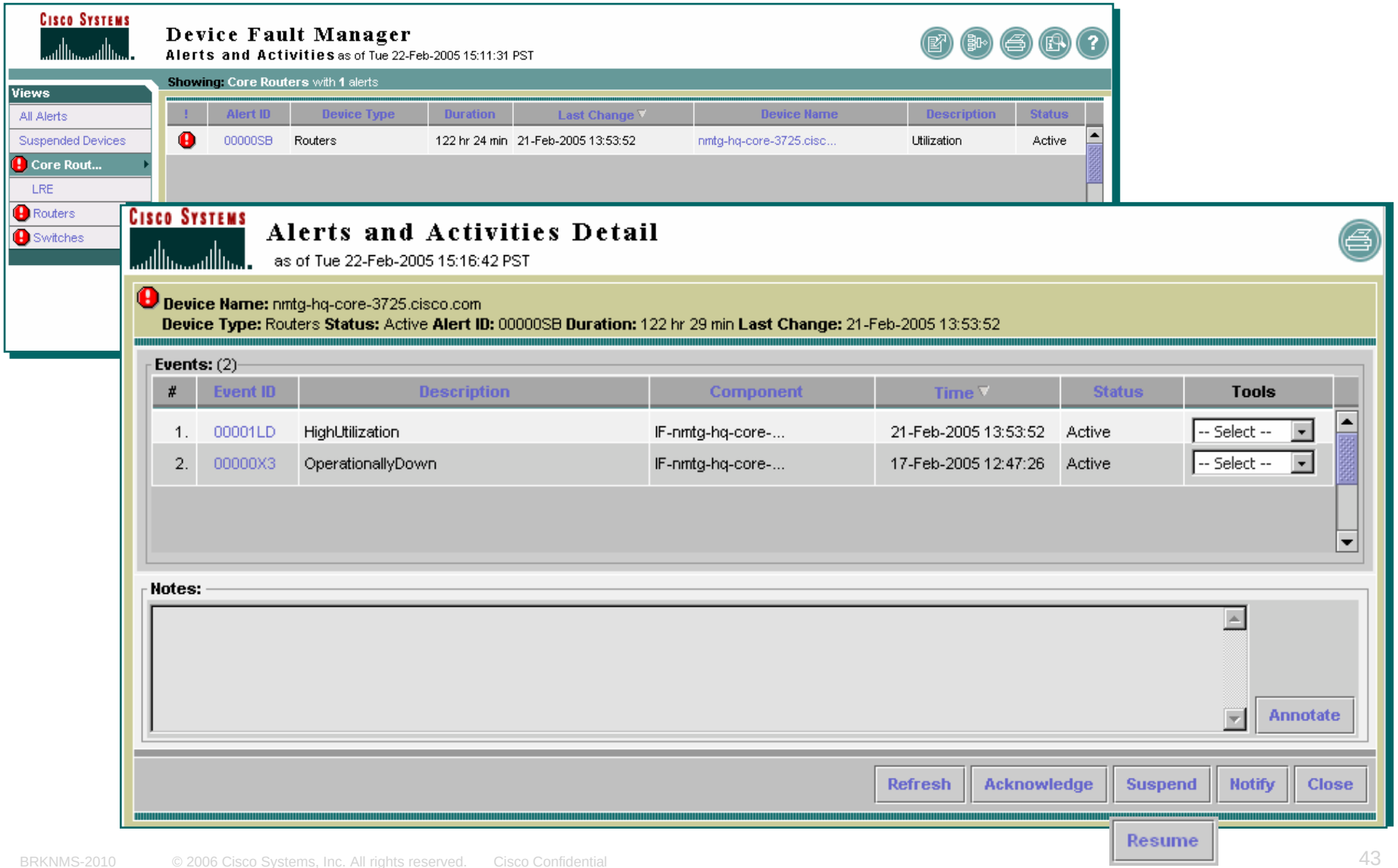
Support by DFM



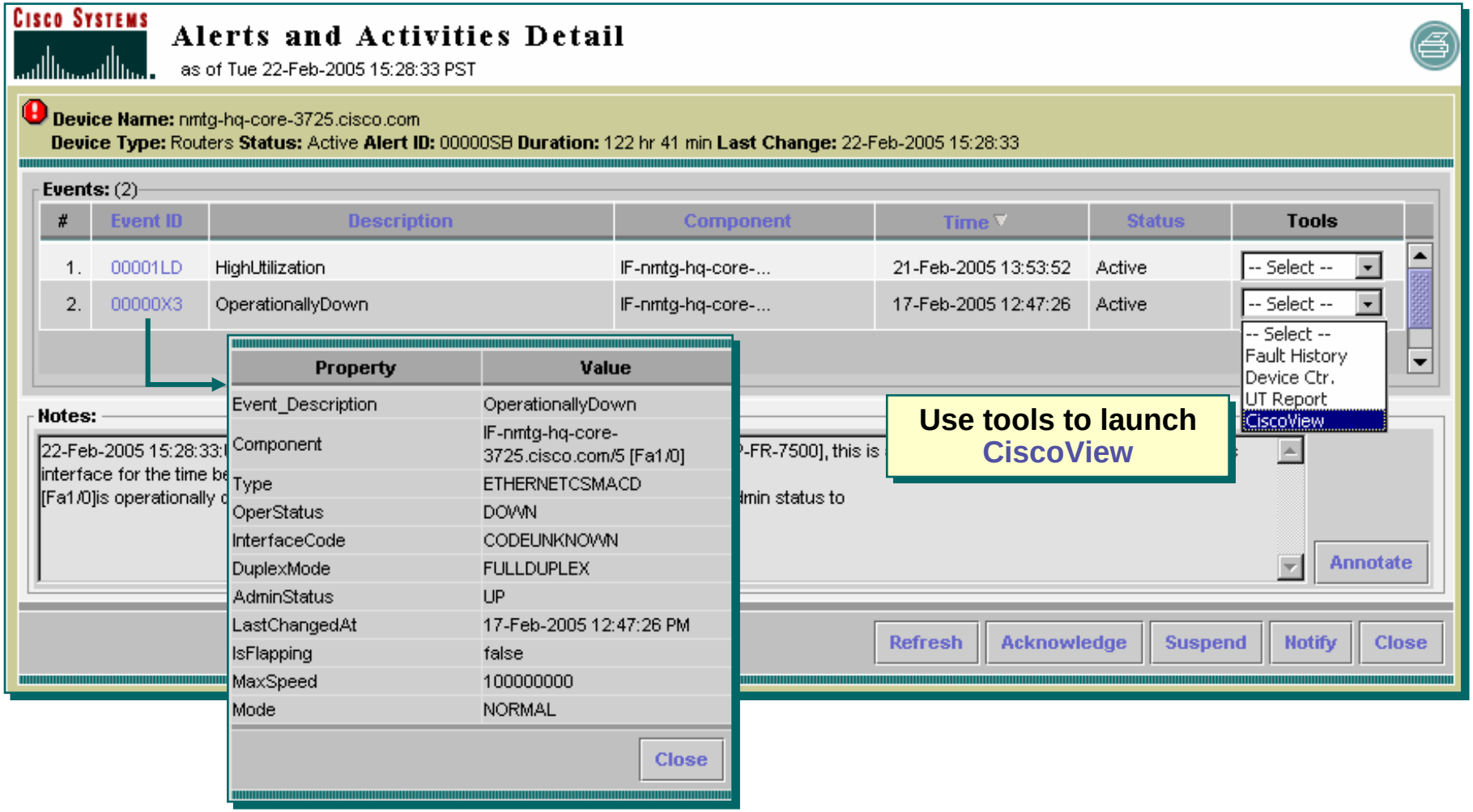
Incident Management does not solve Problems!

Cisco's Device Fault Management

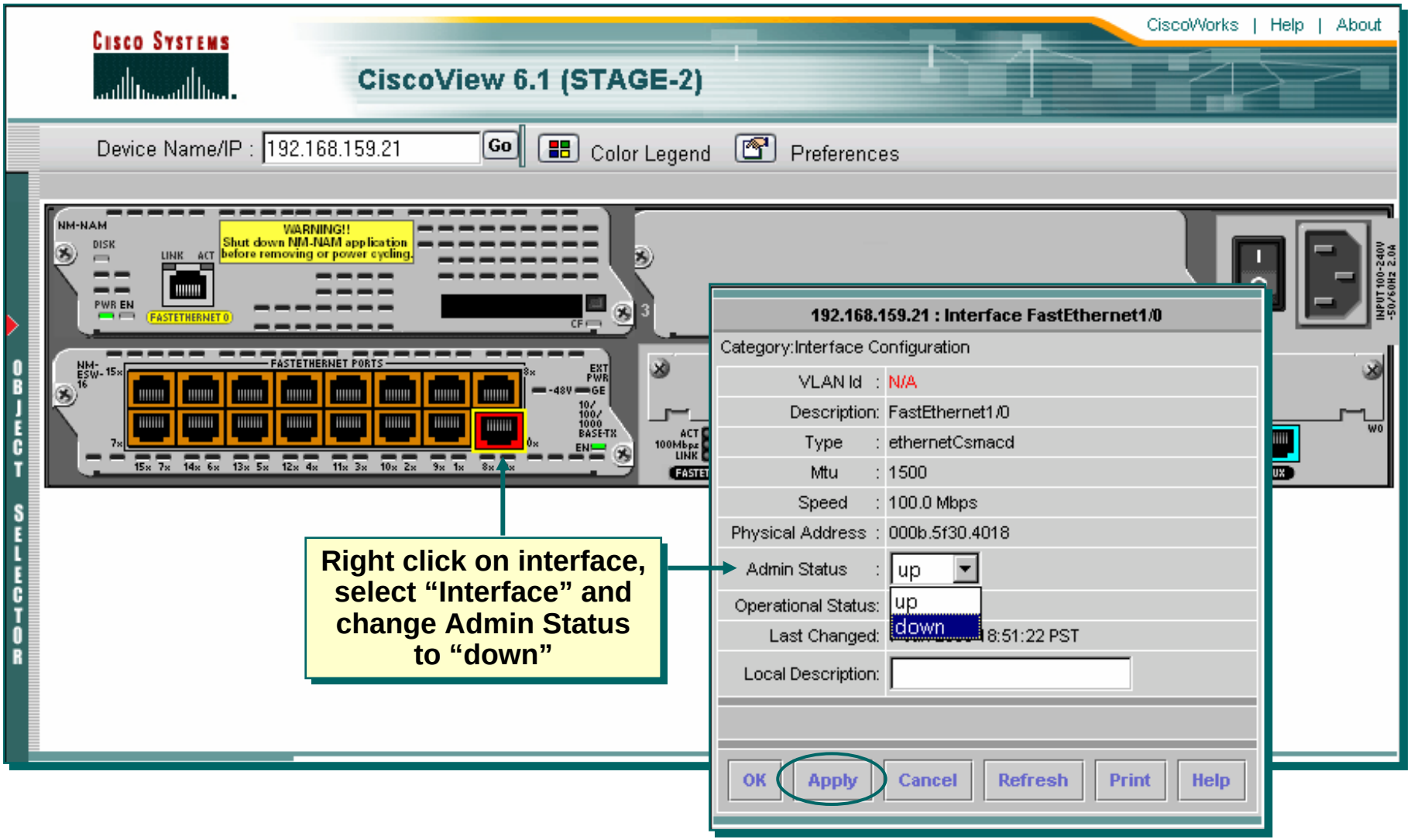
Alerts & Activities (detection)



Cisco's Device Fault Management
Alerts & Activities



Alerts & Activities
Resolution – Change Port Status (Continue …)



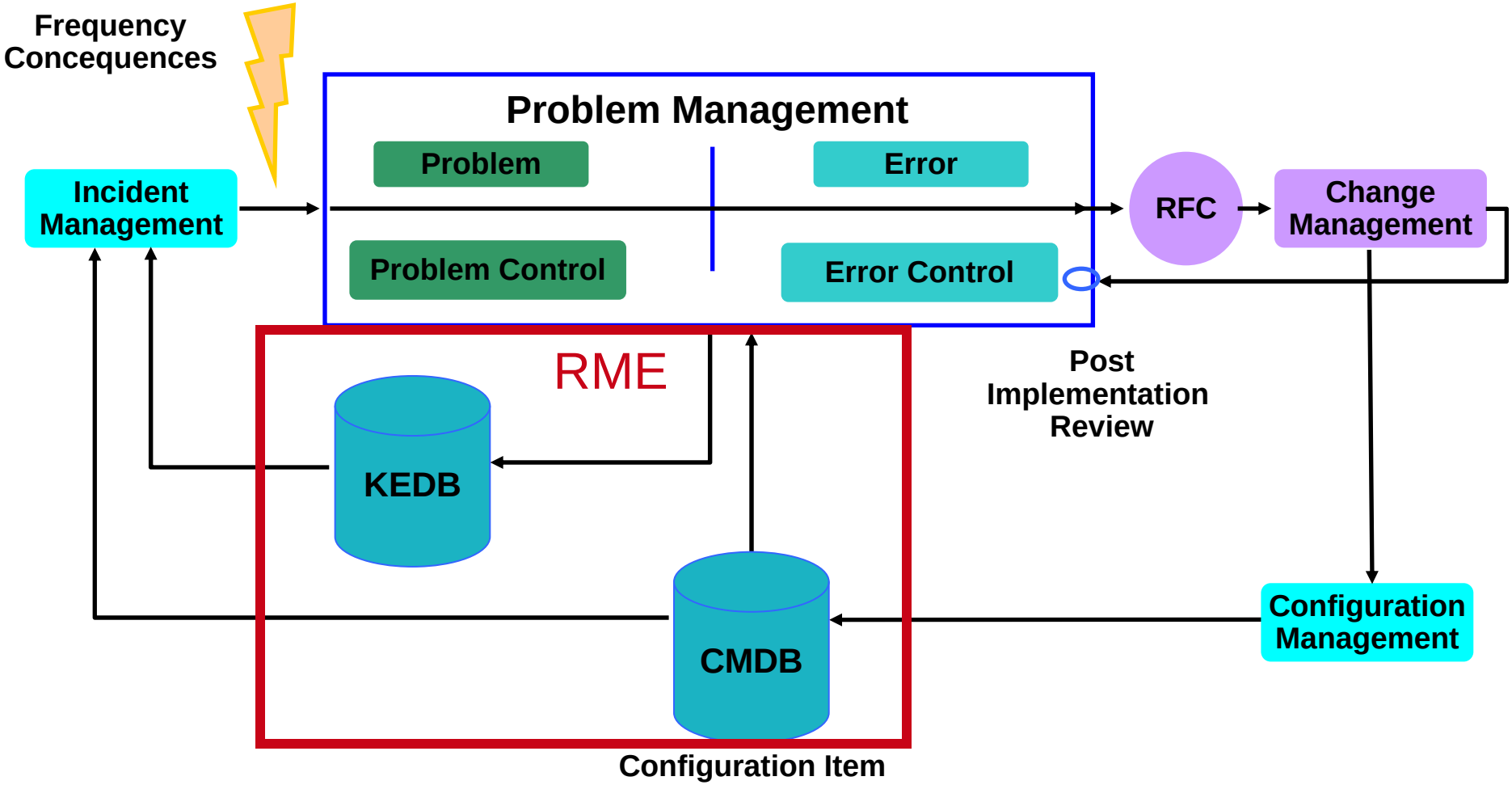
Problem Management

- The objective of Problem Management is to minimize the impact of problems on the organisation. Problem Management plays an important role in the detection and providing solutions to problems (work arounds & known errors) and prevents their reoccurrence.

- A 'Problem' is the unknown cause of one or more incidents, often identified as a result of multiple similar incidents.

