

Managing PTFs Across an Enterprise with ARE

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Architect Systems Management

Automation

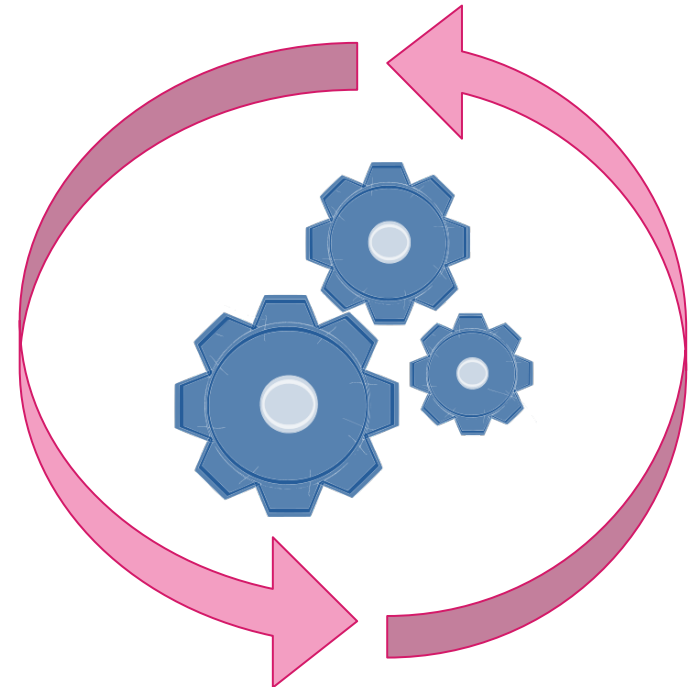


Do you have tasks that someone must do on a regular basis ?

- Check on Jobs?
- Review status of something ?
- Validate information with in logs ?

PTF Automation ?

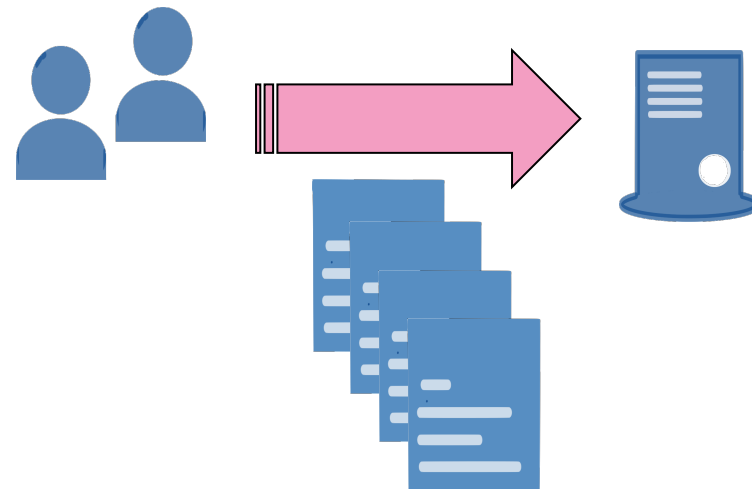
- Are you current ?
- Do you have multiple partitions ?
- Different release levels ?



Heath Care Company



Multi Page document that lists everything that needs to be verified before a system can be released after an upgrade of any kind

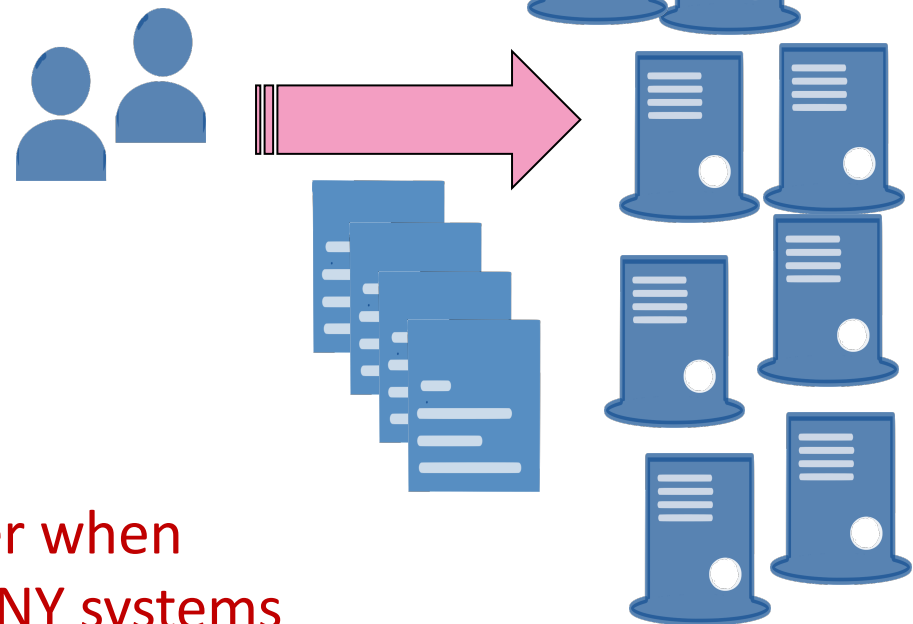


Not too bad with 1 system....

