

## **Image Services Resource Adapter**

## **Deployment Guide**

For SAP NetWeaver WAS 6.40

**Release 3.4 Fixpack 3** 

April 2009

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## **About This Manual**

This manual provides information about configuring the IBM FileNet Image Services Resource Adapter (ISRA) version 3.4.0.x on SAP WAS 6.40 platform. Refer the separate ISRA Installation Guide for Installing ISRA 3.4.0.x.

## **Conventions Used in the Document**

<u>Conventions</u>	Description
Fixed Size font	Used for commands entered at the system command prompt.
Arial font	Used for important notes
Bold	Occasionally used to refer to portions of user interface, such as the <b>Next</b> button or the <b>Install</b> button

The table lists the formatting conventions used in this document.

## **Related References**

For all ImageViewer parameters please refer to the FNImageViewer documentation provided with ISRA installation media.

<ISRA-home>\ISRA340\FNImageViewer\docs

For all P8 System Manager related information, please refer to P8 System Manager documentation, provided with ISRA installation media.

<ISRA-home>\ISRA340\SystemManager\docs

## **Comments and Suggestions**

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## **ISRA** Deployment

This chapter describes the deployment of ISRA on SAP WAS 6.40 platform.

**Note** The installation procedure for SAP WAS 6.40 is outside the scope of this document. This guide assumes that the required settings and configurations have already been made.

### **Deployment Requirements**

This section lists the minimum software and hardware requirements for successful deployment of ISRA on SAP WAS 6.40 Application Server.

**Caution** All the xml related to the deployment of ISRA must be created manually or use a pre-existing file that is valid. Do not copy xml contents straight from the Deployment Guide.

#### Hardware Requirements

- For additional information on SAP WAS 6.40,visit http://www.sap.com/netweaver
- ISRA installation will require approximately 120 MB free disk space.

#### **Software Requirements**

- SAP WAS 6.40 installed on Microsoft Windows 2003 Server
- IBM FileNet IS 3.6 SP2 and above

### Mandatory Requirements for ISRA

The mandatory requirements for ISRA 3.4.0 is:

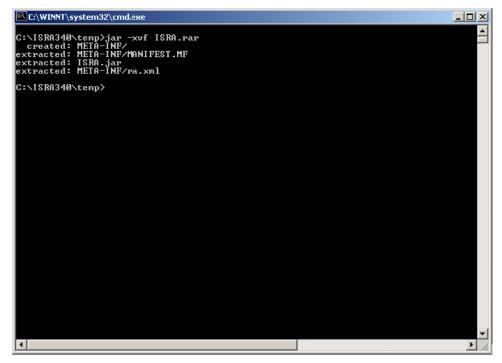
- Include the folder in which **WinPerfMon.dll** is present in the system path in case of Windows operating system. In LINUX, this file is not required.
- Enter the initial and maximum JVM heap size as 512.

## **Deploying ISRA**

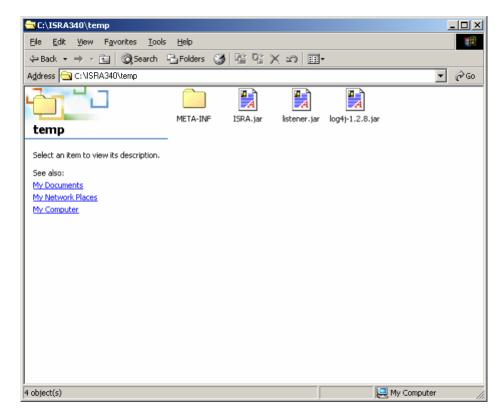
To deploy ISRA on SAP WAS 6.40:

1. Navigate to the directory where ISRA 3.4.0 is installed. Select the **ISRA.rar** file from the Jar folder of ISRA installation directory and copy the file under a temporary folder.

2. Run jar -xvf ISRA.rar command from temporary folder location.



- 3. Delete **ISRA.rar** file from temporary folder.
- 4. Add listener.jar and log4j-1.2.8.jar to the temporary folder. (The System Manager folder contains the listener.jar and log4j-1.2.8.jar) The following screen appears.



5. Create a file named **connector-j2ee-engine.xml** to specify the JNDI name with the following content:

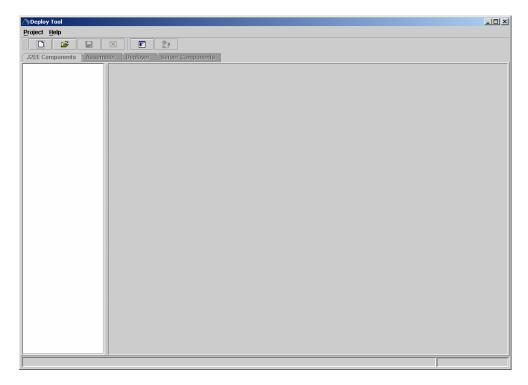
```
<?xml version='1.0' encoding='UTF-8'?>
<!DOCTYPE connector-j2ee-engine SYSTEM 'connector-j2ee-
engine.dtd'>
<connector-j2ee-engine>
<jndi-name>ISCF</jndi-name>
<pool-params>
  <max-connections-number>10</max-connections-number>
         <max-time-to-wait-connection>60</max-time-to-
         wait-connection>
         <expiration-control>
  <connection-lifetime>60</connection-lifetime>
</expiration-control>
</pool-params>
<connector-group>
</connector-group>
</connector-j2ee-engine>
```

6. Include the connector-j2ee-engine.xml file under the /META-INF folder extracted from ISRA.rar. The following screen displays the connector-j2ee-engine.xml file included in /META-INF folder.

SC:\ISRA340\temp\META-INF	
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ocls <u>H</u> elp	19
$\Rightarrow$ Back $\bullet \Rightarrow \bullet \textcircled{1}$ $\textcircled{2}$ Search $\textcircled{1}$ Folders $\textcircled{3}$ $\textcircled{1}$ $\textcircled{2}$ $\swarrow$ $\textcircled{3}$ $\textcircled{1}$	
Address C:\ISRA340\temp\META-INF	∙ ∂Go
MANIFEST.MF connector-j2e e-engine.xml	
Select an tem to view its description.	
See also: <u>My Documents</u> <u>My Network Places</u> <u>My Computer</u>	
3 object(s) 8.03 KB 🛄 My Comp	uter //

C:\WINNT\system32\cmd.exe	- O ×
C:\ISRA340\temp>jar -cvf ISRA.rar *.* added manifest adding: ISRA.jar(in = 411160) (out= 387928>(deflated 5%) adding: Iistener.jar(in = 44316) (out= 40386>(deflated 8%) adding: log4j-1.2.8.jar(in = 352668) (out= 316961>(deflated 10%) ignoring entry META-INF/ adding: META-INF/connector-j2ee-engine.xml(in = 491> (out= 217)(deflated 55%) ignoring entry META-INF/MANIFEST.MF	
adding: META-INF/ra.xml(in = 7621) (out= 1383)(deflated 81%) C:\ISRA340\temp)	
	•
	• //

- 7. In the command prompt, navigate to temporary folder where ISRA.rar is extracted. Create ISRA.rar using the JAVA command: jar -cvf ISRA.rar \*.\*. The following screen appears:
- 8. Run the **DeployTool.bat** file from the following location \\usr\<sap was instance>\J2E\JC00\j2ee\deploying to start the deploying tool of SAP WAS 6.40. The following screen appears:



9. Click **Project > New Project** to create a new deployment project.

ADeploy Tool		_ 🗆 🗵
Project Help		
New Project		
😅 Open Project 🛛	Chi-O emiller Deployer Server Components	
Save 0	anne Seperal Server Serve	
Save As		
Close Project		
E Options		
Errors in Project		
∰.# Make All		
1.Workplace.dlp		
2.Workplace.dlp		
Exit	2ml-X	
<u> </u>		

**10.** The following screen appears:

System	<ul> <li>bea</li> <li>DeployManager</li> <li>globalization</li> <li>img_iboss</li> <li>img_viewer</li> <li>img_viewer_33</li> <li>installer_change_keys</li> <li>ISRA</li> <li>ISRA 3.2.1_PATCH1_INST</li> <li>ISRA 3.3 UTC</li> <li>ISRA 3.3.0</li> <li>ISRA 3.3.0_debug</li> <li>isra12</li> <li>isra123</li> <li>Filters</li> <li>Project Files. (.dlp)</li> </ul>
--------	---

**11.** Select the directory location from the **Directories** frame and specify the project name in the Address text box. Then click **OK**. The following screen appears.