- A 'Known error' is an identified root cause of a Problem.
- Request for Change - Change Request made by the Problem Management to the Change Management in order to eliminate the Problem

Problem Management (2)



Software Managementand & Known Error DB

Resource Manager

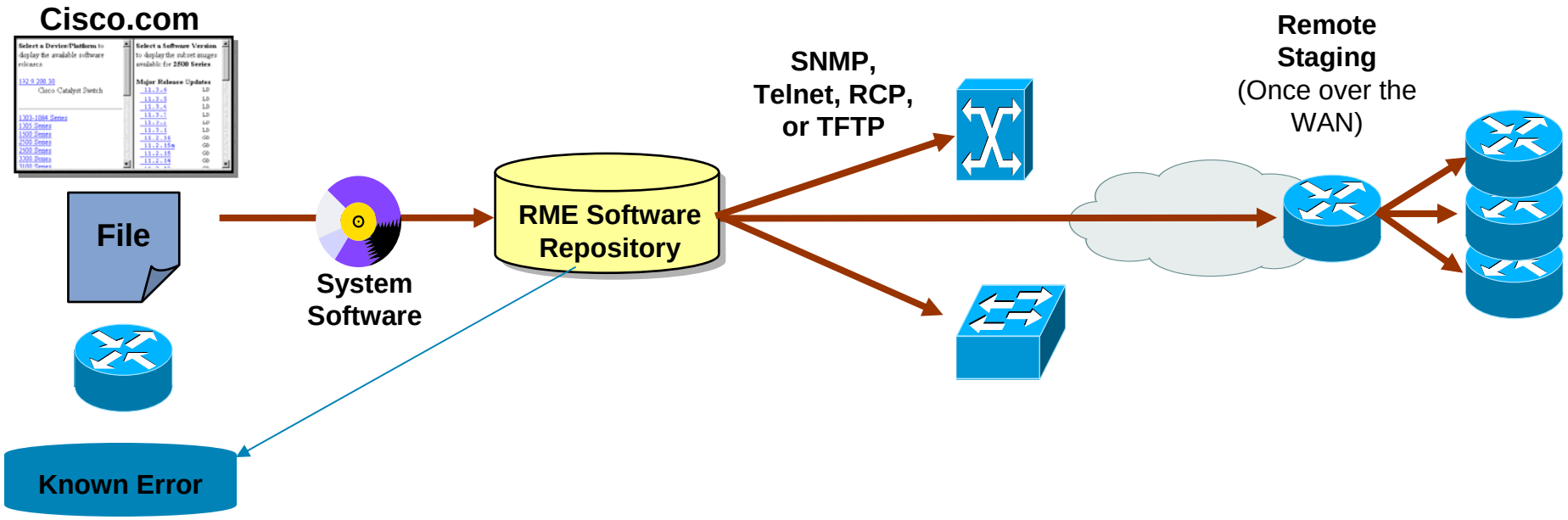
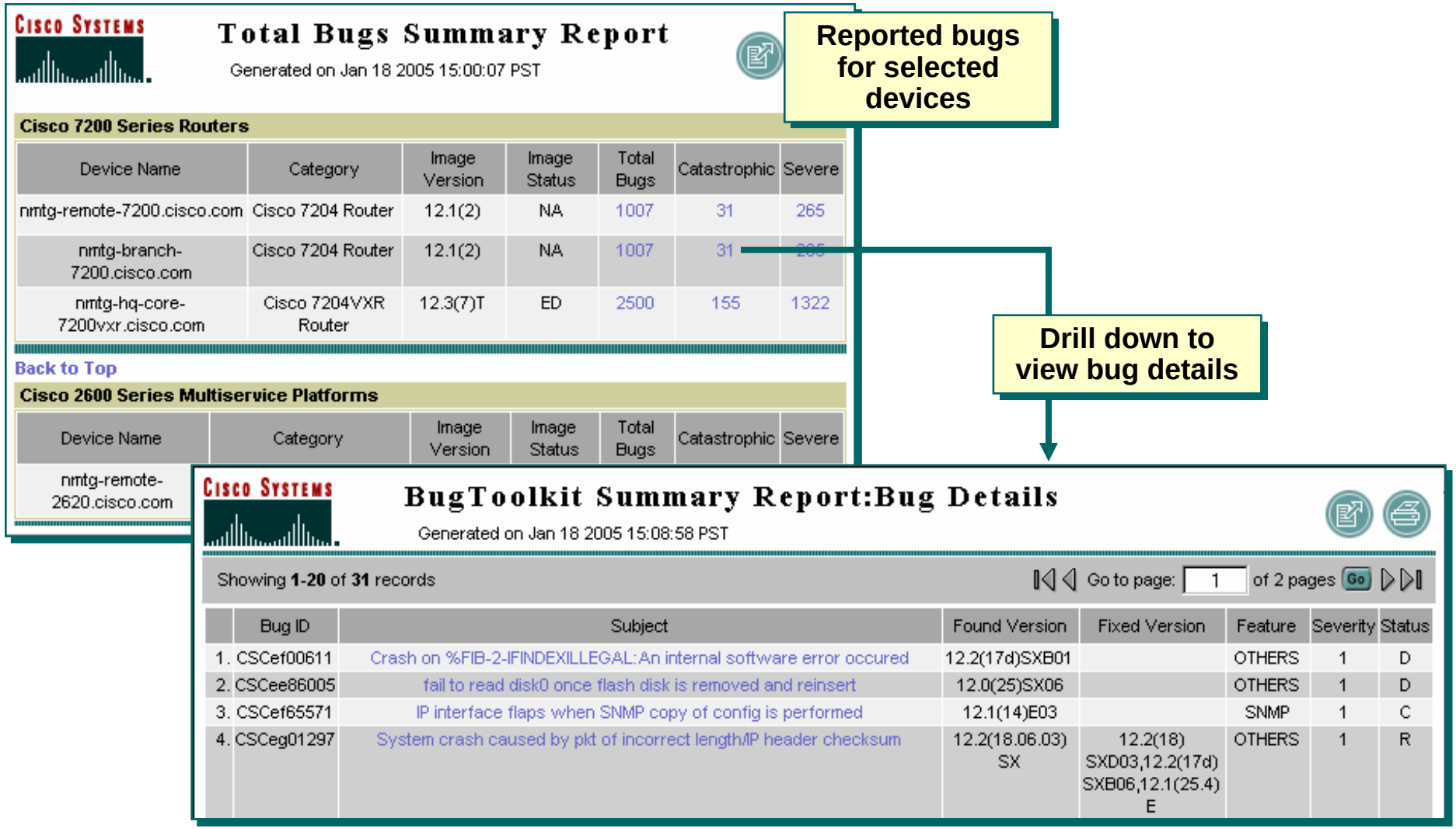
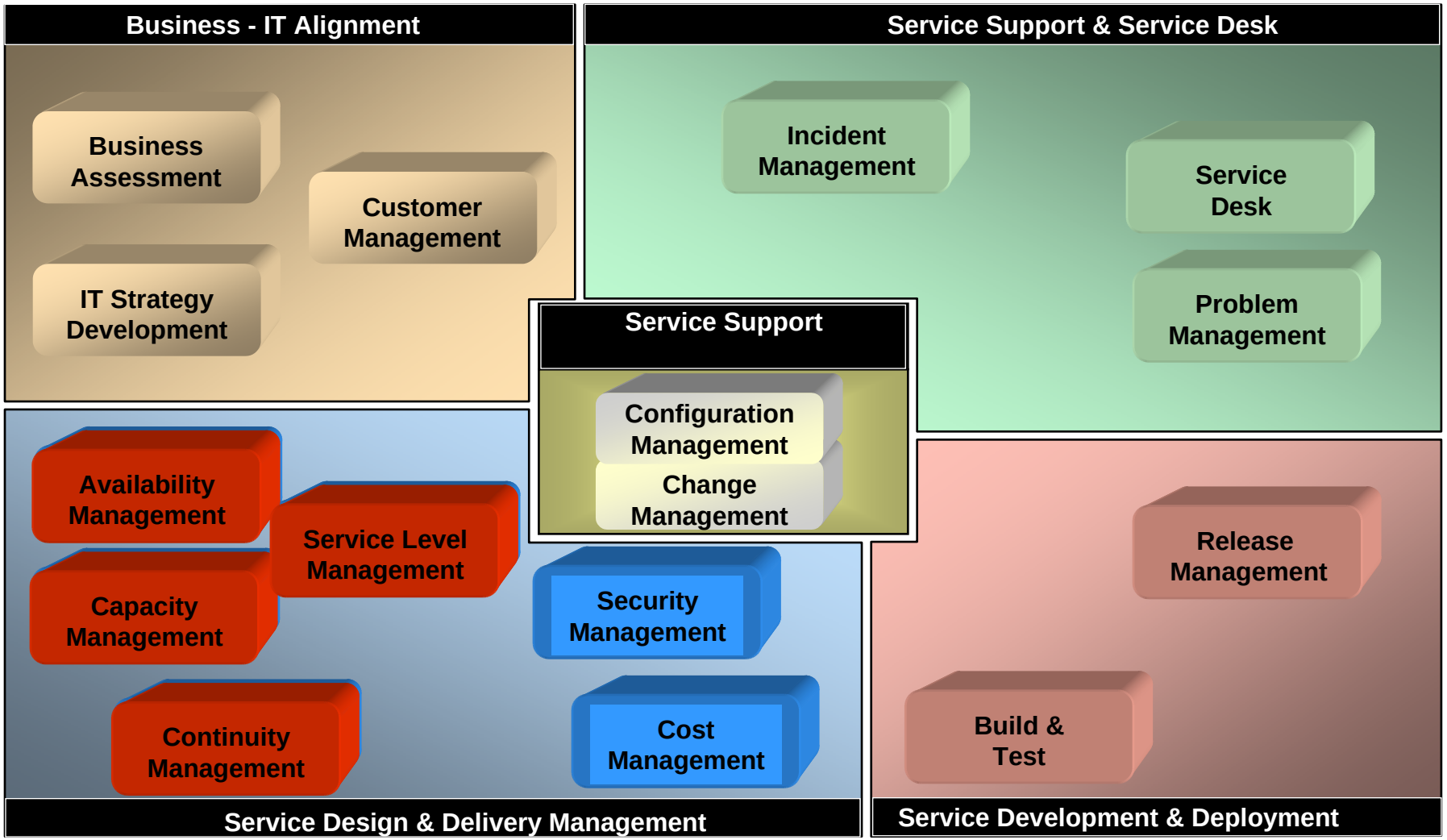


Image Management & Bugs Summary Report



ITIL Service Design & Delivery



Availability Management

Mission :

Optimize the capability of the IT infrastructure, services and supporting organization to deliver a cost effective and sustained level of service availability that meets business requirements.

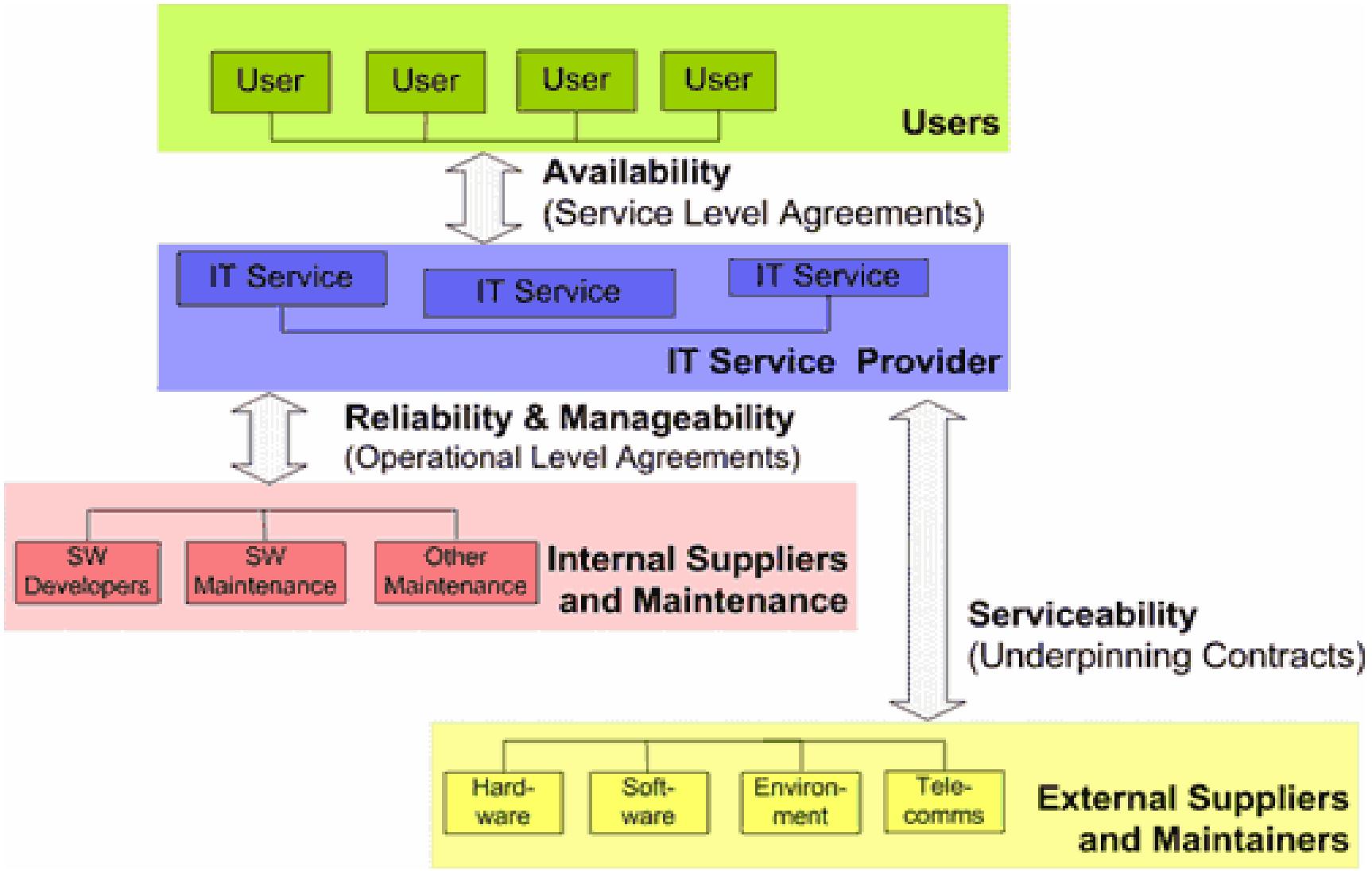
Why Availability Management

- AM Is responsible for that IT Serves are available when Customers need them
- Identifies the Vital Business Function, defines the availability and develops them trough reliable components
- Reaches Availability trough Fault Tolerance, Maintainability and Serviceability
- Reports on reached Availability and continuously improves the availability of IT Services

