Today

PowerSC (Security and Compliance) Tools for IBM i

Starting at 10:00 am UK time by Thomas Barlen and Terry Ford

Smart Meeting → Put questions into the Chat box
or AT&T Toll Free phone for better audio
0800-368-0638 = UK Toll Free
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Then 6403785# Participant Code
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Previous Sessions:
HMC 8.20 Tech Preview
The "Key" to IBM i Licensing
POWER8 E870 from exper
Linux on Power: Best Pract
Linux for AIX/IBM i guys
PowerKVM Deep Dive
More Tricks Power Masters
Power8 from hands-on
Power up your Linux
PowerVC
PowerVP
SSP4
And more…..

Future Sessions →

TBC - May 27th – more POWER8 from hands-on experience
More Being planned
Suggestions Welcome

Webinar wiki: http://tinyurl.com/PowerSystemsTechnicalWebinars
Youtube Channel: http://tinyurl.com/IBMPowerVUGYoutubeChannel

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Gareth Coates @power_gaz
Jyoti Dodhia @JyotiDodhia
Nigel Griffiths @mr_nmon
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PowerSC Tools for IBM i

A service offering from IBM Systems Lab Services

Thomas Barlen

Consulting IT Specialist

IBM Power Systems Security

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PowerSC Tools for IBM i

PowerSC Tools for IBM i helps clients ensure a higher level of security and compliance

Client Benefits

- Simplifies management and measurement of security & compliance
- Reduces cost of security & compliance
- Reduces security exposures
- Improves the audit capability to satisfy reporting requirements

IBM i Security Services from IBM Systems Lab Services

1. **IBM i Security Assessment**
   An experienced IBM i consultant will collect and analyze data using PowerSC Tools for IBM i. The engagement results in a comprehensive report with findings and recommendations for improved compliance and security remediation.

2. **IBM i Single Sign On Implementation**
   SSO improves end user productivity and saves help desk costs. In this services engagement, an experienced IBM consultant will advise on SSO options and provide implementation assistance leveraging the SSO suite components of the PowerSC Tools for IBM i.

3. **IBM i Security Remediation**
   An experienced IBM consultant will advise on best practices to address IBM i security and compliance issues. The consultant will provide remediation assistance leveraging the PowerSC Tools for IBM I

4. **IBM i Encryption Services**
   An experienced IBM consultant will advise on best practices to implement data encryption on IBM I leveraging the PowerSC Tools for IBM i Encryption Suite as appropriate. Tape Encryption implementation services are also available.

For more information on PowerSC Tools for IBM i offerings and services, contact:

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PowerSC Tools for IBM i

Tools / Feature	Function	Benefit
Compliance Assessment and Reporting Tool	Daily compliance dashboard report/s at LPAR, system or enterprise level	Enables compliance officer to demonstrate adherence to pre-defined security polices
Security Diagnostics	Reports detailing security configuration settings and identifying deficiencies	Reduces operator time involved in remediating security exposures
Privileged Access Control	Controls the number of privileged users	Ensures compliance with industry guidelines on privileged users
Secure Administrator for SAP	Manages and controls access to powerful SAP administrative profiles	Eliminates sharing of SAP administrative profiles with enhanced security auditing
Access Control Monitor	Monitors security deviations from application design	Prevents user application failures due to inconsistent access controls
Network Interface Firewall for IBM i Exit Points	Controls access to Exit Point interfaces such as ODBC, FTP, RMTCMD, etc	Reduces threat of unauthorized security breach and data loss
Audit Reporting	Consolidates and reduces security audit journal information	Simplifies audit analysis for compliance officer and/or auditors
Certificate Expiration Manager	Simplifies management of digital certificates expiration	Helps operators prevent system outages due to expired certificates
Password Validation	Enhances IBM i operating system protection with stricter password validation	Enables security officers to ensure user passwords are not trivial
Single Sign On (SSO) Suite	Simplifies implementation of SSO and password synchronization	Reduces password resets and simplifies end user experience
Encryption Suite	Simplifies implementation of cryptography using IBM i operating system capabilities	Helps application developers meet data security standards and protect critical data

PowerSC Tools for IBM i is a service offering from IBM Systems Lab Services

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Security Diagnostics Introduction

In depth security collection and reporting

- A tool that can be used to
  - Simplify security management by providing advanced security reports
  - Reduce time to create reports for auditors
  - Help analyzing the security state of your IBM i system and application environment
- Provides in-depth information of all security related information, such as
  - Object permissions
  - System value reports
  - Exit point programs
  - Program references
  - Trigger programs
  - Work Management
  - Auditing configuration
  - Network attributes
  - Integrated File System
  - Over 70 reports
  - Output stored in DB2 tables

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Security Diagnostics Introduction (cont'd)

- Security Diagnostics extracts far more information from the system than standard reports, such as the reports available from the SECTOOLS menu
- Extensive number of object and security attributes are retrieved
- Many reports provide a complete set of information for a series of objects or all objects of a certain category versus IBM i base CL commands that allow you to only display information on an object by object basis
- Simplifies greatly the extraction of information and correlations of data and events
- The tool is constantly enhanced with new functions

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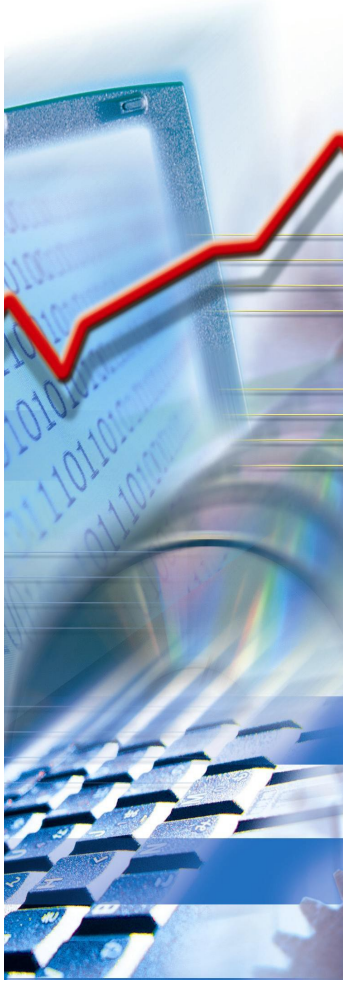
Implementation

- The Security Diagnostics tool is licensed per server or as an enterprise license
  - License keys are required for installation
- Shipped in a save file
- The tool is installed via a Load Security Tool command
- Installed in library QZRDSECREV
  - Library contains all required objects
  - Public access is *EXCLUDE
- When started the first time, the tool creates a library QZRDSECRPT
  - This library will contain database tables for information that has been collected on the system
  - Contains also an output queue AUDITOUTQ
- The tool must be run by a user profile with at least the *ALLOBJ, *AUDIT, *IOSYSCFG, *JOBCTL and *SECADM special authorities



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Using Security Diagnostics

- The tool comes with a menu that let's you select the kind of reports that you want
  - The menu is opened by the command SECREVCMD
  - Each category provides a list of reports that can be generated

```
 Profiles   Programs   JobD   IFS   Sysval   Comms   Libraries   Subsystem
 Misc.   Ad-Hoc1   Ad-Hoc2


Ver: 7.10          PowerSC Tools for IBM i Security Diagnostics
             © Copyright IBM Corp. 2006, 2014 All Rights Reserved     15:50:57
                          IBM Systems Lab Services                    I5OSP4

               Submit Job to Batch..... Y
               Hold Job on Job Queue... N
               Job Queue to Submit to.. SECRJOBQ
               Job Queue Library....... *LIBL
               Run Job Now............. N
               Date to Run Job......... 02/04/15
               Time to Run Job......... 15:50:57

                Refresh Data.           View Selected

                Select All...           Deselect All.

 F3=Exit    F5=Refresh    F7=Run/Submit
```

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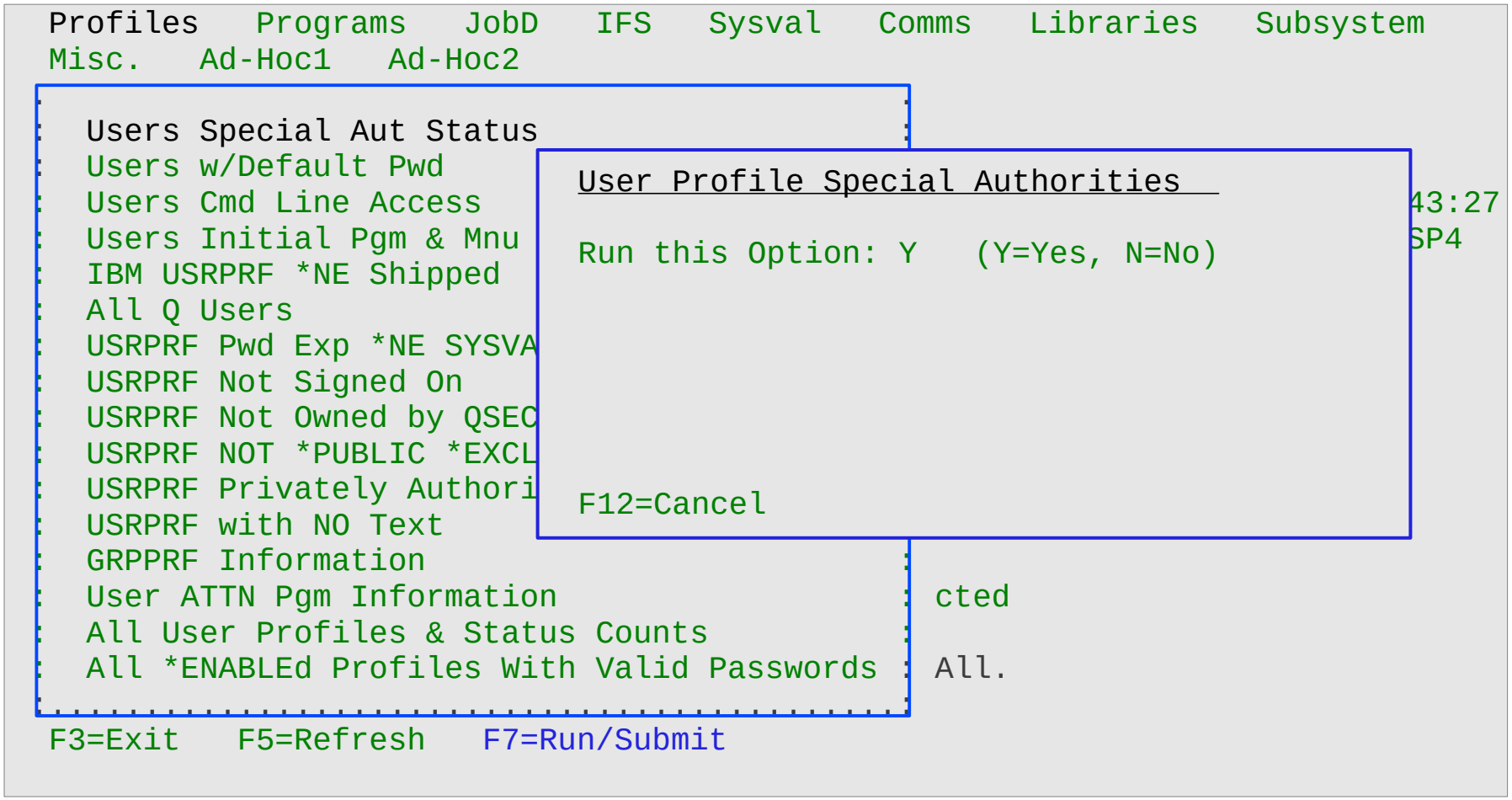
Selecting reports

- The menu interface can be operated with the mouse
- To select a report to run, click on the report category and then select the report you are interested in



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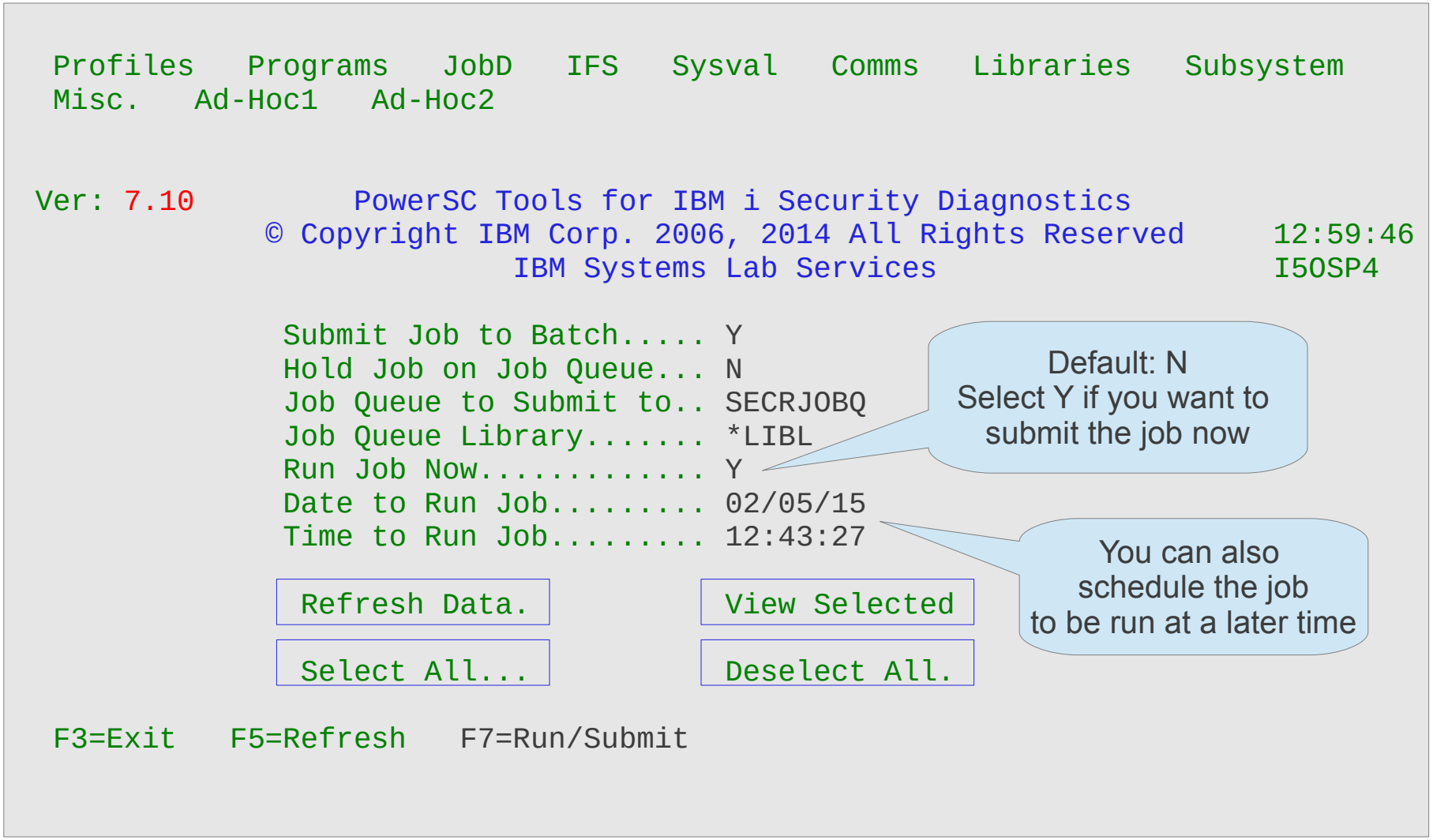
Submitting your collection job