/>Deploy Tool - C:\isra_33_sap.dlp	<u>-0×</u>
Project J2EE Components Help	
J2EE Components Assembler Deployer Server Components	

**12.** Click the **Assembler** tab. Right-click on project name (here it is **isra\_34sap**). The following screen appears:

∕_>Deploy Tool - C:\isra_33_sap.c	dlp		<u> </u>
Project Assemble Help			
J2EE Components Assemble		wante	
SZEC Components Assemble	Descriptor Files		
Add Archive Ctrl-D		dditional	
Tri-R Ctri-R	WAR Files	File Name:	
ଅ Refresh			
Make Ear Ctrl-M		Context Root:	
Rename Ear Ctrl-F2	-	Modify	

**13.** Click the **ADD Archives** icon. Following screen appears.

Directories	Files
<ul> <li>System</li> <li>System</li> <li>A:\</li> <li>B:\</li> <li>C:\</li> <li>backup_policy</li> <li>bea</li> <li>cache_Restar</li> <li>CPWL_QA</li> <li>docs</li> <li>Documents ar</li> <li>Gible fileNet</li> <li>FileNet</li> <li>FileNet</li> <li>finsw</li> <li>img_screens</li> </ul>	C deployer
P ISRA340     Acrobat	Filters
	Archive Files (.war;.jar;.rar) 🔻

**14.** Select the directory location of the installed **ISRA.rar** from the Directories frame and click **OK**. The **ISRA.rar** is included in the current project.

Directories	Files
CPWL_QA docs Documents ar dummy FileNet FileNet FileNet FileNet FileSt F	META-INF ISRA.jar ISRA.rar listener.jar log4j-1.2.8.jar
©- 🚁 temp ©- 🗀 Util	Filters
uninstall 💌 🙀	Archive Files (.war;.jar;.rar) 🔻

**15.** Right-click on project name (**isra\_34\_sap**) to open the context menu, and navigate to **Make Ear**.

/>Deploy Tool - C/isra_34_sap.dlp			
Project Assemble Help			
J2EE Components Assembler Deployer Server Compon	sents		
Crista 34 Add Archive Cold			
and President Control	ditional		
C Refresh R Files	File Name:		
Mature Ear Col-M	Context Root:		
Rename Ear Emi+2		Madity	
RAR of resource adapter is added.			

**16.** The following screen appears.

Directories	Files
CPWL_QA docs Documents ar	🗀 deployer
© _ dummy © _ FileNet © _ FNImageView	
<ul> <li>► ing_screens</li> <li>♀ □ ISRA340</li> </ul>	
- 🗋 Acrobat	
<ul> <li>ImageVi</li> <li>ImageVi</li></ul>	
<ul> <li>Image: SystemMa</li> <li>Im</li></ul>	
← ☐ Util uninstall ▼	Archive Files (.ear)
Address isra_34_sap	۲ <u>۲</u> ـــــــــــــــــــــــــــــــــــ

**17.** Specify the directory location of the ear file from the Directories frame and enter the name of the ear file in the Address textbox. Click **OK**. The following screen appears:

Project Assemble Help	sap.dlp			
	9 4 1 9 0	8		
		Components		
isra_33_sap - ISRA.rar	Descriptor Files			
- CE ISRA.rar	Context Security View	w Additional		
	WAR Files	File Name:		1
		Context Root:		1
			Environment I	
			Mundity	

**18.** Click the **Deployer** tab. Click the **Connect** icon to open the SAP login dialog box. The following screen appears.

🛆 Login 👘			×
User Name:	Administrator	SAD	-
Password:		En ?	
Host:	localhost	Connec	ct
Port:	50004	Cance	1
<b>∏</b> Transport	Layers		
No Layer		•	<u>S</u> ettings

- 19. Enter the Password, and click Connect.
- 20. Click on the ISRA.rar link under isra\_34\_sap project. Select Deployer
   > Server Settings > Additional Settings tab to specify the JNDI name.

	St Server Components	
isra_34_sap.ear	General Security Properties Additional Server Settings	
Se ISPACI di	Identity Subjects Additional Settings Driver Settings	
	Name Space	
	JNDI Name: ISCF	
	Aliases	Add
		Transmitt 1
		Ramove
		Edit
	Pool Properties Max Connections Number: 10	etime: 80
	Time To Wait Connections: 60 🚔 Run Cleanup T	bread: 0
	Additional Properties	
	Key	Value
	Key:	

21. Right-click isra\_34\_sap project to open the context menu. From the context menu click **Deployment > Deploy EAR**.

Deploy Tool Project Deplo	l-C:\isra_34_sa av Help	p.dlp				ذلاله
J2EE Compor		bler Deployer S	erver Components			
Sisra_34_sr SRA.ra	EAR	Descriptor Log Context Securit	y View Extra Informatio	on Additional	DataSource Aliases	
	Deployment >	Beplay Ear Child	File N	lame:		
	Properties	Update Child	Context	Root:		
		Undeploy			Modify	
Connected.						

**22.** The server may take some time to complete the deployment process. The deployment status will be displayed as shown in the following screen:



**23.** Click **Yes** to start the deployed application. The following screen appears with a message in the status bar "Application Started Successfully".

Deploy Tool - C:\isra_34_ Project Deploy Help	sap.dlp		
J2EE Components Asse	mbler Deployer Server Compo	nents	
isra_34_sap.ear 3 ISRA.rar	Descriptor Log Configuration		
		tra Information Additional	
	WAR Files	File Name:	
		Context Root:	
		Modify	
Application started success	fully!!!		100%

- **24.** Deploying ISRA is completed.
- 25. Next step is to complete the Mandatory steps necessary for ISRA. Refer to <u>Mandatory Requirements for ISRA</u> section before restarting the Application Server.

#### Explanation for Terminal name and ISRALock folder

The first instance of ISRA deployed on an Application Server creates a folder named "ISRALock" and a **file named**<sup>1</sup> "ISRALock.0" inside that folder. The counter "0" in the file name "ISRALock.0" increments subsequently with each new deployment of ISRA and the same is appended to the terminal name generated for an ISRA instance. This folder is created in the path resolved by the system property "user.dir", which is the same path where the ISRA logs are generated. This functionality has been introduced in ISRA 3.2.1 to support vertical cluster environment.

<sup>&</sup>lt;sup>1</sup> ISRALock.0 (0-9 and a-z) would be created in ISRA 3.4 FP3 and above. Prior versions of ISRA would have files created as ISRALock.0000 (0000-9999).

Terminal name identifies ISRA instance with a unique id so that IS can distinguish each ISRA client uniquely for communication. Earlier, the terminal name used to be of the form "SV<instance number>.<Counter1>@IPAddress". In case of a vertical cluster, ISRA can be deployed across the cluster on a single machine. But in such a scenario, all the managed server instances in a cluster will have the same ISRA instance deployed and will generate the same terminal name, as the "IPAddress" and "instance number" will be same for all the ISRA instances. The current format of a terminal name generated by ISRA is "R<instance number><Counter1><@IPAddress", where Counter2 is the counter appended to the files created in the ISRALock folder as mentioned above. The files created in the ISRALock folder will be automatically removed if the managed servers are gracefully shut down (in case of proper JVM shutdown).

See <u>Configurable ra.xml Properties</u> section below for "<u>DeploymentInstance</u>" property setting.

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## **ISRA Configuration**

This chapter describes the ISRA configuration, deployed on SAP WAS 6.40 Application Server.

## **Configuring Deployed ISRA**

This section describes how to edit the ISRA deployment descriptor after deployment.

ISRA uses the J2EE Connector Architecture deployment descriptor, called **ra.xml** to define its operational parameters. The deployment descriptor is defined by Sun Microsystems in the J2EE Connector Architecture 1.0 specification. It describes the Resource Adapter related attributes, types, and deployment properties using a standard Document Type Definition (DTD).

To edit the ISRA deployment descriptor, perform the following steps:

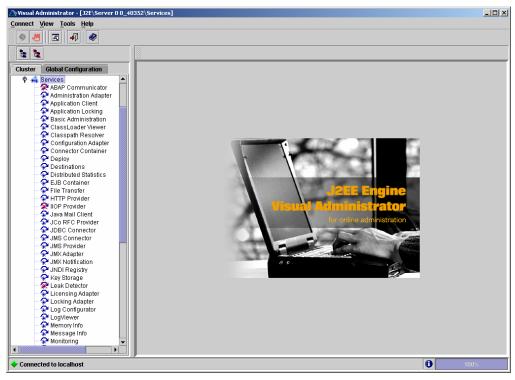
1. Run the **go.bat** file from the following location \\usr\<sap was instance>\J2E\JC00\j2ee\admin to start the Visual Administrator of SAP WAS 6.40. The following screen appears.