Responsibilities and Duties

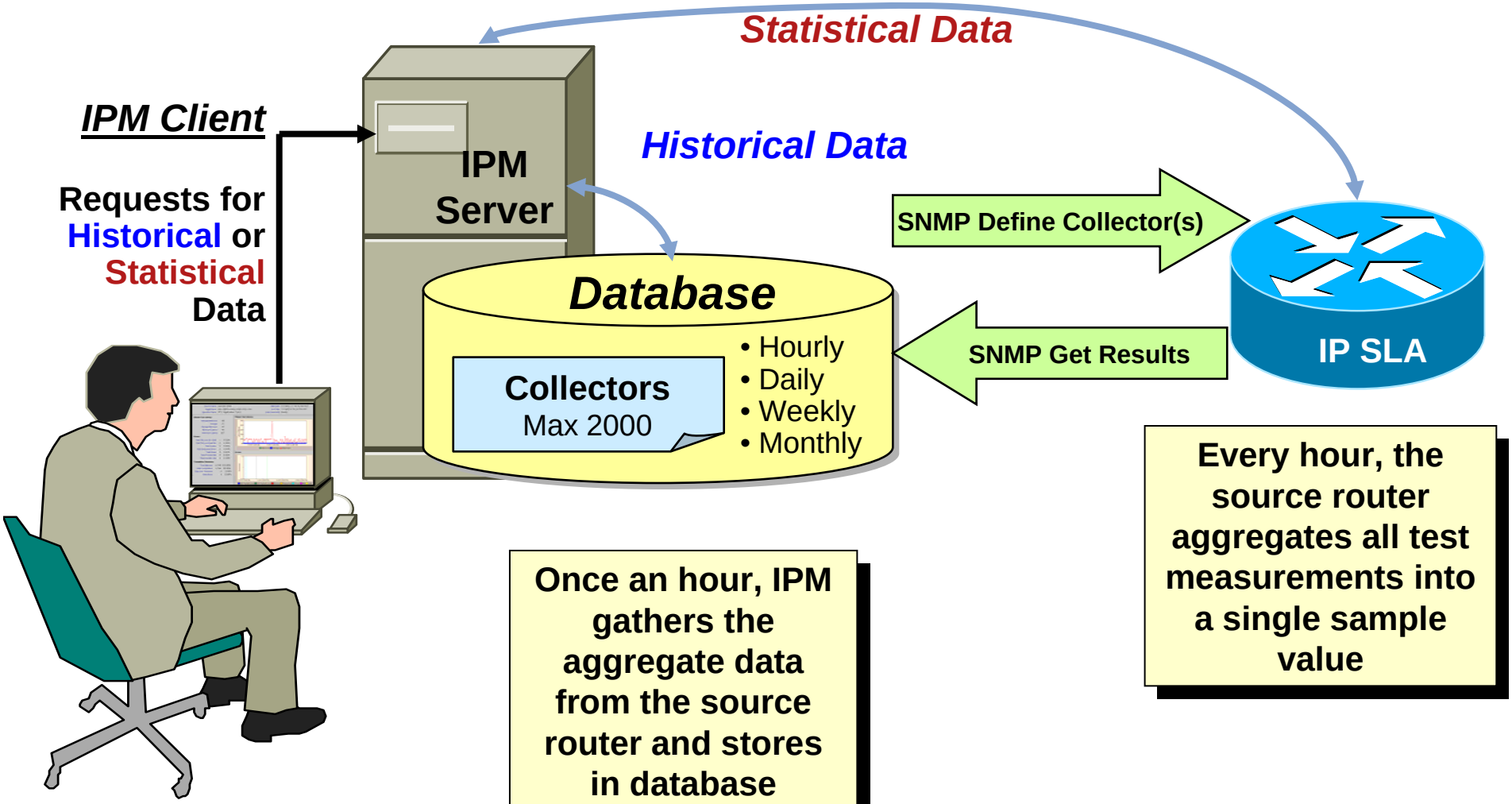
- Builds a Availability Plan for all IT Services
- Defines the availability requirements in conjunction to the Business
- Continuous monitoring and improvement on Availability

Availability Management



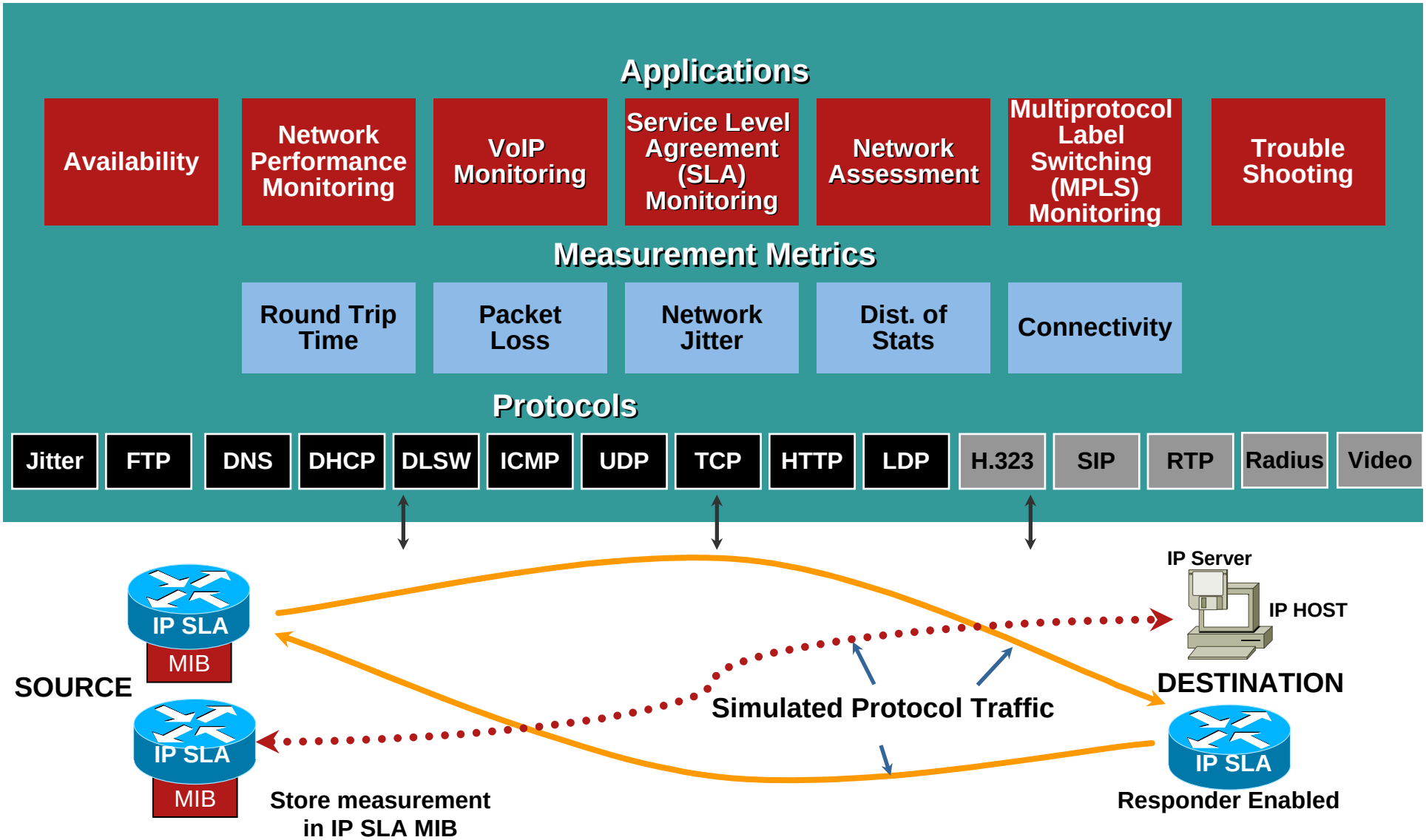
Gathering Service Availability & Performance Data

Internetwork Performance Manager (IPM)



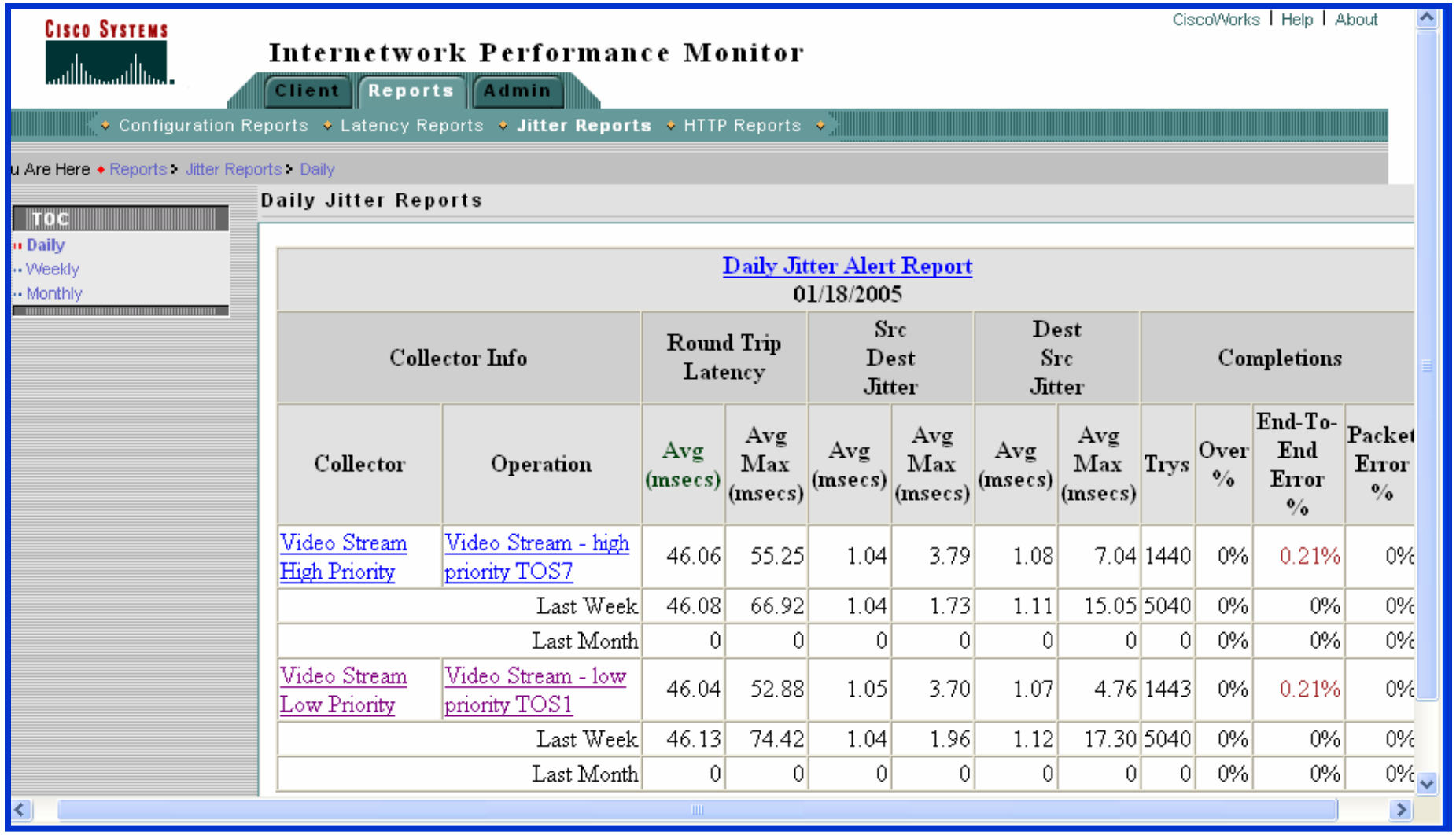
Cisco IOS IP SLA Built in Tests

Cisco IOS IP Service Level Agreements



Service Availability Reports

Internetwork Performance Manager (IPM)



Cisco Systems

Internetwork Performance Monitor

CiscoWorks | Help | About

Client | Reports | Admin

Configuration Reports | Latency Reports | Jitter Reports | HTTP Reports

You Are Here > Reports > Jitter Reports > Daily

TOC

- Daily
- Weekly
- Monthly

Daily Jitter Reports

Daily Jitter Alert Report
01/18/2005

Collector Info		Round Trip Latency		Src Dest Jitter		Dest Src Jitter		Completions			
Collector	Operation	Avg (msecs)	Avg Max (msecs)	Avg (msecs)	Avg Max (msecs)	Avg (msecs)	Avg Max (msecs)	Trys	Over %	End-To-End Error %	Packet Error %
Video Stream High Priority	Video Stream - high priority TOS7	46.06	55.25	1.04	3.79	1.08	7.04	1440	0%	0.21%	0%
	Last Week	46.08	66.92	1.04	1.73	1.11	15.05	5040	0%	0%	0%
	Last Month	0	0	0	0	0	0	0	0%	0%	0%
Video Stream Low Priority	Video Stream - low priority TOS1	46.04	52.88	1.05	3.70	1.07	4.76	1443	0%	0.21%	0%
	Last Week	46.13	74.42	1.04	1.96	1.12	17.30	5040	0%	0%	0%
	Last Month	0	0	0	0	0	0	0	0%	0%	0%

Daily –Latency Report / Service Latency Report

Internetwork Performance Manager (IPM)

Daily IP-Echo Latency Summary Report
10/26/2005

Collector Info		Daily Statistics					Last Week's Statistics				Last Month's Statistics			
Collector	Operation	Avg (msecs)	Avg Max (msecs)	Trys	Over %	Error %	Avg (msecs)	Avg Max (msecs)	Over %	Error %	Avg (msecs)	Avg Max (msecs)	Over %	Erro %
PEcho_Source_if	DefaultIpEcho	286	376	1440	0%	0.63%	0	0	0%	0%	0	0	0%	0%
MyColl	DefaultIpEcho	280	364	180	0%	0%	0	0	0%	0%	0	0	0%	0%
Coll_IPEcho	DefaultIpEcho	1	3	1440	0%	0%	0	0	0%	0%	0	0	0%	0%

Daily Services Latency Summary Report
10/26/2005

Collector Info		Daily Statistics					Last Week's Statistics				Last Month's Statistics		
Collector	Operation	Avg (msecs)	Avg Max (msecs)	Trys	Over %	Error %	Avg (msecs)	Avg Max (msecs)	Over %	Error %	Avg (msecs)	Avg Max (msecs)	Over %
Collector1	DefaultTelnet	282	789	1416	0%	0%	0	0	0%	0%	0	0	0%
Collector5	DefaultTelnet	61	309	1416	0%	0%	0	0	0%	0%	0	0	0%
Collector6	DefaultTelnet	60	236	1416	0%	0%	0	0	0%	0%	0	0	0%
CollectorOD4	DefaultTelnet	0	0	0	0%	0%	0	0	0%	0%	0	0	0%
CollectorOD3	DefaultTelnet	0	0	0	0%	0%	0	0	0%	0%	0	0	0%
CollectorOD2	DefaultTelnet	0	0	0	0%	0%	0	0	0%	0%	0	0	0%
CollectorOD1	DefaultTelnet	0	0	0	0%	0%	0	0	0%	0%	0	0	0%
Collector4	DefaultUDPEcho	0	0	1440	0%	100.00%	0	0	0%	0%	0	0	0%
Collector2	DefaultUDPEcho	0	0	1440	0%	100.00%	0	0	0%	0%	0	0	0%

Capacity Management

Mission:

Capacity Management is the discipline that ensures IT infrastructure is provided at the right time in the right volume at the right price, and ensuring that IT is used in the most efficient manner.