- After you have selected all reports that you are interested in, select the job options



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The collection process

- The collection process is performed in a single job
- Job is submitted to job queue SECRJOBQ and runs in dedicated subsystem QISECSBS
- To prevent interference with normal workload, the collection job runs at priority 60

```
                              Work with Active Jobs                        I5OSP4
                                                                 02/04/15  21:02:46
CPU %:       .0     Elapsed time:   00:00:00     Active jobs:   234

Type options, press Enter.
  2=Change   3=Hold   4=End   5=Work with   6=Release   7=Display message
  8=Work with spooled files   13=Disconnect ...
                                                 --------Elapsed---------
Opt  Subsystem/Job  Type  Pool  Pty      CPU  Int    Rsp  AuxIO  CPU %
     QISECSBS       SBS     2    0        .0                  0     .0
        SECREVPGM    BCH     2   60        .1                  0     .0

                                                                          Bottom
Parameters or command
===>
F3=Exit   F5=Refresh      F7=Find      F10=Restart statistics
F11=Display thread data   F12=Cancel   F23=More options   F24=More keys
```

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The collection job has finished, what now?

- You can wait until your collection job has finished or already start analyzing what has been collected so far
- Library QZRDSECRPT contains all collected information

```
                          Work with Objects Using PDM                  I5OSP4

Library . . . . .   QZRDSECRPT       Position to . . . . . .
                                     Position to type  . . . .

Type options, press Enter.
  2=Change       3=Copy        4=Delete      5=Display       7=Rename
  8=Display description        9=Save       10=Restore      11=Move ...

Opt  Object      Type        Attribute   Text
     AUDITOUTQ   *OUTQ                   iSAT Out Queue
     ADPPGMAUDF  *FILE       PF-DTA      Adoption Programs with Auditing Value
     ADPPGMS     *FILE       PF-DTA      Programs that adopt *ALLOBJ Profiles
     ANZDFTPWDF  *FILE       PF-DTA      List of User Profiles that have Defau
     ANZDFTS     *FILE       PF-DTA      Profiles with Default Passwords
     ASPOBJS     *FILE       PF-DTA      ASP configuration objects file
     ATNPGMS     *FILE       PF-DTA      Attention Program Attributes
     AUTLOBJ     *FILE       PF-DTA      Objects Secured by an AUTL
                                                                      More...
Parameters or command
===>
F3=Exit          F4=Prompt           F5=Refresh          F6=Create
F9=Retrieve      F10=Command entry   F23=More options    F24=More keys
```

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Analyzing the collected information

- You can use your preferred method (i.e. SQL or Query or WebQuery) to analyze the collected information
- Sometimes it is an advantage to create a separate library to store your Query or SQL definitions
  - Makes it easy to create reoccurring reports

Example of using a Query to create a report over the ANZDFTPWDF file
The ANZDFTPWD operating system command only creates a spool file without any reference to special authorities, audit settings, etc.

```
 This report contains a list of all user profiles on system i5OSP4 that have
 default passwords (User profile name = Password). It also lists the special
 authorities a user profile might have.

                    List of user profiles with default passwords
                                      i5OSP4
02/05/15  14:42:23      User profiles with default passwords      PAGE    1
                 STATUS                                                CMD
     User        Before      ALL  AUD  IOS  JOB  SAV  SEC  SVC  SPL  Audit
                 Action
    MASTER1     *ENABLED     X    -    -    X    -    -    -    -     -
    OL5002      *ENABLED     -    -    -    -    -    X    -    -     -
    OL5003      *ENABLED     -    -    -    -    -    X    -    -     -
    OL5004      *ENABLED     -    -    -    -    -    X    -    -     -
```

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Where do you find information about the tool and files

- There is a comprehensive user's guide that explains the installation process as well as information about the collected information and the files the information is stored in

6. Tool Output Database Guide

This section lists all the Database files created by the Tool and the Fields they contain.

All Corresponding Spooled Reports are named the same as the Database files with few exceptions and can be found in Output Queue QZRDSECRPT/AUDITOUTQ

No.	Description	Output File	Fields
1	Create a list of adopted programs that have an object level audit value = *NONE	QZRDSECRPT/ADPPGMAUDF	- System name - Display date - Display time - Library - Object - Object type - Object attribute - Object owner - Object auditing value - Library ASP device name - Object ASP device name - Text description
2	List of Users with Default Passwords Assigned	QZRDSECRPT/ANZDFTPWDF	- System Name - Run Date - YY/MM/DD - Run Time - HH:MM:SS - User Profile Name - IBM Supplied Profile

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Monitoring Compliance and Vulnerabilities
PowerSC Tools for IBM i

Terry Ford, Team Lead

Security Services Delivery Team

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PowerSC Tools for IBM i

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"Some organizations will be a target **regardless** of what they do, but most become a **target because** of what they do *(or don't do)*"

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Compliance Monitoring – Compliance to What?

Company Policy and/or Standards

These should define how systems should be built, maintained, monitored, and interacted with by its custodians and users. Another way of thinking about it, they are a Service Level Agreement (SLA) between Owners, Management and the people they have hired to “work” the business. Owners and Management derive a “sense of security” knowing that its employees are managing the business according to this agreement. Owners and Management must be involved in the creation and maintenance of these documents. Compliance monitoring then is simply demonstrating that the employees (and management) are doing what they have been hired to do.

IBM

IBM i Security Management Standards

Edition: 1.0

March 2014

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Compliance Monitoring – Who Should Care?

- **Business and Information Owners** – must be assured that the information and brand reputation of the business is protected
- **Chief Security Officer (CSO)** – as custodian of the business and information owners, must answer for risks present on the system and that they are being managed to an acceptable level
- **Security Administrators** – must insure that access is implemented appropriately as designed
- **Compliance Officer** – must insure that the IT operations comply to corporate rules and regulations as well as industry and government regulations
- **Operations Managers** – must insure the correct policies/standards are in place and being followed
- **Application Developers** – must insure applications are being designed and placed in production correctly with sufficient controls to prevent inappropriate access
- **Everyone** – adherence to policy insures the continuity of the business

Compliance Monitoring – Inhibitors

- Security setup inherited from the past - previous owners / application designers no longer are available
- For many IBM i IT departments, security is performed by an individual with multiple responsibilities – operations, administration, programming, etc.
- Security implementation “how to” is often not understood, is neglected or not monitored due to time constraints.
- Security policies/standards often do not exist. If they do, monitoring of compliance to the policy is not done or understood and deviation from the policies/standards across the enterprise is unknown.
- How do you measure security? What are Key Risk Indicators (KRI) ? How do I prove due diligence to security monitoring?
- Gathering of security information is time consuming and scattered in multiple places on the system. The analysis of this data or monitoring of security changes is often dated by the time it is read.
- Is my data safe?
- Is my brand and/or reputation safe?
- Is my job safe?

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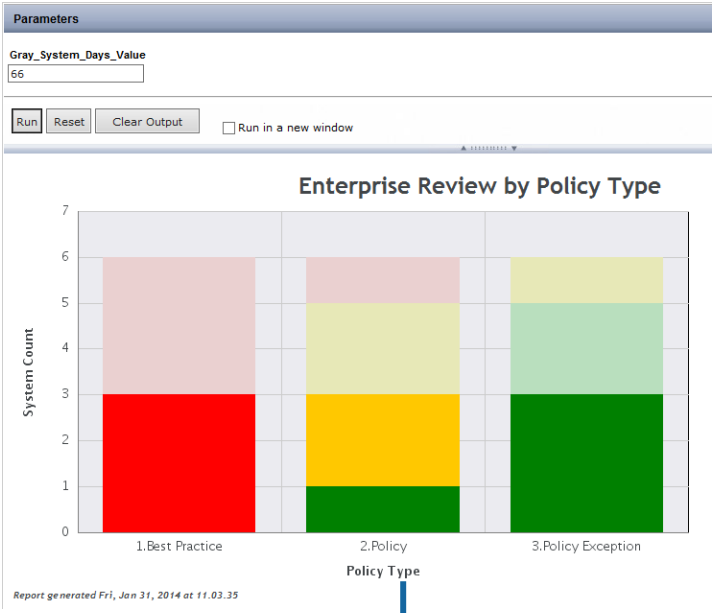
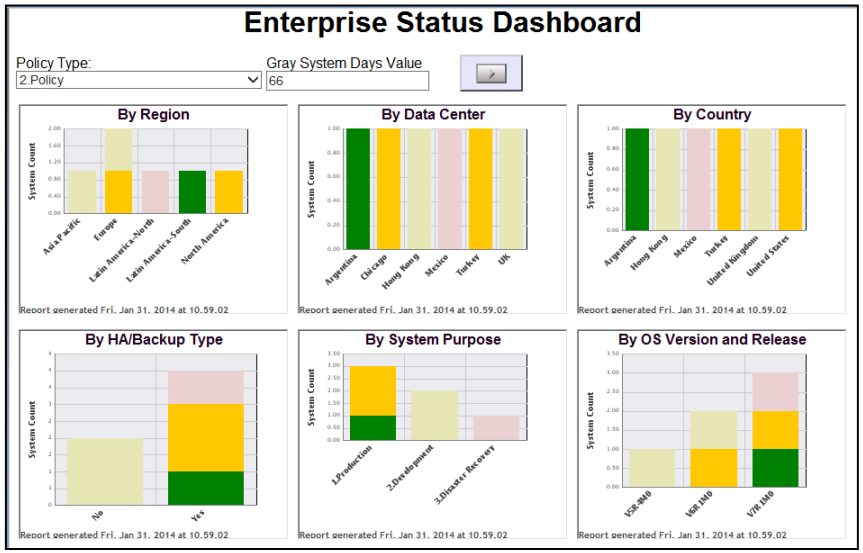
Compliance Monitoring – Measuring Security

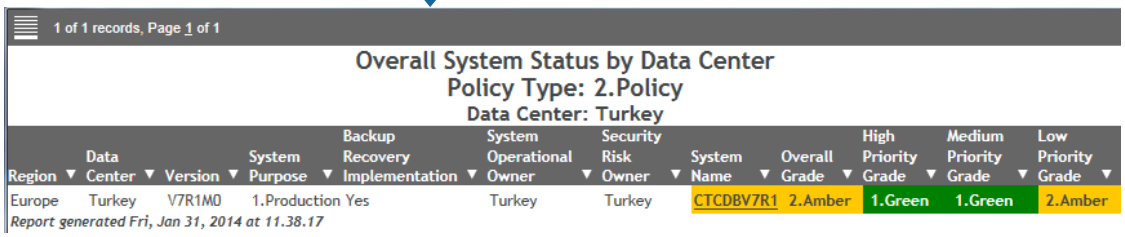
- "If you can't measure it, how can you improve or fix it ?"
- Provide evidence that risk is being managed according to enterprise defined risk thresholds empowering Senior Management to make informed risk management decisions on where best to allocate resource.
- **REQUIREMENTS**:
  - Centralized view of Security Compliance status across the enterprise
    - No access to remote machines required
    - Maintain segregation of duties
    - Provide management visibility, meaningful reports that drive action
  - Customizable Control Tests
    - Measurable Results
    - Ability to define Key Risk Indicators (KRI's)
    - Traceability back to Security Standards and Company Policies
  - Dashboard Style Reporting
    - Red, Yellow (Amber), Green (RAG) Metrics
    - 'Clickable' reports – to drill down to the issue
    - Trending – to measure improvements (hopefully) over time

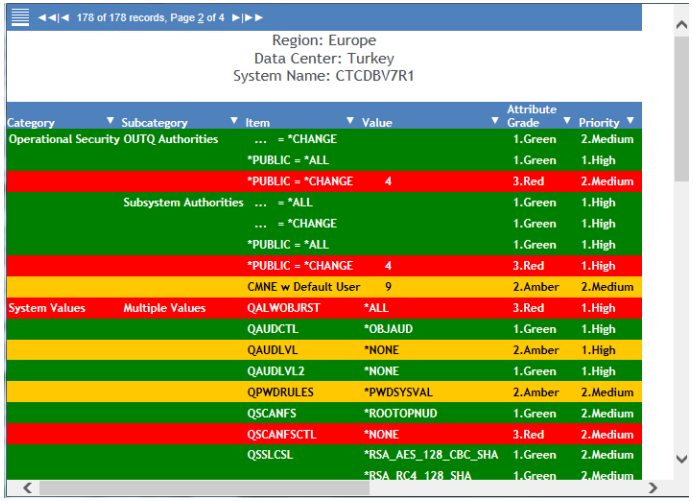
Compliance Assessment and Reporting Tool

"I just want to arrive in the morning, get a cup of coffee, and have a view of what systems are in compliance and which are not."