Heath Care Company



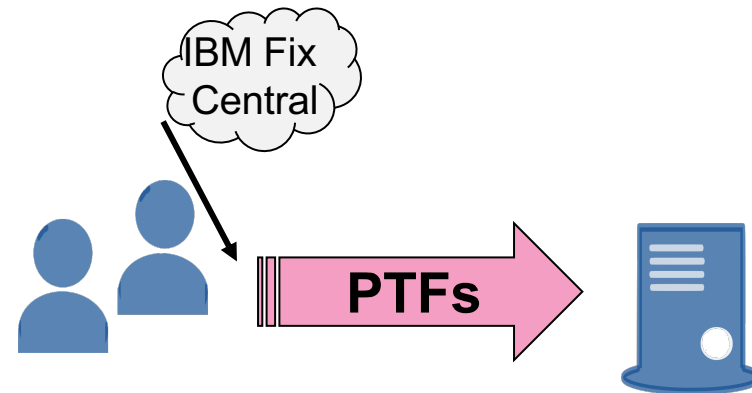
Multi Page document that lists everything that needs to be verified before a system can be released after an upgrade of any kind



Huge time waster when dealing with MANY systems

Company with Many Partitions

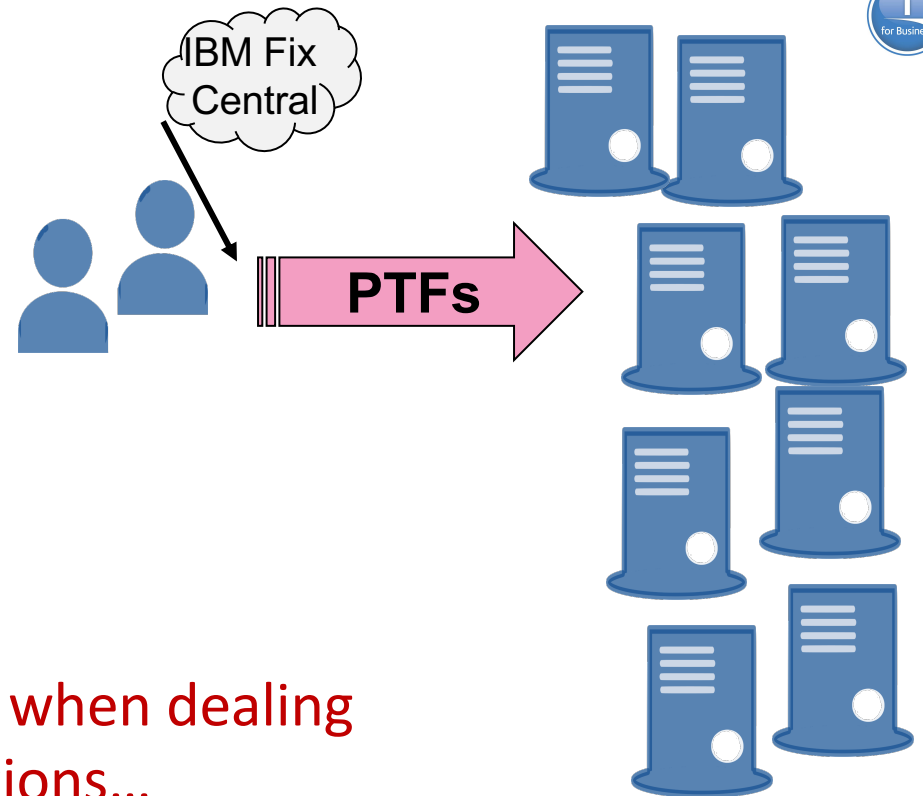
Down load PTFs from IBM Fix Central and load and Apply to partition



Not too bad with 1 system....

Company with Many Partitions

Down load PTFs from IBM Fix Central and load and Apply to partition



Major headache when dealing with many partitions...



IBM Administration Runtime Expert for i – What is it?

—Automated tool to verify the physical condition and runtime attributes of:

- Applications
- Systems
- Environments
- PTFs

—**Ability to fix detected problems**

- Fix User Profiles to known values
- Fix Authorities on files and directories
- Automate custom actions