🛆 Connect to SAP J2EE Engine	×
Create and manage a personal list of connections or connect to a previously specified connections.	
Default	
Connect         Cancel         New         Edit         Delete	

2. Click Connect. The following screen appears.

△Login			×
User Name:	Administrator		
Password:	******	SAL	
Host:	localhost	Connect	
Port:	50004	Cancel	
_ Transport	Layer		
Default		▼ Settings	

**3.** Enter the **Password**, and click **Connect**. The following screen appears.

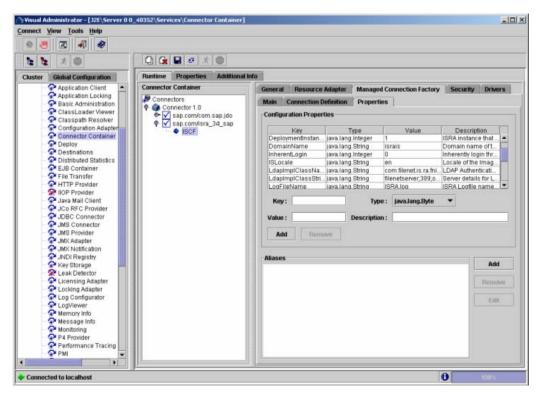


4. Navigate to J2E > Server 0 <id> > Services. Expand Services and click Connector Container. The following screen appears.

**Note** The id of Server 0 depends on the patch level version of **J2EE Engine** used in SAP NetWeaver WAS 6.40.

6 J 🕂 式 🛷		
Cluster Global Configuration	Runtime Properties Additional Info	
ABAP Communicator     ABAP Communicator     AdhaP Communicator     Application Client     Application Client     Application Client     Application Costing     Basic Administration     ClassLader Viewer     Configuration Adapter     Configuration Adapter     Configuration Adapter     Configuration Adapter     Destinuted Statistics     ESE Container     Fild Connector Container     Jost Connector     Uds Connector     Conductor     Conductor	Connector S Connector 1 Sap.com/corn sap.jdo Sap.com/corn_sap.jdo Sap.com/com/corn_sap.jdo Sap.com/corn_s	

 Under Connector container, navigate to Connectors > Connector 1.0 > sap.com/isra\_34\_sap > ISCF. The following screen appears.



6. Under the Managed Connection Factory tab, open the Properties tab. All the configurable properties are listed here.

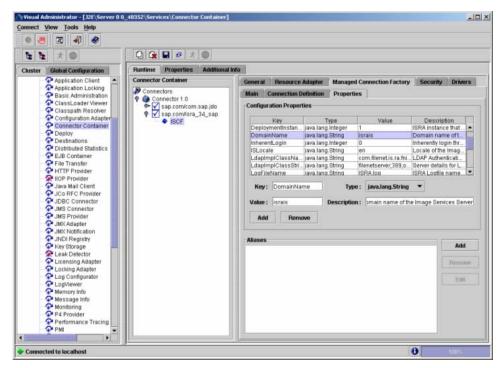
The user can make changes to the parameters as required. For details, refer to <u>Changing ISRA Specific Parameters</u> section.

## **Changing ISRA Specific Parameters**

After ISRA is deployed, some parameters of the Deployment Descriptor need to be changed to configure it for the target IS server.

To change the ISRA specific parameters, perform the following steps:

7. In the SAP NetWeaver Visual Administrator, navigate to the **Properties** tab, as shown in the above figure, under **Managed Connection Factory** tab in **ISCF**. Refer to <u>Configuring Deployed ISRA</u> section for details. The following screen appears.



Select the Key name under Configuration Properties section. For example: DomainName. The details of the key are reflected below the table. Change the values in the fields: Key, Value, Type, and Description, and click Add button (For Example, here DomainName property is changed from israis to isserver). The following screen appears.

8 <b>8</b> 8	$\cap$	
<b>t</b> <i>x</i> 0		
Ister Global Configuration	Runtime Properties Additional	i into
Application Client	Connector Container	General Resource Adapter Managed Connection Factory Security Drivers
Pasic Administration	Connectors	Main Connection Definition Properties
ClassLoader Viewer	Sap.com/com.sap.jdo	Configuration Properties
Classpath Resolver     Configuration Adapter	🕈 🔽 sap.com/isra_34_sap	Kev Type Value Description
Connector Container	<ul> <li>ISCF</li> </ul>	Key Type Value Description DeploymentInstan, java lang Integer 1 ISRA instance that
Peploy	· · · · ·	DomainName java.lang.String isserver Domain name of t_
Destinations     Distributed Statistics		InherentLogin Java lang Integer 0 Inherently login thr
P EJB Container		ISLocale java.lang.String en Locale of the Imag LdapImpIClassNa java.lang.String com filenet is ra fni LDAP Authenticati.
File Transfer		LdapimpiClassStri. java lang String filenetserver, 389.0 Server details for L
HTTP Provider     NOP Provider		LooFileName iava lano Strino ISRA.loo ISRA.Loofile name.
IOP Provider     Java Mail Client		Key: Type: javaJang.String 💌
Co RFC Provider		ney: Type: Javasang.sumg
- P JDBC Connector		Value : Description :
Source Street St		
Adapter		Add Rumove
- 📯 JMX Notification		
Storage		Aliases
Leak Detector		
Cicensing Adapter		Remove
2 Locking Adapter		
- PLog Configurator		Edit
Memory Info		
Thessage Info		
2 Monitoring		
P4 Provider Performance Tracing		
Penormance tracing		

**9.** After changing the value against the required property, click **Save Changes** icon. The following confirmation message appears.

Message	2	×
Î	Save successuful.	
	ОК	

10. Click OK.

### **Configurable ra.xml Properties**

The configurable properties to be set (modified) in **ra.xml** are:

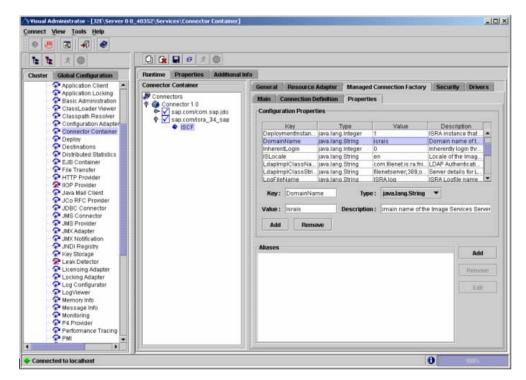
- DomainName
- OrganizationName
- LoggingLevel
- LoggingMode
- PageBufferSize
- <u>CacheRefreshInterval</u>
- <u>SecurityCacheMode</u>
- MetaDataCacheRefreshMode
- LogFileName
- LogFileSize
- <u>LdapImplClassName</u>

- LdapImplClassString
- InherentLogin
- DeploymentInstance
- PCHLogging
- <u>AllowAnonymousUser</u>
- RPCLogging
- <u>ClientCodepage</u>
- GMTEnabled flag
- ISLocale
- IgnoreObjectBusyMsgInDocMigration

**Note** Please note that all properties described in the deployment descriptor are mandatory and no property should be removed. Default values should be specified for properties that users do not want to use.

#### DomainName

This is the domain name of the IS server. The default value of DomainName is FileNetIS. It should be set according to the operational environment. Change this property to the domain name of the IS.



#### **OrganizationName**

This is the FileNet IS organization name. The default value of OrganizationName is IBM. It should be changed according to the operational environment.

ا الله الله الله الله الله الله الله		
t t x 0		
Cluster Global Configuration	Runtime Properties Additional	l hifo
Application Client	Connector Container	General Resource Adapter Managed Connection Factory Security Driver
Application Locking	Connectors	Main Connection Definition Properties
ClassLoader Viewer	<ul> <li>Connector 1.0</li> <li>Sap.com/com.sap.jdo</li> </ul>	Configuration Properties
Classpath Resolver	Sap.com/isra_34_sap SCF	Kev Type Value Description
Connector Container	- NOUL	LoggingMode java lang Integer 3 U-No Logging, 1-C
Deploy Destinations		OrganizationName java lang String FileNet Organization nam PageBufferSize java lang Integer 64 Page data fetch siz
P Distributed Statistics		PCHLogging java lang String Disabled Parameter to enab
EJB Container		ProductName Java Jang String FileNet Image Ser Name of the Product ProductVersion Java Jang String ISRA 3.4.0 Enterpri. Product Version
ATTP Provider		ProductVersion java lang String ISRA 3.4.0 Enterpri Product Version RPCLogging java lang Integer 0 0-Exceptions and
R IIOP Provider		
Java Mail Client		Key: OrganizationName Type: java.lang.String 🔻
- DBC Connector		Value: FileNet Description: zation name of the Image Services Serv
JMS Connector JMS Provider		
JMX Adapter		Add Remove
JMX Notification JNDI Registry		
- 📯 Key Storage		Aliases Add
- R Leak Detector		Benny
- P Locking Adapter		
Log Configurator		East
A Memory Info		
A Message Info		and the second se
	100	
A Monitoring		

### LoggingLevel

This is an integer representing the amount of log information to be generated. The values are dynamically updatable by using the ISRA Console. The valid values are:

Logging Level	Description
-1	Disables ISRA Logging
0	Only Error and Warning messages will be logged by ISRA
1	Informative messages will also be logged by ISRA
2	Prints debug message in the log

The default value of LoggingLevel is 0. It can be modified to other valid Logging Levels. It is recommended to keep the logging level at 0. LoggingLevel can be increased if user encounters a problem while accessing ISRA through the application.