Why Capacity Management

- Plan and Monitor all IT Capacity in order to provide Capacity in a timley and cost efficient manner as required by the Business
- Understand the actual and future demand on IT Capacity.
- Influence IT Capacity Demand

Responsibilities and Duties

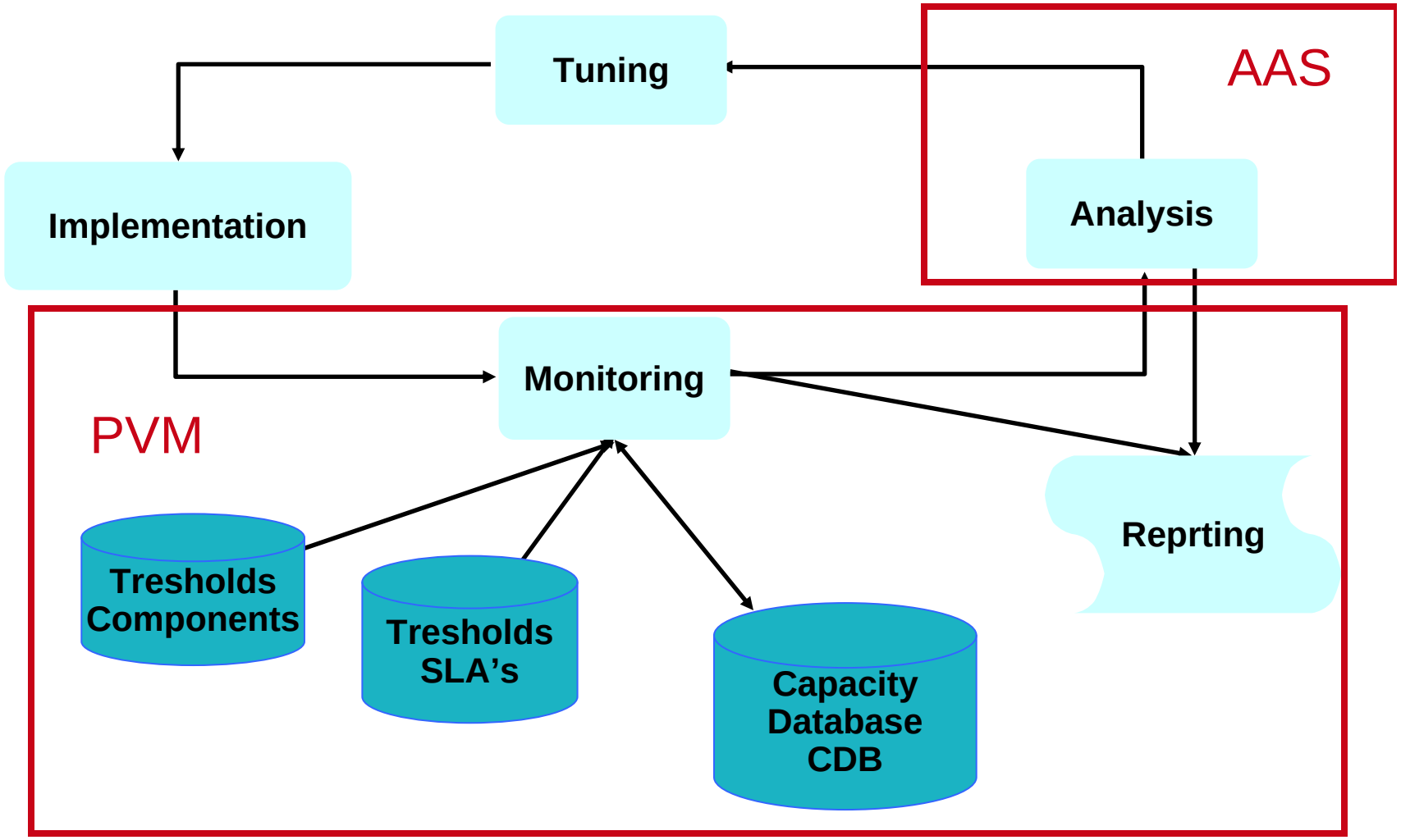
- Business Capacity Management

  Responsible that future Business demands get planed and implemented on time
- Service Capacity Management

  Focus on improving customer oriented IT Services
- Resource Capacity Management

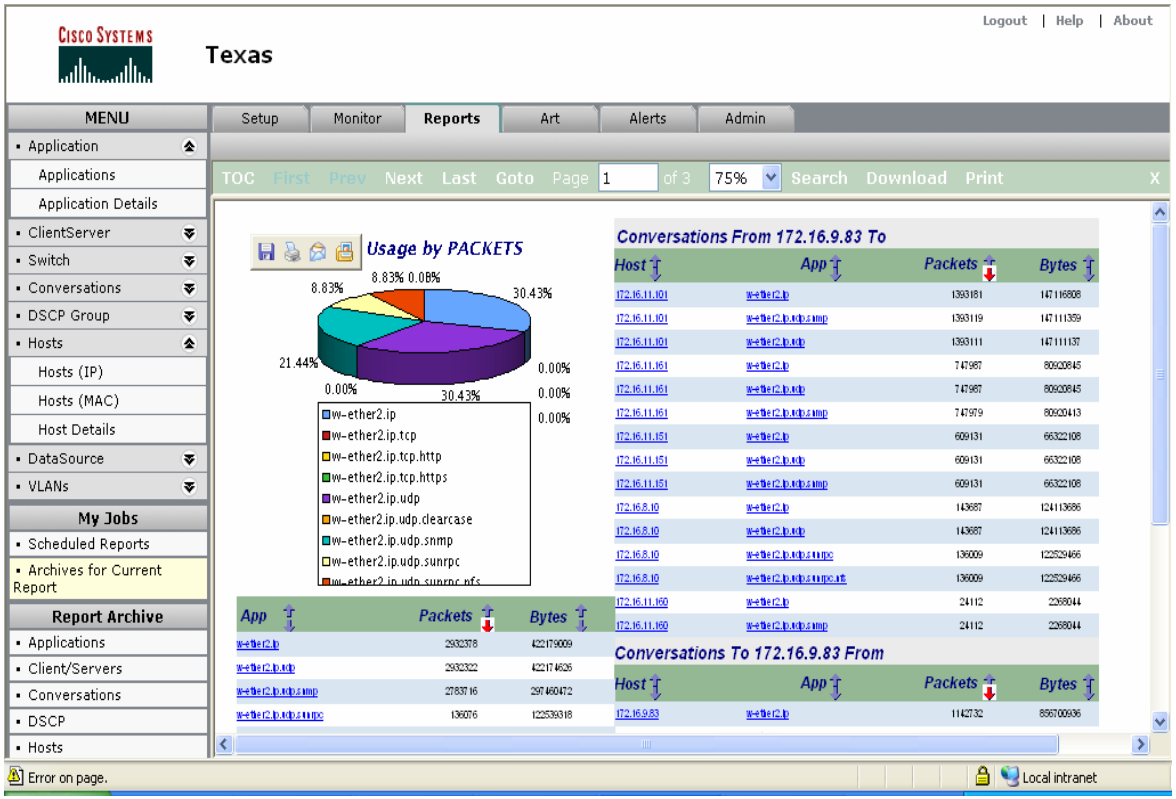
  Focus on IT Infrastructure Resources and its Management

Capacity Management



Traffic & Bandwidth Utilization Analysis

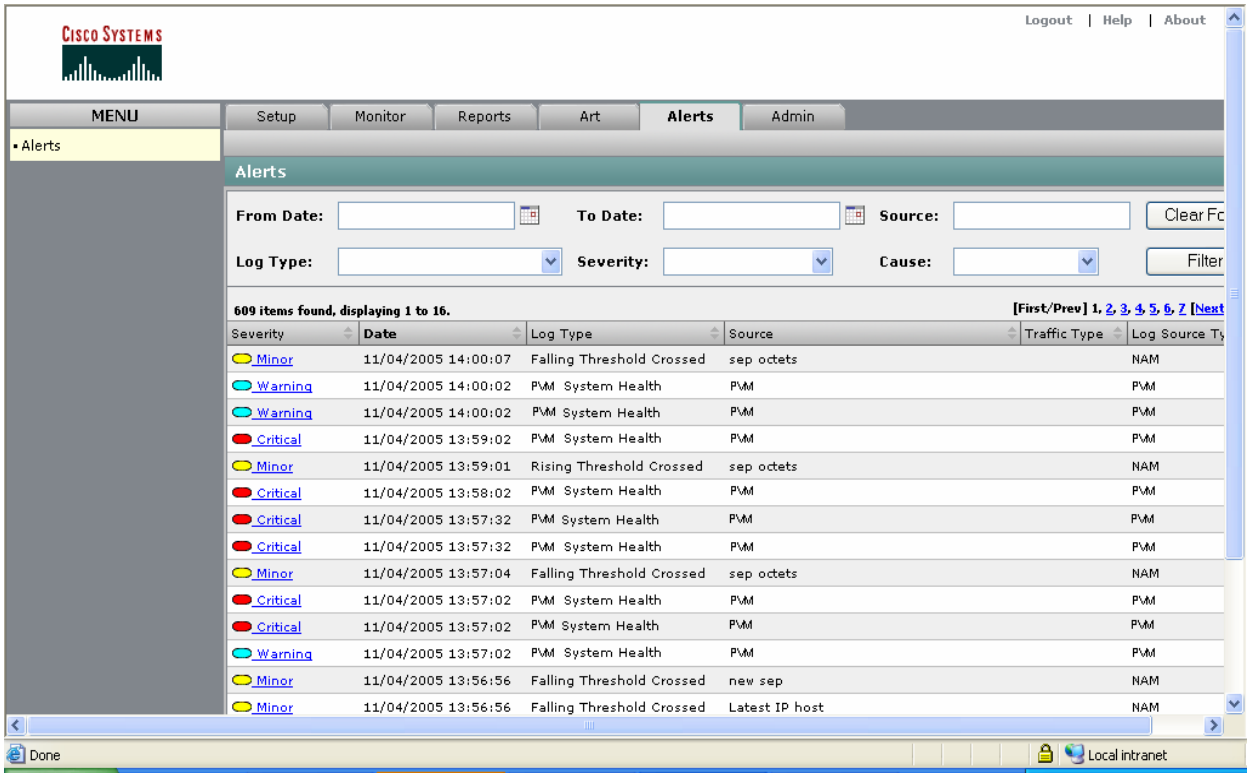
Performance Visibility Manager



- Top-N Analysis
  - Which applications are using the most bandwidth
  - Which locations are using the most bandwidth
  - Which hosts are using the most bandwidth
- Application Analysis
  - Fully leverage NAM's capabilities to differentiate traffic based on, static ports, dynamic ports, HTTP sub-classification by URL, etc.
- Hosts & Conversations Analysis
  - Identify top talkers and Who talk to who
- VLAN Analysis
  - Identify and drill down which applications, protocols and hosts are consuming bandwidth
- Port & Interface Statistics Analysis

Proactively Monitoring and Reporting

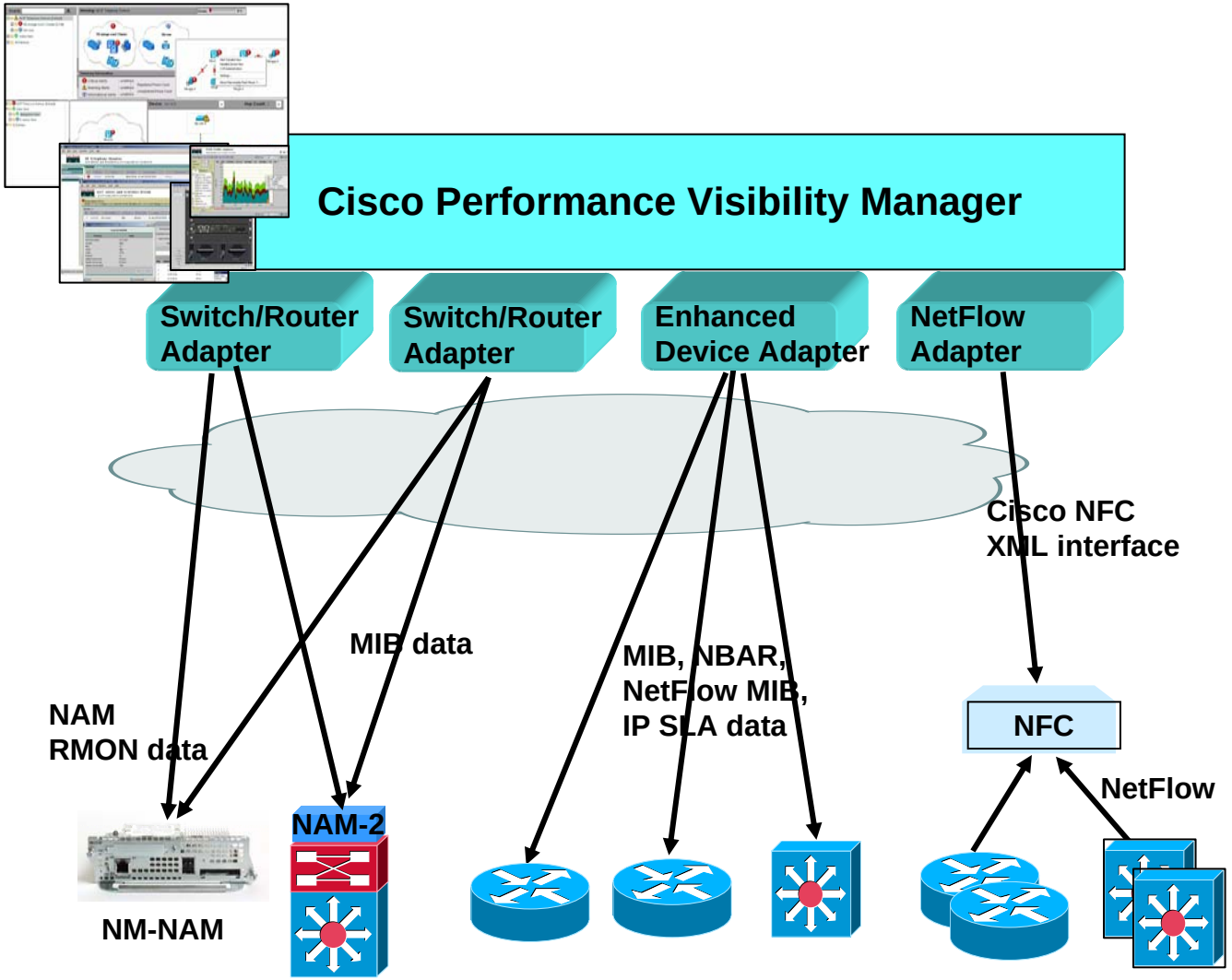
Performance Visibility Manager



- Automatic baselining of normal pattern of normal network behavior based on current and previous performance data
- Proactive monitoring and alerts generated as threshold crossing events
- Real-time reports, Historical reports & Trending reports
- Schedule reports & request on demand reports
- Preconfigured standard reports such as executive views, health reports and technical details per device
- Reports in CVS and PDF format

Performance Management Solution

Performance Visibility Manager



Phase 1

Centralized NAM solution

Phase 2

–Cisco NetFlow Collector (NFC)

•IP SLA

•Device Instrumentation Package - IP SLA, NetFlow MIB, etc.

Phase 3 (Q4 CY2007)

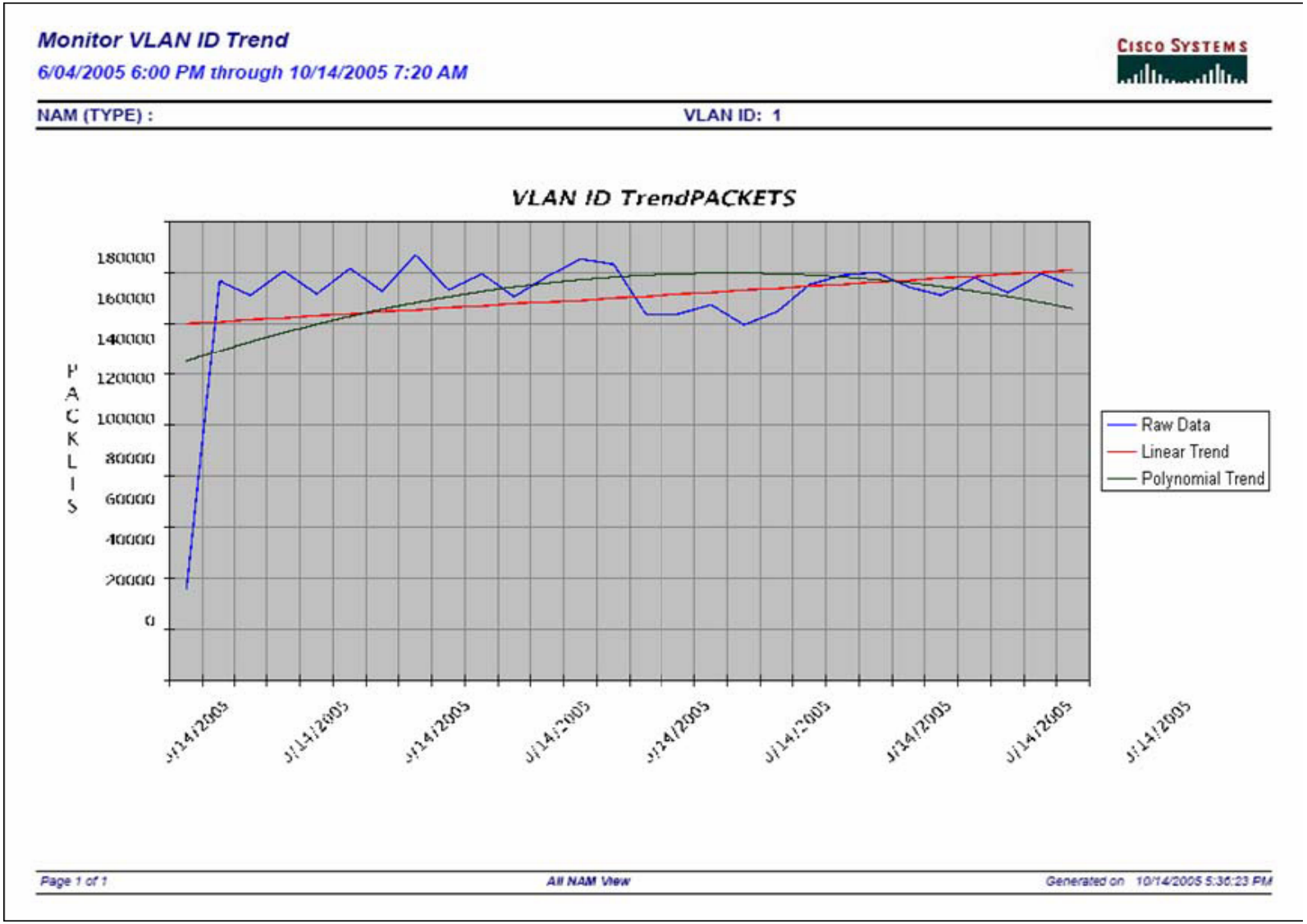
•Application Networking Service (ANS) package