Compliance Assessment and Reporting Tool

Provides quick and easy check of system for security exposures and user defined items

Profile Analysis:

- Special Authorities / Inherited Privileges
- Group Profiles / Ambiguous Profiles
- Default Passwords / Password Expiration
- Inactive Accounts
- *PUBLICLY Authorized Profiles
- Privately Authorized Profiles
- Initial Programs, Menus, and Attention Programs
- Command Line Access

Administration / Configuration:

- System Values / Audit Control Settings
- Invalid Signon attempts
- Work Management Analysis
- Service Tools (SST) Security
- DDM Password Requirements
- Registered Exit Points / Exit Programs
- Function Usage
- Library Analysis / *ALLOBJ Inheritance

Network Settings:

- Network attributes / Time Server
- NetServer Configuration
- TCP/IP servers / Autostart values
- Digital Certificate Expiration
- SNMP / SSH / SSL Configuration
- Listening ports / Network Encryption
- IP Datagram Forwarding
- IP Source Routing
- APPN Configuration (yes – for many it is still there)
- Server Authentication Entries

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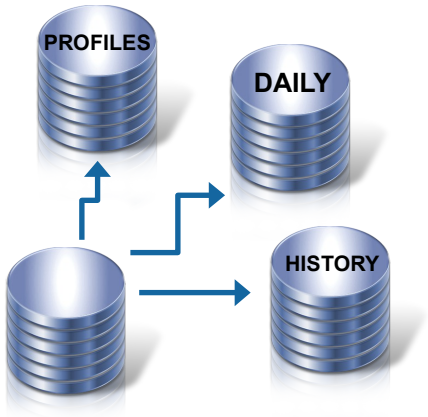
Compliance Assessment and Reporting Tool

High Level Architecture

Remote systems

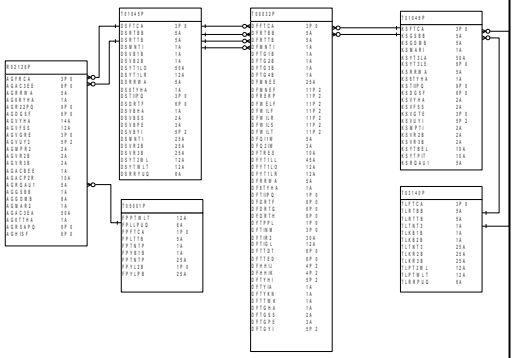


DAILY SUMMARY TABLE
Created by the **Compliance Assessment Tool Collection Agent**
(One for every LPAR)

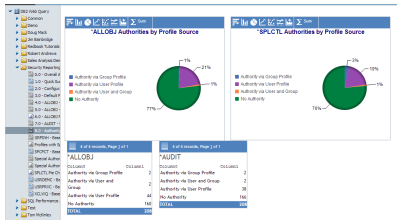
ETL Process to Load Data Mart on Central System

Data Mart system

DB2 for i Reporting Data Mart



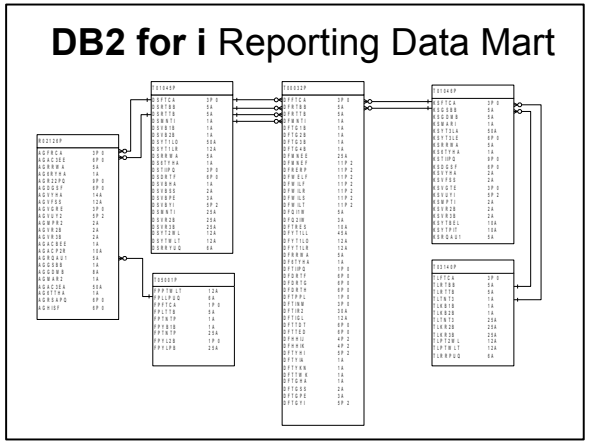
DB2 Web Query Meta Data



DB2 Web Query
Dashboards/Reports

Compliance Assessment and Reporting Tool

Data Mart Tables



How current is the data I am viewing?

Logging of success or failure of scheduled ETL processes with remote systems

How do I wish to filter on and view the data?

System descriptive information such as location, usage, VRM level, Template, etc.

How is Green, Amber, and Red defined?

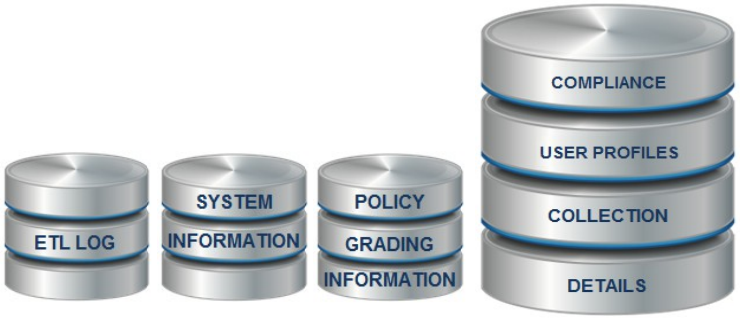
User defined thresholds for aggregate security attribute grading.

Detailed history of system security and compliance grading

- System Attributes
- Security Attributes
- Best Practice
- Policy / Policy Exception
- User Profiles

Compliance Assessment and Reporting Tool

Data Mart Views



DB2 Views

Views over all the base data mart tables, PLUS:

The last ETL entries for each remote system

Summary grading information for the last successful collection for each remote system

Detailed grading information for the last successful collection for each remote system

History of all ETL entries for each remote system

Summary grading information for each remote system for all collected history

Detailed grading information for each remote system for all collected history

Compliance Assessment and Reporting Tool

DB2 Web Query Reports

How current is the information?

- Which systems have not reported in the last two weeks?
- How old is the data for LPAR x?
- What problems are preventing successful data collection from System y?
- How long has there been a problem with collection of information from System z?

What is the summary view of the last collected status for my enterprise ?

- Based on IBM Best Practices?
- Based on my company's policies?
- Based on (expiring) exceptions granted to company policy?
- Based on some System value or attribute?
  - System Name
  - Location (hierarchy)
  - Version/Release level
  - System Usage (development, test, QA, production, etc.)
  - Ownership, Administration responsibility
  - Priority
  - Other?

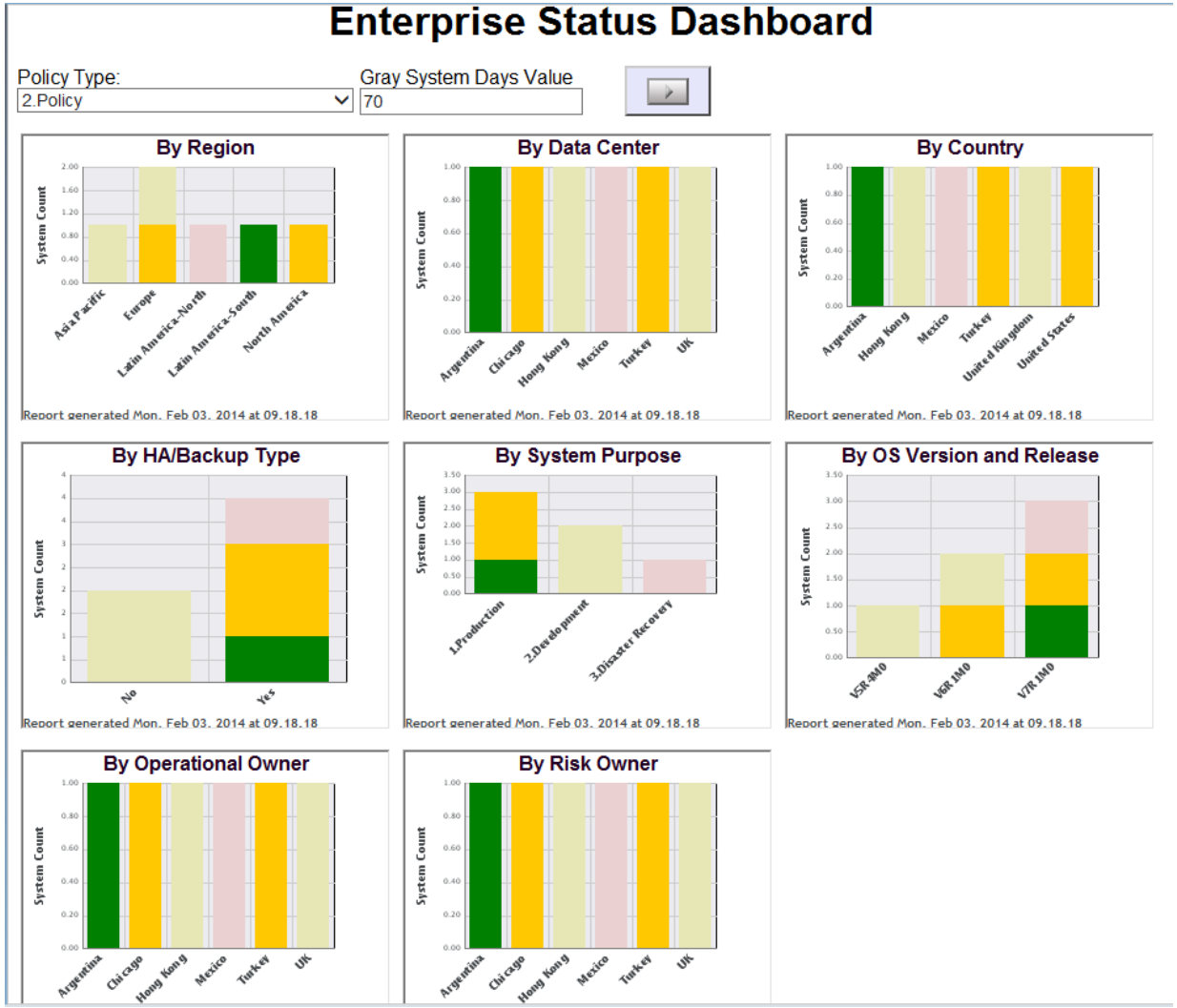
What systems and areas need attention and speedy resolution?

- What are the details for each system in the enterprise?
  - How is success measured? Adherence to company policy or policy exceptions, IBM Best Practice?
  - Which system attributes are being tracked and graded?
  - What is the Priority of each item? High, Medium, and Low Prioritization
  - What is the grade for each item? Green, Amber or Red grading

Compliance Assessment and Reporting Tool

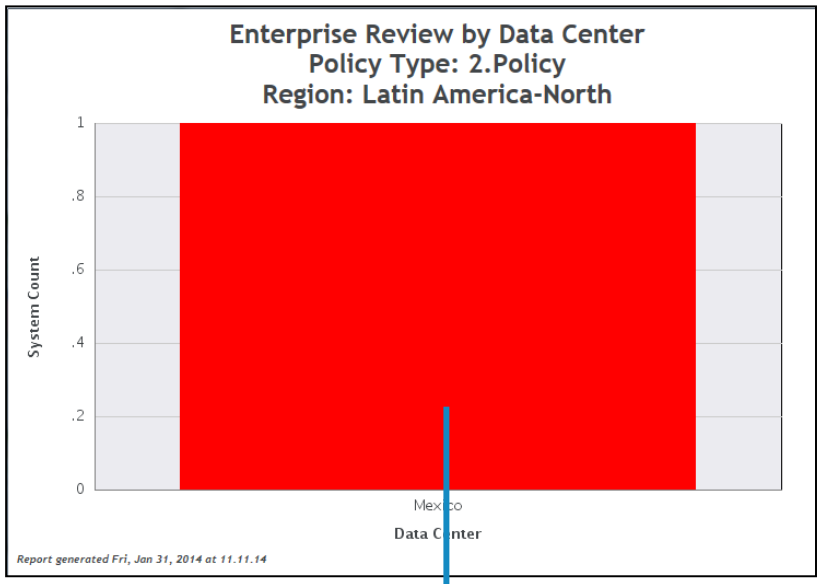
Enterprise Dashboard

- Summary of Overall System Status of all systems in the enterprise by various system attributes.
- Information is based on last successful collection for each system.



Compliance Assessment and Reporting Tool

Regional Review (Drill down to overall grading and details)



181 of 181 records, Page 1 of 4

Graded System Attribute Details
for 2.Policy
Region: Latin America-North
Data Center: Mexico
System Name: BSTGEN

Category	Subcategory	Item	Value	Attribute Grade	Priority
Library Authorities	*IBM Libraries	... = *ALL		1.Green	1.High
		... = *CHANGE		1.Green	1.High
		*PUBLIC = *ALL		1.Green	1.High
		*PUBLIC = *CHANGE	3	3.Red	1.High
		CRTAUT = *ALL		1.Green	2.Medium
		Owners with a Password		1.Green	2.Medium
		OTHR *ALLOBJ ADPT, *PUB=*ALL		1.Green	1.High
		OTHR *ALLOBJ ADPT, *PUB=*CHG		1.Green	2.Medium
		System CMDs that have changed		1.Green	1.High
	USER Libraries	... = *ALL		1.Green	1.High
		... = *CHANGE		1.Green	1.High
		*PUBLIC = *ALL		1.Green	1.High
		*PUBLIC = *CHANGE	80	3.Red	1.High
		CRTAUT = *ALL		1.Green	2.Medium
		Owners with a Password	112	3.Red	2.Medium
		OTHR *ALLOBJ ADPT, *PUB=*ALL		1.Green	1.High
		OTHR *ALLOBJ ADPT, *PUB=*CHG		1.Green	2.Medium

1 of 1 records, Page 1 of 1

Overall System Status by Data Center
Policy Type: 2.Policy
Data Center: Mexico

Region	Data Center	Version	System Purpose	Backup Recovery Implementation	System Operational Owner	Security Risk Owner	System Name	Overall Grade	High Priority Grade	Medium Priority Grade	Low Priority Grade
Latin America-North	Mexico	V7R1M0	3.Disaster Recovery	Yes	Mexico	Mexico	BSTGEN	3.Red	1.Green	2.Amber	3.Red

Report generated Fri, Jan 31, 2014 at 11.28.14

Compliance Assessment and Reporting Tool

System Dashboard

Key System and data collection information
- Status of last collection attempt (Success or Fail)
- Key System attributes – VRM, Location, etc.
- Overall and detailed system grading based upon last successful collection.