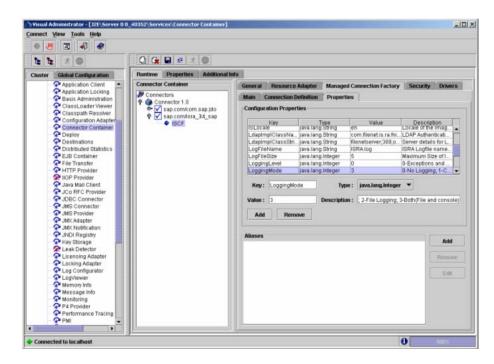
	20 and 200 and 200 and 200			
	1 3 1			
uster	Global Configuration	Runtime Properties Additional I	info	
	Application Client	Connector Container	General Resource Adapter Managed Connection Factory Secu	rity Drivers
	P Basic Administration	Connectors	Main Connection Definition Properties	
	ClassLoader Viewer	Sap.com/com.sap.jdo	Configuration Properties	
Configuration Adapter		Key Type Value Des		
	Connector Container	• ISCF		the imag
	Contractions	· · · · · · · · · · · · · · · · · · ·		rthenticati
	Destinations Distributed Statistics			etails for L
	EJB Container			n Size of I
	Prile Transfer			tions and
	P HTTP Provider		LoggingMode java lang Integer 3 0-No Log	gging; 1-C
	Sava Mail Client		Key: LoggingLevel Type: java.lang.integer 💌	
	Sco RFC Provider			
	JDBC Connector     JMS Connector		Value: 0 Description: ions and Warnings; 1-Info;	2-Debug Level
	JMS Connector		Add Remove	
	SMX Adapter			
	JMX Notification     JNDI Registry		Care of the second s	
			Aliases	Add
		1		
	📯 Key Storage 🦰			
	Key Storage     Key Storage     Leak Detector     Licensing Adapter			Remove
	Key Storage     Key Adapter     Licensing Adapter     Locking Adapter			Remove
	Key Storage     Leak Detector     Licensing Adapter     Locking Adapter     Log Configurator     Log Viewer			
	Key Storage     Leak Detector     Licensing Adapter     Locking Adapter     Log Configurator     Log Viewer     Memory Info			Parmove
	Key Storage     Leak Detector     Leak Detector     Locking Adapter     Locking Adapter     LogViewer     Memory Info     Message Info			Parmove
	Key Storage     Lack Detector     Licensing Adapter     Locking Adapter     Log Configurator     Memory Info     Message Info     Monitoring			Parmove
	Key Storage     Leak Detector     Leak Detector     Locking Adapter     Locking Adapter     LogViewer     Memory Info     Message Info			Parmove

### LoggingMode

This is an integer representing the logging mode. The valid values are:

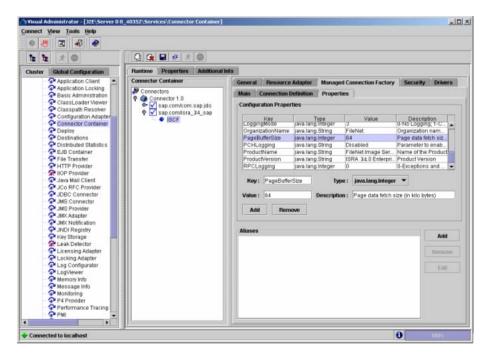
Logging Mode	Description
0	No Logging
1	Only console logging
2	Only file logging
3	Both console logging and file logging

The default Value of LoggingMode is 3. It can be changed to other valid values according to the operational environment.



#### PageBufferSize

This is an integer value specified in kilobytes (KB). PageBufferSize specifies the chunk size used by ISRA to transfer page data to and from IS. The default value is 64 KB. Specifying a higher value will require more memory for the Application Server process, and a low PageBufferSize will mean more trips to IS. The value should be set to an average page size on the target IS. The document buffer size on IS and ISRA should match to optimize image transfer performance.



#### CacheRefreshInterval

This is an integer value specified in minutes. ISRA stores meta-data information like Document class, Indices, menu details etc. in a local cache for faster retrieval. ISRA refreshes the cache information based on the CacheRefreshInterval value. The default value is 30 minutes.

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ster Global Configuration	Runtime Properties Additional	Info						
Application Client	Connector Container	General	Resource	Adapter	Managed (	Connection Factory	Security	Drivers
Application Locking	Connectors	Main	Connection E	efinition	Properties			
ClassLoader Viewer	<ul> <li>Connector 1.0</li> <li>Sap.com/com.sap.jdo</li> </ul>	Config	uration Proper	ties				
Configuration Adapter     Connector Container     Destinations     Distributed Statistics     Else Container	sap.com/isra_34_sap	T T	Key	Т	vpe	Value	Descript	ion
	· NOUT	Allow	AnonymousU.				LDAP Anonyn	
		eRefreshinte	java lang		30	Cache refrest		
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JDBC Connector JMS Connector JMS Provider		Value	1		Description	Cache refresh inf	terval(in minut	es)
JDBC Connector JMS Connector JMS Provider JMS Provider		-	1		Description	Cache refresh inf	terval (in minut	es)
JMS Connector JMS Connector JMS Provider JMX Adapter		Ad	d Rem		Description	Cache refresh inf	terval(in minut	85)
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JDBC Connector     JMS Connector     JMS Provider     JMX Adapter     JMX Adapter     JMX Notification     JNX Registry     Key Storage     Leak Detector     Licensing Adapter		Ad	d Rem		Description	Cache refresh inf	terval(in minut	Add
JDBC Connector     JURS Connector     JURS Connector     JURS Provider     JURX Adapter     JURX Notification     JURX Notification     JURD Registry     Key Storage     Leash Detector     Licensing Adapter     Licensing Adapter		Ad	d Rem		Description	Cache refresh inf	terval(in minut	Add
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JDBC Connector     JURS Connector     JURS Connector     JURS Provider     JUK Adapter     JUK Notification     JUK Notification     JUK Notification     Locking Adapter     Locking Adapter     Locking Adapter		Ad	d Rem		Description	Cache refresh inf	terval(in minut	Add
JDBC Connector JMS Connector JMS Provider JMK Adapter JMK Adapter JMK Adapter JMK Adapter JMK Adapter Key Storage K Leak Detector Licensing Adapter Licensing Adapter Licensing Adapter Licensing Adapter Licensing Adapter Licensing Adapter Memory Info Message Info Monitoring		Ad	d Rem		Description	Cache refresh inf	terval(in minut	Add
JDBC Connector     JDBC Connector     JMS Connector     JMS Connector     JMS Connector     JMS Notification     JMCI Registry     JMCI Registry     Leak Detector     Licening Adapter     Locking Adapter     Locking Adapter     Locking Adapter     Memory into     Memory into		Ad	d Rem		Description	Cache refresh int	terval(in minut	Add

#### SecurityCacheMode

This parameter can take two values:

#### Value Setting

- 1 Caches both users and Groups
- 2 Caches only groups

#### MetaDataCacheRefreshMode

This parameter can have a value in the range of (0-15).

#### Value Setting

- 0 No Metadata cache refresh
- 1 Printer cache refresh only
- 2 Document class cache refresh only
- 4 Key Fields cache refresh only
- 8 Menu Value cache refresh only
- 15 is the default value for this parameter, which will refresh all metadata.

Add corresponding values to get a combination of data.

For example, 1+2 = 3 Printer and Document class data 1+2+4 = 7 Printer, Document class, Key Fields data 0+1+2+4+8 = 15 all data

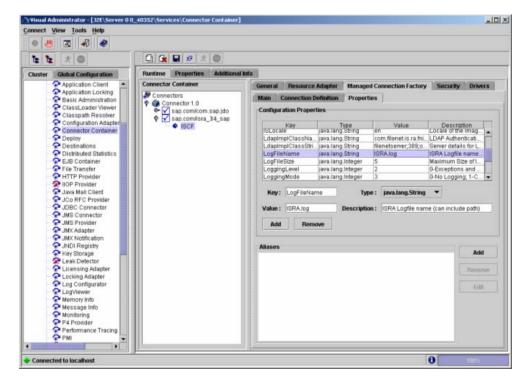
#### LogFileName

The LogFileName is a string containing the name and path of the log file. The default value of LogFileName is **ISRA.log**. A complete or relative path can be provided to create the log file at a specific location on the disk.

To ensure that each ISRA instance has a unique log file, the following steps will be followed:

- Configurable property "DeploymentInstance" will be read from ra.xml and appended to the log file name. If not specified, the default value "1" will be used as the deployment instance of ISRA.
- The unique ID used for terminal ID generation in ISRA will be appended to the log file name.

