

Ongoing Implementation of a Configuration Management System (CMS)

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www.inl.gov



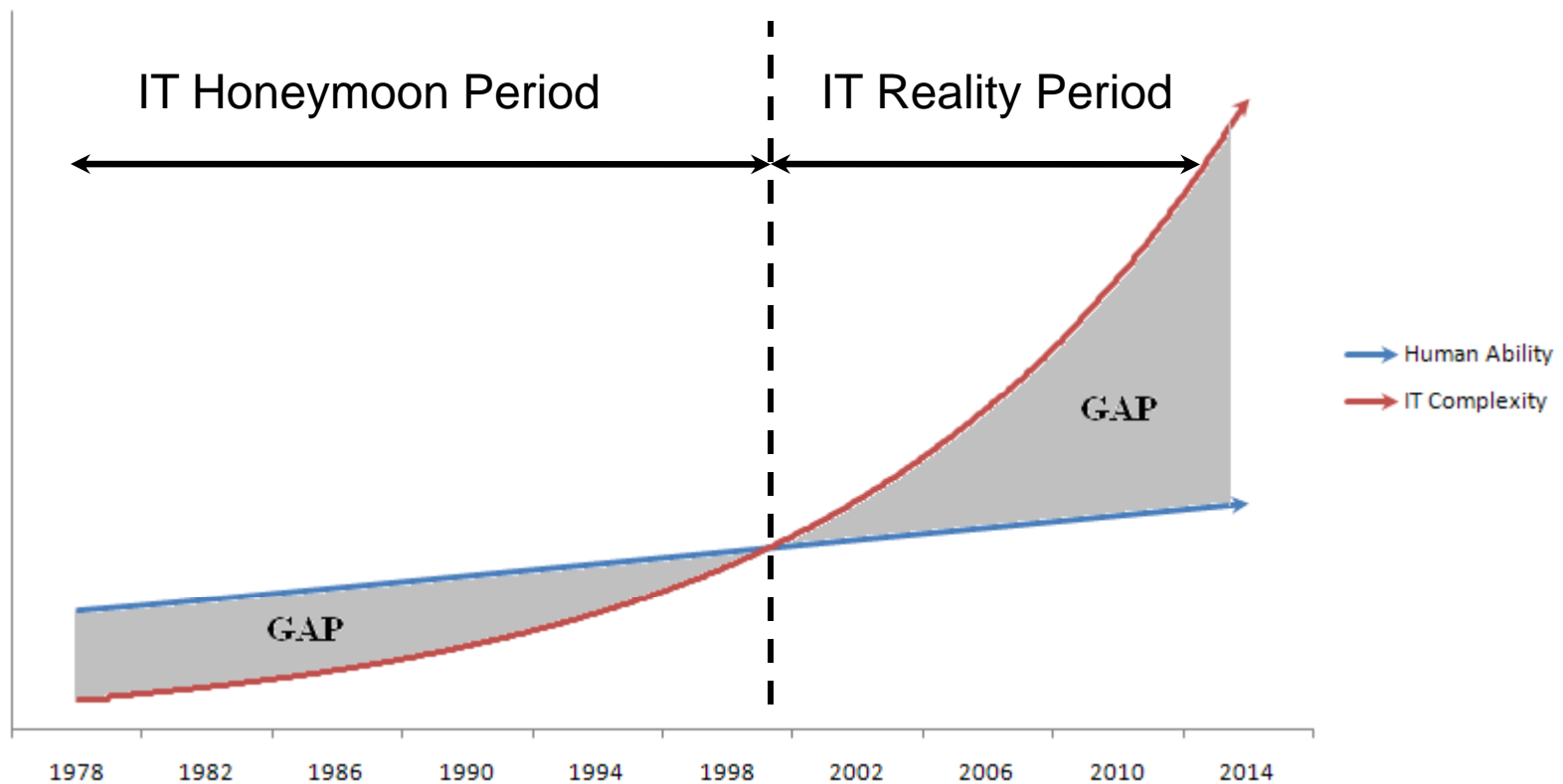
About ITSM Academy



- Accredited Education
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 - ✓ ITIL® Foundation
 - ✓ ITIL Capability (OSA | PPO | RCV | SOA)
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- Alumni Program
- PMI Global Education Provider
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Welcome!

The Challenge - Managing Complexity



O'Donnell, G., & Casanova, C. (2009). *The CMDB Imperative*. Prentice Hall.

