

Understand and Track Your Applications with Application Runtime Expert

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Application Runtime Expert for i



Hey, I need help.

What's wrong?

It stopped working.

What's stopped working?

That application I always use. It was working yesterday. It's not working today.

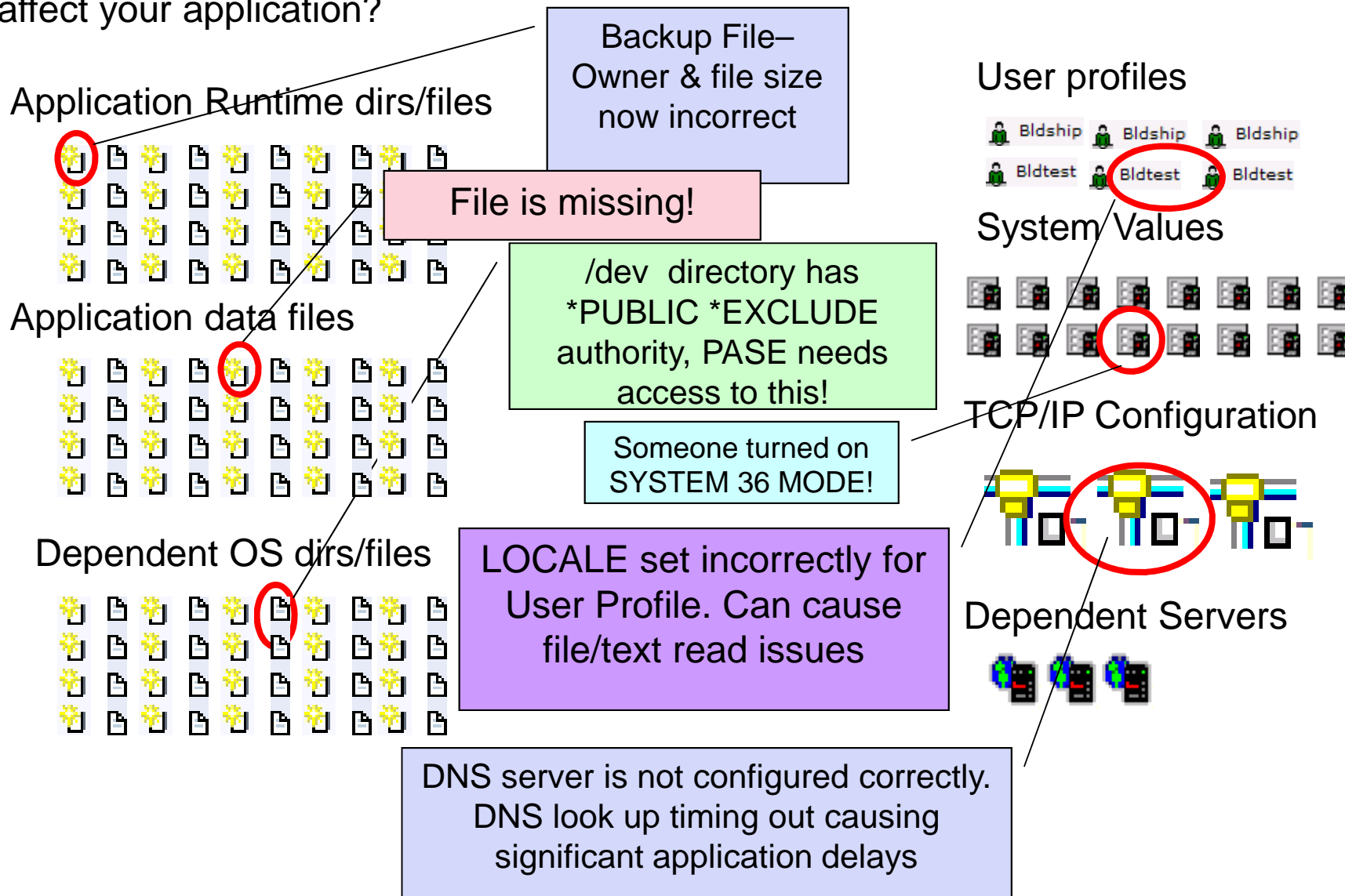


What has changed since yesterday?

NOTHING!

{Yeah, right.}

Problem – Application not working/starting – How do you check everything that can affect your application?



Application Attributes



Java Environment



User Authorities



RPG or C Programs



File Authorities



File – Size, Existence, Dates



Data Authorities



Native ILE Object Attributes



XML File Attributes



Directories – Existence, Dates



Property File Attributes



Environment Variables



Ports



File Ownership



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

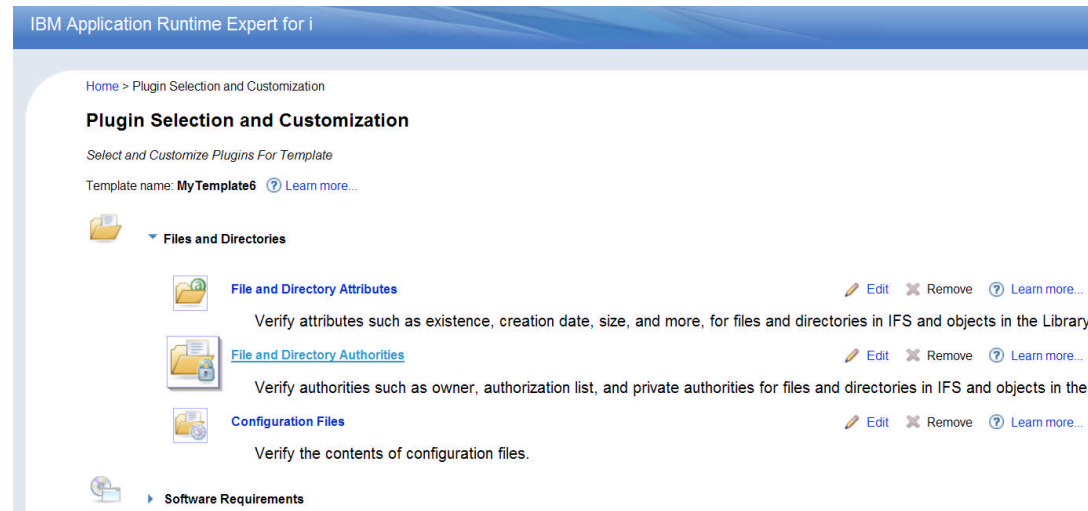
IBM Application Runtime Expert for i – What is it?

- Automated tool to verify the physical condition and runtime attributes of:
 - Applications
 - Systems
 - Environments

- **Ability to fix detected problems**
 - Fix User Profiles to known values
 - Fix Authorities on files and directories

- Verify multiple systems

- Schedule verifications
 - Select system
 - Timeframe



IBM Application Runtime Expert for i – What is it?

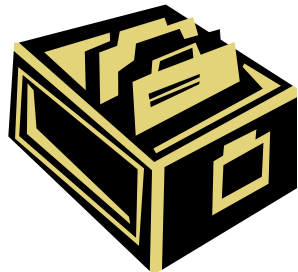
- What can be verified?
 - System information
 - Create a system profile
 - An IBM i Product
 - Any application on the IBM i
 - WebSphere Application Server
 - Integrated Web Application Server
 - User created applications
 - RPG application
 - Directory tree in IFS



RPG



Service View – Today



Knowledge Database

- Documentation of issue/solutions
- Sam – lead support person

Issue 1 – Authority problem on install files – find file, look up correct authority and fix



Issue 2 – Property file setting wrong – several hours to find file, determine correct setting, reset



Issue 3 – System dependency missing – Identify what's missing, correct



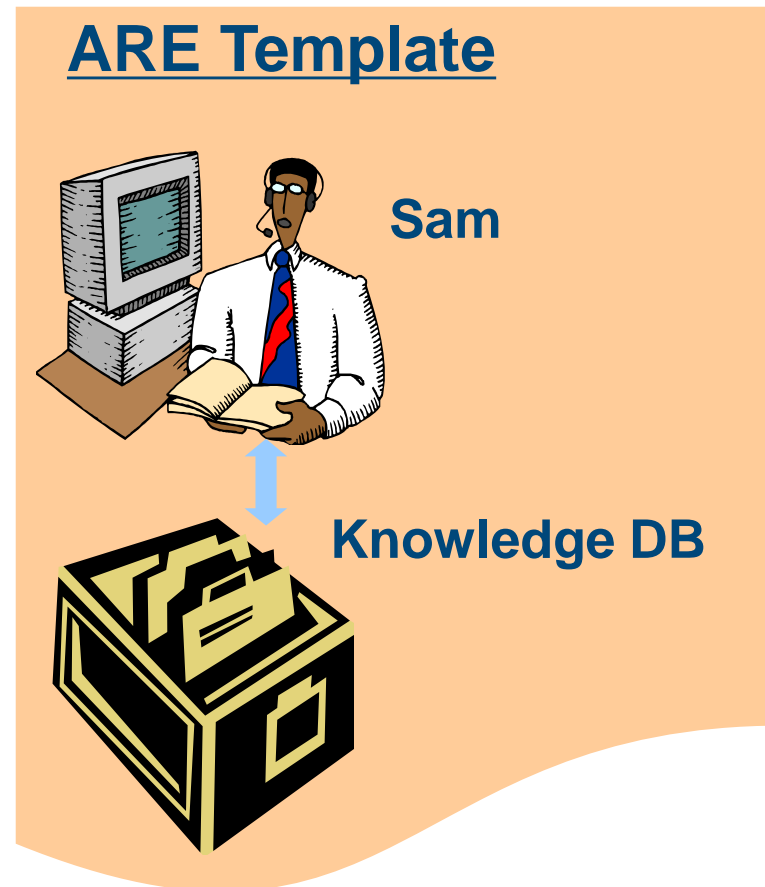
Issue 1a – Authority on dependent & install files incorrect – identify, correct? Re-Install?