System Details Dashboard

System Name: CTCMOD | Policy Type: 2.Policy | Gray System Days Value: 70

Current Event Log Status for CTCMOD

Event Date	Event Type	Event Description	System Name	Region	Data Center	Coded System Purpose	Version
2013/11/27	SUCCESS	SUCCESSFUL COLLECTION FOR SYSTEM CTCMOD	CTCMOD	North America	Chicago	P	V6R1M0

System Attributes

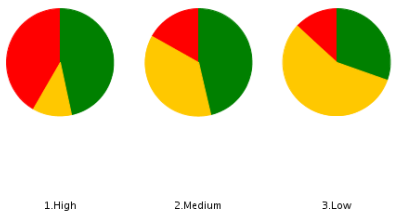
Enterprise System Name		
CTCMOD	Remote System Name	CTCDBMOD
	Serial Number	10-40F40
	System Purpose	1.Production
	UAT/OAT	Yes
	Version	V6R1M0
	Region	North America
	Data Center	Chicago
	Country	United States
	State	Illinois
	City	Chicago
	Postal Code	60606
	Local System Run Date	2013/11/27
	Remote System Run Date	2013/11/27

Overall System Status
Policy Type: 2.Policy

System Name	Overall Grade	High Priority Grade	Medium Priority Grade	Low Priority Grade
CTCMOD	2.Amber	1.Green	1.Green	2.Amber

Report generated Mon, Feb 03, 2014 at 09.25.02

Grading Counts by System and Priority
Policy Type: 2.Policy
CTCMOD



Grade System Attribute Counts
by Priority and Grade
Policy Type: 2.Policy

System Name	Priority	Grade	Count
CTCMOD	1.High	1.Green	28
		2.Amber	7
		3.Red	25
	2.Medium	1.Green	44
		2.Amber	35
		3.Red	16
	3.Low	1.Green	7
		2.Amber	13
		3.Red	3
Subtotal: CTCMOD			178
Total:			178

Report generated Mon, Feb 03, 2014 at 09.25.02

Graded System Attribute Details - 2.Policy
System Name: CTCMOD

Attribute Grade	Priority	Category	Subcategory	Item	Value
3.Red	1.High	Library Authorities	*IBM Libraries	*PUBLIC = *CHANGE	3
				System CMDs that have changed	1
			USER Libraries	*PUBLIC = *ALL	4
				*PUBLIC = *CHANGE	307
				OTHR *ALLOBJ ADPT, Total PGMS	264
				QSECOFR Adoption, *PUB=*CHG	15
				QSECOFR Adoption, Total PGMS	29
		Miscellaneous	Service Tools	Allow Change to System Values	Yes
		Network Configuration	TCP/IP Attributes	DDM PW Required (CHGDDMTCPA)	*USRID
		NetServer Information	NetServer Data	ROOT (/) is Shared	Yes
				ROOT (/) Permissions	*RW
		Operational Security	JOBD Authorities	*PUBLIC = *ALL	15
				*PUBLIC = *CHANGE	28
			OUTQ Authorities	*PUBLIC = *ALL	7
			Subsystem Authorities	*PUBLIC = *CHANGE	4
		System Values	Multiple Values	QALWOBJRST	*ALL
			Single Values	QINACTITV	240
		User Profiles	Default Passwords	Enabled	1
				Total	2
			Group Profiles	Group Profile(s) w/ Passwords	2
			Password Expiration	Never Expires (*NOMAX)	8
			Special Authorities	*ALLOBJ	28
				*JOBCTL	48
				*SAVSYS	32
				*SPLCTL	28
	2.Medium	Library Authorities	USER Libraries	Owners with a Password	375
				OTHR *ALLOBJ ADPT, *PUB=*CHG	18
		Network Attributes	RTVNETA Values	Network Job Action (JOBACN)	*FILE
		Operational Security	OUTQ Authorities	*PUBLIC = *CHANGE	1

Compliance Assessment and Reporting Tool

System Attribute Details (By Age, Policy Type and System Name)

COLLECTION_DETAILS_LAST

Parameters

Gray_System_Days_Value	Policy Type:	System Name:
66	2.Policy	CTCMOD

Run | Reset | Clear Output | ☐ Run in a new window

178 of 178 records, Page 1 of 4 ►|►►

Graded System Attribute Details for 2.Policy

Region: North America
Data Center: Chicago
System Name: CTCMOD

Category	Subcategory	Item	Value	Attribute Grade	Priority
Library Authorities	*IBM Libraries	... = *ALL		1.Green	1.High
		... = *CHANGE		1.Green	1.High
		*PUBLIC = *ALL		1.Green	1.High
		*PUBLIC = *CHANGE	3	3.Red	1.High
		CRTAUT = *ALL		1.Green	2.Medium
		Owners with a Password		1.Green	2.Medium
		OTHR *ALLOBJ ADPT, *PUB=*ALL		1.Green	1.High
		OTHR *ALLOBJ ADPT, *PUB=*CHG		1.Green	2.Medium
		System CMDs that have changed	1	3.Red	1.High
	USER Libraries	... = *ALL		1.Green	1.High
		... = *CHANGE		1.Green	1.High
		*PUBLIC = *ALL	4	3.Red	1.High

Compliance Assessment and Reporting Tool

Overall System Status (by Age, Policy Type and various system criteria)

Parameters

Gray_System_Days_Value	Policy Type:	Regions:	Data Centers:	Version:
66	3.Policy Exception	Asia Pacific Europe Latin America-North Latin America-South	No Selection Argentina Chicago Hong Kong	No Selection V5R4M0 V6R1M0 V7R1M0

System Purpose:	Backup Recovery:	Operational Owners:	Risk Owners:
No Selection 1.Production 2.Development 3.Disaster Recovery	No Selection No Yes	No Selection Argentina Chicago Hong Kong	No Selection Argentina Chicago Hong Kong

Run | Reset | Clear Output | Run in a new window

3 of 3 records, Page 1 of 1

Overall System Status - Custom Prompts
Policy Type: 3.Policy Exception

Regions: 'Asia Pacific' OR 'Latin America-North' OR 'Latin America-South' OR 'North America'
Data Centers:
Versions: 'V6R1M0' OR 'V7R1M0'
System Purpose:
UAT/OAT:
Operational Owners:
Risk Owners:

Region	Data Center	Version	System Purpose	Backup Recovery Implementation	System Operational Owner	Security Risk Owner	System Name	Overall Grade	High Priority Grade	Medium Priority Grade	Low Priority Grade
Latin America-North	Mexico	V7R1M0	3.Disaster Recovery	Yes	Mexico	Mexico	BSTGEN	Gray - 2.Amber	Gray - 1.Green	Gray - 1.Green	Gray - 2.Amber
Latin America-South	Argentina	V7R1M0	1.Production	Yes	Argentina	Argentina	CTCV71	1.Green	1.Green	1.Green	1.Green
North America	Chicago	V6R1M0	1.Production	Yes	Chicago	Chicago	CTCMOD	1.Green	1.Green	1.Green	1.Green

Report generated Fri, Jan 31, 2014 at 11.32.03

Compliance Assessment and Reporting Tool

Cross System Analysis

Horizontal or vertical presentation of risk indicators across LPARs

				System Name BJSYSTEM	BSTGEN	BSTGENTOO	CTCDBV7R1	CTCI005C	CTCMOD
Category	Subcategory	Item Key	Item	Value	Value	Value	Value	Value	Value
Library Authorities	*IBM Libraries	LAIB0013	Owners with a Password	1			1		
		LAIB0160	*PUBLIC = *ALL						
		LAIB0171	*AUTL *PUB = *ALL						
		LAIB0172	*AUTL *PUB = *CHANGE						
		LAIB0180	*PUBLIC = *CHANGE	6	3	3	6	2	3
		LAIB0310	CRTAUT = *ALL						
		LAIB0450	System CMDs that have changed					2	
		LAIB0602	OTHR *ALLOBJ ADPT, *PUB=*ALL						
		LAIB0603	OTHR *ALLOBJ ADPT, *PUB=*CHG					1	
	USER Libraries	LAUS0013	Owners with a Password	133	143	129	133	100	323
		LAUS0220	*PUBLIC = *ALL					20	3
		LAUS0231	*AUTL *PUB = *ALL						
		LAUS0232	*AUTL *PUB = *CHANGE						
		LAUS0240	*PUBLIC = *CHANGE	122	106	93	122	851	294
		LAUS0370	CRTAUT = *ALL					4	
		LAUS0502	QSECOFR Adoption, Total PGMS	19	89	89	19	638	37
		LAUS0503	QSECOFR Adoption, *PUB=*ALL						
		LAUS0504	QSECOFR Adoption, *PUB=*CHG	4	9	9	4	544	15
		LAUS0601	OTHR *ALLOBJ ADPT, Total PGMS	1208	83	83	1208	58	305
		LAUS0602	OTHR *ALLOBJ ADPT, *PUB=*ALL	1			1	1	

Compliance Assessment and Reporting Tool

Cross System Analysis

PTF Inventory…

Category	Subcategory	Item Key	Item	System Name BJSYSTEM	BSTGEN	BSTGENTOO	BSTGEN2	CTCDBV7R1	CTCI005C	CTCMOD	CTCSEC	CTCSECI7	CTCTEST	CTCV71	FIVEC
System Information	Common PTF Groups	SIPTF002	Cumulative PTF Level	SF99710-INSTLLD-13298	SF99710-INSTLLD-13298	SF99710-INSTLLD-13298	SF99710-INSTLLD-13298	SF99540-INSTLLD-12094	SF99610-INSTLLD-14197	SF99710-INSTLLD-13298	SF99540-INSTLLD-12094	SF99720-INSTLLD-14101	SF99610-INSTLLD-13312	SF99710-INSTLLD-13037	SF996 INSTL
		SIPTF004	Group HIPER PTF Level	SF99709-INSTLLD-112	SF99709-INSTLLD-112	SF99709-INSTLLD-112	SF99709-INSTLLD-112	SF99539-INSTLLD-194	SF99609-INSTLLD-191	SF99709-INSTLLD-112	SF99539-INSTLLD-203	SF99719-INSTLLD-7	SF99609-INSTLLD-186	SF99709-INSTLLD-88	SF996 INSTL
		SIPTF006	Group Security PTF Level	SF99708-INSTLLD-32	SF99708-INSTLLD-32	SF99708-INSTLLD-32	SF99708-INSTLLD-32	SF99538-MISSING	SF99608-INSTLLD-49	SF99708-INSTLLD-32	SF99538-INSTLLD-32	SF99718-INSTLLD-5	SF99608-INSTLLD-46	SF99708-INSTLLD-26	SF996 INSTL
		SIPTF007	DB2 for IBM i PTF Level	SF99701-INSTLLD-28	SF99701-INSTLLD-28	SF99701-INSTLLD-28	SF99701-INSTLLD-28	SF99504-INSTLLD-33	SF99601-INSTLLD-33	SF99701-INSTLLD-28	SF99504-INSTLLD-33	SF99702-INSTLLD-1	SF99601-INSTLLD-32	SF99701-INSTLLD-31	SF996 INSTL
		SIPTF008	Technology Refresh PTF Level	SF99707-INSTLLD-7	SF99707-INSTLLD-7	SF99707-INSTLLD-7	SF99707-INSTLLD-7	**N/A**-MISSING	**N/A**-MISSING	SF99707-INSTLLD-7	**N/A**-MISSING	SF99717-MISSING	**N/A**-MISSING	SF99707-INSTLLD-6	**N/A** MISSIN
		SIPTF012	TCP/IP PTF Level	SF99367-INSTLLD-8	SF99367-INSTLLD-8	SF99367-INSTLLD-8	SF99367-INSTLLD-8	SF99315-INSTLLD-22	SF99354-INSTLLD-16	SF99367-INSTLLD-8	SF99315-INSTLLD-22	SF99367-MISSING	SF99354-INSTLLD-16	SF99367-INSTLLD-7	SF993 INSTL
		SIPTF014	Performance PTF Level	SF99145-INSTLLD-7	SF99145-INSTLLD-7	SF99145-INSTLLD-7	SF99145-INSTLLD-7	SF99143-INSTLLD-7	SF99144-INSTLLD-10	SF99145-INSTLLD-7	SF99143-MISSING	SF99145-MISSING	SF99144-INSTLLD-8	SF99145-INSTLLD-4	SF991 INSTL
		SIPTF016	HTTP Server PTF Level	SF99368-INSTLLD-27	SF99368-INSTLLD-27	SF99368-INSTLLD-27	SF99368-INSTLLD-27	SF99114-INSTLLD-36	SF99115-INSTLLD-42	SF99368-INSTLLD-27	SF99114-MISSING	SF99713-INSTLLD-1	SF99115-INSTLLD-41	SF99368-INSTLLD-29	SF991 INSTL
		SIPTF018	JAVA PTF Level	SF99572-INSTLLD-18	SF99572-INSTLLD-18	SF99572-INSTLLD-18	SF99572-INSTLLD-18	SF99291-INSTLLD-33	SF99562-INSTLLD-30	SF99572-INSTLLD-18	SF99291-INSTLLD-34	SF99716-INSTLLD-2	SF99562-INSTLLD-29	SF99572-INSTLLD-18	SF995 INSTL
		SIPTF020	Hardware and Related PTF Level	SF99705-INSTLLD-10	SF99705-INSTLLD-10	SF99705-INSTLLD-10	SF99705-INSTLLD-10	**N/A**-MISSING	SF99605-INSTLLD-13	SF99705-INSTLLD-10	**N/A**-MISSING	SF99775-MISSING	SF99605-INSTLLD-12	SF99705-INSTLLD-4	SF996 INSTL
		SIPTF023	High Availability PTF Level	SF99706-INSTLLD-7	SF99706-INSTLLD-7	SF99706-INSTLLD-7	SF99706-INSTLLD-7	**N/A**-MISSING	SF99606-INSTLLD-4	SF99706-INSTLLD-7	**N/A**-MISSING	SF99776-MISSING	SF99606-INSTLLD-4	SF99706-INSTLLD-3	SF996 INSTL
		SIPTF026	Backup and Recovery PTF Level	SF99362-INSTLLD-35	SF99362-INSTLLD-35	SF99362-INSTLLD-35	SF99362-INSTLLD-35	SF99186-MISSING	SF99187-INSTLLD-54	SF99362-INSTLLD-35	SF99186-INSTLLD-57	SF99715-MISSING	SF99187-MISSING	SF99362-MISSING	SF991 INSTL
		SIPTF029	Print PTF Level	SF99366-INSTLLD-10	SF99366-INSTLLD-10	SF99366-INSTLLD-10	SF99366-INSTLLD-10	SF99347-MISSING	SF99356-INSTLLD-31	SF99366-INSTLLD-10	SF99347-MISSING	SF99766-INSTLLD-1	SF99356-MISSING	SF99366-INSTLLD-7	SF993 INSTL
		SIPTF032	Electronic Services PTF Level	SF99627-INSTLLD-11	SF99627-INSTLLD-11	SF99627-INSTLLD-11	SF99627-INSTLLD-11	SF99625-MISSING	SF99626-INSTLLD-11	SF99627-INSTLLD-11	SF99625-MISSING	SF99627-MISSING	SF99626-MISSING	SF99627-MISSING	SF996 INSTL
	Configuration at Runtime	SICAR001	System Name	MCV7R1	RCHBSTGE	RCHBSTGE	RCHBSTGE	MCV7R1	CTCI005C	CTCDBMOD	CTCSEC	CTCSECI7	CTCTEST	CTCV71	CTCI00
		SICAR002	System Type / Model	9406-MMA	9406-MMA	9406-MMA	9406-MMA	9406-MMA	9406-570	9406-MMA	9406-550	8202-E4B	9406-570	9406-MMA	9406-57
		SICAR003	System Serial Number	10-40F40	10-2D80D	10-2D80D	10-2D80D	10-40F40	10-3200C	10-40F40	10-B772D	10-5931R	10-3200C	10-40F40	10-320
		SICAR004	Processor Feature	5462	7054	7054	7054	5462	7476	5462	7154	8350	7476	5462	7476
		SICAR005	Operating System Level (VRM)	V7R1M0	V7R1M0	V7R1M0	V7R1M0	V7R1M0	V6R1M0	V7R1M0	V5R4M0	V7R2M0	V6R1M0	V7R1M0	V6R1