Application Attributes



Java Environment



RPG or C Programs



File – Size, Existence, Dates



Native ILE Object Attributes



Directories – Existence, Dates



Environment Variables



File Ownership



User Authorities



File Authorities



Data Authorities



XML File Attributes



Property File Attributes



Ports



Call SQL Scripts





System Attributes



Products installed



Run Check Prod



Group PTFs Levels



Individual PTFs Installed



User Profiles



System Values



Exit Points



TCP/IP configuration



Network setting



DNS Working



Additional custom plugins



LANTap Varied On

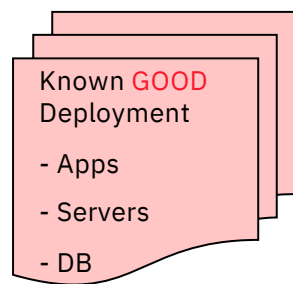


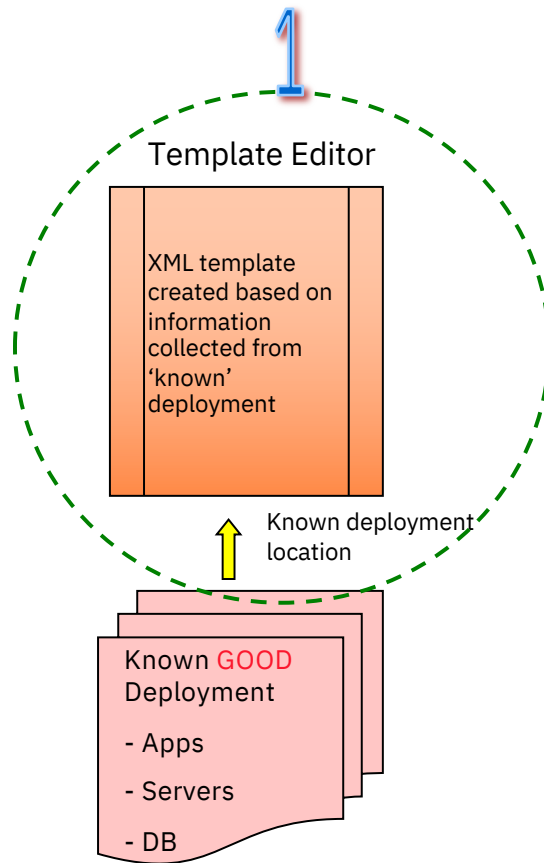
System Date = Today

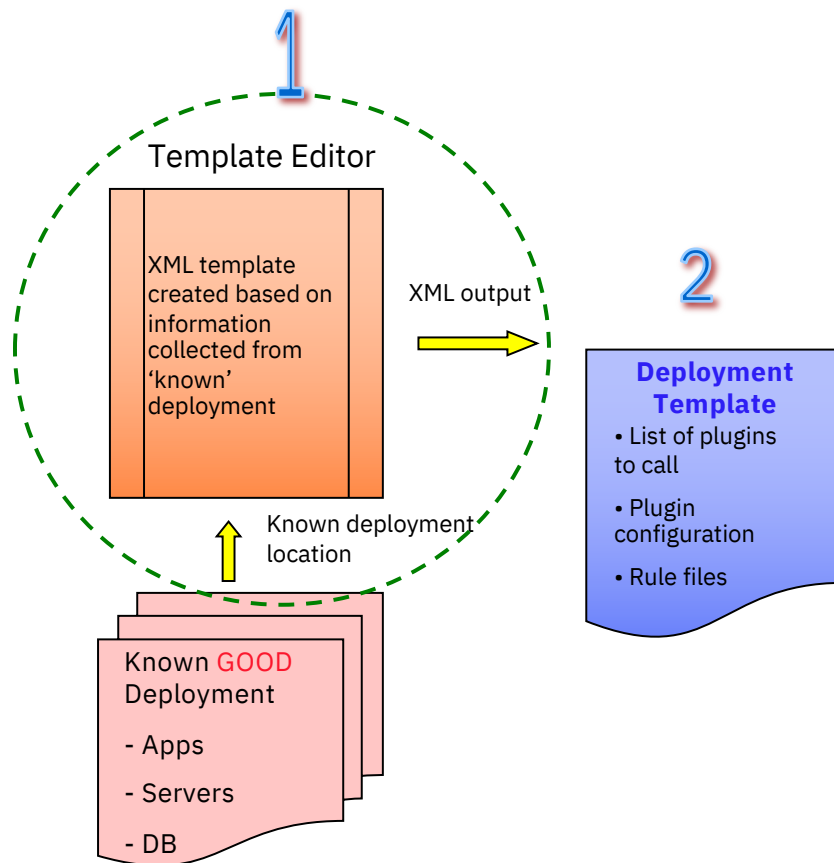


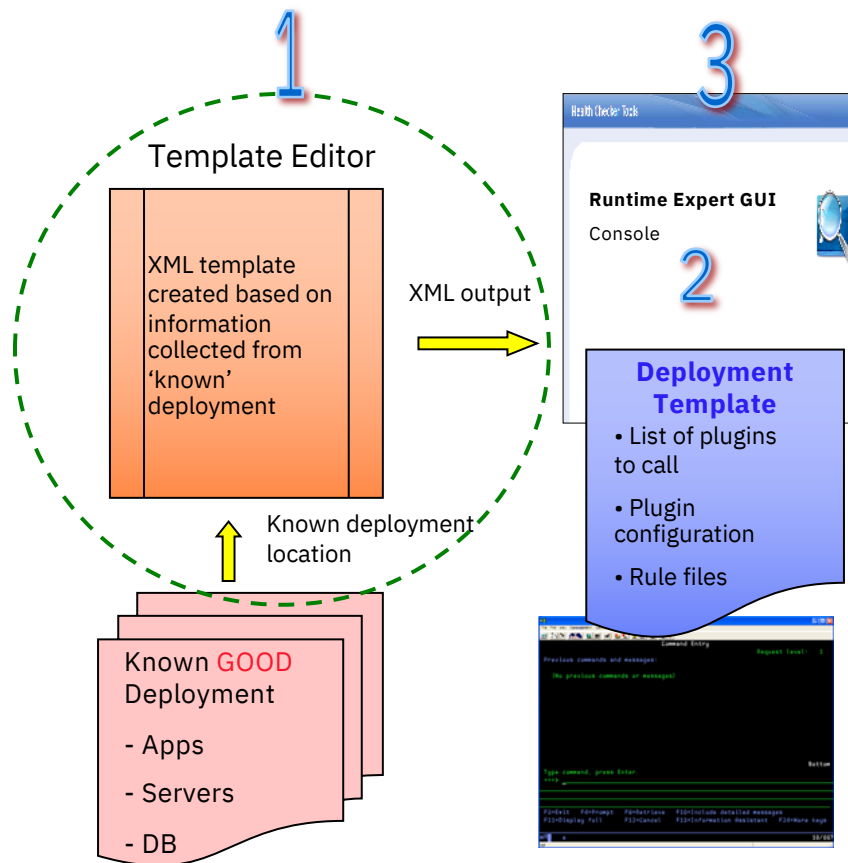
User Servers Active

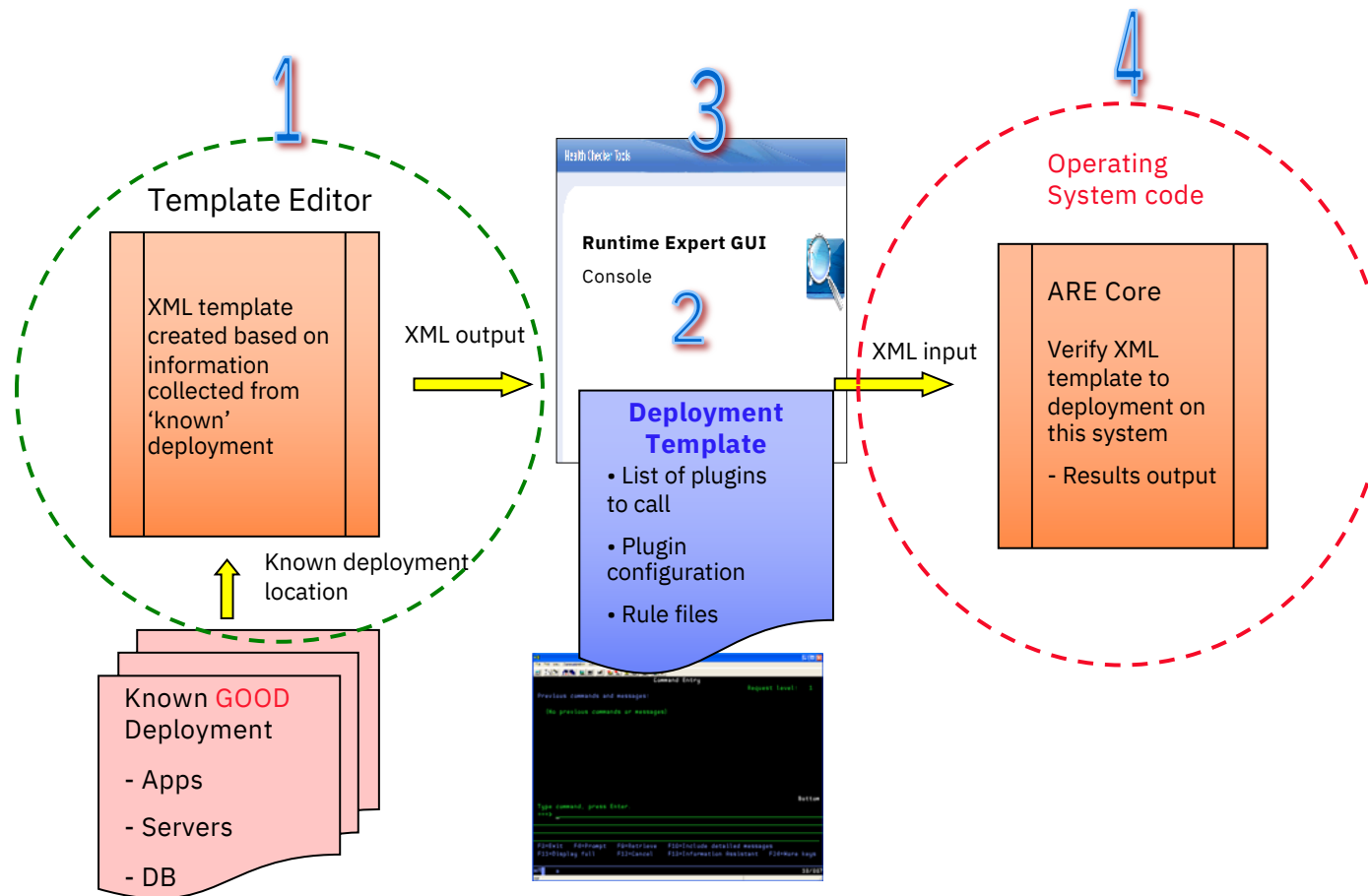


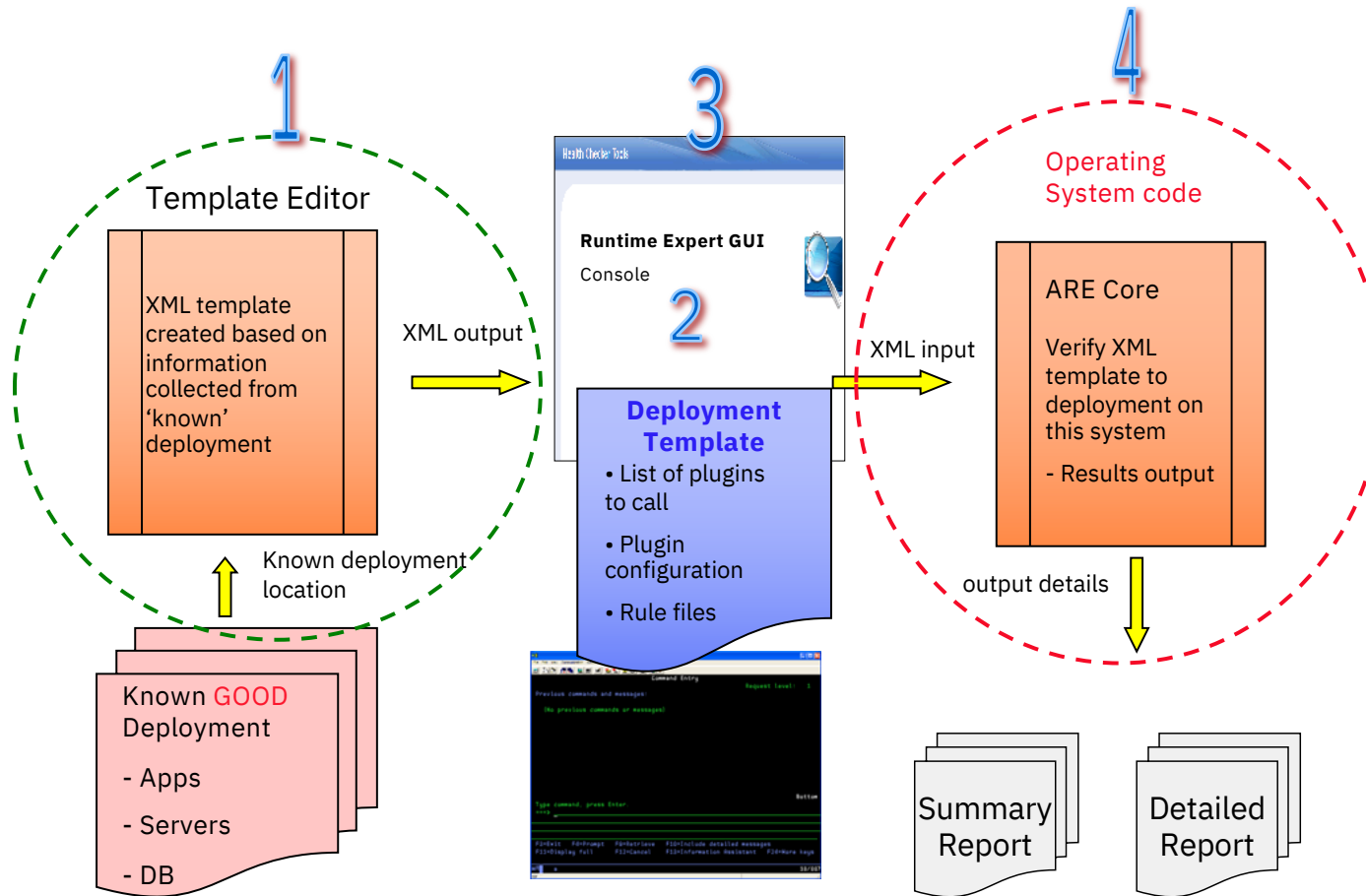








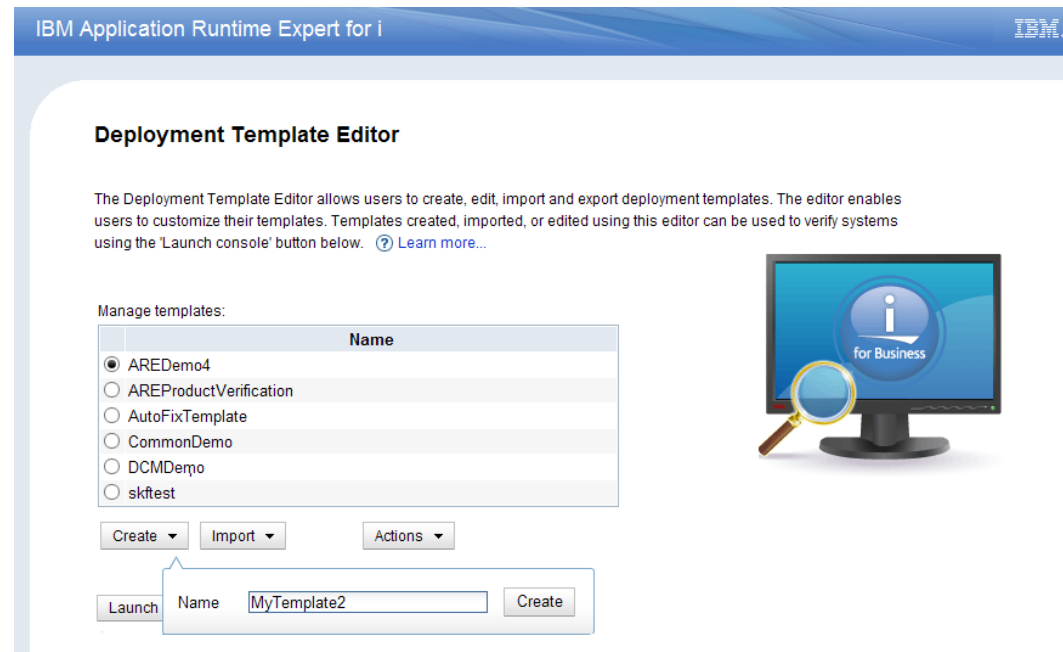






Manage templates