•Cisco NFC 6.0 (2-tier architecture, Flexible NetFlow)

•QoS, NBAR

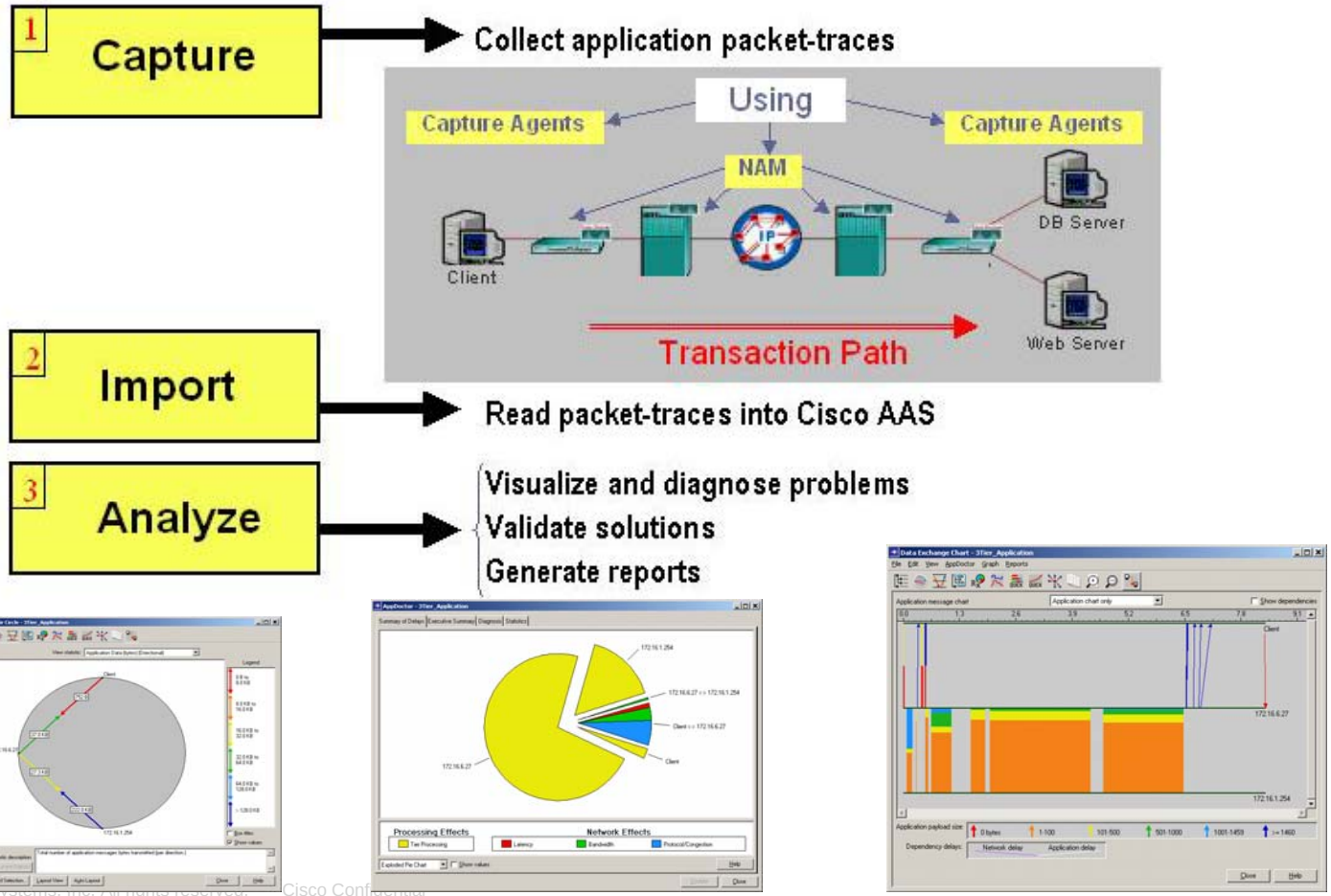
Cisco PVM – Trending report

Performance Visibility Manager

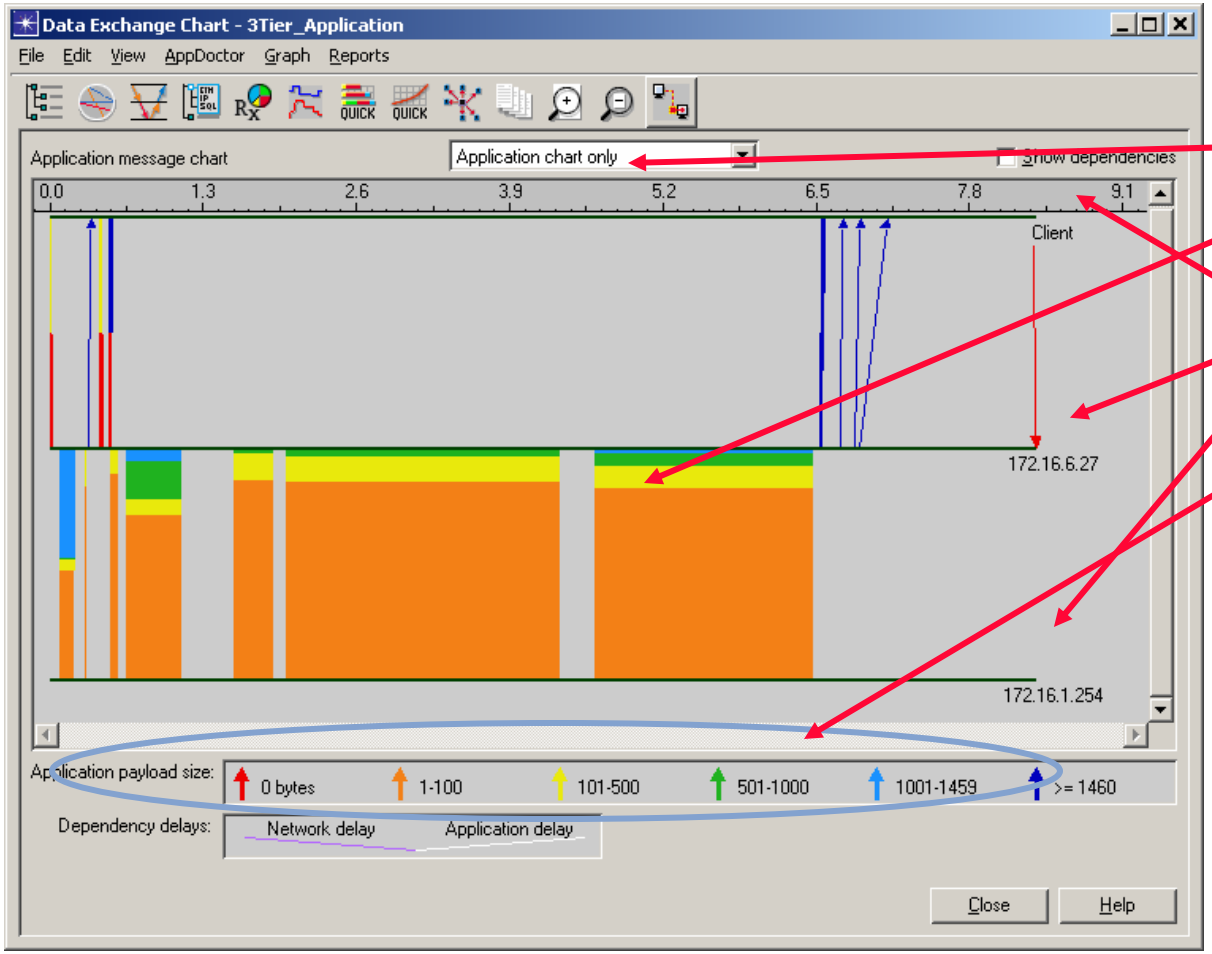


Cisco Application Analysis Solution (AAS)

- Rapidly isolate the causes of e2e problems, and determine if they are network or application related.



Cisco AAS Workflow: Visualize



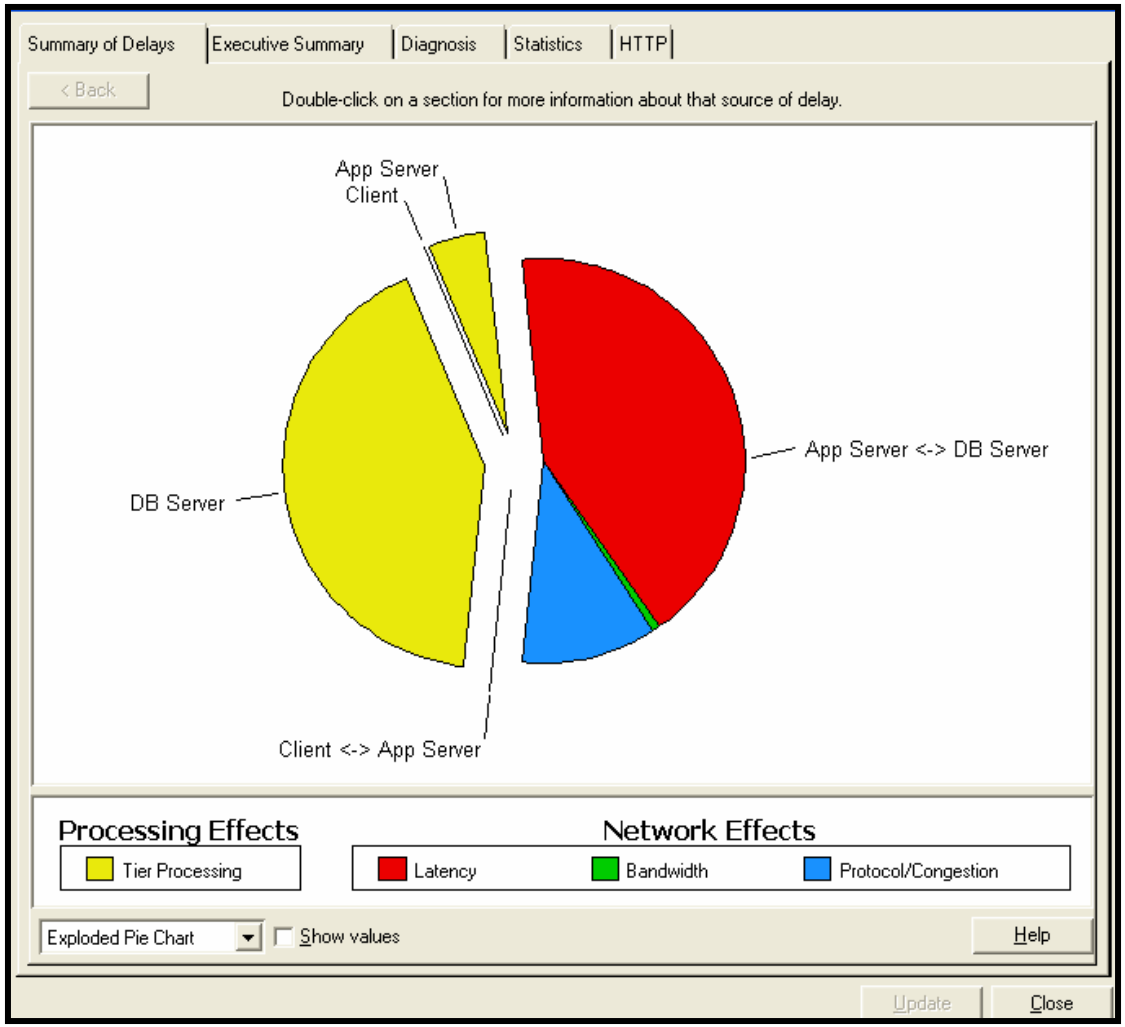
Multi-Tier Database Application
Data Exchange Chart

- Graphs displays and highlights:
  - Time line of transaction
  - Application messages
  - Application tiers
  - Message dependencies
  - Application payload
- Merge n-tier traces for complete end-to-end analysis

Results:

- Most activity is between the two servers,
- Most of the traffic consists of very small messages
- Very little of the end-to-end response time is due to the WAN

Cisco AAS Workflow: Diagnose



Summary of Delays:

- Breaks down transactions into Processing and Network effects
- Processing Effects:
  - Identifies Application Tiers
  - Shows % of Processing effect in each tier
- Network Effects:
  - Effect in each tier
  - Breakdown into three components
    - Latency
    - Bandwidth
    - Protocol/Congestion

Service Level Management

- Mission:

  Plan, coordinate, negotiate, report and manage the quality of IT services at acceptable cost.

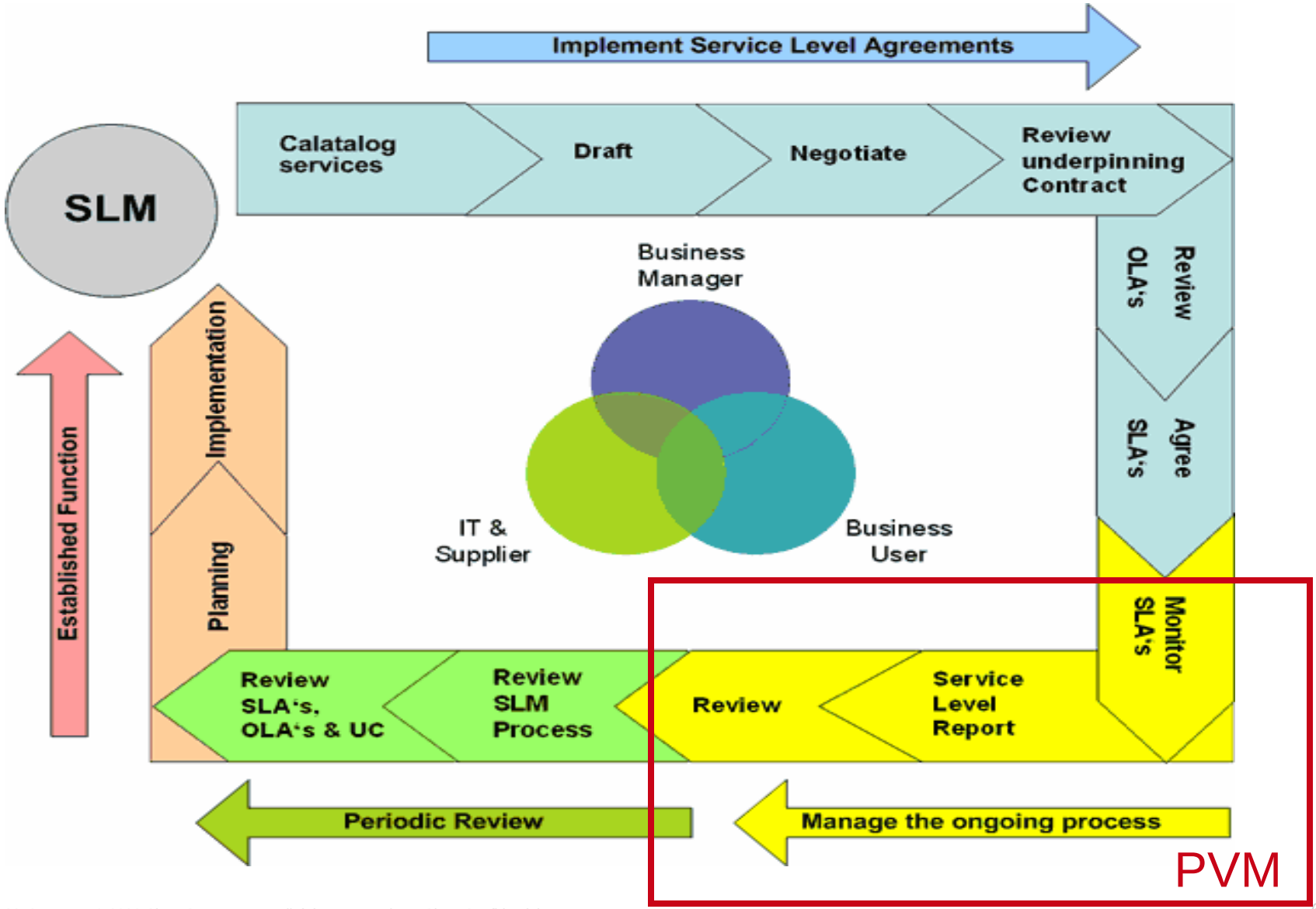
Why Service Level Management

- The goal is to maintain and improve IT Service Quality for business aligned Operations
- SLM documents the Service Goals in SLA‘s
- Manages and Monitors the fulfillment of SAL‘s