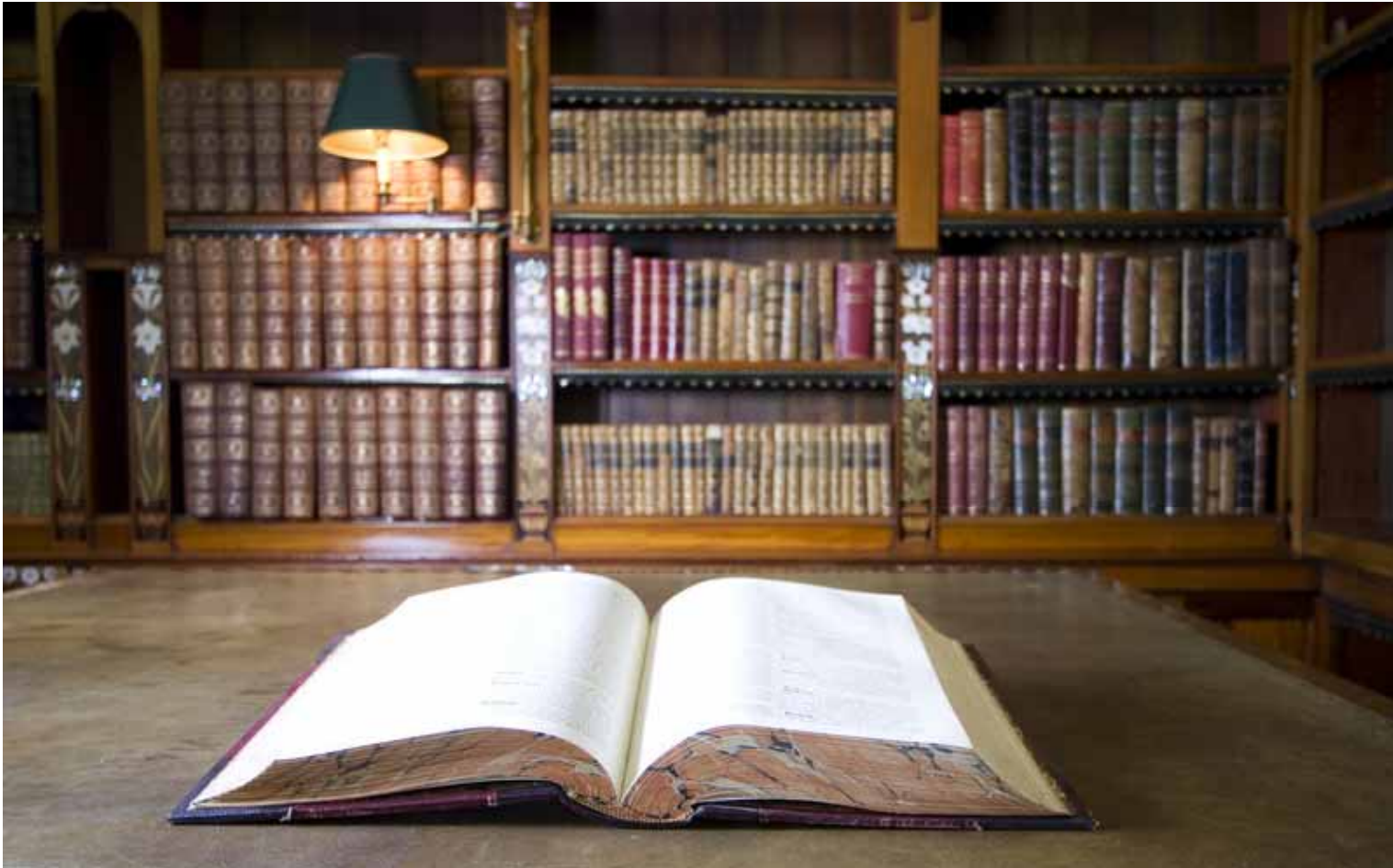
The Take Away – What I want you to know

- How to bridge the complexity gap
 - How do CMDBs support a CMS
 - What VALUE comes from a CMS
 - What have we done so far to build our CMS
 - What makes up an SKMS
 - Our beginning analytics towards an SKMS

The Tools – IT Service Management (ITSM)

- ↑ **SKMS - Service Knowledge Management System** Knowledge
- ISMS - Information Security Management System
 - SCD - Supplier Contract Database
 - CMIS - Capacity Management Information System
 - KEDB - Known Error Database
 - ITSCMS - IT Service Continuity Management System
- CMS – Configuration Management System** Information
- Request, Incident and Problem Management
 - Change, Asset and Configuration Management
 - Portfolio and Catalog Management
 - Access Management
 - DML – Definitive Media Library
- CMDB – Configuration Management Database** Data
- CIs – Configuration items, relationships / attributes