- Create
- Update
- Import



Launch the Create template wizard

[Home](#) > [Plugin Selection and Customization](#) > [SQL Query Verifier](#) > [Customize SQL Query Verifier](#)

Customize SQL Query Verifier

Specify the SQL Query and Verifications Details



Collection name:

Select statement [? Learn more...](#)

`select * from wangnan.ticket`

Example: `SELECT * FROM myDB.myTable`

Print the result set of SQL query to the verification report:

☒ Check the number of records returned for the SQL query [? Learn more...](#)

Expect value:

Comparison:

Severity:

Column value verification conditions [? Learn more...](#)

	Column name	Check class	Expected value	Comparison	Result type	Match case	Severity	Description
Example id		Numeric	6	Equals	All	False	Error	All ids should equa
Example name		String	John	Contains substring	Any	True	Error	Names returned st
<input checked="" type="checkbox"/>	comment	String	wangnan	Contains substring	Any	True	Error	demo correct
<input checked="" type="checkbox"/>	comment	String	demo not exist	Contains substring	Any	True	Error	demo not exist

Add

Remove

OK

Cancel

Call a SQL statement

- Verify the results
- Number of entries
- Specific content!



Built in DB2 Services – Use SQL to get info from the system!

PTF Services

[QSYS2.PTF_INFO](#)

[QSYS2.GROUP_PTF_INFO](#)

Security Services

[QSYS2.USER_INFO](#)

[QSYS2.FUNCTION_INFO](#)

[QSYS2.FUNCTION_USAGE](#)

[QSYS2.GROUP_PROFILES](#)

[QSYS2.SQL_CHECK](#)

[QSYS2.SET_COLUMNS](#)

Work Management Services

[QSYS2.SYSTEM_VALUE_I](#)

[QSYS2.GET_JOB_INFO\(\)](#)

TCP/IP Services

[SYSIBMADM.ENV_SYS_INFO](#)

[QSYS2.TCPIP_INFO](#)

Storage Services

[QSYS2.USER_STORAGE](#)

[QSYS2.SYSDISKSTAT](#)

[QSYS2.SYSTMPSTG](#)

Object Services

[QSYS2.OBJECT_STATISTICS\(\)](#)

Health Services

[QSYS2.SYSLIMTBL](#)

[QSYS2.SYSLIMITS](#)

Journal Services

[QSYS2.DISPLAY_JOURNAL\(\)](#)

Application Services

[QSYS2.QCMDEXC\(\)](#)

Nearly a 100
Services!