Responsibilities and Duties

- Negotiations with Customers on Service Requirements.
- Improving the SLA‘s by Service Improvement Programs
- Report on Cost of Service, Resources and meeting the SLA‘s

Service Level Management



Cisco PVM - Application Response Time

Performance Visibility Manager

Network Flight Time Per Protocol

For Time Period: 9/26/2005 10:59 AM - 9/26/2005 11:22 AM

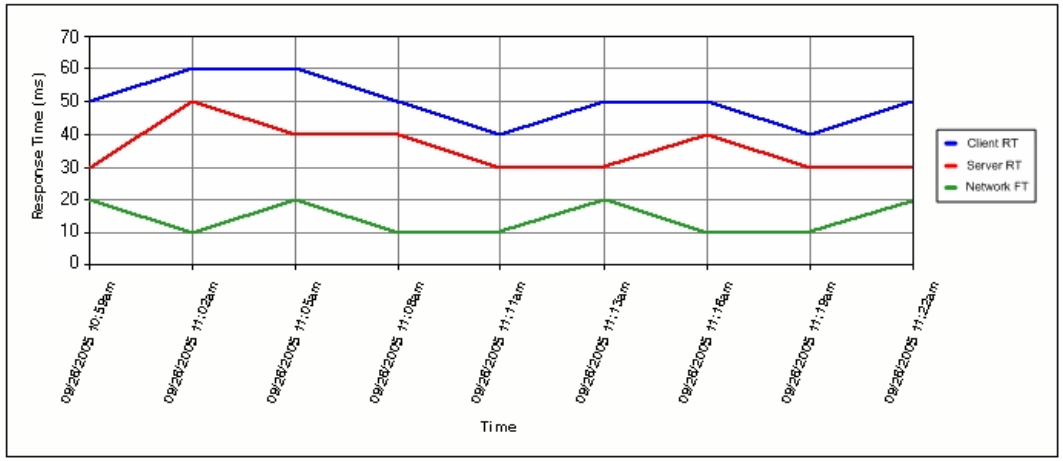
CISCO SYSTEMS

Server: 172.16.11.101 **Client: 172.16.11.43**

ART Group: ARTGROUP3 **Application Name: w-ether2.ip.tcp.http**

Server NAMs: namlab-2800-1 (NAM_1)

Client NAMs: namlab-6500-1 (NAM_2)

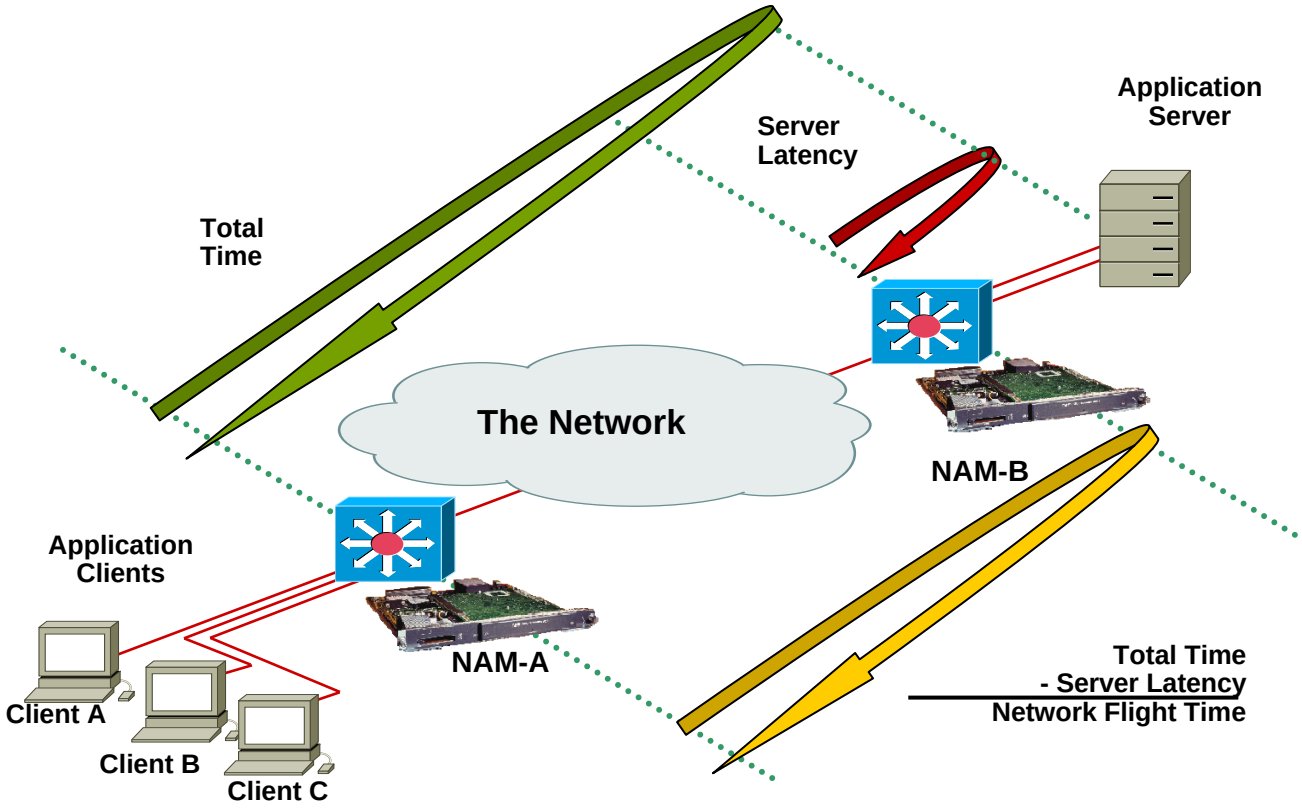


Page 1 of 1 *Generated on 11/18/2005 10:30:28 AM*

Cisco PVM - Application Response Time

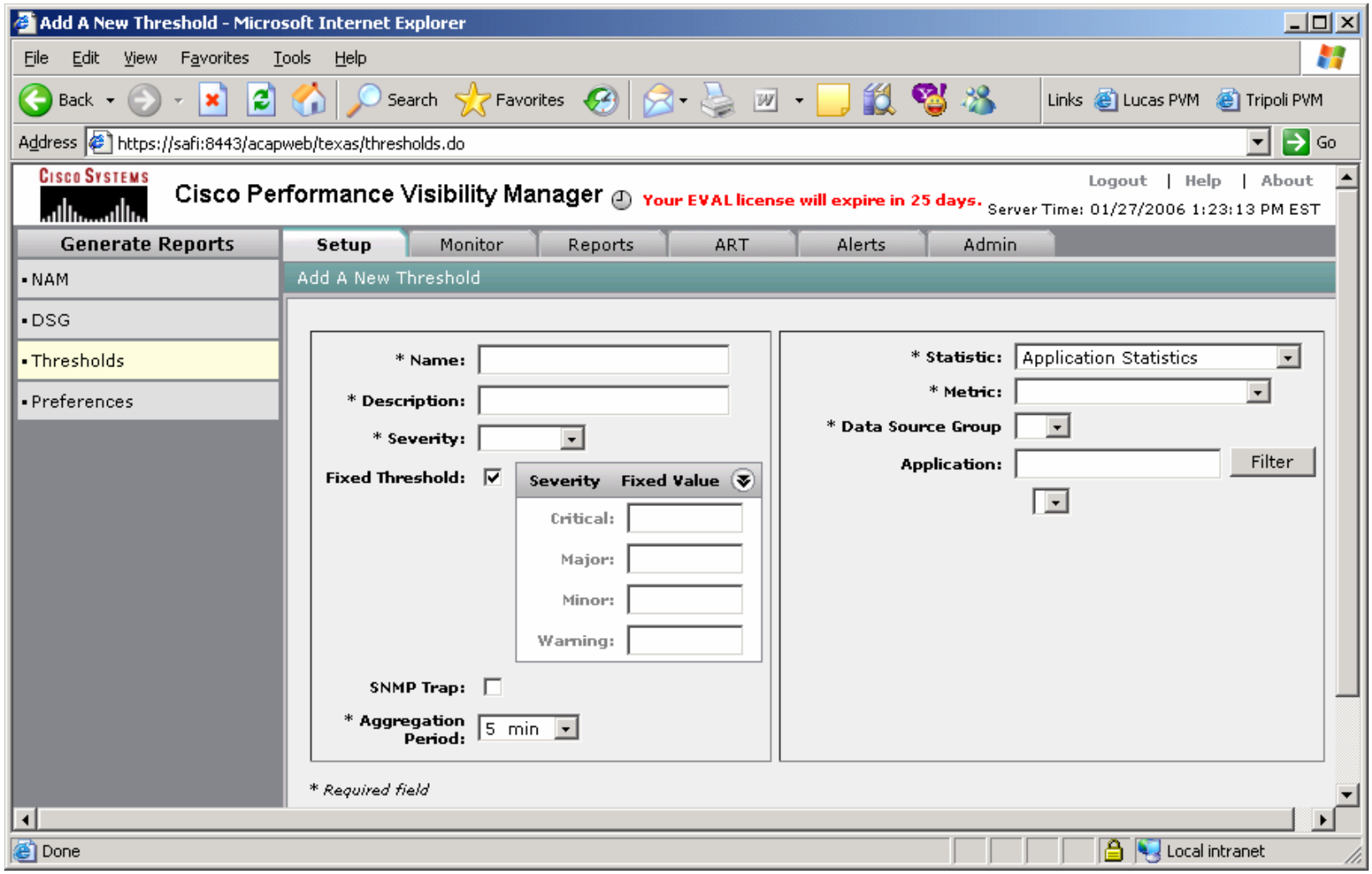
Performance Visibility Manager

Is It the Network or the Application?



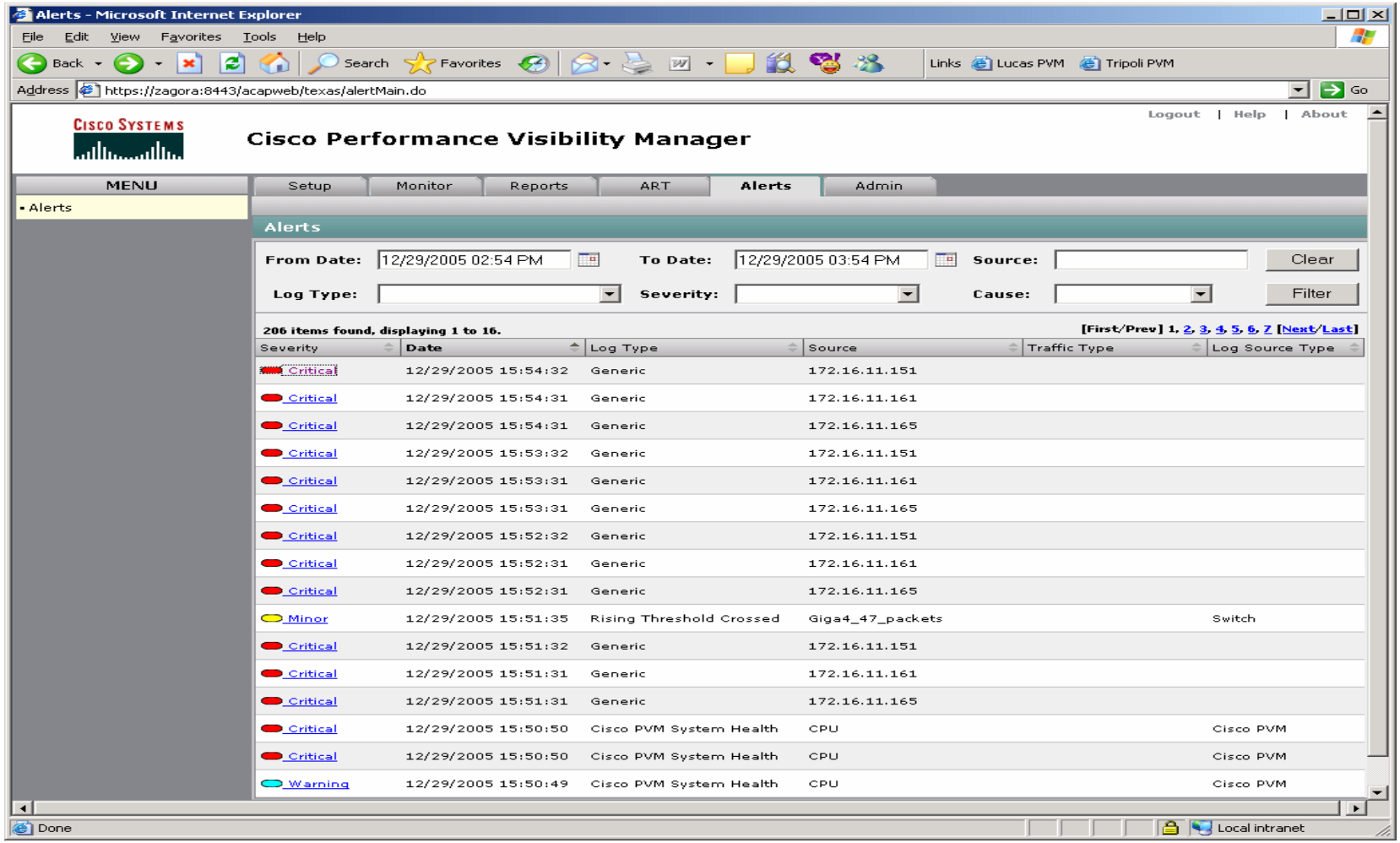
Cisco PVM – Baselining & Thresholds

Performance Visibility Manager



Cisco PVM - Alerts

Performance Visibility Manager



Continuity Management

Continuity management is the process by which plans are put in place and managed to ensure that IT Services can recover and continue should a serious incident occur. It is not just about reactive measures, but also about proactive measures - reducing the risk of a disaster in the first instance.