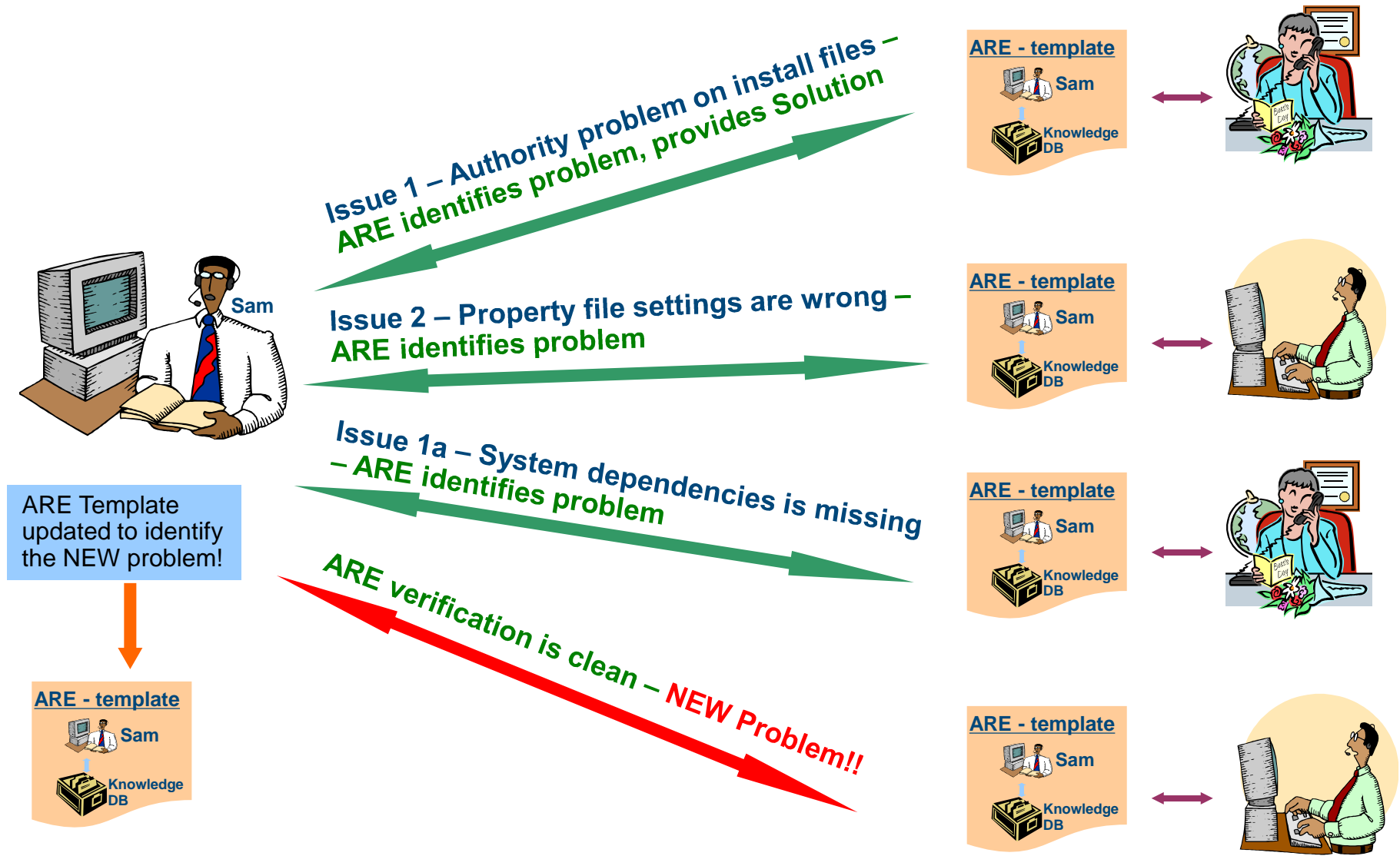
The Solution....

Package BOTH

Sam + Knowledge DB =
automated support solution



Service View – ARE



IBM Application Runtime Expert for i – Why use it?

- Enhanced Serviceability

- Run on failing system to identify and **fix** problems
- One tool to check the entire software stack
 - Application, DB, TCP/IP, Security, JVM, QShell, PASE, etc
 - Results are consolidated into a *single* report
- Runtime Expert checks everything, every time
- As new problems are found, new checks can be added
 - Update existing template to add new checks
 - Write custom plugins for more sophisticated checking or analysis



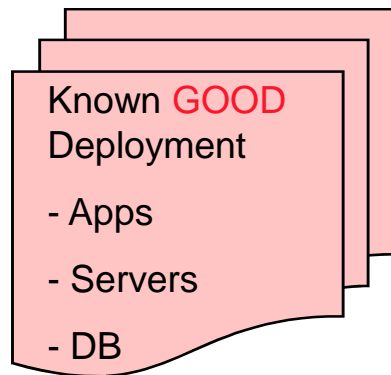
- Product Testing

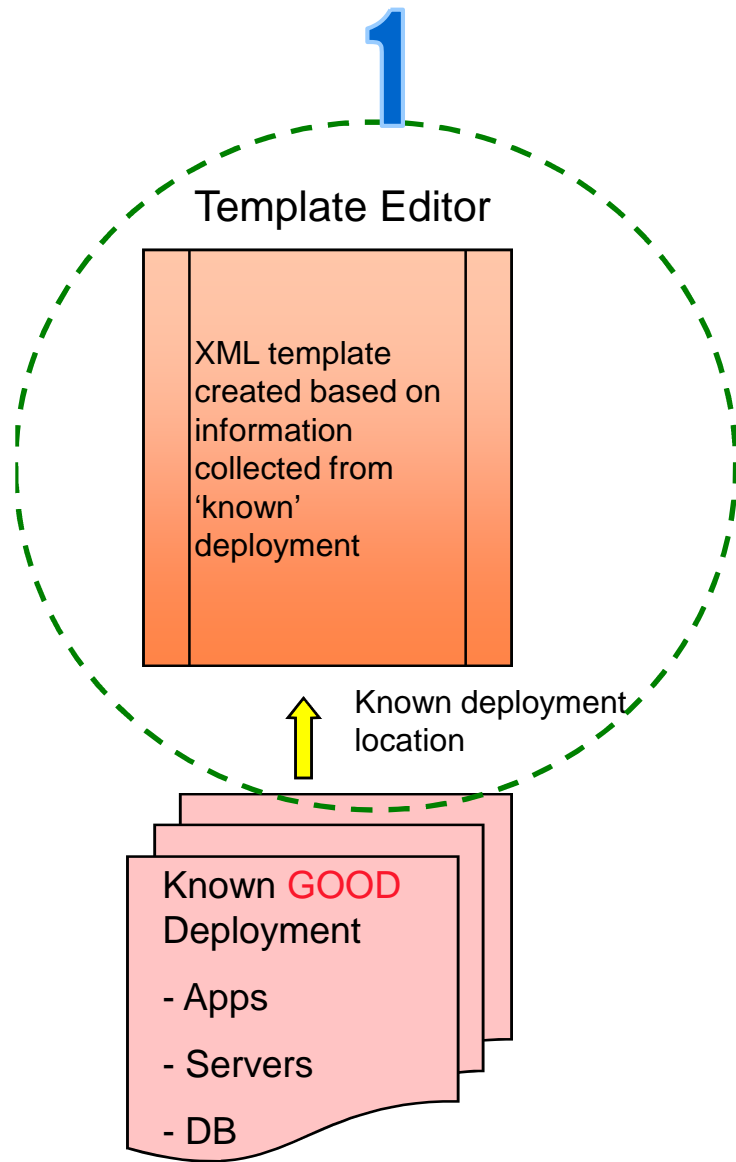
- Understand product installation
 - Are all authorities and object owners being consistently set?
 - Are all files getting installed in the expected locations with the right attributes?
 - Forces “loose ends” to be taken care of so that Runtime Expert report is clean
- Build verification