The Goal - Knowledge



***“It’s not what you know that gets you in trouble.
It’s what you know that ain’t so.” – Yogi Berra***

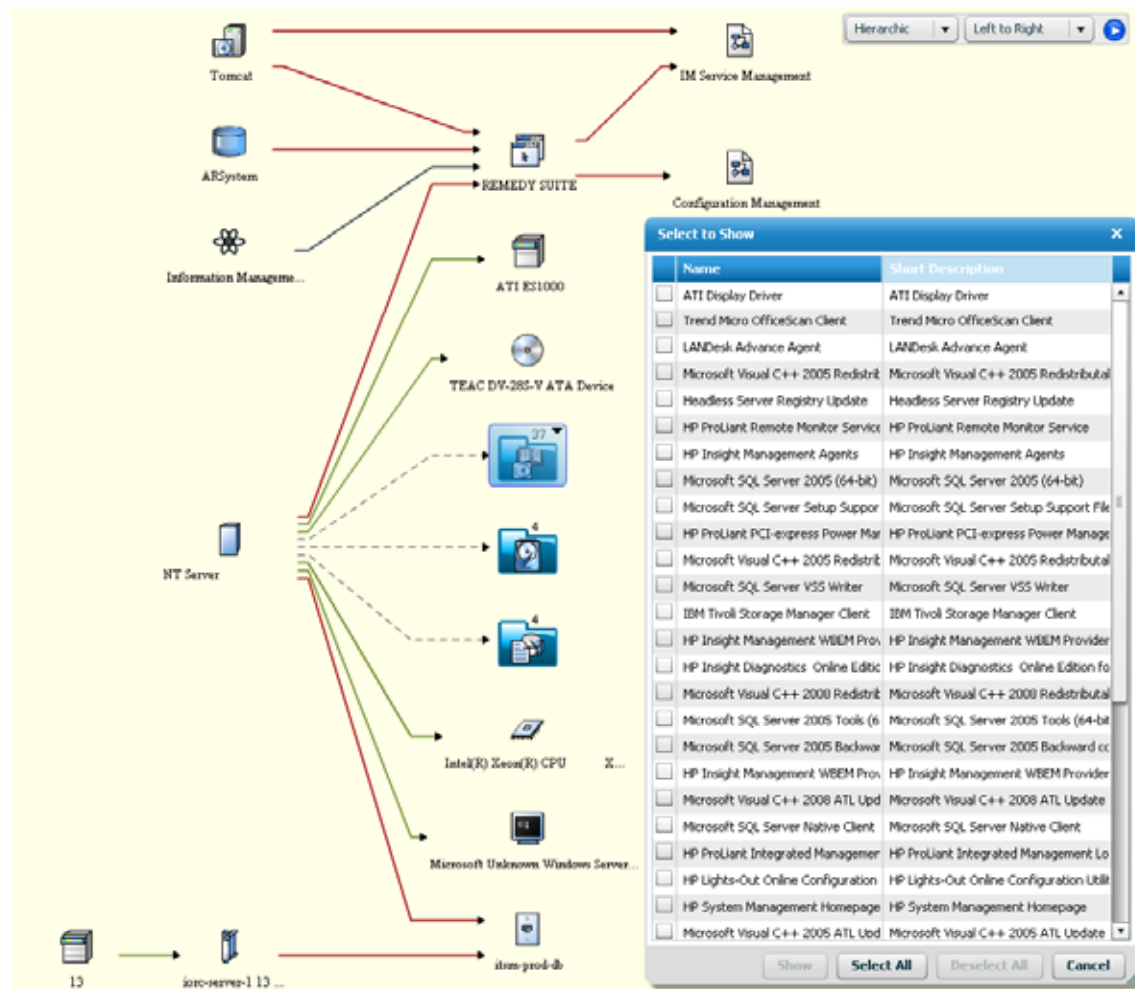
The Focus - Business Value

- **More business opportunities through improved security**
 - Vulnerability management
 - Firewall rules
 - Variance tracking
 - Configuration item relationships
 - Currently maturing – highest priority
- **Measure end to end service levels and warranties**
 - Break services down to components
 - Rollup component availability to service
 - Currently availability only
- **Identify the costs for a service**
 - Service Level Agreement (SLA) costs
 - Budget by service
 - Currently minimal references to CMS not automated