Built in DB2 Services – Examples



```
SELECT * FROM QSYS2.USER_INFO  
WHERE SIGN_ON_ATTEMPTS_NOT_VALID > 0
```

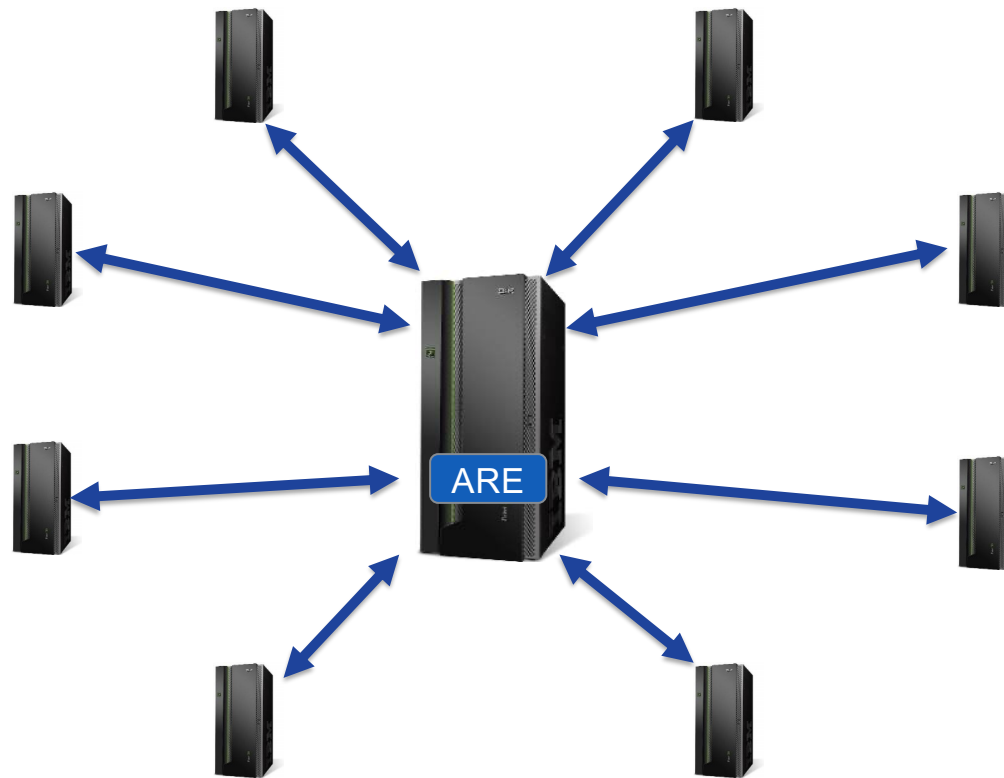
```
SELECT  
  ASP_NUMBER,UNITNBR,PERCENT_USED  
FROM QSYS2.SYSDISKSTAT
```



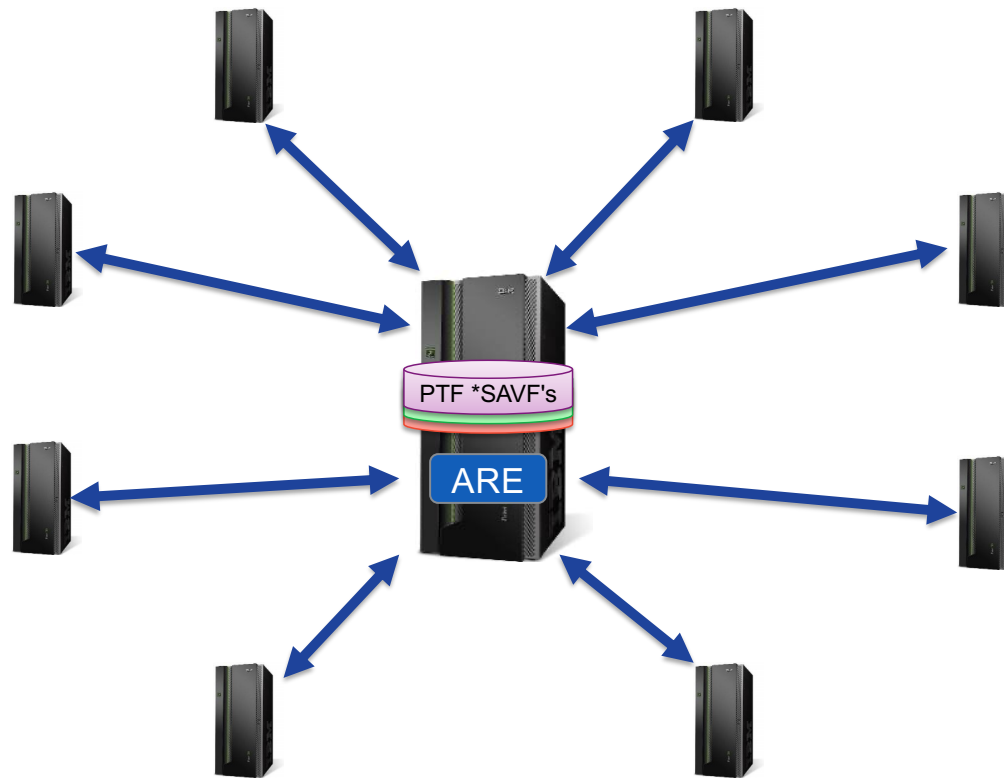
Care about PTFs ?