Best Practice

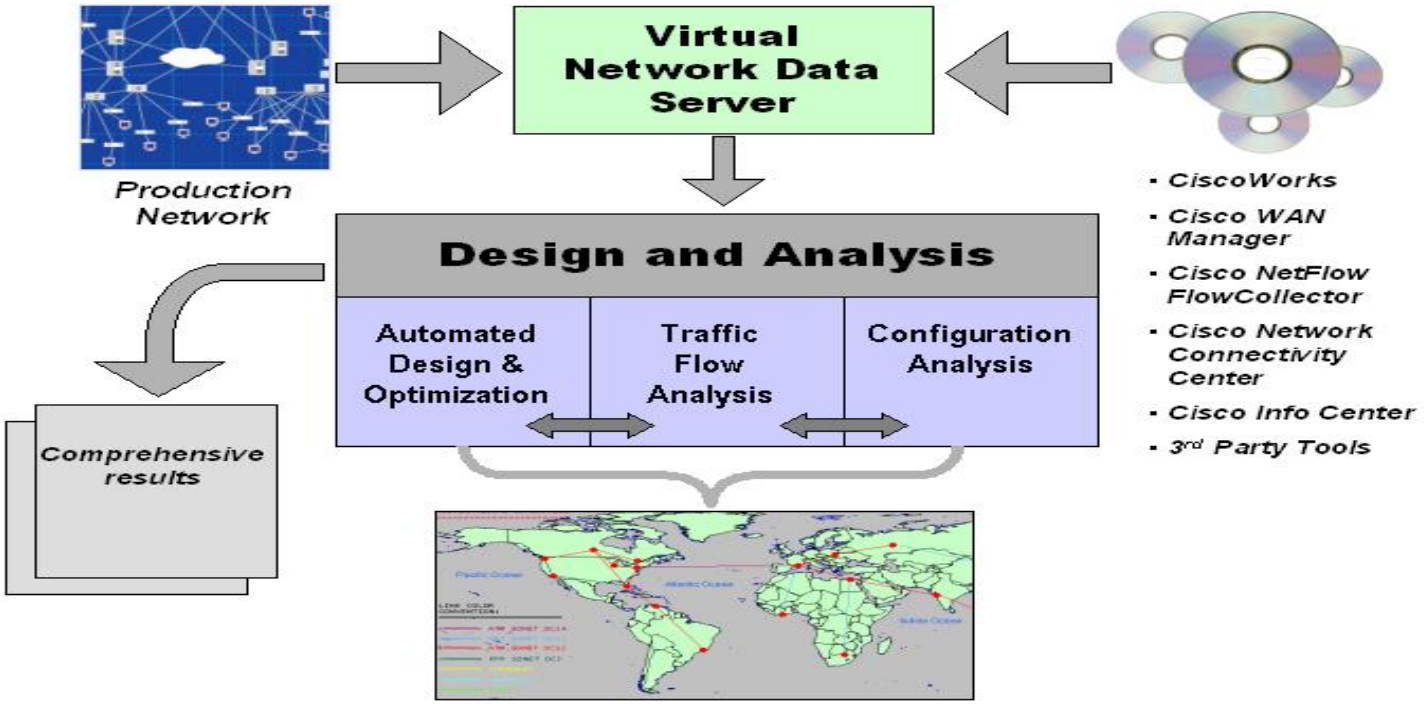
- BCM delivers the critical Business Process which must be protected
- ITSC Plan must have a Risk Assessment
- The ITSC must be adapted to changing Infrastructure

Advantages

- Proactive handling on Business Risks
- Disaster Recovery Plans increase trusts in Customers and Investors
- Having assessments criterion if Disaster strikes
- Clear competencies in case of Disaster

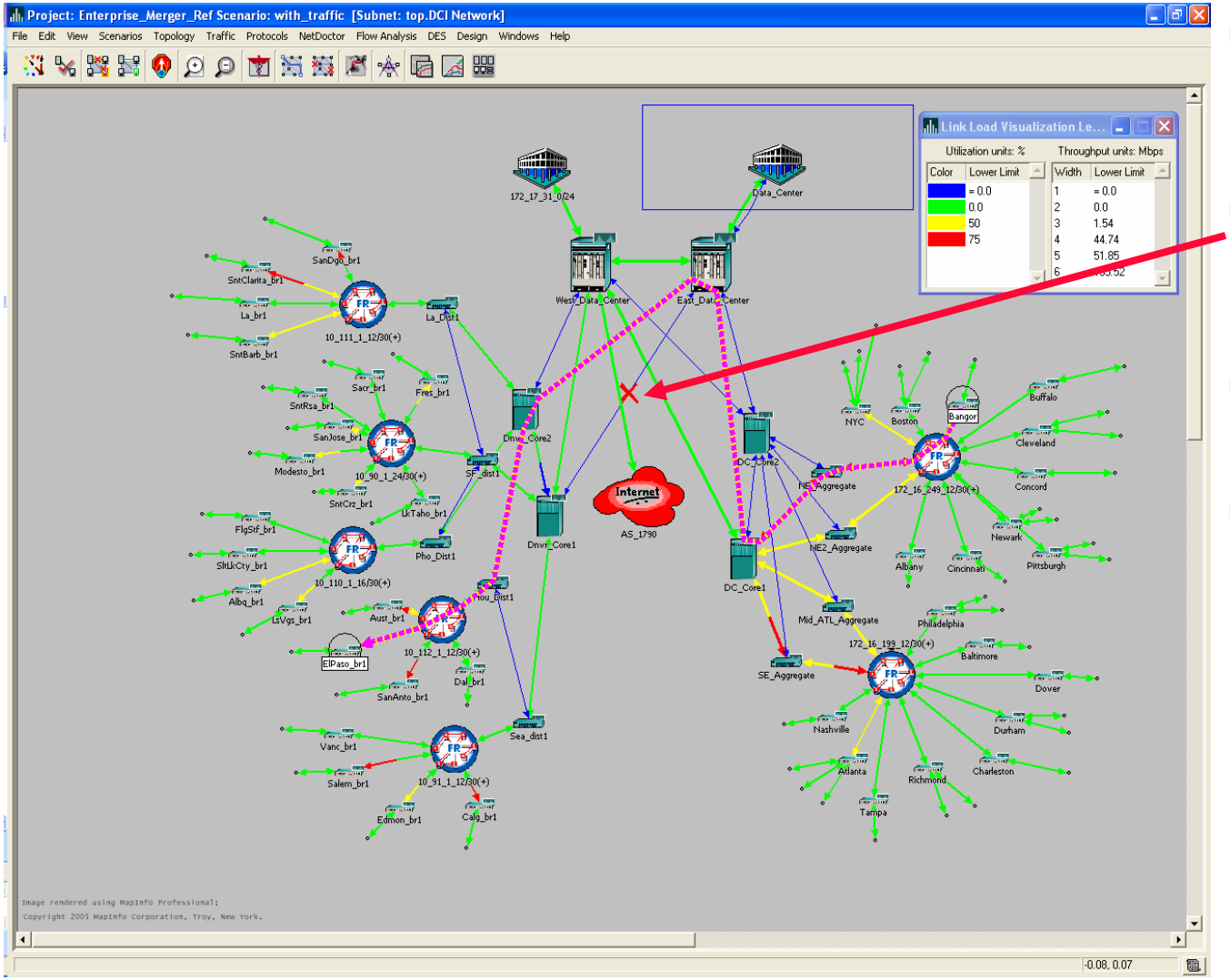
Cisco Network Planning Solution (NPS)

- Predict the impact of changes to topology, configuration, traffic, and technology on performance
- Proposed network changes validated against policies prior to deployment
- Automate capacity planning and topology design
- Optimize link size for resiliency and cost/performance



Cisco NPS Workflow

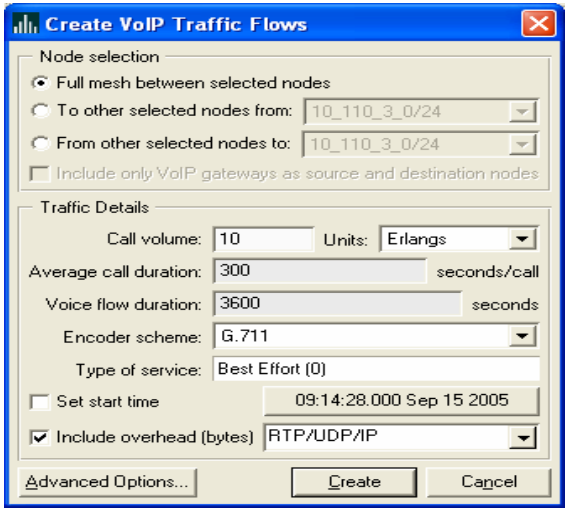
Flow Analysis – Failure Analysis

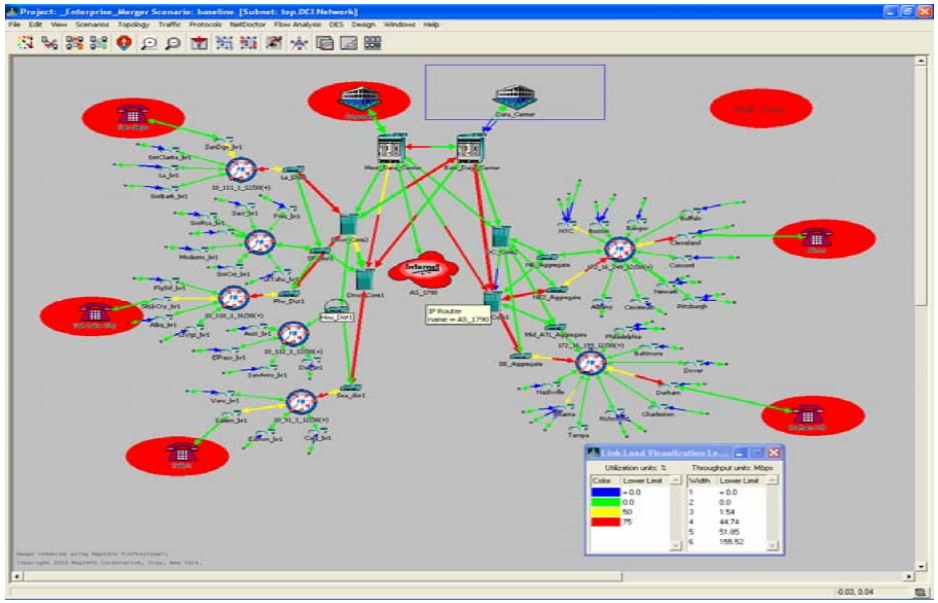


- Study many failure scenarios automatically
- Select resources to fail singly or in groups
- Flows recomputed for each failure case
- Sort results to identify “worst cases”

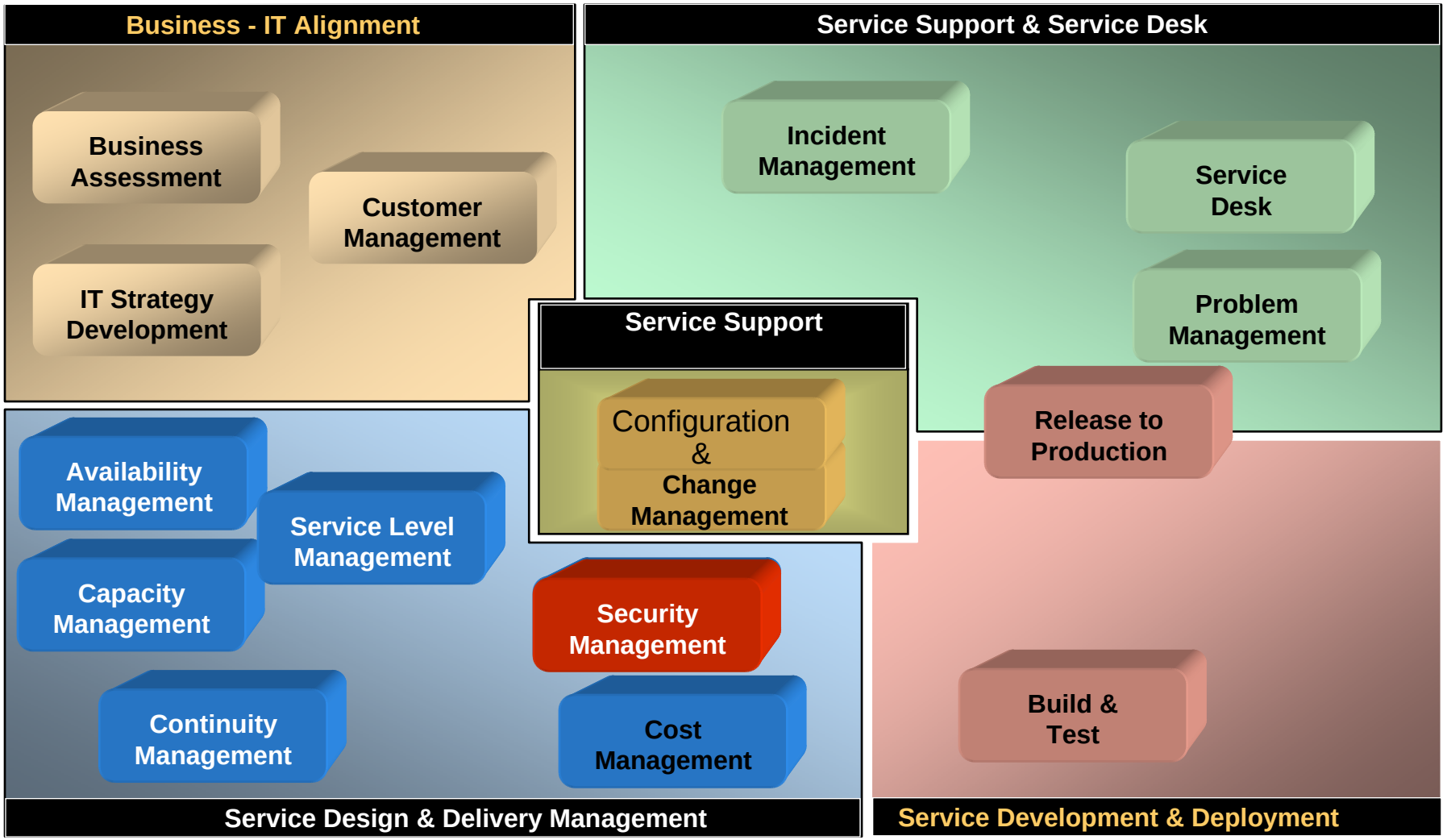
Cisco Network Planning Solution

- Enable "cause and effect" understanding to:
  - Predict the impact of changes to topology, configuration, traffic, and technology on performance and policy compliance
  - Optimize link size for resiliency and cost/performance
- Integrated end-to-end planning workflow consisting of “what-if” analysis, traffic trending and forecasting, and exclusive design and optimization algorithms





ITIL Security Management



Security Management

Mission: To prevent the occurrence of security-related incidents by managing the confidentiality, integrity and availability of IT services and data line with business requirements at acceptable cost.

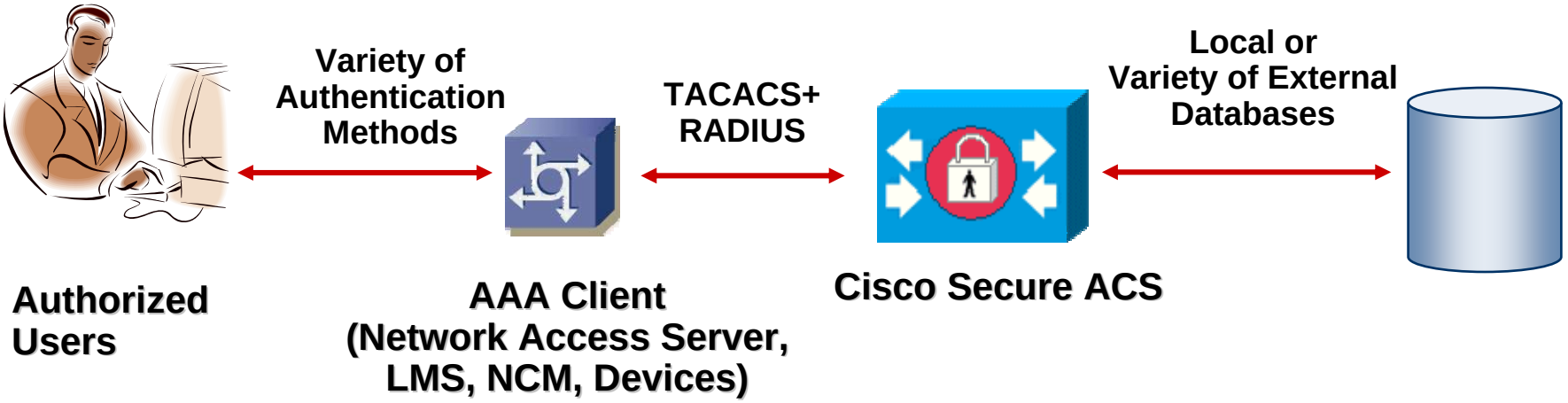
Why Security Management

•**Confidentiality** - Information is accessible only to those authorized.
•**Integrity**- Safeguarding the accuracy and completeness of information
•**Availability**– Authorised users have access to information when required.