Compliance Assessment and Reporting Tool

Cross System Analysis

Certificate Stores …

Category	Subcategory	Item Key	Item	System Name BJSYSTEM	BSTGEN	BSTGENTOO	BSTGEN2	CTCDBV7R1	CTCI005C
Certificate Stores	*PUBLIC Authority	CSPA0001	System Certificate Store Dir	*EXCLUDE	*EXCLUDE	*EXCLUDE	*USE	*EXCLUDE	*USE
		CSPA0002	Obj Sign/Sig Verify Cert Dir	*EXCLUDE	*EXCLUDE	*EXCLUDE	*USE	*EXCLUDE	*USE
		CSPA0003	Object Signing Certificate	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*EXCLUDE	*NOTFOUND
		CSPA0004	Object Signing Certificate PW	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*EXCLUDE	*NOTFOUND
		CSPA0005	Signature Verification Cert	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND
		CSPA0006	Signature Verification Cert PW	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND	*NOTFOUND
		CSPA0007	System Certificate Store	*EXCLUDE	*EXCLUDE)	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE
		CSPA0008	System Certificate Store PW	*EXCLUDE	*EXCLUDE)	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE
	Certificate Analysis (V6)	CSSTA001	Certificates Present (*SYSTEM)	21	*NOTAVAIL	*NOTAVAIL	30	34	1
		CSSTA002	Certificates that are Expired	5	*NOTAVAIL	*NOTAVAIL	11	5	1
		CSSTA003	Expiration within 90 Days	0	*NOTAVAIL	*NOTAVAIL	0	1	2
		CSSTA004	Expiration within 60 Days	0	*NOTAVAIL	*NOTAVAIL	0	0	14
		CSSTA005	Expiration within 30 Days	0	*NOTAVAIL	*NOTAVAIL	0	0	7
		CSSTA006	Certificates NOT Trusted	0	*NOTAVAIL	*NOTAVAIL	0	0	0
		CSSTA007	Certificates with Private Key	2	*NOTAVAIL	*NOTAVAIL	6	14	11
		CSSTA008	Keys with size less than 2048	19	*NOTAVAIL	*NOTAVAIL	19	23	4
		CSSTA009	Keys stored in Hardware	0	*NOTAVAIL	*NOTAVAIL	0	0	0

Compliance Assessment and Reporting Tool

Last Reported Event Log
(Status by Age, System, Region, Data Center, System Name)

Parameters

Gray_System_Days_Value: 65

Region: No Selection, Asia Pacific, Europe, Latin America-North

Data Center: No Selection, Argentina, Chicago, Hong Kong

System Name: No Selection, BSTGEN, CTCDBV7R1, CTCMOD

Run | Reset | Clear Output | Run in a new window

7 of 7 records, Page 1 of 1

Current Event Log Status by System Name

Regions:
Data Centers:
System Names:

Region	Data Center	System Name	Coded System Purpose	Version	Event Type	Event Date	Event Description	
Asia Pacific	Hong Kong	CTCSEC	D	V5R4M0	ERROR	2013/11/27	ERROR: REQUEST GATHERING ON SYSTEM CTCSEC	: Bad Check Status: ERROR
Europe	Turkey	CTCDBV7R1	P	V7R1M0	Gray - SUCCESS	2013/11/26	SUCCESSFUL COLLECTION FOR SYSTEM CTCDBV7R1	
	UK	CTCTEST	D	V6R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM CTCTEST	: REQUEST FOR COLLECTION FAILED
Latin America-North	Mexico	BSTGEN	C	V7R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM BSTGEN	: Bad Check Status: *BADSTS*
Latin America-South	Argentina	CTCV71	P	V7R1M0	SUCCESS	2013/11/27	SUCCESSFUL COLLECTION FOR SYSTEM CTCV71	
North America	Chicago	CTCMOD	P	V6R1M0	SUCCESS	2013/11/27	SUCCESSFUL COLLECTION FOR SYSTEM CTCMOD	
		CTCWEB54	C		Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM CTCWEB54	: REQUEST FOR COLLECTION FAILED

Compliance Assessment and Reporting Tool

Event Log Report

Shows status of most recent attempt to collect security data for each system (Can be filtered by Region, Data Center, and System Name)

Parameters

Gray_System_Days_Value: 68

Region: Europe, Latin America-North, Latin America-South, North America

Data Center: Hong Kong, Mexico, Turkey, UK

System Name: CTCSEC, CTCTEST, CTCV71, CTCWEB54

Run | Reset | Clear Output | Run in a new window

7 of 7 records, Page 1 of 1

Current Event Log Status by System Name

Regions: 'Asia Pacific' OR 'Europe' OR 'Latin America-North' OR 'Latin America-South' OR 'North America'
Data Centers: 'Argentina' OR 'Chicago' OR 'Hong Kong' OR 'Mexico' OR 'Turkey' OR 'UK'
System Names: 'BSTGEN' OR 'CTCDBV7R1' OR 'CTCMOD' OR 'CTCSEC' OR 'CTCTEST' OR 'CTCV71' OR 'CTCWEB54'

Region	Data Center	System Name	Coded System Purpose	Version	Event Type	Event Date	Event Description
Asia Pacific	Hong Kong	CTCSEC	D	V5R4M0	ERROR	2013/11/27	ERROR: REQUEST GATHERING ON SYSTEM CTCSEC : Bad Check Status:
Europe	Turkey	CTCDBV7R1	P	V7R1M0	Gray - SUCCESS	2013/11/26	SUCCESSFUL COLLECTION FOR SYSTEM CTCDBV7R1
	UK	CTCTEST	D	V6R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM CTCTEST : REQUEST FOR COL
Latin America-North	Mexico	BSTGEN	C	V7R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM BSTGEN : Bad Check Status:
Latin America-South	Argentina	CTCV71	P	V7R1M0	SUCCESS	2013/11/27	SUCCESSFUL COLLECTION FOR SYSTEM CTCV71
North America	Chicago	CTCMOD	P	V6R1M0	SUCCESS	2013/11/27	SUCCESSFUL COLLECTION FOR SYSTEM CTCMOD
		CTCWEB54	C		Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM CTCWEB54 : REQUEST FOR CO

1.4.1. Current Event Log Status by System - Active Report

Compliance Assessment and Reporting Tool

Delinquency Reports

Systems that have not successfully reported in the over xx days
(Can be filtered by Region, Data Center, and System Name)

Parameters

Gray_System_Days_Value: 14

Region: Europe, Latin America-North, Latin America-South, North America

Data Center: No Selection, Argentina, Chicago, Hong Kong

System Name: No Selection, BSTGEN, CTCDBV7R1, CTCMOD

Run | Reset | Clear Output | Run in a new window

5 of 5 records, Page 1 of 1

Delinquency Report based upon Event Log

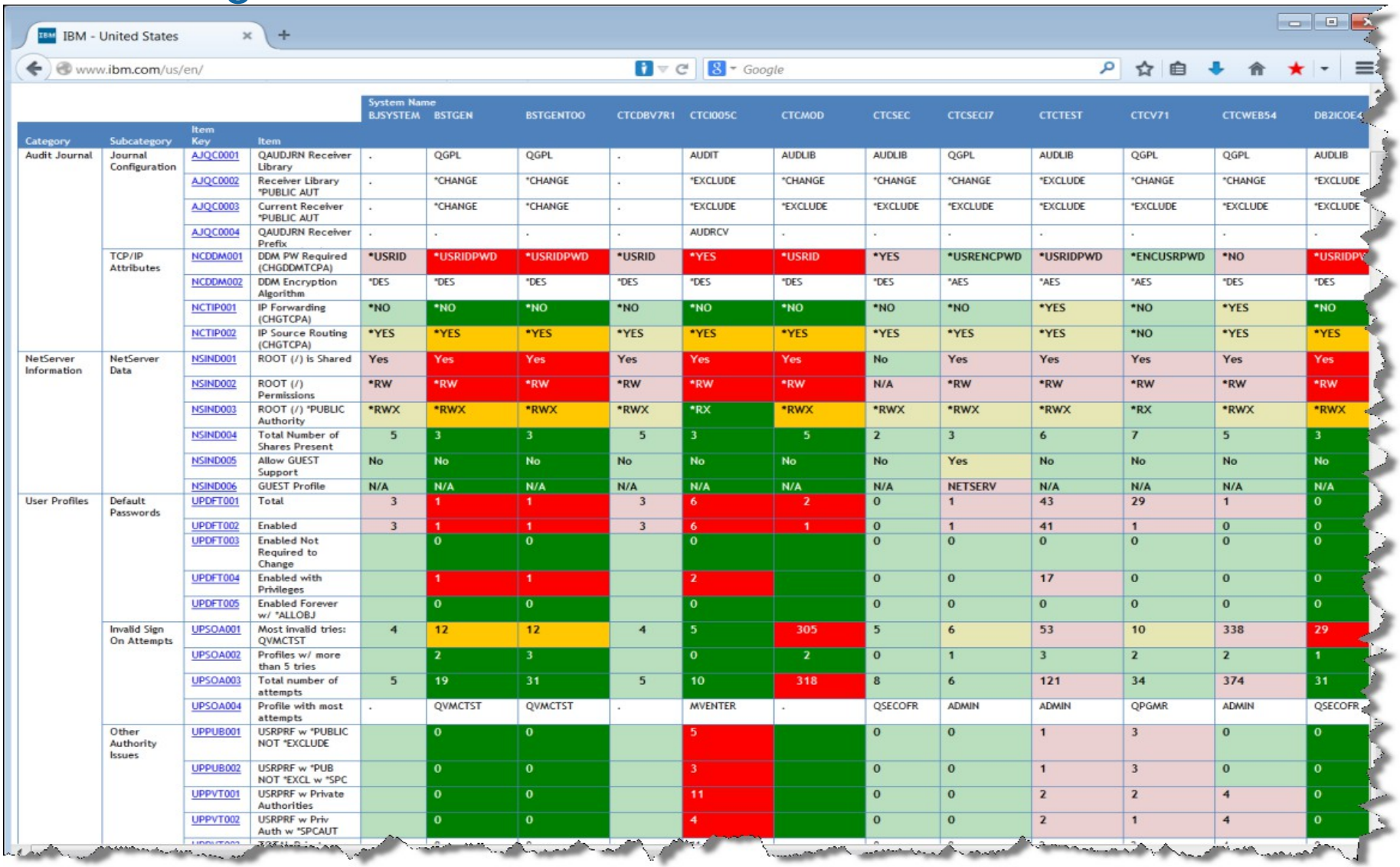
Systems not reporting for at least 14 days
Regions: 'Asia Pacific' OR 'Europe' OR 'Latin America-North' OR 'Latin America-South'
Data Centers:
System Names:

Region	Data Center	System Name	Coded System Purpose	Version	Event Type	Event Date	Event Description
Asia Pacific	Hong Kong	CTCSEC	D	V5R4M0	Gray - ERROR	2013/11/27	ERROR: REQUEST GATHERING ON SYSTEM CTCSEC : Bad Check Status: ERROR
Europe	Turkey	CTCDBV7R1	P	V7R1M0	Gray - SUCCESS	2013/11/26	SUCCESSFUL COLLECTION FOR SYSTEM CTCDBV7R1
	UK	CTCTEST	D	V6R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM CTCTEST : REQUEST FOR COLLECTION FAILED
Latin America-North	Mexico	BSTGEN	C	V7R1M0	Gray - ERROR	2013/11/26	ERROR: REQUEST GATHERING ON SYSTEM BSTGEN : Bad Check Status: *BADSTS*
Latin America-South	Argentina	CTCV71	P	V7R1M0	Gray - SUCCESS	2013/11/27	SUCCESSFUL COLLECTION FOR SYSTEM CTCV71

1.4.2. Delinquency Report Based on Event Log

Compliance Assessment and Reporting Tool

Monitoring Vulnerabilities



IBM - United States

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Category	Subcategory	Item Key	Item	System Name BJSYSTEM	BSTGEN	BSTGENTOO	CTCDBV7R1	CTCI005C	CTCMOD	CTCSEC	CTCSECI7	CTCTEST	CTCV71	CTCWEB54	DB2ICOE4
Audit Journal	Journal Configuration	AJQC0001	QAUDJRN Receiver Library	.	QGPL	QGPL	.	AUDIT	AUDLIB	AUDLIB	QGPL	AUDLIB	QGPL	QGPL	AUDLIB
		AJQC0002	Receiver Library *PUBLIC AUT	.	*CHANGE	*CHANGE	.	*EXCLUDE	*CHANGE	*CHANGE	*CHANGE	*EXCLUDE	*CHANGE	*CHANGE	*EXCLUDE
		AJQC0003	Current Receiver *PUBLIC AUT	.	*CHANGE	*CHANGE	.	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE	*EXCLUDE
		AJQC0004	QAUDJRN Receiver Prefix	.	.	.	.	AUDRCV	.	.	.	.	.	.	.
	TCP/IP Attributes	NCDDM001	DDM PW Required (CHGDDMTCPA)	*USRID	*USRIDPWD	*USRIDPWD	*USRID	*YES	*USRID	*YES	*USRENCPWD	*USRIDPWD	*ENCUSRPWD	*NO	*USRIDPW
		NCDDM002	DDM Encryption Algorithm	*DES	*DES	*DES	*DES	*DES	*DES	*DES	*AES	*AES	*AES	*DES	*DES
		NCTIP001	IP Forwarding (CHGTCPA)	*NO	*NO	*NO	*NO	*NO	*NO	*NO	*NO	*YES	*NO	*YES	*NO
		NCTIP002	IP Source Routing (CHGTCPA)	*YES	*YES	*YES	*YES	*YES	*YES	*YES	*YES	*YES	*NO	*YES	*YES
NetServer Information	NetServer Data	NSIND001	ROOT (/) is Shared	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
		NSIND002	ROOT (/) Permissions	*RW	*RW	*RW	*RW	*RW	*RW	N/A	*RW	*RW	*RW	*RW	*RW
		NSIND003	ROOT (/) *PUBLIC Authority	*RWX	*RWX	*RWX	*RWX	*RX	*RWX	*RWX	*RWX	*RWX	*RX	*RWX	*RWX
		NSIND004	Total Number of Shares Present	5	3	3	5	3	5	2	3	6	7	5	3
		NSIND005	Allow GUEST Support	No	No	No	No	No	No	No	Yes	No	No	No	No
		NSIND006	GUEST Profile	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NETSERV	N/A	N/A	N/A	N/A
User Profiles	Default Passwords	UPDFT001	Total	3	1	1	3	6	2	0	1	43	29	1	0
		UPDFT002	Enabled	3	1	1	3	6	1	0	1	41	1	0	0
		UPDFT003	Enabled Not Required to Change		0	0		0		0	0	0	0	0	0
		UPDFT004	Enabled with Privileges		1	1		2		0	0	17	0	0	0
		UPDFT005	Enabled Forever w/ *ALLOBJ		0	0		0		0	0	0	0	0	0
	Invalid Sign On Attempts	UPSOA001	Most invalid tries: QVMCTST	4	12	12	4	5	305	5	6	53	10	338	29
		UPSOA002	Profiles w/ more than 5 tries		2	3		0	2	0	1	3	2	2	1
		UPSOA003	Total number of attempts	5	19	31	5	10	318	8	6	121	34	374	31
		UPSOA004	Profile with most attempts	.	QVMCTST	QVMCTST	.	MVENTER	.	QSECOFR	ADMIN	ADMIN	QPGMR	ADMIN	QSECOFR
	Other Authority Issues	UPPUB001	USRPRF w *PUBLIC NOT *EXCLUDE		0	0		5		0	0	1	3	0	0
		UPPUB002	USRPRF w *PUB NOT *EXCL w *SPC		0	0		3		0	0	1	3	0	0
		UPPVT001	USRPRF w Private Authorities		0	0		11		0	0	2	2	4	0
		UPPVT002	USRPRF w Priv Auth w *SPCAUT		0	0		4		0	0	2	1	4	0

Compliance Assessment and Reporting Tool

Profile Analysis

Horizontal or vertical presentation of user profiles across LPARs

Enterprise System Name	User Profile	Is IBM Profile	User Class	Object Authority	Is A Group Profile	Status	Limited Capability	Password Expired	Password Is *NONE	Password Expiration Interval	Has Special Authorities	ALL SPCAUT Origin	AUDIT SPCAUT Origin	IOSYSCFG SPCAUT Origin	JOBCTL SPCAUT Origin	SAVSYS SPCAUT Origin	SE SP On
CTCI005C	AAAA	*NO	*USER	*EXCLUDE			*NO	*NO	*NO	*SYSVAL	*YES	*GROUP					
	AASLAND	*NO	*SECOFR	*EXCLUDE			*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	BADINGB	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PRFGRP	*PRFGRP	*PRFGRP	*PRFGRP	*PRFGRP	*PR
	BESTGEN	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*
	BRUCE	*NO	*USER	*EXCLUDE					*NO	*SYSVAL	*NO						
	BRUCE1	*NO	*USER	*EXCLUDE					*NO	*SYSVAL	*NO						
	DB2XML	*NO	*USER	*EXCLUDE					*YES	*SYSVAL	*NO						
	DIEPHUIS	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR
	FCEMRADM	*YES	*USER	*EXCLUDE					*YES	*SYSVAL	*NO						
	FCEMRGRP	*YES	*USER	*EXCLUDE					*YES	*SYSVAL	*NO						
	FCEMRUSR	*YES	*SECOFR	*EXCLUDE					*YES	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	GIBBONS	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*
	GIBBONSJ	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	GINTOWT	*NO	*SECOFR	*EXCLUDE					*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR
	GKJAMES	*NO	*SECOFR	*EXCLUDE			*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	HILLD	*NO	*SECOFR	*EXCLUDE			*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	MDUNTITLED	*NO	*USER	*EXCLUDE			*NO	*NO	*YES	*NOMAX	*YES				*PROFILE	*PROFILE	
	MINETTE	*NO	*SECOFR	*EXCLUDE			*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P
	MKMEYERS	*NO	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR
	MRADMIN	*NO	*USER	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*YES	*NOMAX	*YES				*PROFILE	*PROFILE	
	MRSCHEDULE	*NO	*USER	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*YES	*NOMAX	*YES				*PROFILE	*PROFILE	
	MSHADE	*NO	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR
	MVENTER	*NO	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR
	QANZAGENT	*YES	*SYSOPR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*YES	*SYSVAL	*NO						
	QAUTPROF	*YES	*USER	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*YES	*SYSVAL	*NO						
	QBRMS	*YES	*USER	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*YES	*NOMAX	*NO						
	QCLUMGT	*YES	*USER	*EXCLUDE	*NO	*DISABLED	*NO	*NO	*YES	*SYSVAL	*NO						

Sort Ascending
Sort Descending
Filter
Calculate
Chart
Rollup
Pivot (Cross Tab
Hide Column
Freeze Column
Unfreeze All
Grid Tool
Chart/Rollup Too
Pivot Tool
Show Records
Comments
Export
Print
Window
Restore Original

Equals
Not equal
Greater than
Greater than or equal to
Less than
Less than or equal to
Between
Contains
Contains (match case)
Omits
Omits (match case)

Compliance Assessment and Reporting Tool

Profile Analysis

Aggregation of user profiles across LPARs

User Profile	Total Systems With Profile	Systems With Enabled Profiles	Systems With All Object Special Authority	Systems With Audit Special Authority	Systems With I/O System Special Authority	Systems With Job Control Special Authority	Systems With Save System Special Authority	Systems With Security Administrator Special Authority	Systems With Spool Control Special Authority	Profile Description
AAAA	1	1	0	0	0	0	0	0	0	
AASLAND	3	3	3	3	3	3	3	3	3	Christian Aasland 612-397-2947, XLU
ABONIFAC	1	1	1	1	1	1	1	1	1	Antonio Bonifacio
ADMGROUP	1	1	0	0	0	0	0	0	0	Used in Security lab
ADMIN	2	0	2	2	2	2	2	2	2	CBC Administrator for Management Centra
ADMOWN	1	0	1	1	1	1	1	1	1	Security Fundamentals Owner
ADM01	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM02	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM03	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM04	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM05	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM06	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM07	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM08	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM09	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADM10	1	1	0	0	0	0	0	1	0	System Admin and Control class
ADPOWN	1	1	1	1	1	1	1	1	1	
AJFISHER	2	1	2	2	2	2	2	2	2	Arv Fisher - Java dev't
AKENNEDY	1	1	1	1	1	1	1	1	1	Alan Kennedy
ALLOBJ	2	2	2	1	1	1	1	1	1	
AMRA	1	1	1	1	1	1	1	1	1	Nadir Amra
APPGROUP1	1	1	0	0	0	0	0	0	0	
APPGRP	1	1	0	0	0	0	0	0	0	
APPGRP1	1	1	0	0	0	0	0	0	0	
APPGRP2	1	1	0	0	0	0	0	0	0	
APPLIBOWN	1	1	0	0	0	0	0	0	0	
APPOWN	1	0	0	0	0	0	0	0	0	
APPOWN1	1	0	0	0	0	0	0	0	0	
APPSECOFR	1	1	1	0	0	0	0	0	0	

Compliance Assessment and Reporting Tool

Profile Analysis

Drill down into user profiles as configured across LPARs

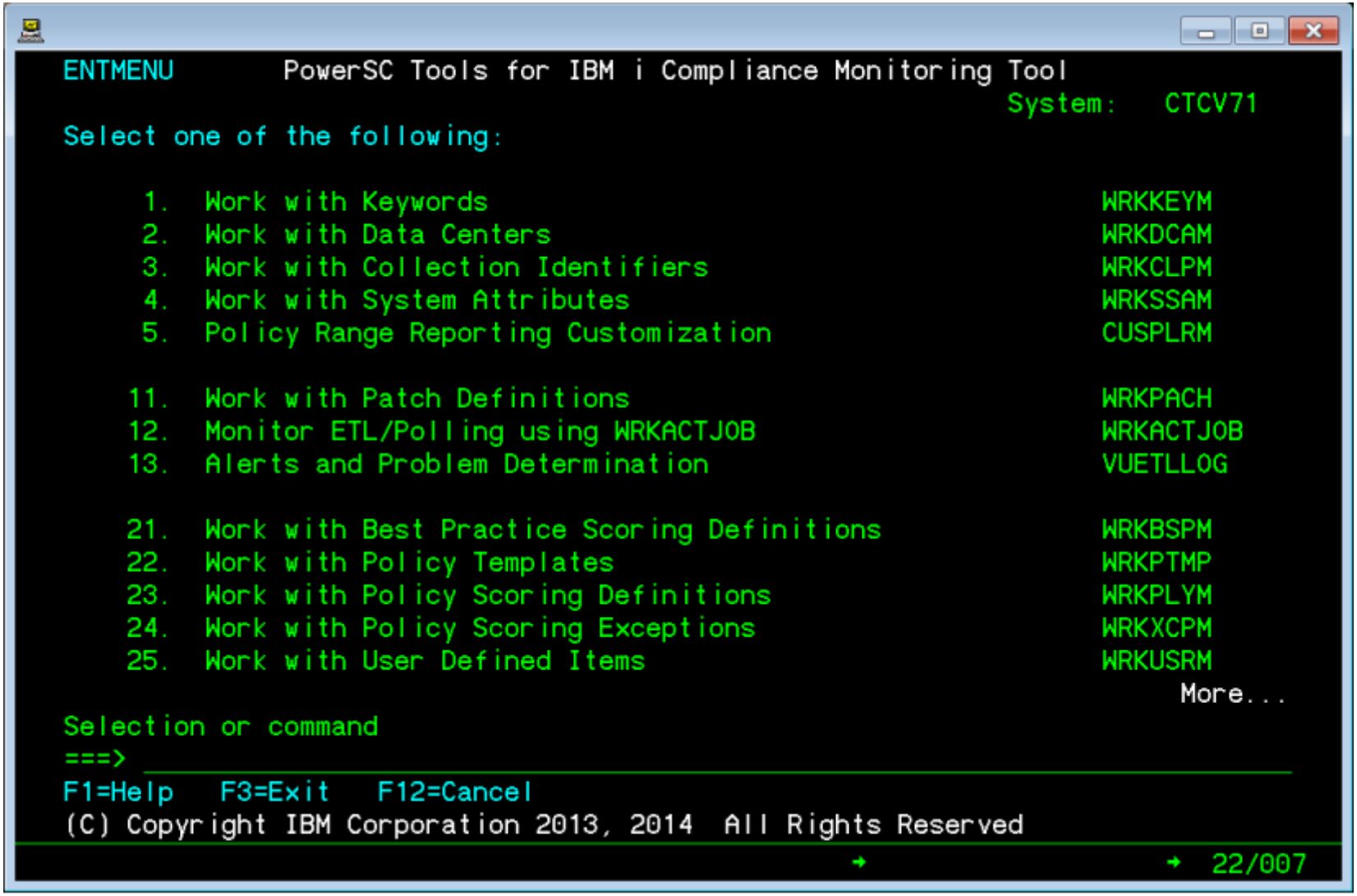
User Profile Details for Selected Systems