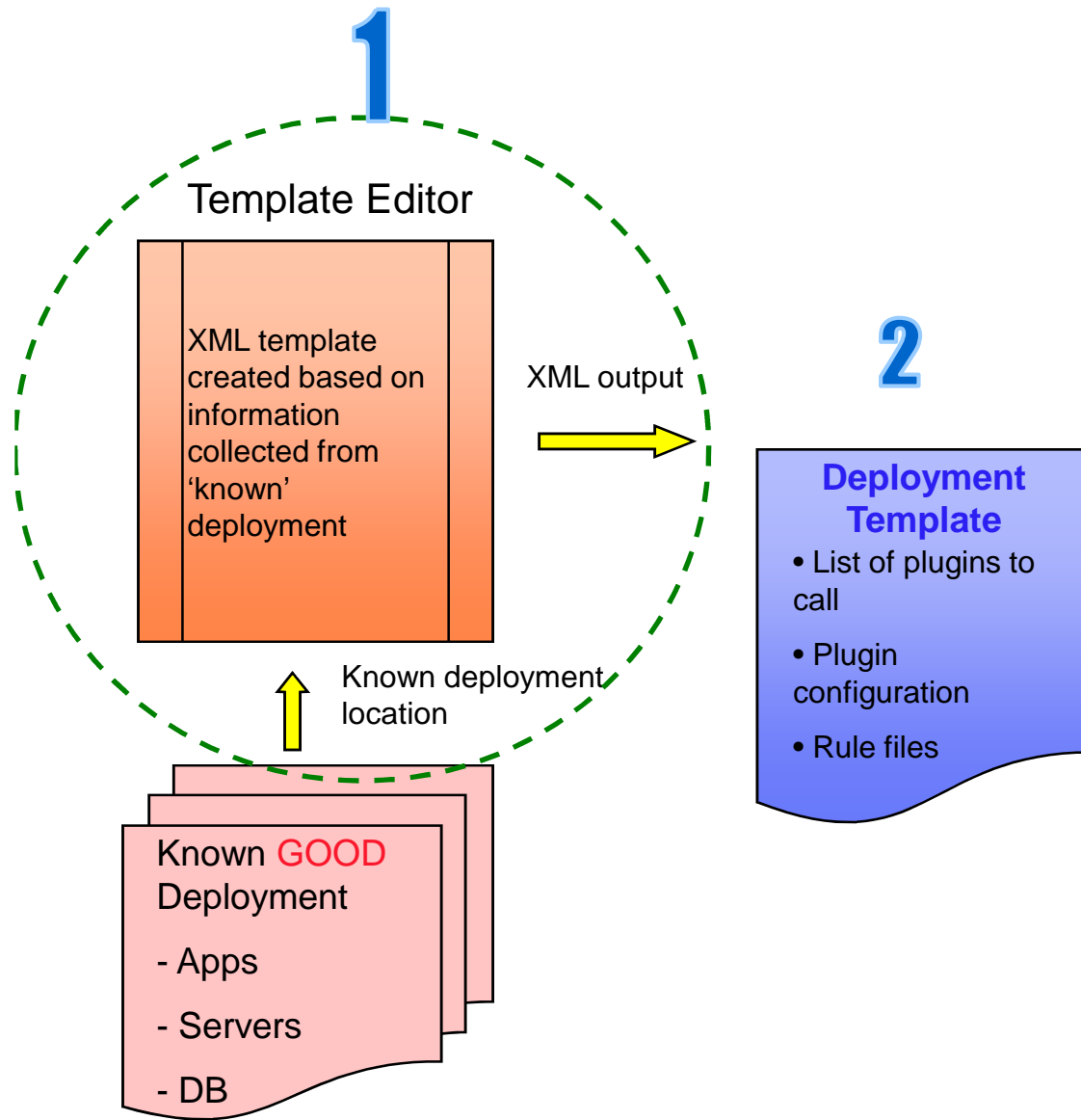
IBM Application Runtime Expert for i – Why use it?

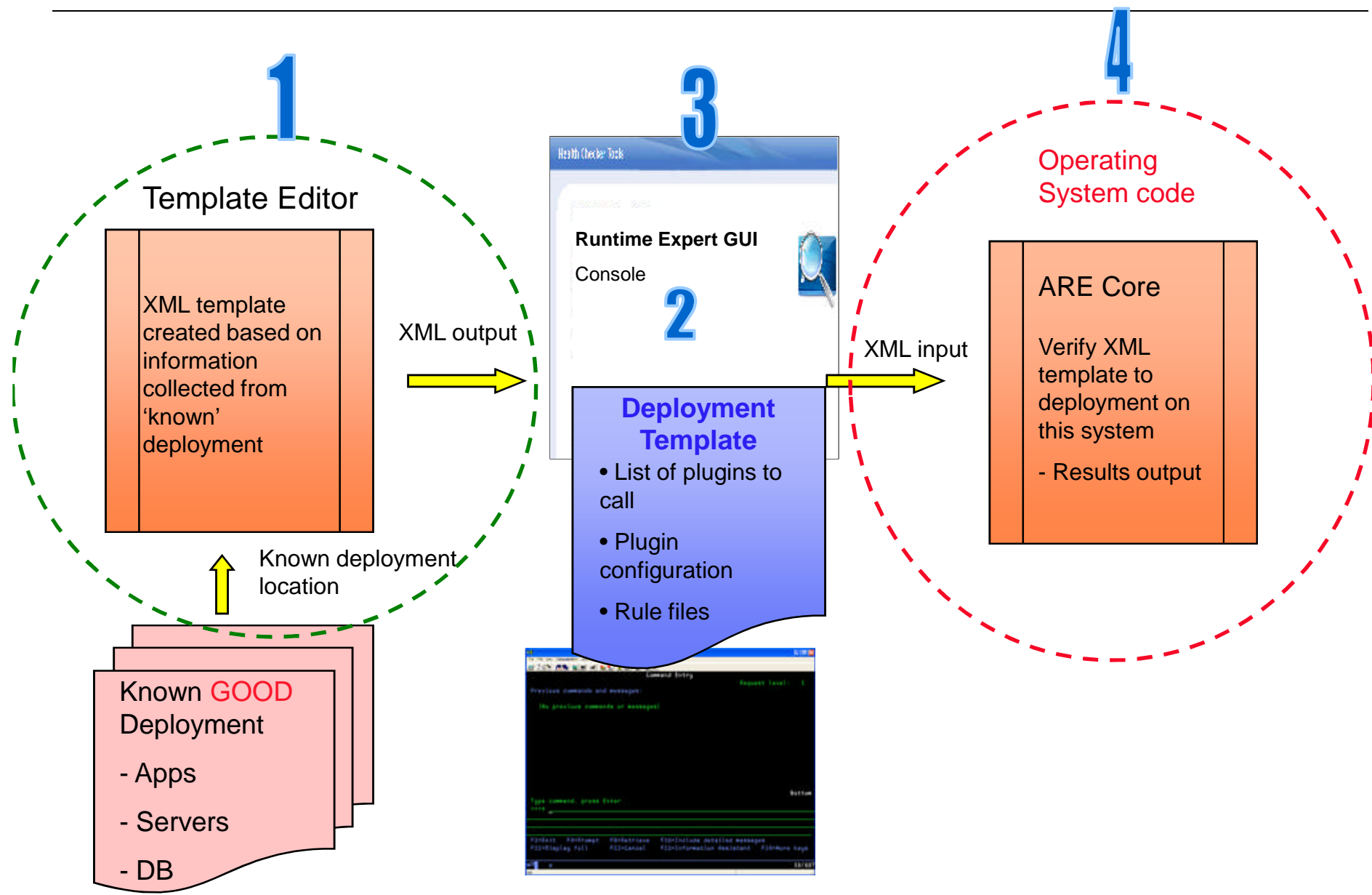
- System Validation
 - Ensure your systems are in expected state
 - Help debug issues with your own systems
- Pre-requisite Checking
 - Most software products have pre-reqs – ARE can check these for you
 - Products, PTF levels, user profiles, system values, network, etc
 - Removes dependency on customer to do it
 - Customers like it because it is simpler – no “list of things to check first”
- It has proven itself for our products
 - IAS and IBM Web Administration for i
 - Using for **over two years** with fantastic results
 - WebQuery
 - Java
 - HTTP
 - Internally for Translation Verification Test (28 partitions)
 - NLS settings, PTF levels, Group PTF levels, User profiles, System date set to ‘today’, verify *LANTAP was varied on, System value settings