Responsibilities and Duties

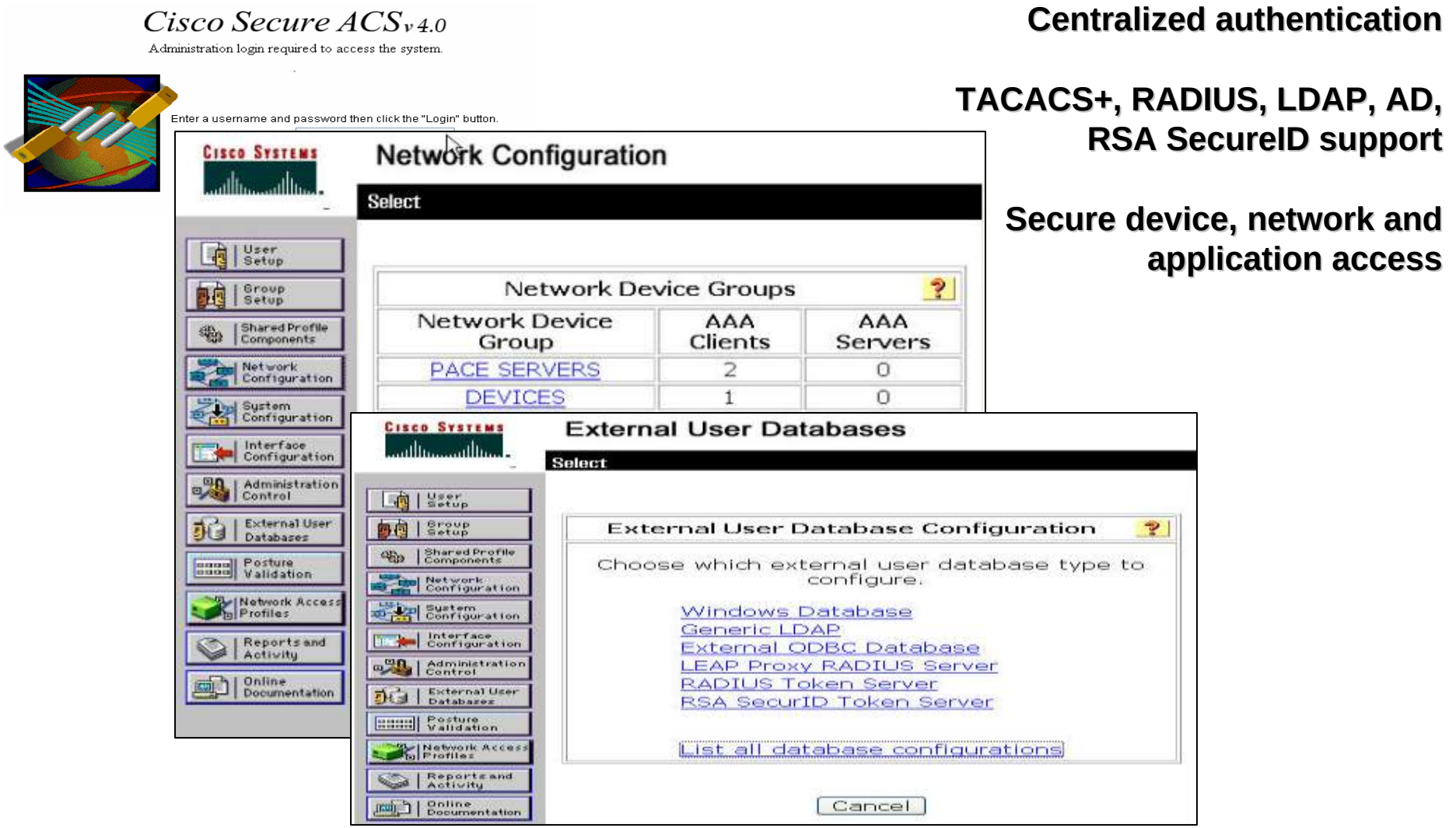
- Plan, Implement, Assess and Improve Security
- Implements physical, technical process oriented personal Security actions
- Takes counteractions against Security breaches

Cisco Secure Access Control Server (ACS)



- **AAA Client/Server**
  - AAA Client defers authorization to centralized AAA server
  - Highly scalable
  - Uses standards-based protocols for AAA services

ACS Secured Access



Centralized authentication

TACACS+, RADIUS, LDAP, AD, RSA SecureID support

Secure device, network and application access

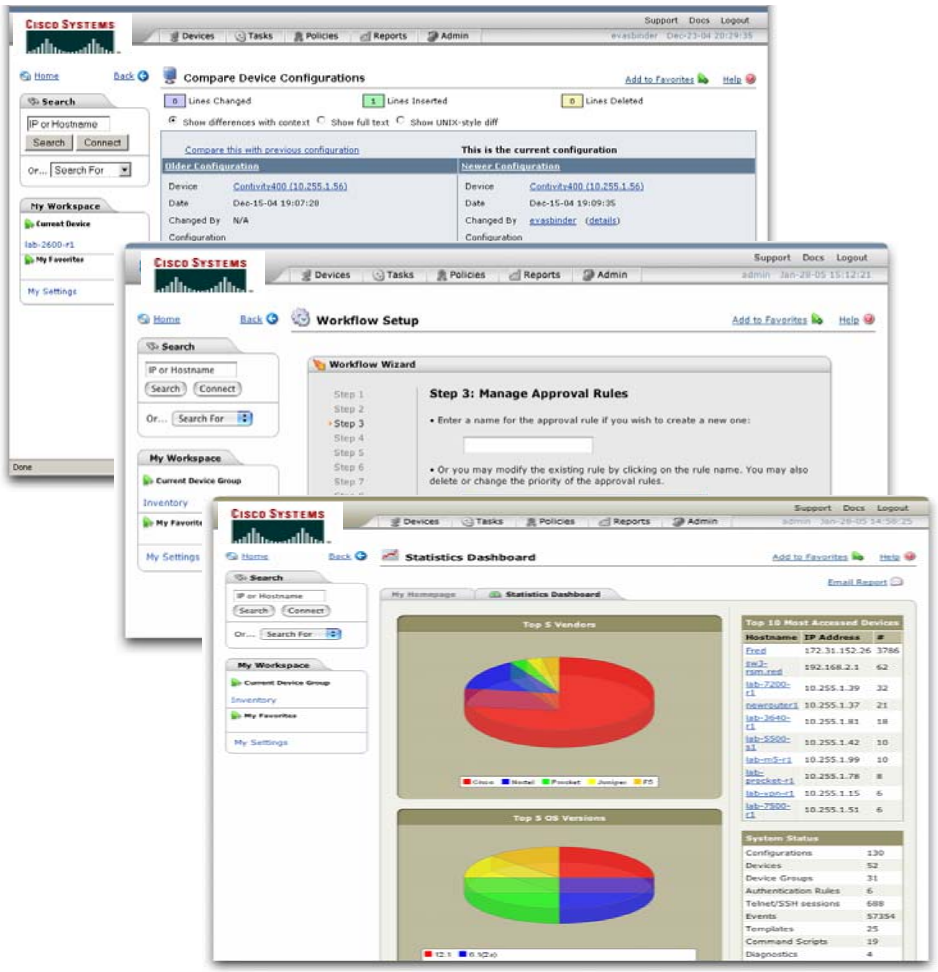
CiscoWorks Network Compliance Manager

Best-in-breed Network Configuration and Change Management (NCCM)
- real-time change detection
- device config and OS provisioning
- pre-deployment validation
- policy enforcement

Sophisticated Audit and Compliance Analysis
- set policy to track config and OS compliance
- automated generation of compliance reports (SOX, VISA CISP, HIPAA, GLBA, ITIL, CobiT, COSO)

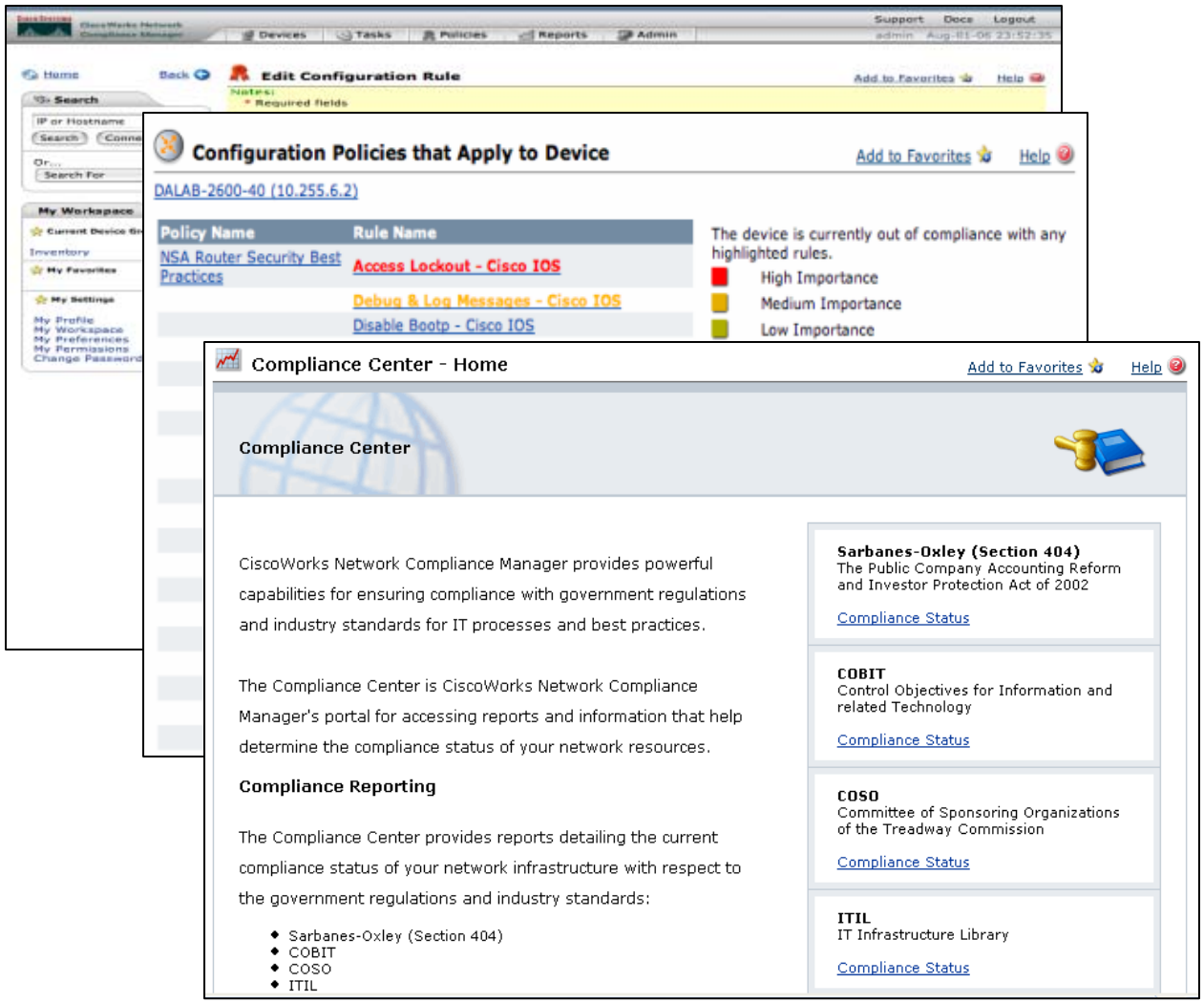
Advanced Workflows
- model complex projects
- define custom approval policies

Extensive Reporting
- network status
- compliance



Audit & Compliance

Network Compliance Manager



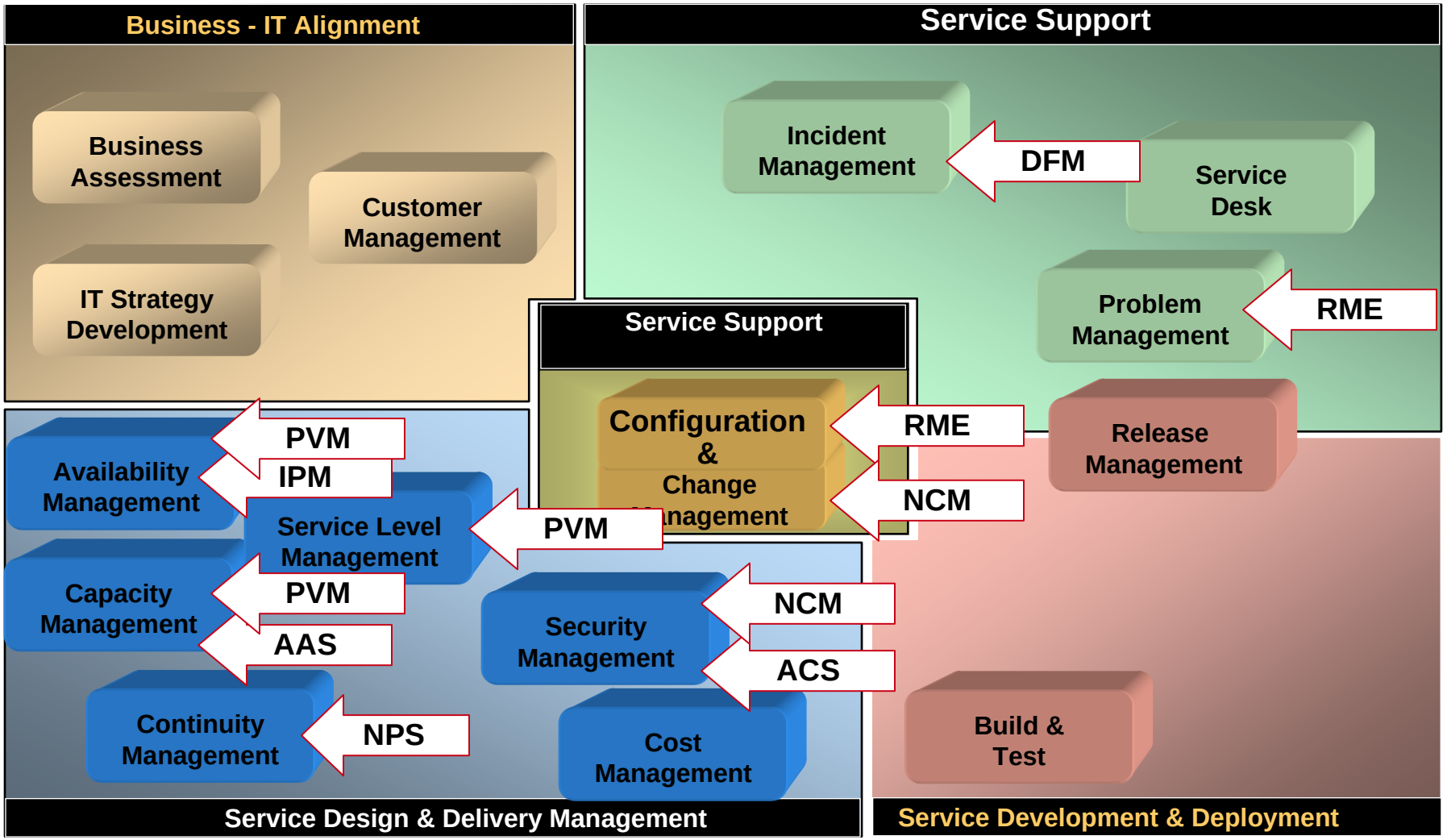
Extremely flexible, and granular policy enforcement model

Check device configurations against policies

Adhere to standards compliance

Packaged Compliance Reports

ITIL Processes & Cisco Tools



Summary

- Cisco's Tool Focus Today is clearly on Configuration and Change Management and on Service Delivery for the Network.
- There is no one2one match of ITIL Processes and Cisco Tools (Tools support multiple Processes and vice versa)
- CMDB Data as one of the major ITIL Data Store could be partially extracted from the RME Database
- PVM will become the Cisco Network Performance Datawarehouse with all kind of Availability, Capacity and Service Level Data for Applications and the Network

Yes we support a lot of ITIL Process with CISCO tools !!!

Meet the Experts
Management & Operations

- Benoit Claise
  Distinguished Service Engineer
- Bruno Klauser
  Consulting Systems Engineer
- Emmanuel Tychon
  Technical Marketing Engineer
- Ralph Droms
  Technical Leader
- Stephen Mullaney
  Technical Marketing Engineer
- Stuart Parham
  Consulting Systems Engineer






Q and A