User Profile: QSECOFR

Region	Data Center	System Name	User Profile	Is IBM Profile	User Class	Object Authority	Is A Group Profile	Status	Limited Capability	Password Expired	Password Is *NONE	Password Expiration Interval	Has Special Authorities	ALL SPCAUT Origin	AUDIT SPCAUT Origin	IOSYSCFG SPCAUT Origin	JOBCTL SPCAUT Origin	SAVSYS SPCAUT Origin	SECADM SPCAUT Origin	SE...
Latin America-North	Mexico	BSTGEN2	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR...
	ROBS	CTCMOD	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*DISABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
Latin America-South	Argentina	BSTGEN	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR...
		BSTGENTOO	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
		CTCDBV7R1	QSECOFR																	
		CTCSEC	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*DISABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
		CTCSECI7	QSECOFR	*YES	*SECOFR	*EXCLUDE	*YES	*ENABLED	*NO	*NO	*NO	*NOMAX	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
		FIVECTESTSYS	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
North America	Rochester	CTCTEST	QSECOFR	*YES	*SECOFR	*EXCLUDE	*YES	*ENABLED	*NO	*NO	*NO	*NOMAX	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PR...
		CTCV71	QSECOFR	*YES	*SECOFR	*EXCLUDE	*YES	*DISABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*P...
	ROBS2	BJSYSTEM	QSECOFR																	
	ROB3	CTCI005C	QSECOFR	*YES	*SECOFR	*EXCLUDE	*NO	*ENABLED	*NO	*NO	*NO	*SYSVAL	*YES	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	*PROFILE	

Compliance Assessment and Reporting Tool

Application to Provide Customization



Compliance Assessment and Reporting Tool

Application to manage systems under review…

```
10/02/14                    Work with System Attributes                    12:50:03

Position to  . . .  _____________________  ( Enterprise Name )

Type options, press Enter.                 PATCHING OPERATIONS
2=Edit  3=Copy  4=Delete  5=Display  7=ON/OFF  8=Applied  9=Run Now  T=Telnet

Opt Enterprise Name     Serial # LPAR VxRxMx Purpose        PCH ACT HR SMTWTFS
 _  BJSYSTEM            10-40F40 0003 V7R1M0 2.Development SPD Yes 14 YYYYYYY
 _  BSTGEN              10-2D80D 0001 V7R1M0 1.Production  SPD Yes 10 YYYYYYY
 _  BSTGEN00            10-2D80D 0001 V7R1M0 1.Production  ACT Yes 06 YYYYYYY
 _  CTCDBV7R1           10-40F40 0003 V7R1M0 1.Production  SPD Yes 10 NYYYYYN
 _  CTCI005C            10-3200C 0001 V5R4M0 1.Production  SPD Yes 04 YYYNYYY
 _  CTCMOD              10-40F40 0006 V7R1M0 1.Production  ACT Yes 02 YYYYYYY
 _  CTCSEC              10-B772D 0001 V5R4M0 2.Development SPD Yes 15 YYYYYYY
 _  CTCSECI7            10-5931R 0001 V7R2M0 2.Development SPD Yes 02 YYYYYYY
 _  CTCTEST             10-3200C 0011 V6R1M0 2.Development SPD Yes 22 YYYYYYY
 _  CTCV71              10-40F40 0004 V7R1M0 1.Production  SPD Yes 10 YYYYYYY
 _  CTCWEB54            10-3200C 0004 V5R4M0 3.Contingency SPD No  15 YYYYYYY
 _  DB2ICOE4            10-B7B52 0022 V7R1M0 2.Development SPD Yes 02 YYYYYYY
 _  FIVECTESTSYS                 0000        1.Production  SPD Yes 02 YYNNYYY
                                                                      More...
F3=Exit  F5=Refresh  F6=Add  F7=Archive  F8=Patching  F9=View RMT  F11=Toggle
                                                                  22/007
```

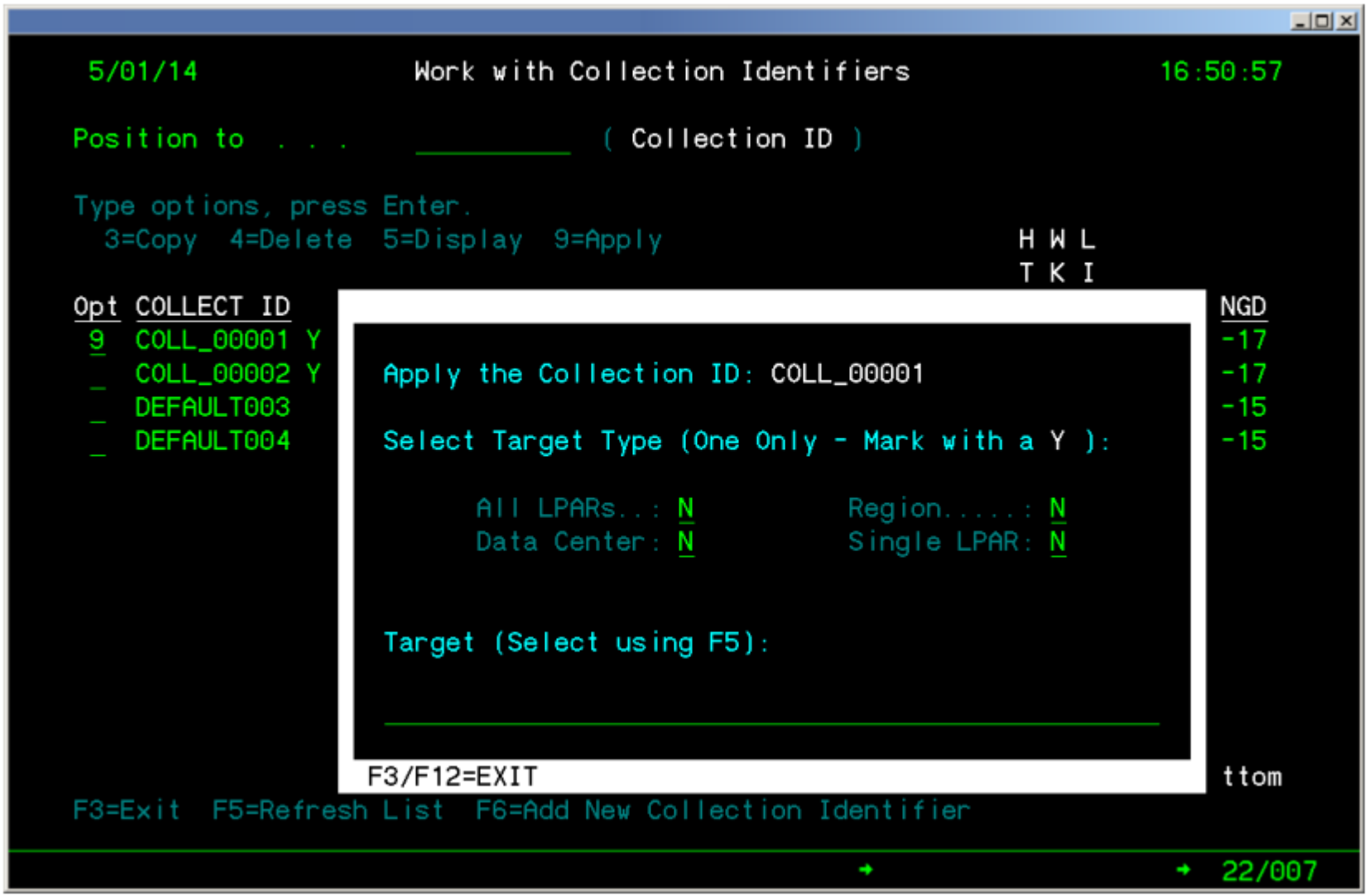
Compliance Assessment and Reporting Tool

Application to customize what is collected …

```
VIEW Mode      Collection Parameter Maintenance      5/01/14  16:52:47  CTCV71
                                                  Created: 2013-08-13 10.34.11
                                                  Changed: 2014-04-17 00.16.07
Collection ID..: COLL_00001      In Use?: Y            Last Changed By: TAFORD

Description....: COLL_00001

Template Name..: *DEFAULT     (F4)

Output Library.: QZRDQWKDTA  (Fixed Value of QZRDQWKDTA)

Prepared By....: QWKUSER                 Name of Security Administrator

Create HTML?...: N  (Y/N)    HTML Report Title: DEFAULT

Analyze Work MGMT?:  Y  (Y/N)
Analyze Libraries?:  Y  (Y/N)

Exit Program: *NONE
Exit Library: *NONE       (can NOT be *CURLIB or *LIBL)


F3=Exit

                                                                  22/007
```

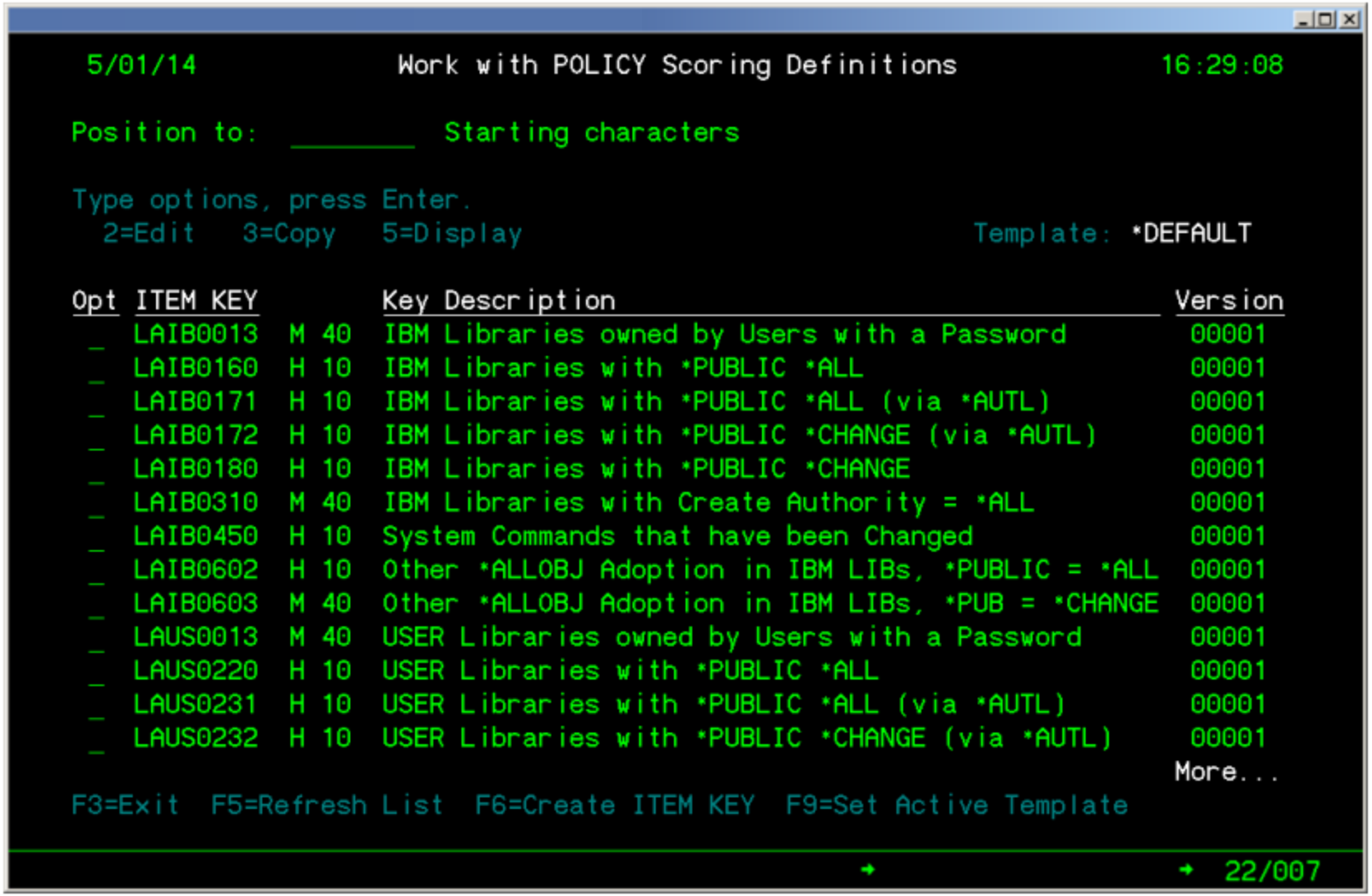
Compliance Assessment and Reporting Tool