For instance, if the log file name configured in ra.xml is **ISRA.log** and the deployment instance is 1, the modified log file name would be **ISRA\_1\_0.log**. Here, "0-9 and a-z" is the unique  $ID^2$  generated at run time. This ensures a unique name of the log file for each instance of ISRA.

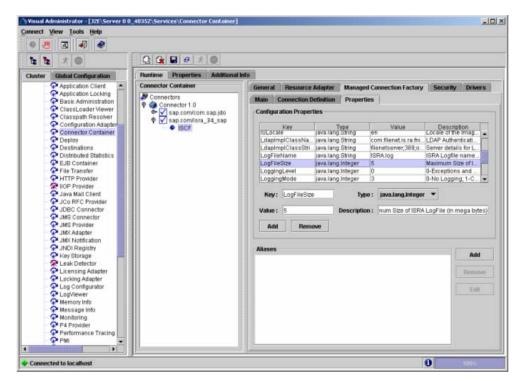


### LogFileSize

This is an integer representing the maximum size of the log file in Megabytes (MB). When the size of the file reaches this maximum limit, the log file is

<sup>&</sup>lt;sup>2</sup> The modified log file name would be ISRA\_1\_<unique-ID>.log. The value for unique ID is 0-9, a-z in ISRA 3.4 FP3 and above. Older versions of ISRA use the unique ID value between 0000-9999.

renamed and a new file is created with the same name. For example, ISRA\_1\_0.log is renamed to ISRA\_1\_0\_1.log, and a new file ISRA\_1\_0.log is created. The default value of LogFileSize is 5MB. Automatic purging of old ISRA log files has been implemented leaving behind only 5 latest versions.



#### LdapImplClassName

It is the name of the Implementation class for LDAP Authentication. This parameter contains the complete path of the LDAP Implementation class to be entered along with the LDAP Implementation Class Name.

The default value is 'com.filenet.is.ra.fnis.FN\_IS\_IPlanetImpl'.

The value of the property for LDAP implementation for Active directory is com.filenet.is.ra.fnis.FN\_IS\_ActiveDirImpl and for Novell NDS is com.filenet.is.ra.fnis.FN\_IS\_NovellNDSImpl.

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luster	Global Configuration	Runtime Properties Additional I	Info	
	Application Client     Application Locking	Connector Container	General Resource Adapter Managed Connection Factory Security Driv	ers
	Basic Administration	Connectors	Main Connection Definition Properties	
ClassLoader Viewer     Classpath Resolver     Configuration Adapter     Configuration Adapter     Connector Container     Deploy     Destinations	🗣 🟹 sap.com/com.sap.jdo	Configuration Properties		
	Sap.com/isra_34_sap ISCF	Key Type Value Description	-	
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		DomainName java lang.String isserver Domain name of t. InherentLogin java lang Integer 0 Inherently login thr.		
	P Distributed Statistics		ISLocale java lang String en Locale of the Imag.	
	EJB Container     File Transfer		LdapimpiClassNa java lang String com filenet is ra fni LDAP Authenticati LdapimpiClassStri java lang String filenetserver;389.o. Server details for L	
	TTP Provider		LogFileName java lang String ISRA log ISRA Logfile name.	
	Provider Java Mail Client		Key: apimpiClassName Type: java.lang.String •	
	JCo RFC Provider		Ney: spimpiclassivane Type: java.ang.sning	
	JDBC Connector     JMS Connector		Value: FN_IS_IPlanetimpl Description: LDAP Authentication Class Name	
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	Message Info     Monitoring			
	P4 Provider			
	Performance Tracing			
	PMI 👻			

### LdapImpIClassString

This parameter is a general string that takes in all the LDAP Server specific parameters required for authentication. It takes the following inputs:

• Server Name – Name of the Server/ Machine on which LDAP Server exists.

**Note** In case that the LDAP server is located on a different subnet, it may be necessary to enter IP address or a full domain name.

- Port Number LDAP Server's port number used for transactions.
- User Path Organization unit under which the users are filed in the LDAP Directory Server.

The three parameters must be separated by semicolon and must appear in the order - server name, port number and user path. An example of LDAPImplClassString is:

• For Active Directory

filenetserver;389;ADS.com

• For IPlanet

filenetserver;389;uid= user1, ou=ISRA, dc=odc, dc=filenet, dc=com

For Novell NDS

filenetserver;389;cn=user1, ou= ISRA, o=FileNet

	3 4 2			
uster	Global Configuration	Runtime Properties Additional	uda	
uster	Application Client	Connector Container	General Resource Adapter Managed Connection Factory Security	Drivers
	Application Locking     Basic Administration     ClassLoader Viewer     ClassLoader Viewer     ClassLoader Viewer     Configuration Adapter     Comfigurations     Deploy     Deploy	Connectors ♥ Connector 1 0 ♥ Sap.com/com sap.jdo ♥ Sap.com/sra_34_sap ♥ ISCE	Main         Connection Definition         Properties           Configuration Properties	oft. n thr nag. catl for L ame •
	JNDI Registry     Key Storage     Leak Detector     Licensing Adapter     Locking Adapter     Log Configurator     Log Configurator     Log Configurator		Alases	Add Remove Edit
	LogViewer     Memory Info     Message Info     Monitoring     P Provider			

## InherentLogin

To use LDAP security, the value will be set to 1 from the default value 0.

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ster Global Configuration	Runtime Properties Additional	linfo				
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Application Locking	Connectors	Main Connection Definition Properties Configuration Properties				
ClassLoader Viewer	<ul> <li>Connector 1.0</li> <li>Sap.com/com.sap.jdo</li> </ul>					
- 📯 Configuration Adapter	Sap.com/isra_34_sap	Key Type Value Description Deploymentinstan lava tang integer 1 ISRA instance that				
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<ul> <li>Destinations</li> <li>Distributed Statistics</li> </ul>		InherentLogin java lang Integer 0 Inherently login thr. ISLocale java lang String en Locale of the Imag				
- PEJB Container		LdapimpiClassNa, java lang String com filenet is ra fni LDAP Authenticati				
Prile Transfer		LdapImpIClassStri java.lang.String filenetserver;389;o Server details for L				
- Provider		LogFileName java lang String ISRA log ISRA Logfile name				
- 👷 IIOP Provider - 🖓 Java Mail Client		Key: InherentLogin Type: java.lang.knteger -				
JCo RFC Provider		Key: InherentLogin Type: java.lang.integer *				
JDBC Connector		Value: 0 Description: ht 0-Direct IS Login:1-LDAP Authentication				
- 📯 JMS Connector						
JMS Provider		Add Remove				
JMX Adapter JMX Notification						
A JNDI Registry		Aliases				
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2 Monitoring						
P4 Provider						
Performance Tracing						

#### DeploymentInstance

This is the instance number of ISRA that is being deployed. It is a user defined number between 1 and 100. The default value for this parameter is 1 when none is specified. The maximum is 100, which means that 100 different instances of ISRA can be deployed on a single machine.

Each deployment/JNDI of ISRA on the same Web/Application server requires its own instance number. For example, there can be 2 ISRA applications deployed on the same Web/Application server. Each deployment would require its own instance number and JNDI name. This number is used on the IS server to differentiate between multiple connections from the same IP address of the Web/Application server.

IS always expects unique IDs from ISRA clients, and when it receives duplicate IDs from ISRA, it will reject communication.

So it is always advised to increment the deployment instance number when another instance of ISRA is deployed to achieve its unique id.

Format of the terminal ID is used by ISRA and IS in distinguishing a Unique ISRA instance.

RXXYYYZ@<ip-address>

Where,

XX = takes values from 1 to 100. If there is only one instance then it defaults to 1. Else the value has to be set to the Number of Deployment instances.

YYY = Counter that increments with the creation of a new LogonSession object (Values in base 36)

Z = Unique ID generated per ISRA instance. Introduced to support ISRA in clustered environment (Unique ID is a number in Base 36)

<ip-address> = IP Address of the machine where ISRA is deployed.

The Unique ID is obtained from the place holder file ISRALock.z (where Z=Unique ID) that is created in the ISRALock folder. Each cluster member creates its own place holder file (like ISRALock.0, ISRALock.1 and so on) within the common ISRALock folder.