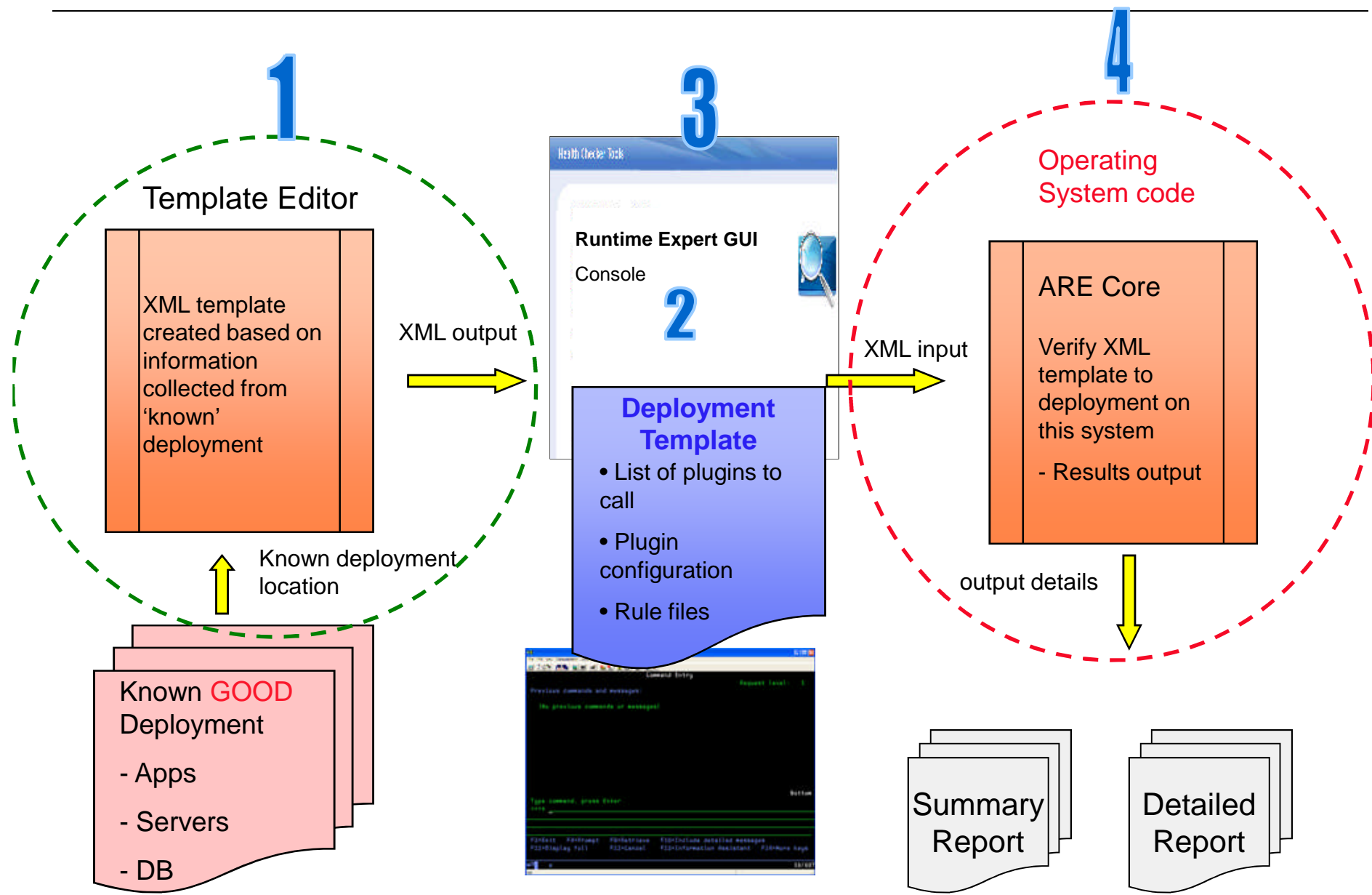












Demo

Manage templates

- Create
- Update
- Import

Deployment Template Editor

The Deployment Template Editor allows users to create, edit, import and export deployment templates. The editor enables users to customize their templates. Templates created, imported, or edited using this editor can be used to verify systems using the 'Launch console' button below. [? Learn more...](#)

Manage templates:

	Name
<input checked="" type="radio"/>	AREDemo4
<input type="radio"/>	AREProductVerification
<input type="radio"/>	AutoFixTemplate
<input type="radio"/>	CommonDemo
<input type="radio"/>	DCMDemo
<input type="radio"/>	skftest

Name



Launch the Create template wizard

[Home](#) > Plugin Selection and Customization

Plugin Selection and Customization

Select and Customize Plugins For Template

Template name: SQL_and_Command_demo [? Learn more...](#)



Files and Directories



File and Directory Attributes

[Edit](#) [Remove](#) [? Learn more...](#)

Verify attributes such as existence, creation date, size, and more, for files and directories in IFS and objects in the Library file system.



File and Directory Authorities

[Edit](#) [Remove](#) [? Learn more...](#)

Verify authorities such as owner, authorization list, and private authorities for files and directories in IFS and objects in the Library file system.



Configuration Files

[Edit](#) [Remove](#) [? Learn more...](#)

Verify the contents of configuration files.



Resource Collector

[Edit](#) [Remove](#) [? Learn more...](#)

Specify files, libraries, objects and savf files to include into a archive file to allow additional detailed verification.



Software Requirements

Work with files. Attributes, Authorities, and Contents.
Include files contents for detailed review!

Home > Plugin Selection and Customization > File and Directory Attributes

File and Directory Attributes

Create Collections of Files, Directories, and Libraries



Files, directories, and libraries to collect information [? Learn more...](#)

Collection name	Exists	Type	Size	Last modified	CCSID	Creation time	Specific attributes
<input checked="" type="radio"/> Collection1	✓	✓	✓		✓		✓

Add files/directories

Add libraries

Remove

Update

Edit XML

Test

OK

Cancel

- **Verify specific attributes**
 - **Files/Directories**
 - **Libraries**
- **Verify Native ILE attributes - NEW!!!**

Home > Plugin Selection and Customization > File and Directory Attributes > Select Library Objects

Select Library Objects

Select Objects in Libraries to Include in the Collection

Library view Collection only view

Specify library

- [-] /QSYS.LIB
 - [+] [] qhttpsvr.lib

- Native ILE Attributes 
- Click advanced select attributes

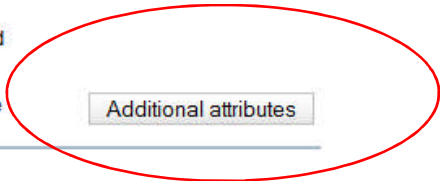
Legend

- The entire library is selected
- Only the library is selected
- The library and/or some objects within it are selected
- Library is not selected

Collection name:

Attributes [Learn more...](#)

- Exists Size
- Type Last modified
- Creation time CCSID



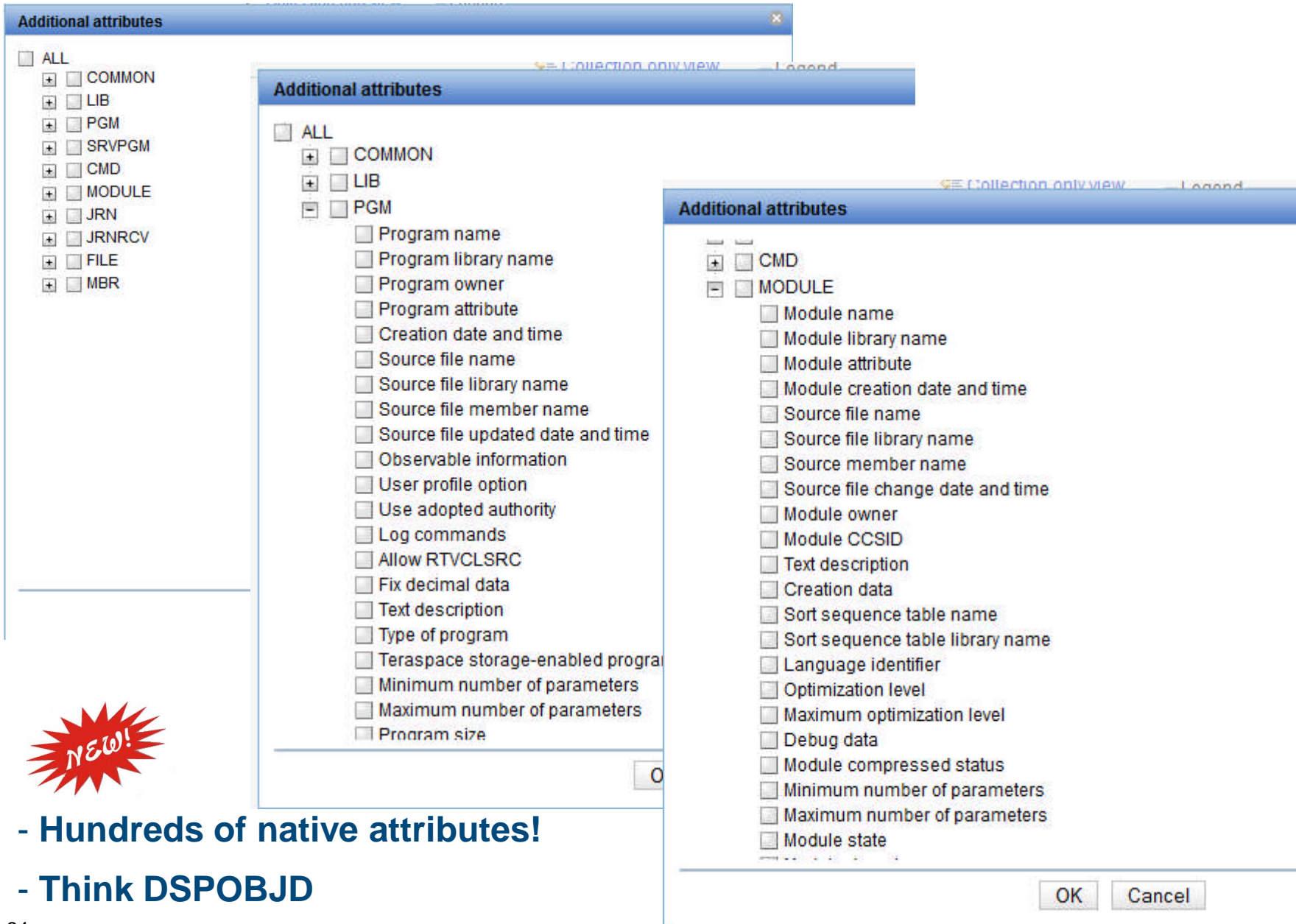
Filters: [Learn more...](#)

Include:

Exclude:

Example: *.USRPRF; *USXA*

- Use Filter support to ONLY include the specific files and directories you want based on a set of Filter definitions.