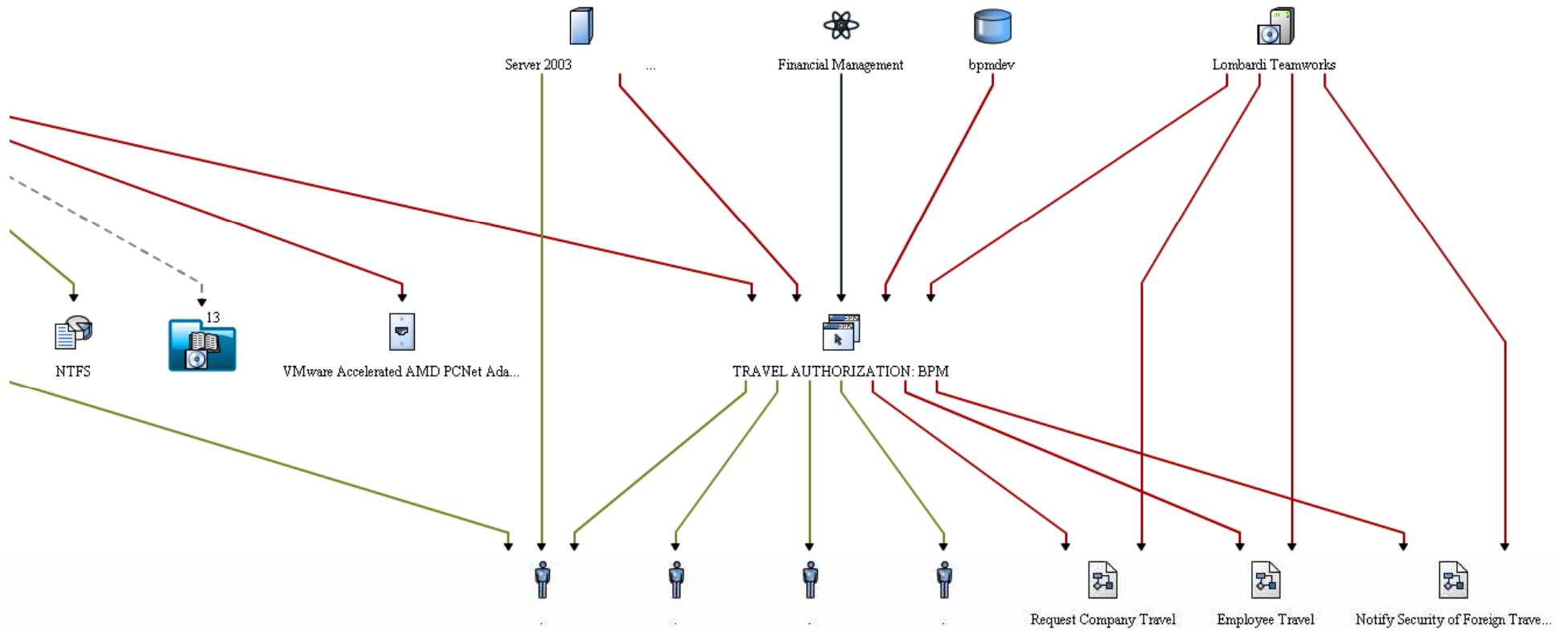
The CMDBs – Where did we start

- Enterprise Architecture Repository
 - Manual data source
 - Relates applications to business functions – services
 - Relates applications to servers and software
- Network Information Center
 - Manual data source
 - Relates equipment to personnel
 - Relates equipment to network infrastructure
- LANDesk
 - Discovered data source
 - Relates servers/desktops to network connectivity
 - Relates servers/desktops to software

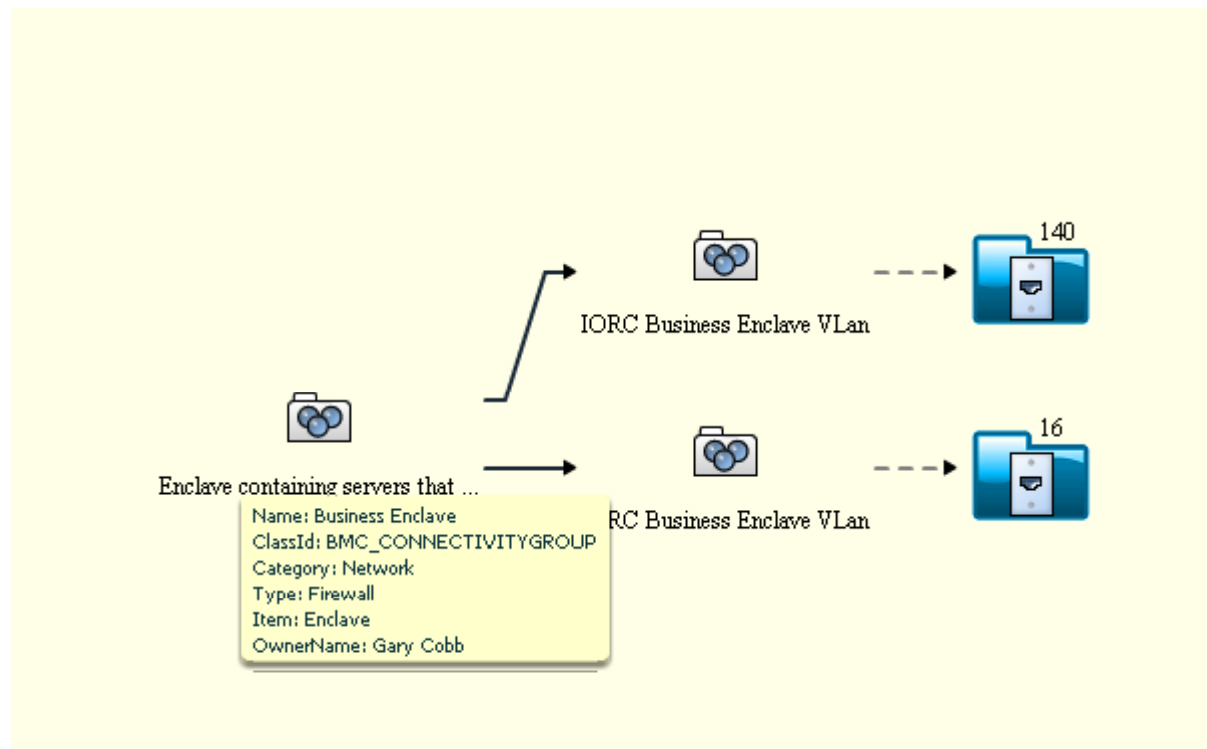
The CMS – Context of service from end to end