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uster Global Configuration	Runtime Properties Additional	linfo					
Application Client     Application Locking	Connector Container	General Resource	Adapter	Managed	Connection Factory	Security D	ivers
P Basic Administration	Connectors	Main Connection	Definition	Propertie	es		
	🗢 🗹 sap.com/com.sap.jdo	Configuration Properties					
		Key		уре	Value	Description	
		AllowAnonymousU			true	LDAP Anonymou	
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		Deploymentinstan.			1	ISRA instance the	
		DomainName	java lang		isserver	Domain name of	
		InherentLogin	java lang		0 en	Inherently login the Ima	
R IIOP Provider		ISLocale	lava land				Colora Area
- 📯 IIOP Provider - 🖓 Java Mail Client		Key: eployment		Type			
IIOP Provider     Java Mail Client     JCo RFC Provider     JDBC Connector			Instance	Туре		r •	
Selice Provider Sava Mail Client Confect Provider SDBC Connector SMS Connector		Key: eployment Value: 1	Instance	Туре	e : java.lang.integer	r •	
IIOP Provider     Java Mail Client     JCo RFC Provider     JDBC Connector		Key: eployment	Instance	Туре	e : java.lang.integer	r •	
IIOP Provider     Java Mail Client     Joc RFC Provider     JOBC Connector     JMS Connector     JMS Provider     JMS Provider     JMK Notification		Key: eployment Value: 1 Add Rem	Instance	Туре	e : java.lang.integer	r •	
IIOP Provider Java Mail Client JDC RFC Provider JDBC Connector JJBS Provider JJKS Adapter JJKX Adapter JJKX Notification JJKX Notification		Key: eployment Value: 1	Instance	Туре	e : java.lang.integer	r 👻	
IOP Provider     Java Mail Client     Joc RFC Provider     JDBC Connector     JJBK Connector     JMS Connector     JMS Provider     JMK Adapter     JMK Notification     JND Registry     Key Slorage     Leak Detector		Key: eployment Value: 1 Add Rem	Instance	Туре	e : java.lang.integer	r 👻	ie = 10
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IIOP Provider Java Mail Job Control Christer JJBS Connector JJBS Connector JJBS Connector JJBS Provider JJBS Adapter JJBS Notification JJBS Notification JJBS Rejistry Key Storage Leak Detector Locking Adapter Locking Adapter		Key: eployment Value: 1 Add Rem	Instance	Туре	e : java.lang.integer	r 👻	ie = 10 Add
IIOP Provider     Joo Mail Client     Joo RFC Provider     JJDBC Connector     JJMS Connector     JMS Connector     JMS Provider     JMK Adapter     JMK Notification     JMC Registry     Key Storage     Lesh Oblector     Licensing Adapter     Log Configurator     Log Viewer		Key: eployment Value: 1 Add Rem	Instance	Туре	e : java.lang.integer	r 👻	ie = 10 Add
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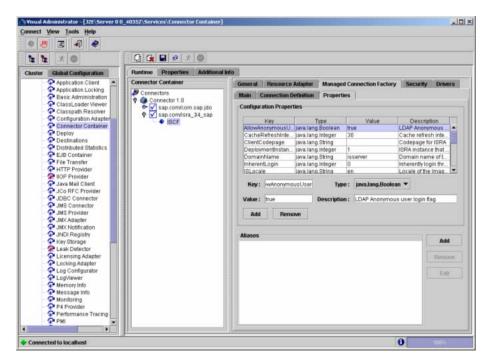
### PCHLogging

This is a String parameter to enable/disable PCH logging in ISRA. The default value for this parameter is "Disabled". PCHLogging enables user to log performance monitoring data of IS.

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ster Global Configuration	Runtime Properties Additional	linfo			
Application Client	Connector Container	General Resource Adapter Managed Connection Factory Security Drivers			
Basic Administration     Classpath Resolver     Connector 1.0     Connector 2.0     Connector 2.0	P Connectors	Main Connection Definition Properties			
		Configuration Properties			
	Key Type Value Description LogFileSize java lang.Integer 5 Maximum Size of L				
	LoggingLevel java.lang.integer 0 0-Exceptions and				
	LoggingMode java Jang Integer 3 0-No Logging, 1-C., OrganizationName java Jang String FileNet Organization nam.				
	PageBufferSize java.lang.integer 64 Page data fetch siz.				
		PCHLogging java lang String Disabled Parameter to enab.			
Provider		ProductName java lang String FileNet Image Ser Name of the Product			
A liop Provider		Key: PCHLogging Type: java.lang.String -			
JCo RFC Provider		ney, roncoyyiny Type, pavalang.string			
DBC Connector		Value : Disabled Description : 'arameter to enable PCH Logging in ISR			
JMS Connector     JMS Provider					
A JMX Adapter		Add Remove			
JMX Notification					
- P JNDI Registry P Key Storage		Aliases			
Leak Detector					
Cicensing Adapter		Remove			
P Locking Adapter					
Log Configurator     LogViewer		Edit			
P Memory Info					
Thessage Info					
2 Monitoring					
P4 Provider Performance Tracing					

#### AllowAnonymousUser

It's a Boolean value to allow Anonymous user logon through LDAP, when blank password is passed from user/client. The default value of this parameter is "false".



#### RPCLogging

This is an integer representing the RPC logging level. The valid values are:

RPCLogging	Description
0	No Logging
1	File Logging

The default Value of RPCLogging is 0. It can be changed to 1 if RPCLogging is required.

The RPC LogFileSize is taken as double the size of that of ISRA LogFileSize. So, when the size of the RPC log file reaches its maximum limit (10mb), the log file is renamed, and a new file is created with the same name. For example, ISRA\_1\_0\_RPC.log is renamed to ISRA\_1\_0\_RPC\_1.log, and a new file ISRA\_1\_0\_RPC.log is created. Automatic purging of old ISRA RPC log files has been implemented leaving behind only 5 latest versions.

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luster	Global Configuration	Runtime Properties Additional				
	Application Client     Application Locking	Connector Container	General Resource Adapter Managed Connection Factory Security	Drivers		
	Pasic Administration	P Connectors	Main Connection Definition Properties			
ClassLoader Viewer     Classpath Resolver     Configuration Adapter     Configuration Adapter     Connector Container     Deploy     Destinations	🗣 🗹 sap.com/com.sap.jdo	Configuration Properties				
	\$	Key Type Value Description LoggingMode Java Jang Integer 3 U-No Logging	m			
		LoggingMode java.lang.integer 3 U-No.Logging. OrganizationName java.lang.String FileNet Organization r				
		PageBufferSize java lang integer 64 Page data feto				
	P Distributed Statistics		PCHLogging lava lang String Disabled Parameter to			
	File Transfer		ProductName java Jang String FileNet Image Ser Name of the P ProductVersion java Jang String ISRA 34.0 Enterprin Product Version			
	ATTP Provider		RPCLogging java lang integer 0 0-Exceptions			
	R IIOP Provider			144.8		
	📯 Java Mail Client		Key: RPOLogging Type: java.lang.integer *			
JCo RFC Provider						
	P JDBC Connector		Value: 0 Description: ions and Warnings; 1-Info; 2-Del	oug Level		
	JDBC Connector     JMS Connector			oug Level		
	P JDBC Connector		Value: 0 Description: ions and Warnings; 1-Info; 2-Del Add Remove	oug Level		
	JDBC Connector     JMS Connector     JMS Provider     JMS Provider     JMS Adapter     JMX Adapter     JMX Notification		Add Remove	oug Level		
	JDBC Connector     JMS Connector     JMS Provider     JMX Adapter     JMX Adapter     JMX(Notification     JND) Registry			Add		
	JDBC Connector     JMS Connector     JMS Connector     JMS Provider     JMX Notification     JMX Notification     VIOI Registry     Key Storage     Leak Detector		Add Remove			
	JDBC Connector     JMS Connector     JMS Connector     JMS Adapter     JMX Adapter     JMX Notification     VNDI Registry     Key Storage     Leak Detector     Licensing Adapter		Add Remove Allases			
	UDBC Connector     UMS Connector     UMS Connector     UMS Adapter     UMX Adapter     UMX Notification     UMX Notification     UMX Notification     Locking Adapter     Locking Adapter		Add Remove Allases	Add		
	JDBC Connector     JMS Connector     JMS Connector     JMS Provider     JMS Notification     JMD Registry     JMC Notification     JMDI Registry     Lick Detector     Licensing Adapter     Locking Adapter		Add Remove Allases	Add		
	JDBC Connector     JMS Connector     JMS Connector     JMS Connector     JMS Adapter     JMK Adapter     JMK Adapter     JMK Adapter     JMK Storage     Kess Storage     Leak Detector     Licensing Adapter     Loc Cong Adapter     Log Configurator     Log Viewer     Memory Info		Add Remove Allases	Add		
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### ClientCodepage

This is the code page for encoding Text and Sticky Note annotations. The default value for this parameter is Cp1252.

On Microsoft Windows platform, the Locale character set is the Windows Code Page (1252 for US English and Western Europe) whereas on a UNIX platform, it is an ISO 8859-X character set (ISO 8859-1 for US English and Western Europe).

Thus, if the client locale character set, is Windows Code Page based (for example: Cp1252 for US English and Western Europe), and the server is UNIX based, then Windows Code Page should be used for encoding the annotations data before committing to the server. This is because; there is an inconsistency in characters mapping between Microsoft Windows Code Pages and the equivalent ISO 8859-X series. For instance, Code page 1252 is built on ISO 8859-1 but uses the range 0x80-0x9F for extra printable characters rather than the C1 control codes used in ISO8859-1.