Additional attributes

- ALL
 - COMMON
 - LIB
 - PGM
 - SRVPGM
 - CMD
 - MODULE
 - JRN
 - JRNRCV
 - FILE
 - MBR

Additional attributes

- ALL
 - COMMON
 - LIB
 - PGM
 - Program name
 - Program library name
 - Program owner
 - Program attribute
 - Creation date and time
 - Source file name
 - Source file library name
 - Source file member name
 - Source file updated date and time
 - Observable information
 - User profile option
 - Use adopted authority
 - Log commands
 - Allow RTVCLSRC
 - Fix decimal data
 - Text description
 - Type of program
 - Teraspace storage-enabled program
 - Minimum number of parameters
 - Maximum number of parameters
 - Program size

Additional attributes

- CMD
 - MODULE
 - Module name
 - Module library name
 - Module attribute
 - Module creation date and time
 - Source file name
 - Source file library name
 - Source member name
 - Source file change date and time
 - Module owner
 - Module CCSID
 - Text description
 - Creation data
 - Sort sequence table name
 - Sort sequence table library name
 - Language identifier
 - Optimization level
 - Maximum optimization level
 - Debug data
 - Module compressed status
 - Minimum number of parameters
 - Maximum number of parameters
 - Module state

OK Cancel



- Hundreds of native attributes!

- Think DSPOBJD

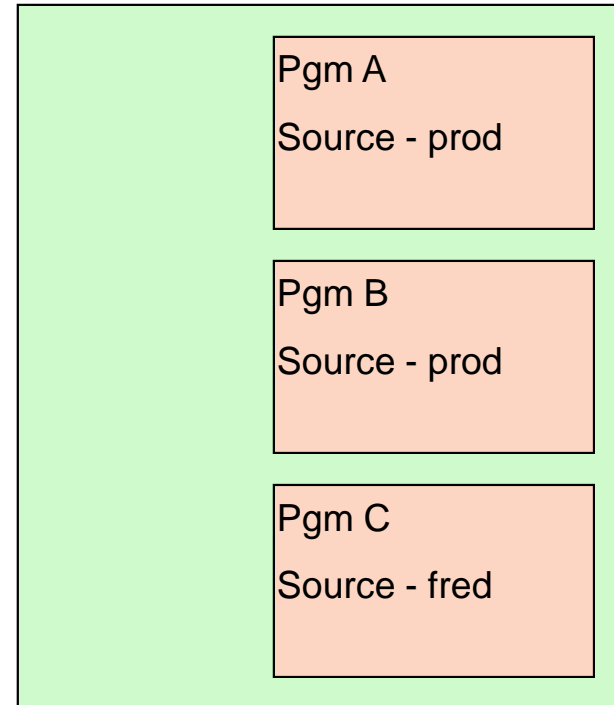
ILE Considerations

With ARE you can verify specific ILE attributes.

- Source File & Member
- Source File Library
- Owner

Any attribute you might check manually using DSPOBJ!!


Production IBM i



IBM Application Runtime Expert for i IBM.

Home > Plugin Selection and Customization > File and Directory Authorities

File and Directory Authorities

Create Collections of Files, Directories, and Libraries 

Files, directories, and libraries to collect information [? Learn more...](#)

	Collection name	Data authority	Object authority	Owner	Primary group	Authorization list
<input checked="" type="radio"/>	HCDemoServer	✓	✓	✓	✓	✓

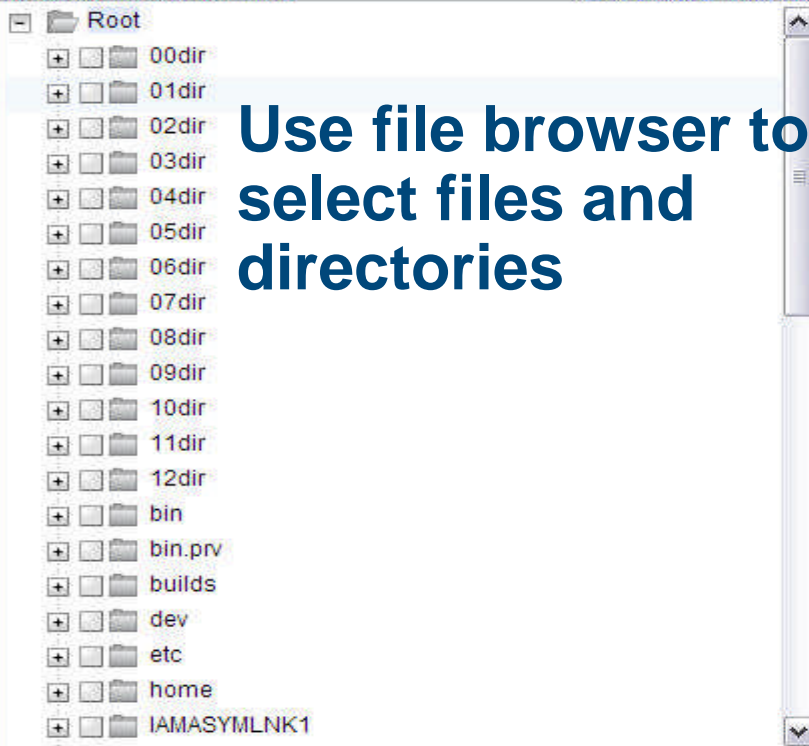
- Add authority profiles for
 - Files/Directories
 - Libraries
- View and work with XML
- Create multiple 'collections' to customize what attributes are verified

Home > Plugin Selection and Customization > File and Directory Authorities > Select Files and Directories

Select Files and Directories

Select Files and Directories to Include in the Collection

Integrated File System view Collection only view



Use file browser to select files and directories

Legend

- The entire directory tree is selected
- Only the directory is selected
- The directory and/or some portions of its sub-tree are selected
- Directory is not selected

Collection name:

Attributes [Learn more...](#)

- Data authority
- Object authority
- Owner
- Primary group
- Authorization list

Specify which attributes to verify

Filters: [Learn more...](#)

Include:

Exclude:

Example: *USRPRF, *USXA*

Edit XML

Advanced feature: Hand edit the actual XML data

OK

Cancel

Edit view

```
<?xml version="1.0" encoding="UTF-8"?><authoritySet version="1.0">
  <authorities>
    <gui-mapping>
      <fileSelection name="/www/hcdemo" selectSubTree="true"/>
      <followSymlink value="false"/>
      <checksum value="ae378cd2fee4fd53f5dd2e9fefc7c5e1"/>
    </gui-mapping>
    <!--#! Be careful of modifying any node below, they are generated according to the configuration information above. If mo
  <enableCheck name="dataAuthority"/>
  <enableCheck name="objectAuthority"/>
  <enableCheck name="owner"/>
  <enableCheck name="primaryGroup"/>
  <enableCheck name="authorizationList"/>
  <object authList="*NONE" errorLevel="error" name="/www/hcdemo" owner="RAOP" primaryGroup="*NONE" type="DIR">
    <privateAuthority dataAuth="*RWX" errorLevel="error" objAuth="*ALL" user="RAOP"/>
    <privateAuthority dataAuth="*RX" errorLevel="error" objAuth="*NONE" user="QLWISVR"/>
    <privateAuthority dataAuth="*RX" errorLevel="error" objAuth="*NONE" user="*PUBLIC"/>
    <privateAuthority dataAuth="*RWX" errorLevel="error" objAuth="*NONE" user="QIMHHTTP"/>
  </object>
  <object authList="*NONE" errorLevel="error" name="/www/hcdemo/conf" owner="RAOP" primaryGroup="*NONE" type="DIR">
    <privateAuthority dataAuth="*RWX" errorLevel="error" objAuth="*ALL" user="RAOP"/>
    <privateAuthority dataAuth="*RX" errorLevel="error" objAuth="*NONE" user="QLWISVR"/>
    <privateAuthority dataAuth="*RX" errorLevel="error" objAuth="*NONE" user="*PUBLIC"/>
    <privateAuthority dataAuth="*RWX" errorLevel="error" objAuth="*NONE" user="QIMHHTTP"/>
  </object>
```

Customize the XML data

Add Logic, change values, and responses

Home > Plugin Selection and Customization > Resource Collector > Configure Resource Collector

Configure Resource Collector

Specify Files, Directories, and Native IBM i objects to Collect



Output .zip file name:

Integrated file system [? Learn more...](#)

Collect the following files

	Name	Keep path	Severity level
Example	/somewhere/dir/somefile.txt	Yes	Error
<input checked="" type="checkbox"/>	ww/myServer/logs/err.txt	Yes ▾	Error ▾

Collect all the files in the specified directory

	Name	All subtree	Filter	Keep path	Severity level
Example	/somewhere/dir	Yes	*.log	Yes	Error
<input checked="" type="checkbox"/>	<input type="text"/>	Yes ▾	<input type="text"/>	Yes ▾	Error ▾