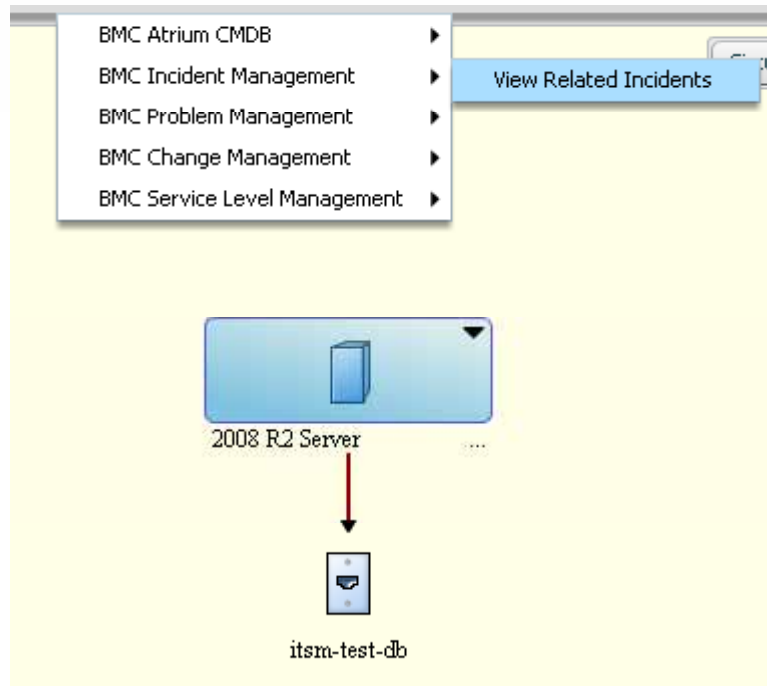
The CMS – A business service



The CMS - Breaking it down



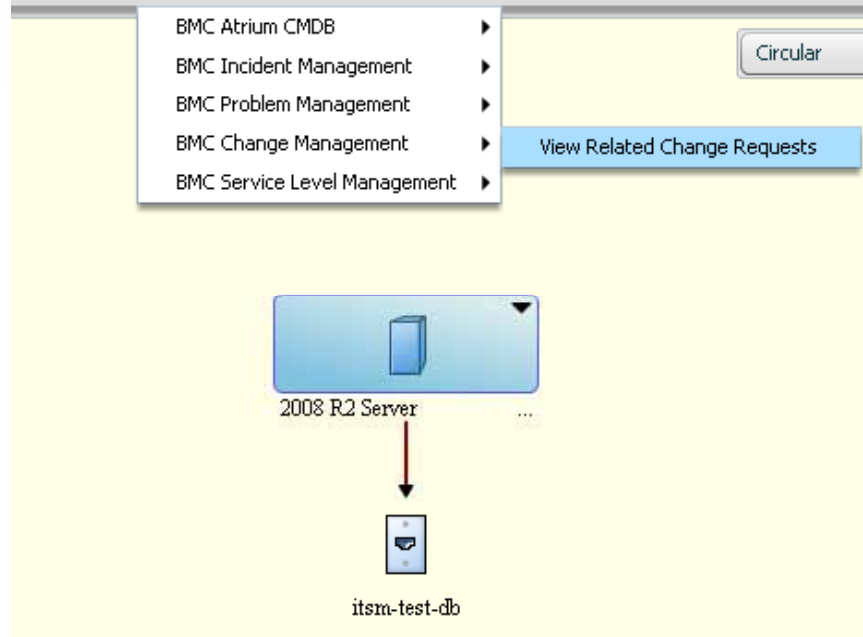
The CMS – Related Vulnerabilities



Showing 1 - 9 of 9

Incident ID	Summary	Incident Status	Priority	Customer Last ...	Customer First ...	Customer Company	Reported Date
INC000000193834	SecurityVuln NES-49272: itsm-test-db (1...	Resolved	Medium	.. Nessus	Archer	Idaho National Laboratory	2/3/2011 5:12:30 PM
INC000000212241	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Assigned	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 10:12:20 AM
INC000000212277	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Assigned	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 11:27:37 AM
INC000000212278	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Assigned	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 11:32:39 AM
INC000000212325	SecurityVuln NES-0000: ITSM-DEV-DB (...)	In Progress	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 2:18:35 PM
INC000000212334	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Assigned	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 2:30:04 PM
INC000000212339	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Resolved	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 2:37:14 PM
INC000000212341	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Resolved	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 2:40:33 PM