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Application Client	Connector Container	General Resource Adapter Managed Connection Fact	ory Security Drivers
Basic Administration	P Connectors	Main Connection Definition Properties	
ClassLoader Viewer     Classpath Resolver	e- V sap.com/com.sap.jdo	Configuration Properties	
Configuration Adapter	Key Type Value	Description	
Connector Container	- Nort	AllowAnonymousU. Java lang Boolean true	LDAP Anonymous
Contractions		CacheRefreshInte java.lang.integer 30	Cache refresh inte
Distributed Statistics		ClientCodepage java.lang.String DeploymentInstan java.lang.integer 1	Codepage for ISRA
EJB Container		DomainName Java.lang.String isserver	Domain name of t
😭 File Transfer		InherentLogin java lang Integer 0	Inherently login thr
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- P JDBC Connector		Value: Description: Codepage for	ISRA
JMS Connector JMS Provider			
- JMX Adapter		Add Remove	
- JMX Notification			
P JNDI Registry		Aliases	Adid
Key Storage Resk Detector			Add
			Thirmove
Licensing Adapter		1	
Licensing Adapter			Eritt
Locking Adapter			1
Cocking Adapter Cog Configurator CogViewer			
Locking Adapter     Log Configurator     LogViewer     Memory Info			
Cocking Adapter Cog Configurator CogViewer			
Locking Adapter     Log Configurator     Log Viewer     Memory Info     Message Info			

For Annotations data, ISRA internally retrieves the IS character set and uses the equivalent Windows Code Pages for the following ISO encodings:

ISO Encoding	MS Windows counterpart
ISO8859_1	Cp1252
ISO8859_2	Cp1250
ISO8859_5	Cp1251
ISO8859_6	Cp1256
ISO8859_7	Cp1253
ISO8859_8	Cp1255
ISO8859_9	Cp1254
ISO8859_13	Ср1257

Note Specifying an incorrect code page may lead to inconsistency and/or corruption of Annotations data.

#### **GMTEnabled flag**

This parameter takes two values:

- 1. true
- 2. false

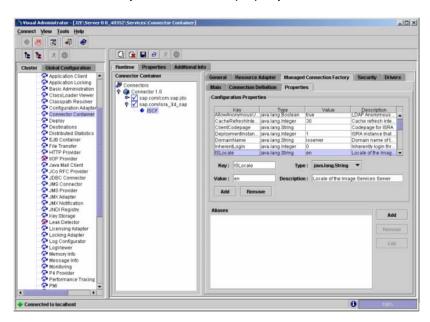
The default value of this parameter is false

**Setting "GMTEnabled" to false**: When the flag is set to false, it is assumed that the ISRA client application is not "GMT Enabled" i.e. client applications will not do any timezone conversion. ISRA returns the date committed on the IS to client applications after adjusting the difference between the Application Server timezone and the GMT Timezone. As a result, the dates displayed in applications will be in accordance with the dates committed on the IS.

**Setting "GMTEnabled" to true**: When the flag is set to true, it is assumed that the client application is "GMT Enabled" i.e. client applications will display the dates in GMT. In this case, ISRA returns the date committed on the IS in the GMT timezone, without any adjustment. Set this value to true only if you have made changes to your application after of an upgrade to ISRA 3.3 FP6 or ISRA 3.4 FP2.

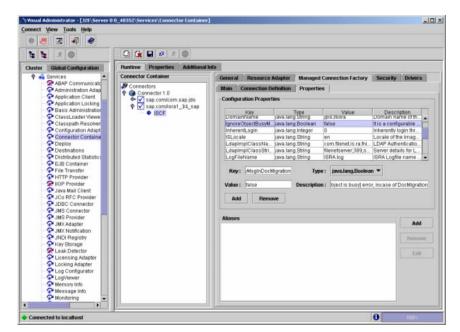
#### **ISLocale**

This is a String parameter which represents the ISRA Locale. The administrator can set the value of this configurable property as that of the IS locale. It is a lower-case two-letter code as defined by ISO-639. The default value of this parameter is "en" (English locale). The ResourceBundle used in ISRA will depend on the value set by the user for this property.



#### IgnoreObjectBusyMsgInDocMigration

This is a Boolean parameter which can be set to true to ignore the [77,0,11 The object is busy] error, incase of DocMigration. The default value for this parameter is false.



#### Configuring SAP NetWeaver WAS 6.40 Specific Parameters

The Connector Container Service in the J2EE Engine provides support for pooling EIS connections, which can be reused.

You can configure the connection pooling for each ManagedConnectionFactory at deployment time.

Once the configurable properties are set for ISRA, the Application Server-specific parameters, for connection pooling, need to be configured. In case of SAP NetWeaver server, the properties that need to be specified are:

- max-connections-number
- max-time-to-wait-connections
- connection-lifetime
- run-cleanup-thread

The steps to configure these properties are:

 In the SAP NetWeaver Visual Administrator Console, navigate to the Connection Definition tab, under Managed Connection Factory tab in ISCF. Refer to <u>Configuring Deployed ISRA</u> section for details. The following screen appears.

D 🛃 🛋 🛷	$\sim$			
<b>h h k</b>				
uster Global Configuration	Runtime Properties Additional	linfo		
Application Client	Connector Container	General Resource Adapter	Managed Connection Factory Security Drivers	
P Basic Administration	Connectors	Main Connection Definition	Properties	
ClassLoader Viewer     Classpath Resolver	- Sap.com/com.sap.jdo	Connection Factory Interface :	lavar.resource.cci ConnectionFactory	
Configuration Adapter		Connection Factory Impl Class :	com.filenet.is.ra.cci.FN_JS_CciConnectionFactory	
Connector Container	All Process	Connection Interface :	lavax resource.cci Connection	
Destinations     Distributed Statistics		Connection Impl Class :	com filenet is ra col FN_IS_CorConnection	
EJB Container		and a second		
File Transfer		Connector JNDI Name : Connection Pooling	1994	
JCo RFC Provider JJMS Connector JJMS Connector JJMS Provider JJMS Notification JJMS Notification JJNS Registry Key Storage Licensing Adapter Licensing Adapter Licensing Adapter Log Configurator Log Viewer Message Info Message Info Message Info P P4 Provider		Expiration: 💌 Connection Lifetime: 600 Cleanup Thread: 300	Maximum Connections: 15	

 Select the Expiration check box. The Connection Lifetime, and Cleanup Threat fields get enabled. Enter their values, and also in the fields: Maximum Connections, and Maximum Time to Wait for Connection. Click Save. A confirmation message appears.

Message	2	×
Ê	Save successuful.	
	ОК	

3. Click OK.

The SAP NetWeaver connection pooling specific parameters gets configured.

A description of each attribute is given below:

- **max-connections-number** this defines the maximum number of connection instances that can be stored in the connection pool
- max-time-to-wait-connections using this parameter you can define how many seconds the system waits for a connection to be released if there are no free connections and the maximum number of pooled connections is already achieved. The system throws an exception after this interval.
- connection-lifetime use this parameter to define how many seconds a connection may stay in pool before it is closed
- run-cleanup-thread using this parameter you can schedule a thread that periodically cleans up unused connection objects at a regular interval that you set in seconds.

### **Configuring Multiple IS Servers with ISRA**

To configure ISRA for accessing multiple IS servers, create a Connection Factory for each IS that user wants to connect.

To create a new connection factory, perform the following steps:

 In the SAP NetWeaver Administrative Console, navigate to ISCF. Refer to <u>Configuring Deployed ISRA</u> section and follow through till step 5 for details. The following screen appears.

	10	
Auster Global Configuration Runtime Properties		
Application Client  Connector Container	General Resource	Adapter Managed Connection Factory Security Drivers
Application Locking     Basic Administration     ClassLoader Viewer     Classpath Resolver     ✓ Sap.com/cor     Sap.com/cor	Display Name :	
Configuration Adapter Connector Container Oppioy Destinations Distributed Statistics Elis Container	Description :	
File Transfer     HTTP Provider     HIOP Provider     Jor Mail Client	Vendor Name :	FileNet
- Co RFC Provider	Spec Version :	1.0
A JDBC Connector	EIS Type :	FileNet Image Services
JMS Provider     JMS Provider     JMK Adapter     JMC Notification     JMC Notification	Version :	330
Key Storage     Key Stora	License Description :	
Memory Info Message Info Monitoring	Is License Required :	ō
P4 Provider     Performance Tracing	Rar File Name :	BRArar
- PMI -	Is Real Application :	

2. Click on the **Clone** button. The following dialog box appears.



**3.** Enter a **JNDI name**, and click **OK**. The following confirmation message appears.



4. Click OK. The following screen appears.

lobal Configuration	Runtime Properties Additional	linfo					
Cluster	Connector Container	General Resource A	dapter	Managed C	onnection Factory	Security E	Drivers
ABAP Communic     Administration At	Connectors Connector 1.0 Conn	Main Connection Definition Properties Configuration Properties					
Application Cleim Application Cock Basic Administra Classpath Resol Configuration Ad Deploy Destinations Distributed Statis ELIS Contrainer File Transfer HITTP Provider JJob Provider JJob Provider JJob Registry AJSC ORFC Provide JJOBC Connector JJBC Connector C		Key AllowkonymousUs. Cache Bereshintewa ClientCodepage Deploymerintsance DomainName InherentLogin ISLocale Key: DomainNam Value: pis36ora Add Remon	iava lan java lan java lan java lan java lan java lan java lan java lan	g String g Integer g String g Integer a String	Value true 30 2 pis380ra 0 en e: java.Jang.String n: Domain name o		thous u A sh interv. or ISRA ce that i gin thro a Image.