- Are all of my systems at the same fix level?
 - How can I keep my systems up-to-date?
 - What are the latest levels released by IBM?
-

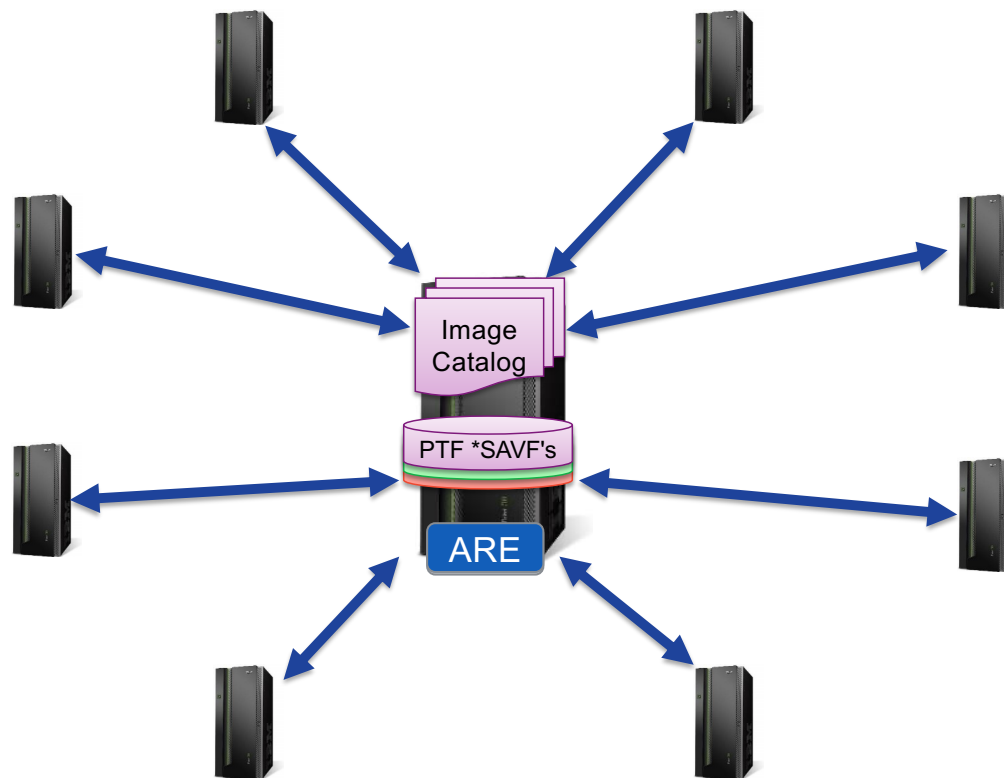
Central system – compare (same release)



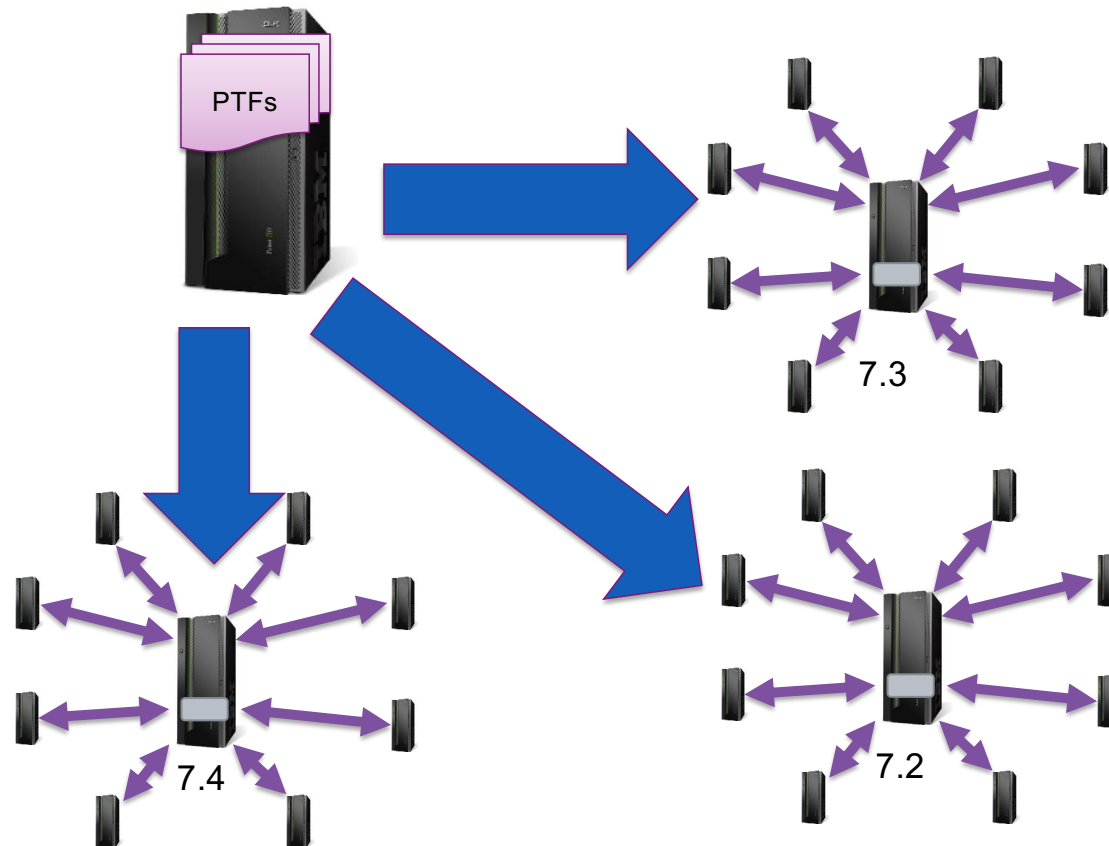
Central system - *SAVF distribution (same release)



Central system – Image catalog distribution (same release)



Central system – image catalog dist. (multiple releases)



Check for the latest PTF group levels from the IBM cloud!



IBM Application Runtime Expert for i

Home > Plugin Selection and Customization > PTFs

IBM PSP
Select PTFs to verify on target system against IBM PSP. Internet connection required.