Native IBM i object save support [? Learn more...](#)

Specify the IBM i save command to collect native IBM i objects on the target system

	Command
Example	SAVLIB LIB(MYLIB) DEV(*SAVF) SAVF(QGPL/MYLIB)
Example	SAVOBJ OBJ(*ALL) LIB(MYLIB) DEV(*SAVF) SAVF(QGPL/MYLIB)
<input checked="" type="checkbox"/>	SAVLIB LIB(MYLIB) DEV(*SAVF) SAVF(QGPL/MYLIB)

Zip up specific files or the contents of an entire director

- Error logs
- Configuration files

Create a SAVF of IBM i Native object for detailed review

IBM Application Runtime Expert for i



Home > Plugin Selection and Customization > IBM i Products

IBM i Products

Select the IBM i Products to Verify



Products [? Learn more...](#)

Licensed program	Option	Release	Status
5761SS1	5	V6R1M0	*INSTALLED
5761SS1	6	V6R1M0	*INSTALLED
5761SS1	7	V6R1M0	*INSTALLED
5761SS1	8	V6R1M0	*INSTALLED
5761SS1	9	V6R1M0	*INSTALLED
5761SS1	13	V6R1M0	*INSTALLED
5761SS1	14	V6R1M0	*INSTALLED
5761SS1	18	V6R1M0	*INSTALLED
5761SS1	21	V6R1M0	*INSTALLED
5761SS1	22	V6R1M0	*INSTALLED
5761SS1	23	V6R1M0	*INSTALLED
5761SS1	26	V6R1M0	*INSTALLED
5761SS1	27	V6R1M0	*INSTALLED
5761SS1	29	V6R1M0	*INSTALLED

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

Licensed program	Option	Release	CHKPRDOPT	Severity
5761DG1	*BASE	V6R1M0	<input type="checkbox"/>	Error
5761JV1	11	V6R1M0	<input checked="" type="checkbox"/>	Warning
5761SS1	3	V6R1M0	<input type="checkbox"/>	Error
5761SS1	12	V6R1M0	<input type="checkbox"/>	Error
5761SS1	30	V6R1M0	<input type="checkbox"/>	Error
5761SS1	33	V6R1M0	<input checked="" type="checkbox"/>	Error



- Error
- Warning
- Info

Customize report info!

- Error
- Warning
- Info

4/7
 Position to:

Filter – all supported products or products on this system

Home > Plugin Selection and Customization > User IDs > Edit User ID Collection

Edit User ID Collection

Select User IDs to Verify



All user IDs on the system [? Learn more...](#)

- USER03
- USER04
- USER05
- USER06
- USER07
- USER08
- USER09
- USER10
- USER11
- USER12

Previous Next 13/17

Position to:

Collection name:

'Position to' auto navigates to specified value!

User IDs to verify [? Learn more...](#)

Attributes to verify:

- CCSID
- Character ID
- Country ID
- Group Authority
- Group Authority Type
- Group Profile
- Job Description
- Language ID
- Limit Capabilities
- Locale
- Message Queue
- Output Queue
- Owner
- Password is *NONE
- Special Authority
- Special Environment
- Status
- Supplemental Group
- User Class

Specify the user ID attributes to verify

Customize

OK Cancel

All users specified here will verify all attributes listed to the right. Create multiple collections to use different attribute lists.

Home > Plugin Selection and Customization > PTFs

PTFs

Select the Group and Individual PTFs to Verify

List all PTF groups on the system

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

PTF group	Minimum level	Recommended level	Severity
<input type="radio"/> SF99368	2	2	Error <input type="button" value="v"/>
<input type="radio"/> SF99572	3	3	Error <input type="button" value="v"/>

PTFs to verify [? Learn more...](#)

PTF	Expected status	Severity
<input type="checkbox"/> 5770999 -- Licensed Internal Code		
<input type="checkbox"/> 5770SS1 -- IBM i		
<input type="checkbox"/> 5770SS1 -- Extended Base Support		
<input type="checkbox"/> 5770SS1 -- Extended Base Directory Support		
<input type="checkbox"/> 5770SS1 -- System/36 Environment		
<input type="checkbox"/> 5770SS1 -- Host Servers		
<input type="checkbox"/> 5770SS1 -- System Openness Includes		
<input type="checkbox"/> 5770SS1 -- Integrated Server Support		
<input type="checkbox"/> 5770SS1 -- Qshell		
<input type="checkbox"/> 5770SS1 -- Domain Name System		
<input type="checkbox"/> 5770SS1 -- Portable App Solutions Environment		
<input type="checkbox"/> 5770SS1 -- Digital Certificate Manager		

Collect all PTF Groups for this system, or click add to include additional groups and levels



Select the PTFs currently on this system

IBM Application Runtime Expert for i



Home > Plugin Selection and Customization > Configuration Files

Configuration Files

Specify Configuration Files to Verify



Configuration files [? Learn more...](#)

Configuration file	Type
<input checked="" type="radio"/> /www/INTAPPSVR/conf/i5OSStartup.properties	Property

Verify the actual contents of

- Property files
- XML files
- HTTP config files

Home > Plugin Selection and Customization > Configuration Files > Customize Configuration File

Customize Configuration File

Select Configuration Values to Verify



Configuration file: /www/INTAPPSVR/conf/i5OSStartup.properties

Key	Expected value
<input type="checkbox"/> startup.lwiAssignUserID	QLWISVR
<input type="checkbox"/> startup.lwiSubsystem	QHTTPSVR
<input type="checkbox"/> engine.lwiVersion	8.1
<input type="checkbox"/> engine.workingDir	/www/INTAPPSVR/lwi
<input type="checkbox"/> engine.javaVersion	1.6
<input type="checkbox"/> startup.lwiJobQueueName	QZHBHTTP
<input type="checkbox"/> startup.lwiAssignJobName	INTAPPSVR
<input type="checkbox"/> engine.stderr	/www/INTAPPSVR/lwi/logs/lwistderr.txt
<input type="checkbox"/> engine.stdout	/www/INTAPPSVR/lwi/logs/lwistdout.txt
<input type="checkbox"/> engine.lwiProfile	profile.l5intappsvr

Add

OK Cancel


Compare the key value pairs!!

IBM Application Runtime Expert for i IBM.

Home > [Plugin Selection and Customization](#) > Network Configuration

Network Configuration

Verify IBM i Network Configuration



- Verify TCP/IP Configuration** [? Learn more...](#)
 - ✓ Domain information
 - ✓ Host table entries
 - ✓ Interfaces
- Verify DNS Lookup Performance and Correctness** [? Learn more...](#)
 - ✓ Retrieve IP address for local host
 - ✓ Retrieve IP address for loopback
 - ✓ Retrieve the host name for IP address 127.0.0.1

Include the Network plugin your template. When Application Runtime Expert runs, the network settings on the target system are verified

Home > Plugin Selection and Customization > System Values and Network Attributes

System Values and Network Attributes

Select System Values or Network Attributes to Verify



System values and network attributes [? Learn more...](#)

QPRCMLTTSK
QPRTDEV
QPRTKEYFMT
QPRTTXT
QPWDCHGBLK
QPWDEXPITV
QPWDLMTAJC
QPWDLMTCHR
QPWDLMTREP
QPWDLVL
QPWDPOSDIF
QPWDRQDDGT
QPWDRQDDIF
QPWDRULES
QPWDVLDPGM



Values to verify [? Learn more...](#)

QCNTYID	Edit
QCTLSBSD	Edit
QCURSYM	Edit
QDATETIME	Edit
QDATFMT	Edit
QDATSEP	Edit
QPWDEXPWRN	Edit
QPWDMAXLEN	Edit
QPWDMINLEN	Edit

Previous

Next

9/13

Position to:

Collection name:

OK

Cancel

System Values & Network Attributes

- Quickly compare ALL system values
- Edit the expected values to match your expectations

Home > Plugin Selection and Customization > Scripts and Commands > Customize Script or Command

Scripts and Commands



Specify the Script or Command to be Run and Verified

Collection name:

Call ANY CL command or QSH Script

- Run a command or script on the target system

Program to run and verify [? Learn more...](#)

Script command to run in QShell

```
system "WRKCFGSTS CFGTYPE(*LIN) "
```

*Example: system "WRKSYSSTS ASTLVL(*ADVANCED)"*

CL command to run

Print the result of the command to the verification report:

Result verification [? Learn more...](#)

Result verification details

Group	Severity	Source	Expected value	Comparison	Match case
<input checked="" type="radio"/> MyGroup1(And)	Error	Standard output	ETHLITCP *DEV ACTIVE	Contains substring	False

Analyze the spool file or standard out. Verify the results of the command or programs!

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`

Call a SQL statement

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

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 sh
<input checked="" type="checkbox"/>	<input type="text" value="comment"/>	<input type="button" value="String"/>	<input type="text" value="wangnan"/>	<input type="button" value="Contains substring"/>	<input type="button" value="Any"/>	<input type="button" value="True"/>	<input type="button" value="Error"/>	demo correct
<input checked="" type="checkbox"/>	<input type="text" value="comment"/>	<input type="button" value="String"/>	<input type="text" value="demo not exist"/>	<input type="button" value="Contains substring"/>	<input type="button" value="Any"/>	<input type="button" value="True"/>	<input type="button" value="Error"/>	demo not exist

IBM Application Runtime Expert for i IBM.