And how (where) it is deployed …



Compliance Assessment and Reporting Tool

Application to Provide Scoring



Compliance Assessment and Reporting Tool

Application to Provide Scoring – Customer Policy

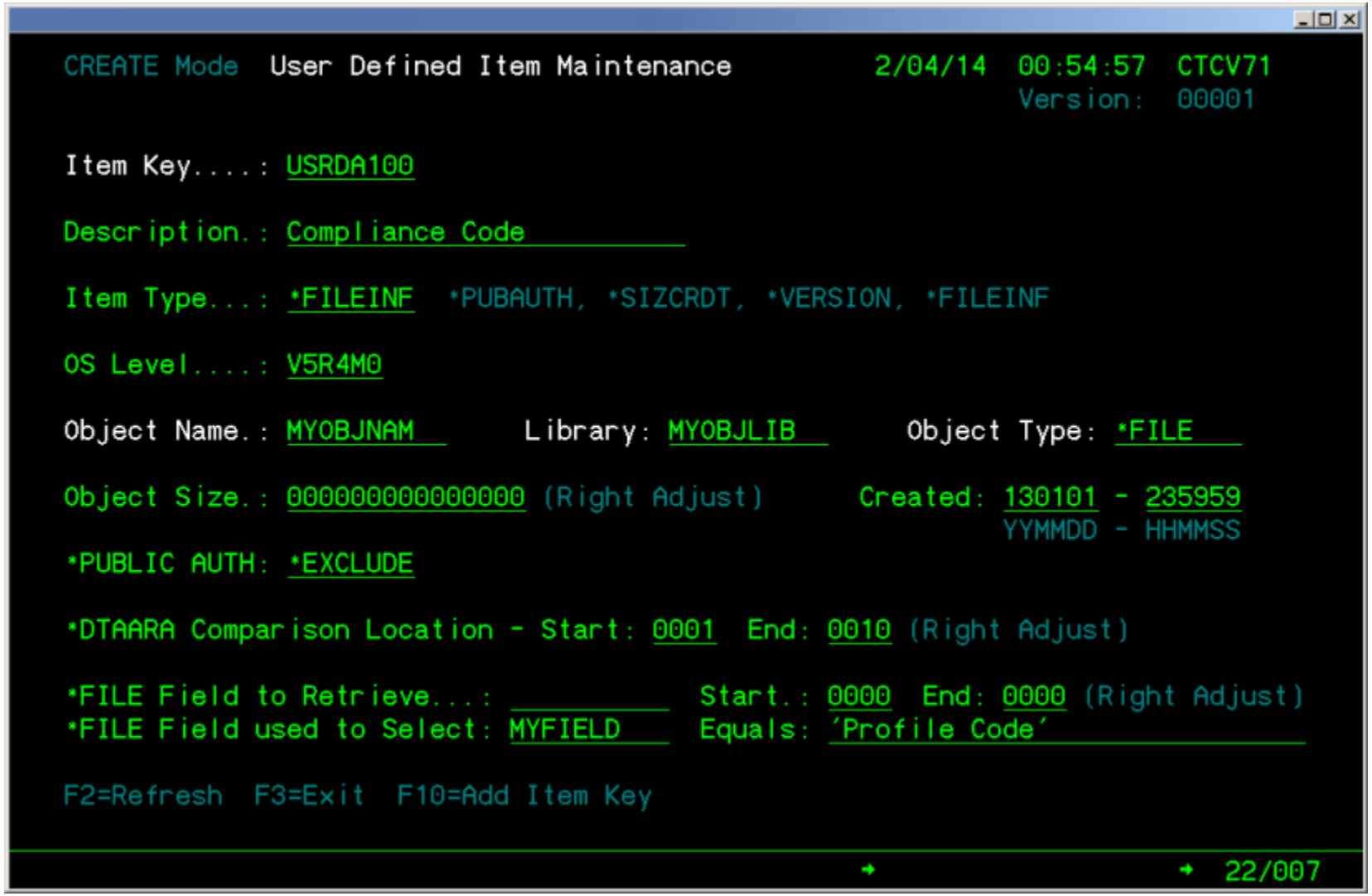
Compliance Assessment and Reporting Tool

Application to Provide Scoring – Customer Policy

```
VIEW Mode      POLICY Scoring Maintenance          5/01/14  16:35:03  CTCV71
                                                        Template: *DEFAULT
                                                             Version: 00001

Item Key....: LAUS0220

Description.: USER Libraries with *PUBLIC *ALL

Item Type...: *CHAR   *NUM, *CHAR    *NUM Sort: *LOHI   *LOHI, *HILO

Risk Rating?: H  H=High M=Medium L=Low     Priority: 10    Lowest OS: V5R4M0

GREEN Value.: 0                          Value or LO/HI Threshold (7)
GREEN Other.: *NA                        Value or *NA (Not used w/ *NUM)
GREEN Other.: *NA                        Value or *NA (Not used w/ *NUM)

YELLOW Value: *NA                        Value, *NA, *NOTGREEN,
                                         *NOTGRNRED, *BETWEEN

RED Value...: *NOTGREEN                  Value, *NOTGREEN, *NOTGRNYLW,
                                         *NA, or LO/HI Threshold (7)

F3=Exit  F8=More Green Values

                                                                  22/007
```

Compliance Assessment and Reporting Tool

Application to Provide Scoring – User / Customer Defined



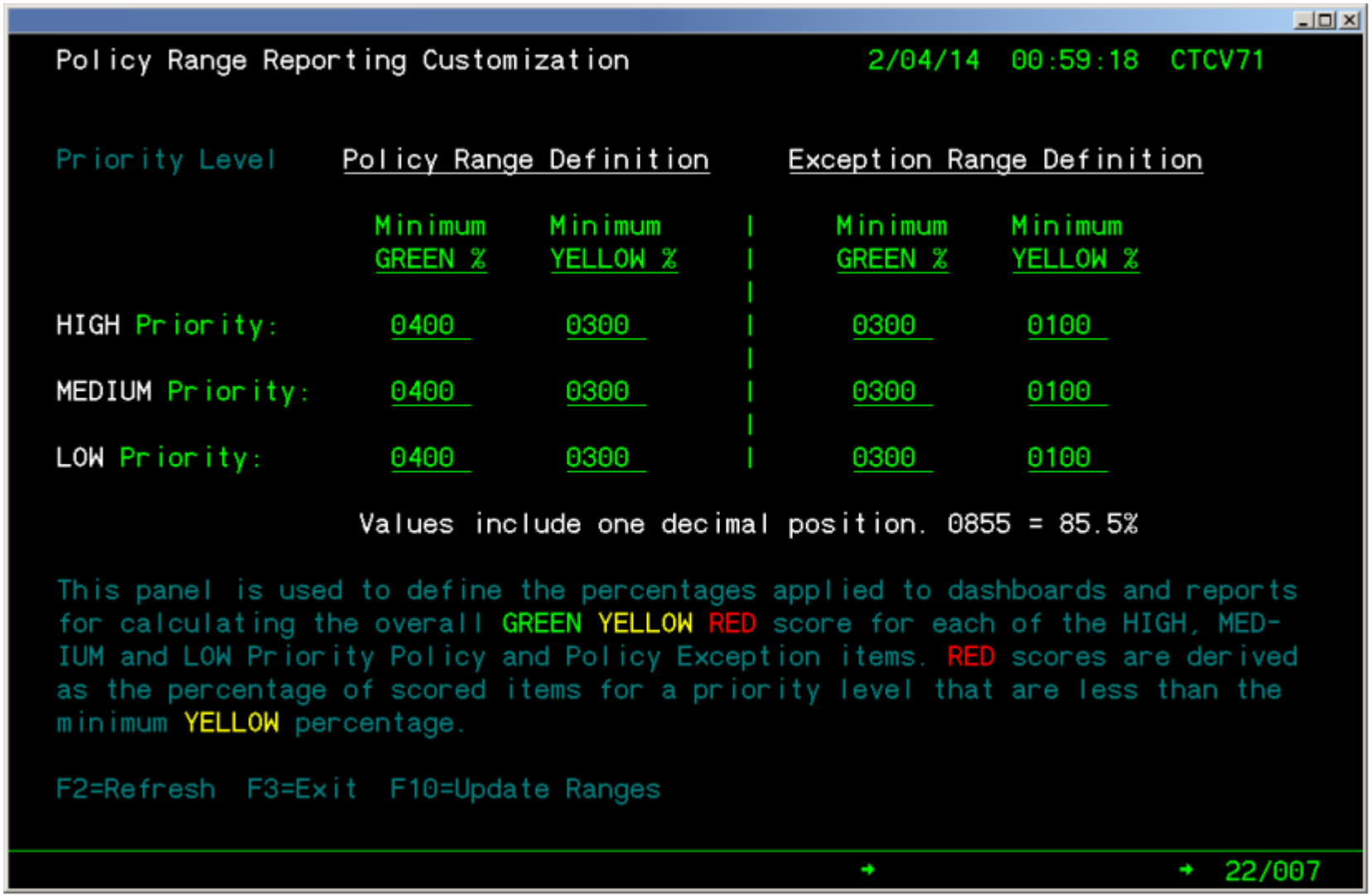
Compliance Assessment and Reporting Tool

Application to patch itself **or** for you to patch your systems

```
VIEW Mode        Patch Definition Maintenance      5/01/14  17:07:36  CTCV71
                                                   Created: 2014-04-30 01.24.07
                                                   Changed: 2014-04-30 01.24.07
Patch Name/ID.:  TESTBB                              Last Changed By: TAFORD

Description...:  test

Service Ticket:  *NONE      (if applicable, otherwise *NONE )

Deploy Date...:  14/05/01  YY/MM/DD (F4)    Date Completed on Target: N/A

Patch Type....:  *QWKFIX  *APPFIX, *OPSFIX, *QWKFIX, *SECFIX

Target Type...:  *ALL     *ALL, *DTACTR, *REGION, *SYSTEM (RDBNAM)

Patch Target..:  *ALL                                                (F5)

Patch Location:
  ..... Library:  QZRDQWKENT  (can NOT be *CURLIB or *LIBL)
  ..... Program:  QWKCLPXP
  ... Save File:  *NONE       (if applicable, otherwise *NONE )

F3=Exit

                                                                  22/007
```

Compliance Assessment and Reporting Tool

Application to Provide Dashboard Customization



Questions

PowerSC Tools for IBM i

- ***Simplifies management*** *and measurement of security & compliance*
- ***Reduces cost*** *of security & compliance*
- ***Improves detection*** *and reporting of security exposures*
- ***Improves*** *the* ***audit capability*** *to satisfy reporting requirements*

IBM Lab Services offerings for IBM i security:

- *IBM i Security Assessment*
- *IBM i Single Sign On Implementation*
- *IBM i Security Remediation*
- *IBM I Encryption*

PowerSC Tools for IBM i	Benefits
Compliance Assessment Tool	Demonstrate adherence to pre-defined security polices
Security Diagnostics	Reduces operator time involved in remediating exposures
Privileged Access Control	Ensures compliance with guidelines on privileged users
Secure Administrator for SAP	Eliminates sharing of SAP administrative profiles
Access Control Monitor	Prevents user application failures due to inconsistent controls
Network Interface Firewall	Reduces threat of unauthorized security breach and data loss
Audit Reporting	Simplifies audit analysis for compliance officer and/or auditors
Certificate Expiration Manager	Prevents system outages due to expired certificates
Password Validation	Ensures user passwords are not trivial
Single Sign On (SSO) Suite	Reduces for password resets and simplifies user experience
Encryption Suite	Helps meet data security standards and protect critical data

PowerSC Tools for IBM i is a service offering from IBM Systems Lab Services

For more information on PowerSC Tools for IBM i offerings and services, contact: Terry Ford taford@us.ibm.com Practice Leader, IBM Systems Lab Services Security

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PowerVP
SSP4
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APPENDIX

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Prerequisites – Central Server

- **IBM i operating system version 7.1 or above**
  - Option 1 - Extended Base Support
  - Option 2 - Online Information
  - Option 3 - Extended Base Directory Support
  - Option 12 - Host Servers
  - Option 13 - System Openness Includes
  - Option 14- GDDM
  - Option 26 - DB2 Symmetric Multiprocessing (**OPTIONAL**)
  - Option 29 - Integrated Server Support
  - Option 30 - QSHELL
  - Option 31 - Domain Name System
  - Option 33 - PASE
  - Option 34 - Digital Certificate Manager
  - Option 39 - International Components for Unicode

- **5733WQE - DB2 Web Query Express v2.1** (Standard edition preferred - 5733WQS)
  - Minimum 1 core license (for *Base and Option 1)
  - 2 Licensed users (Option 4) – see Notes page
  - One Workbench License (Option 5)

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Compliance Assessment and Reporting Tool

Prerequisites – Central Server (continued)

- **Pre-requisite program products:**
  - 5770DG1 - IBM HTTP Server for i
  - 5761JV1 - IBM Developer Kit for Java (*BASE and options 8 through 13)
  - 5770NAE - IBM Network Authentication Enablement for i
  - 5733SC1 - IBM Portable Utilities for i (*BASE and OpenSSH, OpenSSL, zlib)
  - 5770TC1 - IBM TCP/IP Connectivity Utilities for i
- **Pre-requisite PTFs** (as of January 2015):

		V7R1	V7R2
SF99710	Cumulative PTF Package	14283	14276
SF99709	Group HIPER	129	22
SF99708	Security Group	35	9
SF99707	Technology Refresh	9	1
SF99701	DB2 Group	32	1
SF99647	DB2 Web Query Hot Fix	9	9
SF99572	Java Group	19	4
SF99368	HTTP Group	31	5
SF99367	TCPIP Group	8	1

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Prerequisites – Remote Systems

- IBM i operating system version 5.4 or above with v7.1 Central, or
- IBM i operating system version 6.1 or above with v7.2 Central
- Compliance Assessment and Reporting Tool - Remote Agent

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