☐ All:

☒ Select PTF groups to verify:

PTF groups [? Learn more...](#)

PTF group	Description
INTC710	INTERNAL CUME GROUP FOR V7R1M0
SF99363	WEBSphere APP SERVER V7.0
SF99364	WEBSphere APP SERVER V6.1
SF99368	IBM HTTP SERVER FOR I
SF99381	WEBSphere APP SERVER V8.5
SF99572	JAVA
SF99637	DB2 WEB QUERY FOR IBM I V1.1.2
SF99710	CUMULATIVE PTF PACKAGE C4283710

Previous

Next

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PTF groups to verify [? Learn more...](#)

PTF group	Description
SF99380	WEBSphere APP SERVER V8.0
SF99701	DB2 FOR IBM I
SF99999	== PTF Group added by user ==

Add ▼

Disregard groups released in prior: 60 days ▼

Collection name: Collection1

OK

Cancel

Compare Groups or PTF's against the central system!



IBM Application Runtime Expert for i

Home > Plugin Selection and Customization > PTFs

Central System

Select PTFs to verify on target system against Central System. This is where local host runs from.

PTF groups:

All

Select PTF groups to verify:

PTF groups [Learn more...](#)

PTF group	Description
INTC710	INTERNAL CUME GROUP FOR V7R1M0
SF99363	WEBSPPHERE APP SERVER V7.0
SF99364	WEBSPPHERE APP SERVER V6.1
SF99368	IBM HTTP SERVER FOR I
SF99381	WEBSPPHERE APP SERVER V8.5
SF99572	JAVA
SF99637	DB2 WEB QUERY FOR IBM IV1.1.2
SF99701	DB2 FOR IBM I
SF99710	CUMULATIVE PTF PACKAGE C4283710

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Disregard groups released in prior: 0 days

Products PTFs belong to:

All

Specific Products:

Products [Learn more...](#)

Product	Description
5770SS1	IBM i
5761BR1	IBM Backup, Recovery and Media Services for i
INFOAS4	Information APARs
INFOOSL	Information APARs
1TMELCF	Tivoli Management Agent
5700NT1	Native Tools (NATT) - IBM Internal Tools
5722AF1	IBM Advanced Function Printing Utilities
5722AP1	Advanced DBCS Printer Support
5722BR1	IBM Backup, Recovery and Media Services for i
5722CM1	IBM Communications Utilities for System i
5722CR1	Cryptographic Support
5722DB1	System/38 Utilities
5722DE1	IBM DB2 Extenders Version 9.5 for i
5722DFH	IBM CICS Transaction Server for i

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PTF groups to verify [Learn more...](#)

PTF group	Description
SF99380	WEBSPPHERE APP SERVER V8.0
SF99999	== PTF Group added by user ==

Add

Products to verify [Learn more...](#)

Product	Description
5722BZ1	IBM Business Solutions
1111111	== Product added by user ==

Add

Input Name:

1111111

Add

Collection name: Collection1

How do you get it

- GUI is a FREE LP – 5733ARE

- Runs on 7.2 & higher
- **Included with IBM i**

- Core is part of the base OS

- Just apply latest HTTP and Java Group PTFs

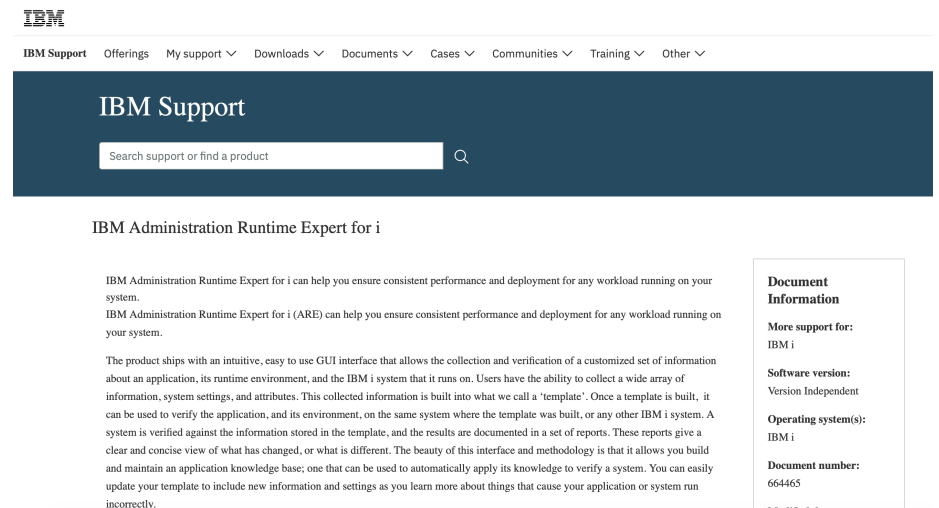
- Articles

- Manage PTF with ARE Rudi vanHelvoirt

<https://www.ibm.com/support/pages/manage-ptfs-ibm-i-administration-runtime-expert-are>

- Product Web site contains install instructions, fix information, and documentation

- <https://www.ibm.com/support/pages/ibm-administration-runtime-expert-i>





Something for free?

— IBM i OS is shipping a handful of ready made templates!!



Network checking

- Run the network plugin
- Verify DNS servers

Pre-Checker

- Verify the Java environment
- Verify the condition of PASE

Host Servers

- Verify the Host Servers are active

Damage Object Detection

- Scan every disk sector on your system or IASP to search for damaged objects

New!!

Basic IAS Server Verify

- Specify IAS server name
- Basic IAS server infrastructure



OS Based Template Details

- New Script
- Run from QSH

`/QIBM/ProdData/OS/OSGi/templates/bin/areVerify.sh`

Usage: areVerify.sh <parameter>

Valid parameter:

-network	: Verify network configuration and status
-iasserver server_name	: Verify the 'server_name' IAS server
-precheck	: Verify software products that are necessary to use the IBM Application Runtime Expert for i
-hostservers	: Verify the host servers are active
- storage	: Damage Object Detection

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