Home > Plugin Selection and Customization > Summary

Summary

Deployment Template Build Summary

Template Summary | File and Directory Authorities | IBM i Products | User IDs

Generated template file name: /QIBM/UserData/ARE/workspace/templates/MyFirstTemplate/MyFirstTemplate.jar

Version: 1.0.1

Description: Template created by the IBM Application Runtime Expert for i.

Features enabled:

- Capability to fix detected problems

**Review all the values you specified
and we collected**

Click confirm to build template

Confirm Cancel

IBM Application Runtime Expert for i IBM.

Deployment Template Editor


The Deployment Template Editor allows users to create, edit, import and export deployment templates. The editor enables users to customize their templates. Templates created, imported, or edited using this editor can be used to verify systems using the 'Launch console' button below. [? Learn more...](#)

Manage templates:

Name
<input checked="" type="radio"/> MyFirstTemplate

Message Area X

The following template has been successfully built:
MyFirstTemplate.



Console

The IBM Application Runtime Expert for i is capable of verifying multiple IBM i systems using a deployment template created or importing using the deployment template editor. [? Learn more...](#)

Collections:

Default

Demo

Operations ▾

Systems to verify:

	System name	User profile	Password	Template
<input checked="" type="checkbox"/>	system1	user1		areDemo ▾
<input checked="" type="checkbox"/>	system2	user1		areDemo ▾
<input checked="" type="checkbox"/>	system3	user1		areDemo ▾
<input checked="" type="checkbox"/>	system4	user1		areDemo ▾
<input checked="" type="checkbox"/>	system5	user1		areDemo ▾

Add
Remove
Select all
Deselect all
Runtime properties

Note: Only selected systems will be verified.

Verify systems
View previous results

[Launch deployment template editor](#)

- Verify multiple systems using templates built using template editor
 - No need to put template on each system
 - Results of verification pulled into the Console and displayed
- Capability to fix detected problems

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IBM Application Runtime Expert for i

[Console](#) > Result

Console

System verification status: 0/5 complete [Refresh](#)

System name	Template	Status	Result
system1	areDemo	 Processing	
system2	areDemo	 Processing	
system3	areDemo	 Processing	
system4	areDemo	 Processing	
system5	areDemo	 Processing	

Follow the progress of each template as it runs on the target systems

Auto refresh every few seconds or click 'Refresh' to check more often

Click 'Stop all' to stop the process from running on the target system






IBM Application Runtime Expert for i

[Console](#) > Result

Console

Verification status updated in real time

System verification status: 0/5 complete  Refresh

System name	Template	Status	Result
system1	areDemo	 Plugin 2 of 8 (Authority Verifier) has started	
system2	areDemo	 Plugin 5 of 8 (Network Configuration Checker) has started	
system3	areDemo	 Plugin 2 of 8 (Authority Verifier) has started	
system4	areDemo	 Plugin 2 of 8 (Authority Verifier) has started	
system5	areDemo	 Processing	

Back

Stop all

IBM Application Runtime Expert for i

Console > Result











Console

Table summarizes results for every system verified

System verification status:

5/5 complete

 Refresh

System name	Template	Status	Result
system1	areDemo	 Complete	 7 errors, 0 warnings
system2	areDemo	 Complete	 No problems found.
system3	areDemo	 Complete	 8 errors, 0 warnings
system4	areDemo	 Complete	 4 errors, 0 warnings
system5	areDemo	 Complete	 No problems found.

- [Summary Report](#)
- [Detailed Report](#)
- [XML Report](#)
- [Runtime Log](#)

Back

Stop all

Summary and detailed reports are just a click away

[Console](#) > [Result](#) > Summary Report

Summary Report

System name: system1

Remote core version: 1.0.3

Template: areDemo

User ID: USER1

Summary report lists attributes verified and problems found

Summary details [? Learn more...](#)

Plugin name	Attributes verified	Error	Warning	Info	Fix actions
▶ File Attribute Verifier	8068	0	0	0	None
▼ Authority Verifier	8074	3	0	0	Fix actions(3)
Description					
User USER1 has no data authority to object /home/user1					
User USER1 has no object authority to /home/user1					
Owner of /home/user1 is not what is expected Expected: USER1 Actual: QSYS					
▶ Configuration Attribute Verifier	110	0	0	0	None
▶ Network Verifier	0	0	0	0	None
▶ Network Configuration Checker	0	0	0	0	None
▶ Product Verifier	5	0	0	0	None
▶ User Profile Verifier	54	4	0	0	Fix actions(3)
▶ System Value Verifier	5	0	0	0	None

Drill down to see problem details

Click to fix problems

[Console](#) > [Result](#) > [Summary Report](#) > Fix Problems

Fix Problems

System name: system1
Problems found by: Authority Verifier

Select	Description
<input checked="" type="checkbox"/>	<input type="checkbox"/> Description: User USER1 has no data authority to object /home/user1
<input checked="" type="checkbox"/>	<input type="checkbox"/> Description: User USER1 has no object authority to /home/user1
<input checked="" type="checkbox"/>	<input type="checkbox"/> Description: Owner of /home/user1 is not what is expected

Select problems to fix

▼ Processed problems

Result	Description
<i>This table is empty.</i>	

Click on 'Fix' to correct these selected issues on the target system

[Console](#) > [Result](#) > [Summary Report](#) > Fix Problems

Fix Problems

System name: system1
 Problems found by: Authority Verifier

Select	Description
<i>This table is empty.</i>	

▼ Processed problems

Result	Description
Fixed	<input checked="" type="checkbox"/> User USER1 has no data authority to object /home/user1
Fixed	<input checked="" type="checkbox"/> User USER1 has no object authority to /home/user1
Fixed	<input checked="" type="checkbox"/> Owner of /home/user1 is not what is expected Expected: USER1 Actual: QSYS

Monitor results as fix is completed on the remote system

Console

The IBM Application Runtime Expert for i is capable of verifying multiple IBM i systems using a deployment template created or imported using the deployment template editor. [Learn more...](#)

Groups:

Default Group1 Group2

Operations


Systems to verify:

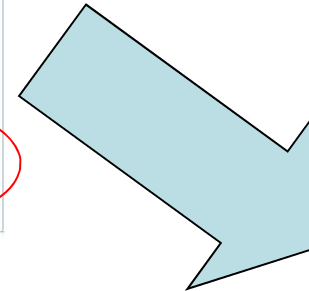
	System name	User ID	Password	Template
<input checked="" type="checkbox"/>	myhost.com	test	••••	MyTemplate1
<input checked="" type="checkbox"/>	myhost2.com	test	••••	MyTemplate1
<input type="checkbox"/>	myhost2.com	*DEFAULT		MyTemplate2
<input type="checkbox"/>				MyTemplate2

Add Remove Select all Deselect all Runtime properties

Note: Only selected systems are verified. Schedule runs only if IBMARE is running.

Verify systems View previous results

 **Schedule**
No schedule.



New Schedule icon added for each group. Click to configure scheduled verification of the group.

Schedule Setting

No schedule

Daily

Weekly

Every Sunday At 0 : 0

Monthly

Note: Only selected systems are verified. Schedule runs only if IBMARE is running. [Learn more...](#)

OK Cancel

IBM Application Runtime Expert for i









Console

The IBM Application Runtime Expert for i is capable of verifying multiple IBM i systems using a deployment template created or imported using the deployment template editor. [? Learn more...](#)

Icons for the status of last verification

Groups:

-  Default 
-  Group1 
-  Group2 

Systems to verify:

	System name	User ID	Password	Template
<input checked="" type="checkbox"/>	myhost1	test	••••	AREonliberty ▼
<input checked="" type="checkbox"/>	myhost2	test	••••	MyTemplate1 ▼
<input type="checkbox"/>	myhost2	test		MyTemplate1 ▼
<input type="checkbox"/>	myhost2			MyTemplate1 ▼
<input checked="" type="checkbox"/>	myhost3	*default		MyTemplate1 ▼

Icons for scheduler status

Note: Only selected systems are verified. Schedule runs only if IBMARE is running.



[Schedule](#)

Every month, 01, 00:00

A scheduled group

IBM Application Runtime Expert for i IBM.