INC000000212344	SecurityVuln NES-0000: ITSM-DEV-DB (...)	Resolved	Medium	.. Mora	Angelina	Idaho National Laboratory	4/27/2011 2:44:03 PM

The CMS – Related Changes



Showing 1 - 5 of 5

Change ID	Support Company	Change Status	Summary	Risk Level	Scheduled Star...	Scheduled End...	Actual Start Date	Actual End Date
CRQ000000012352	Idaho National Laboratory	Closed	Windows DEV: Monthly Maintenance	Risk Level 1	3/9/2011 6:00:00 ...	3/9/2011 10:00:00...	3/9/2011 6:00:00 ...	3/9/2011 8:00:00 ...
CRQ000000012742	Idaho National Laboratory	Closed	Windows DEV: Monthly Maintenance	Risk Level 1	4/13/2011 6:00:00...	4/13/2011 10:00:0...	4/13/2011 6:00:00...	4/13/2011 10:00:0...
CRQ000000013055	Idaho National Laboratory	Closed	Windows DEV: Repeat Monthly Maintena...	Risk Level 1	4/19/2011 6:00:00...	4/19/2011 10:00:0...	4/19/2011 6:00:00...	4/19/2011 10:00:0...
CRQ000000013236	Idaho National Laboratory	Completed	Windows DEV: Monthly Maintenance	Risk Level 1	5/11/2011 6:00:00...	5/11/2011 10:00:0...	5/11/2011 6:00:00...	5/11/2011 10:00:0...
CRQ000000013262	Idaho National Laboratory	Scheduled	SecurityVuln NES-0000: ITSM-DEV-DB (...	Risk Level 1	4/27/2011 4:00:00...	4/27/2011 6:00:00...		

The CMS – Network Firewall Rule Request

Provide Information

Firewall Rule Request

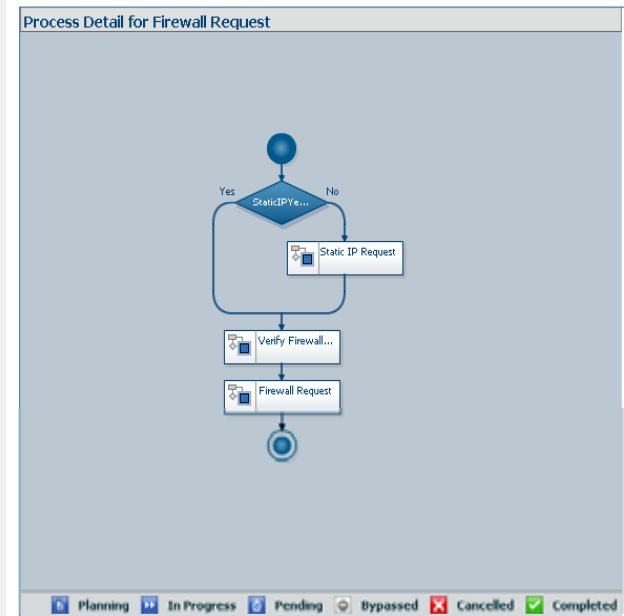
Name Thane Price
Phone 2085261334 086603
Email Thane.Price@inl.gov

Instructions

Please provide information in each of the fields. Feel free to contact the OpsCenter at 6-1000 to have them fill out this form for you or if you have any questions.