Console > Default

History of status Refresh

	Histroy	Run By	Item	Status
<input type="checkbox"/>	▶ 2013/09/12/20:55	Manually	1	Good
<input type="checkbox"/>	▶ 2013/09/12/01:08	Manually	1	Error
<input type="checkbox"/>	▶ 2013/09/11/02:15	Manually	1	Good
<input type="checkbox"/>	▼ 2013/09/11/01:26	Manually	2	Error
		System	Template	User ID
		localhost	MyTemplate6	niejh Good
		9.123.96.209	MyTemplate4	niejh 8 error(s), 0 warning(s), 0 info(s)
<input type="checkbox"/>	▶ 2013/09/11/01:26	Manually	1	Go
<input type="checkbox"/>	▶ 2013/09/09/03:00	Manually	1	Er

[Summary Report](#)
[Detailed Report](#)
[XML Report](#)
[Download Archive](#)


[Runtime Log](#)
[Remote runtime log](#)
[Remote stdout](#)
[Remote stderr](#)

View summary report

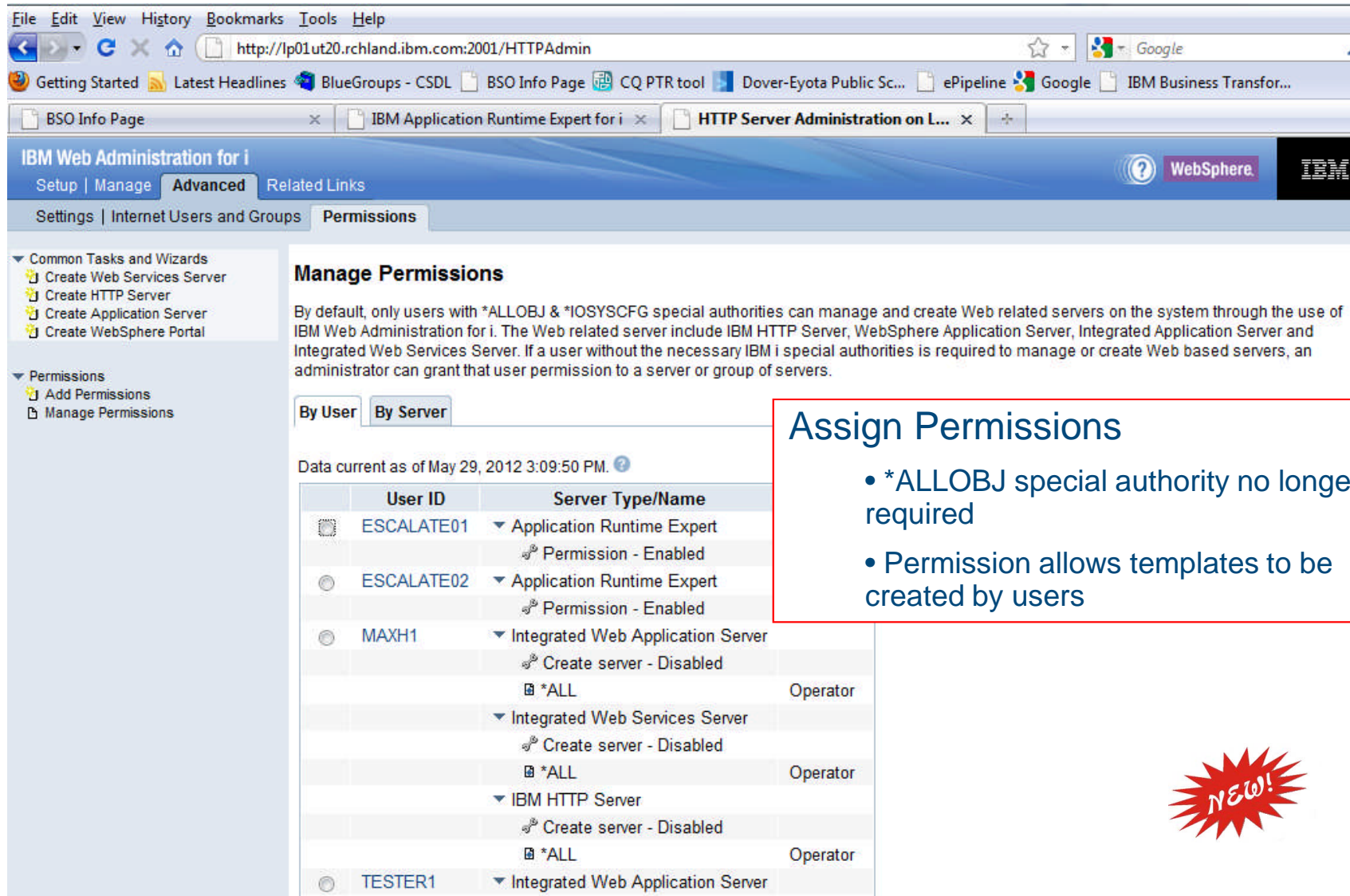
Back to top

List of previous verification results of a group

Advanced Capabilities

- More advanced features for one-stop solution, including(count.):
 - Customize template XML files
 - ✓ Add logic (if, switch) for OS level
 - Product installed
 - Missing files
 - etc.
 - ✓ Gain access to new plugins not yet supported by the GUI
- Support users without *ALLOBJ special authority 
 - Users without *ALLOBJ authority are able to create template using the GUI tool
 - Users without *ALLOBJ authority are able to run template using runAREAuth.sh script

IBM Web Administration for i GUI – http://hostname:2001/HTTPAdmin



Manage Permissions

By default, only users with *ALLOBJ & *IOSYSCFG special authorities can manage and create Web related servers on the system through the use of IBM Web Administration for i. The Web related server include IBM HTTP Server, WebSphere Application Server, Integrated Application Server and Integrated Web Services Server. If a user without the necessary IBM i special authorities is required to manage or create Web based servers, an administrator can grant that user permission to a server or group of servers.

By User | By Server

Data current as of May 29, 2012 3:09:50 PM.

User ID	Server Type/Name	
ESCALATE01	Application Runtime Expert	Permission - Enabled
	Application Runtime Expert	Permission - Enabled
ESCALATE02	Application Runtime Expert	Permission - Enabled
	Application Runtime Expert	Permission - Enabled
MAXH1	Integrated Web Application Server	Create server - Disabled
	*ALL	Operator
	Integrated Web Services Server	Create server - Disabled
	*ALL	Operator
	IBM HTTP Server	Create server - Disabled
	*ALL	Operator
TESTER1	Integrated Web Application Server	

Assign Permissions

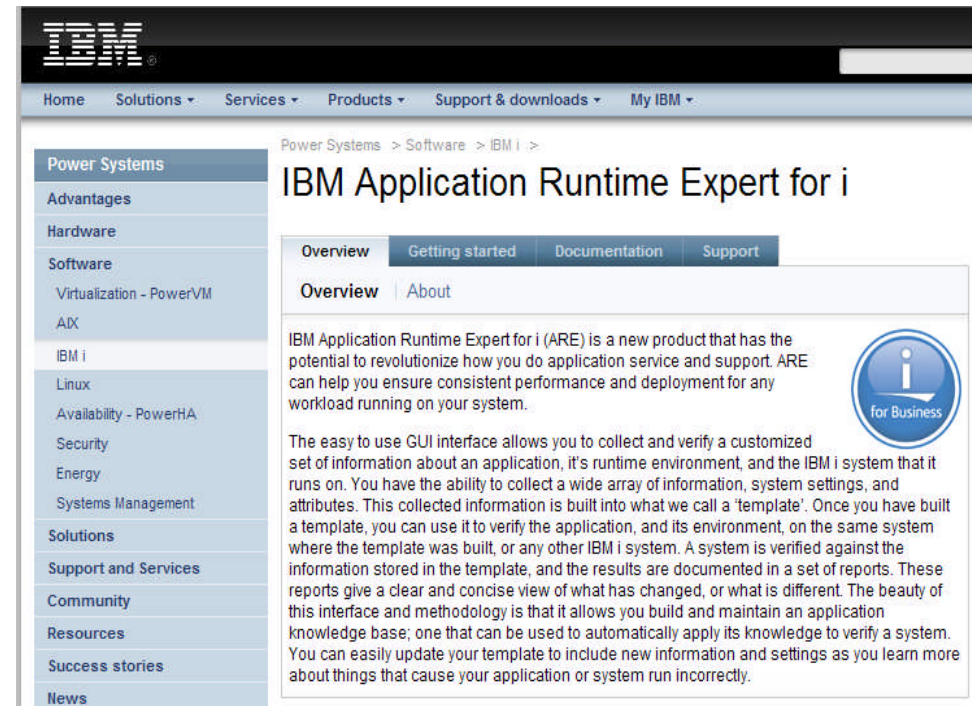
- *ALLOBJ special authority no longer required
- Permission allows templates to be created by users



How do you get it

- GUI is a chargeable LP – 5733ARE
 - Runs on IBM i 6.1 and 7.1
 - **Very** reasonably priced!

- Core is part of the base OS
 - Available on IBM i 5.4 and newer
 - Just apply latest HTTP and Java Group PTFs
 - 6.1: SF99115 and SF99562
 - 7.1: SF99368 and SF99572



- Articles
 - Turning Big Problems Into Small Ones
http://www.ibmssystemsmag.com/ibmi/application_runtime_expert/33004p1.aspx
 - You and i – ARE Solving Problems http://ibmsystemsmag.blogs.com/you_and_i/2010/07/you-and-i-are-solving-problems.html
 - Do You Need an Application Runtime Expert?
<http://ibmsystemsmag.blogs.com/idevelop/2010/07/do-you-need-an-application-runtime-expert.html>

- Product Web site contains install instructions, fix information, and documentation
 - <http://www.ibm.com/systems/power/software/i/are/index.html>

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

Availability

- **5.4 – HTTP group SF99114 level 33 or newer**
- **6.1 – HTTP group SF99115 level 27 or newer**
- **7.1 – HTTP group SF99368 level 15 or newer**

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