What is the hostname of the origin system?* test1
What is the IP Address of the origin system?* 111.111.111.111
Does the origin system have a DHCP Reservation?* No/Not Sure
What is the hostname of the destination system?* test2
What is the IP address of the destination system?* 222.222.222.222
What company is this request for?* BEA
Port Number:* 1234
TCP/UDP:* TCP/UDP

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The CMS - Tracking and approving firewall rules

Initiate |
 Review & Authorize |
 Approval |
 Plan & Schedule |
 Implement |
 Closed

Change ID* CRQ00000013899
Coordinator Group* Firewall Admins
Change Coordinator*
Change Location 609 - CFA
Service+
Template+ Firewall Request For SRM
Summary* Firewall Request
Notes Type of request: Firewall
 Origin System Name: inl418844
Class* Normal
Change Reason Other
Target Date
Impact* 4-Minor/Localized
Urgency* 3-Medium
Priority Medium
Risk Level* Risk Level 1

Work Detail | Tasks | Relationships | Date/System

2 entries returned - 2 entries matched

Type	Summary	Files	Submit Date
General Information	Process Flow: Standard Process		5/19/2011 12:52:52 PM
General Information	This ticket was created from the service request system.		5/19/2011 12:52:52 PM

View | Create | Report | History

Charge Number
Status* Request For Change
 Status Reason
Manager Group* Change Approval Board
 Change Manager
 Current Approval Phase Business Approval | Show Pending

1 entries returned - 1 entries matched

Approval Status	Approvers	Name	Alternate Signature
Pending	elsero	Elsethagen, Randal...	

View Notifications | Add | Approve | Reject

The CMS – Desktop Variance Request

Provide Information

Desktop Policy Variance Request

Name Thane Price
Phone 2085261334 086603
Email Thane.Price@inl.gov

Instructions

Please provide all the information requested along with a detailed justification which includes alternative protection methods which will be utilized. Variances are not active until your responsible manager, endave owner and Cyber Security Office has approved the request. Variances are temporary and not permanent. You will be notified when your variance is about to expire which will require a new variance approval. If you have any questions please contact the OpsCenter at 6-1000.

Property Number of system variance is for:* 414473

Is this system managed or self-managed?* Managed

Laptop Hard Drive Encryption Request this Variance

Minimum Security Configuration Request this Variance

Least User Access Request this Variance

LANDesk Request this Variance

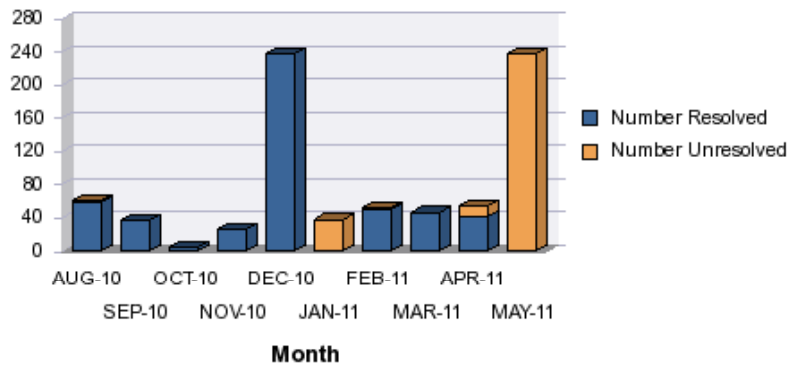
Justification My scientific software is incompatible. I don't have PII or CUI

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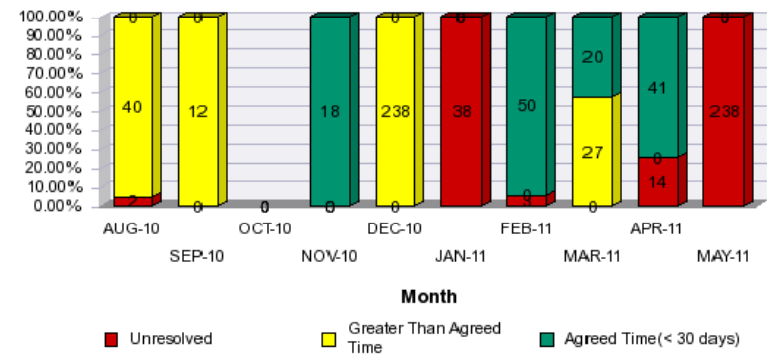
The SKMS – Vulnerability Analytics

Business Enclave

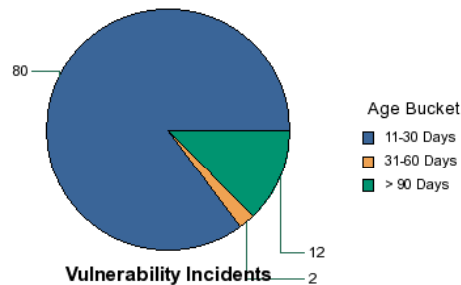
Vulnerability Incident Resolution Trend by Month



Percent Remediated Within Agreed Time



Outstanding Vulnerabilities Without Deviation



The SKMS – Measuring Availability

Business Process Automation SLA Metrics Met or Missed by Month

Jun 01, 2010 - May 31, 2011

Company: Idaho National Laboratory

	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Threshold 99% Platinum Services	98.77	67.07	96.61	100	100	100	100	100	99.83	100	99.83	99.48
Threshold 98% Gold Services	98.97	99.56	94.31	99.91	99.64	100	97.22	98.06	99.77	99.63	99.23	99.7
Threshold 96% Silver Services	98.75	96.93	99.77	98.78	97.01	100	99.79	97.42	99.95	99.5	99.23	100

Application service availability is measured as the percentage of time the application is performing without interruption. This is 24 hours per day 365 days per year less 4 hours per month for planned maintenance. This is an average of 726 hours of availability per month.

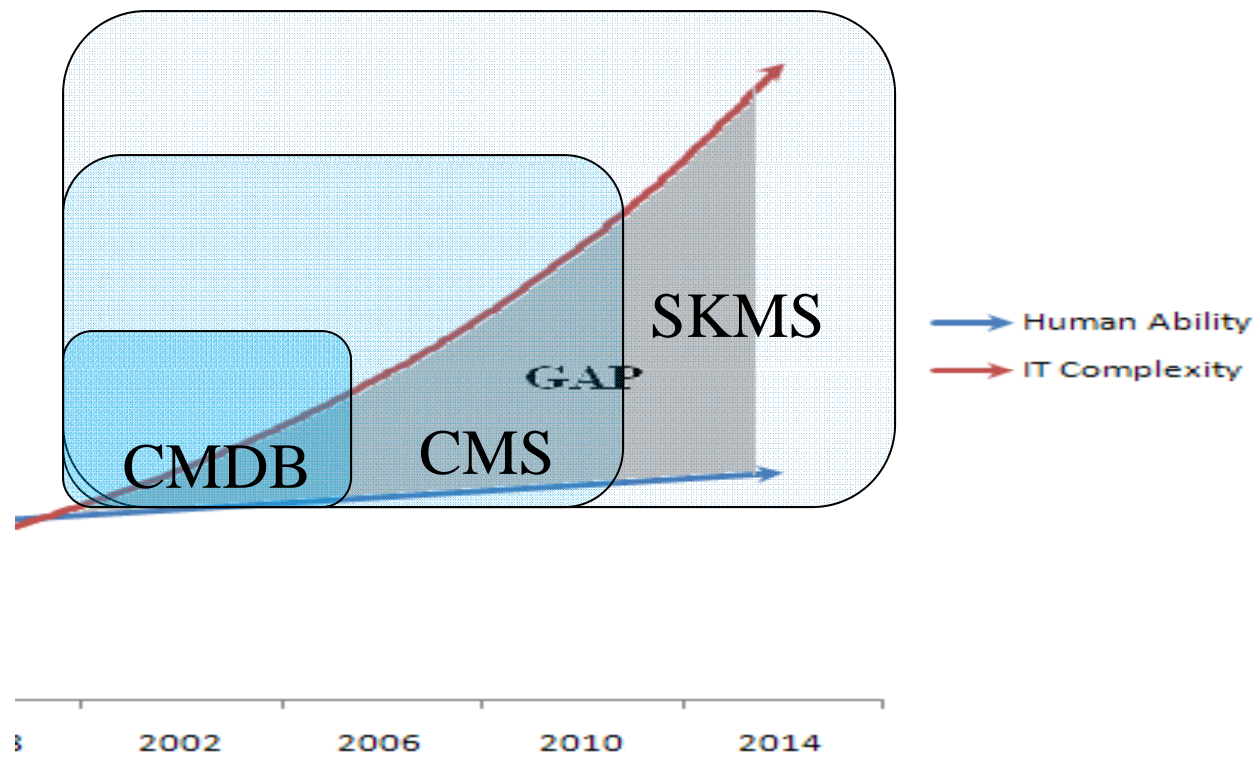
The Present – Add capability

- Add discovered data sources
 - Proteus
 - Active Directory
 - MAC and ARP Tables
- Acquire funding – CMDB Librarian
- Work to add value to or replace IT applications
 - Patchman
 - NIC
 - Enterprise Architecture
 - TRACCS
 - ECL

The Future - Improvements

- Add Links to the Definitive Media Library – Source Control
- Track financial and timesheet information
- Enable automated auditing of software licenses
- Enable automated change requests based on maintenance schedules
- Improve ITIL process maturity

The Point – Overcome the gap



Questions



Thane.price@inl.gov