5. A clone of the ISCF connection factory is created. Go to Properties tab under Managed Connection Factory tab. Change the values in the desired properties and click Add.

**Note** Values against the **DomainName**, and **DeploymentInstance** must be changed. The user may also change the value in **OrganizationName**.

**6.** After changing the values against all the properties, click **Save**. The following confirmation message appears.



7. Click OK.

A new connection factory is created.

3

# Configuring and Deploying ISRA Console and Sample Application

### **ISRA Console**

The LoadISRA utility from ISRA 3.4.0 has now been replaced with the ISRA Console (in ISRA 3.4 fixpack 1 and above). This ISRA console has been developed to show the ra.xml properties in a well formatted table and also features buttons to enable/disable/edit logging levels dynamically.

The dynamic update of logging allows the user to enable and change logging levels while the ISRA is running and without needing to restart the appserver. The console also features links to launch Sample Application and to view JVM statistics.

This console is available as a Web Module (ISRAConsole.war) within ISRAConsole.ear and gets deployed automatically during the deployment of ISRAConsole.ear

### **Configuring Sample Application**

The ISRA console and Sample Application are packaged within a single Enterprise Application Archive File (**ISRAConsole.ear**).

ISRAConsole.ear consists of:

- Two Web modules:
  - o ISRASampleWEB.war (ISRA Sample Application)
  - o ISRAConsole.war (ISRA Console)
- Deployment Descriptor (application.xml)

This chapter illustrates the deployment and configuration of the ISRA Console and Sample Application on SAP WAS 6.40 Application Server.

**Note** ISRA product media comes with an IBM FileNet Image Viewer, which can be used to display the TIFF, JPEG, BMP, and other supported file formats on a Java-enabled browser.

This Sample Application is intended solely for illustrative purposes and it should not be expected to perform useful work, or be used for production deployment. This Sample Application is to be used strictly as reference material.

It is assumed that ISRA is deployed and configured for the target IS.

In ISRA 3.4 fixpack 1, a new properties file "jndiISRA.properties" has been introduced and it gets created in Application Server home directory. The JNDI names of connection factories mentioned in this properties file, which will be used by Sample application to display on the login page. Two JNDI names "ISCF" and "ISCF1" are mentioned in the file by default. Additional library names can be included by providing comma separated entries. The property file is mandatory and it should contain the same names as the JNDI Binding Paths specified for the configured ISRA ConnectionFactories.

For configuring Sample application, certain properties need to be updated in the web.xml of the **ISRASampleWEB.war**.

Follow the below steps for extracting web.xml from ISRASampleWEB.war.

- 1. Extract ISRASampleWEB.war from ISRAConsole.ear.
- 2. Extract web.xml from ISRASampleWEB.war.
- **3.** Add the following <resource-ref> tag after </welcome-file-list> tag in **web.xml** file for the web application:

```
<resource-ref>
<description>ISRA</description>
<res-ref-name>ISCF</res-ref-name>
<res-type>javax.resource.cci.ConnectionFactory</res-
type>
<res-auth>Application</res-auth>
</resource-ref>
```

Note With every new connection factory created, the above <resource-ref> tag has to be added, with the appropriate resource reference name. For example: when JNDI name of connection factory is ISCF, then <res-refname> is ISCF, and when JNDI name of connection factory is ISCF1, then <res-ref-name> is ISCF1.

This is done only in case of configuring multiple instances of IS servers. For details on the same, refer to <u>Configuring Multiple IS Servers with</u> <u>ISRA</u> section.

4. Create a file **web-j2ee-engine.xml** file for the web application with the following content,

<?xml version='1.0' encoding='UTF-8'?>

<!DOCTYPE web-j2ee-engine SYSTEM 'web-j2ee-engine.dtd'>
<web-j2ee-engine/>

- 5. Add web-j2ee-engine.xml file in the ISRASampleWEB.war file (inside /WEB-INF) of ISRAConsole.ear.
- 6. To enable extended annotation functionality modify the following parameters in **web.xml**:
  - a. Change env-entry-value for "DOCCLASSNAME" to the document class configured in the IS for digital signatures.

<env-entry-value>digDocClass</env-entry-value>

b. Change env-entry-value for "MAXROWS" to the number of records to be fetched from the given document class.

<env-entry-value>200</env-entry-value>

**7.** To enable Remote Printing functionality modify the following parameters in **web.xml**:

a. Change env-entry-value for "USEPRINTVIEWOPTION" to either Yes or No. This value will determine whether to honor the print/view preference set in the **web.xml** or to take the value returned by ViewOne. Default value is No.

<env-entry-value>No</env-entry-value>

 b. Change env-entry-value for "PRINTVIEWOPTION" to either View Only =1, Print Only =2, Print/View =3. This value indicates the value of Print/View. The default value is 3.

<env-entry-value>3</env-entry-value>

Note If the PRINTVIEWOPTION is set to 3 (default) then the sticky note would be saved as a normal sticky note. If PRINTVIEWOPTION value is specified as 1 or 2 then the annotations will be saved as an extended annotation (*Extended annotations* are non-standard annotations which are saved with a class name parameter (*F\_CLASSNAME*) of "Proprietary", a class id property (*CLASS\_ID*) of {A91E5DF2-6B7B-11D1-B6D7-00609705F027} and a subclass name property (*F\_SUBCLASS*) that describes the annotation).

The value of PRINTVIEWOPTION would be honored for each sticky note individually, and not for all the sticky notes on a document as a whole.

Thus, the setting for PRINTVIEWOPTION would be processed for either a new annotation being added or an existing annotation being modified.

- 8. Update web.xml in ISRASampleWEB.war.
- 9. Update ISRASampleWEB.war in ISRAConsole.ear.

After the above configuration, deploy the ISRAConsole.ear into SAP NetWeaver WAS 6.40.

## **Deploying ISRA Console and Sample Application**

This section describes how to deploy the ISRA Console and Sample Application on a SAP WAS 6.40 Server to access ISRA in a managed environment. It is assumed that ISRA is deployed and configured for the target IS.

To deploy the ISRA Console and Sample Application, perform the following steps:

1. Run the **DeployTool.bat** file from the following location \\usr\<sap was instance>\J2E\JC00\j2ee\deploying to start the deploying tool of SAP WAS 6.40. The following screen appears.

∆]Deploy Tool	
Project Help	
JZEE Components Assembler Deployer Server Components	

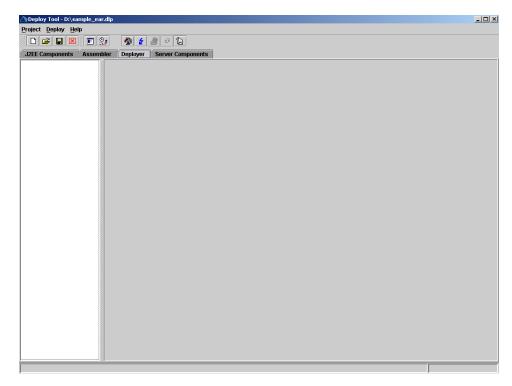
### 2. Click Project > New Project.

Deploy Tool			_ 🗆 🗙
Project Help			
New Project	Ctrl-N		
😅 Open Project	Ctrl-O	bler Deployer Server Components	
Save			
Save As			
Close Project			
Dptions			
Errors in Project			
∰.≢ <u>M</u> ake All			
1.img_viewer_33.dlp			
2.img_jboss.dlp			
3.img_viewer.dlp			
<u>4</u> dlp			
5.isra1_33_sap.dlp			
Exit	Ctrl-X		
<u> </u>			

**3.** The following screen appears.

New Project Current Directory D:\	
Directories	Files   bea   JoeployManager   globalization   img_iboss   img_viewer   img_viewer_34   installer_change_keys   ISRA   ISRA 3.2.1_PATCH1_INST   ISRA 34 UTC   ISRA 34.0   ISRA 3.4.0   ISRA 3.4.0_debug   isra12   isra123
Address	DK Cancel

4. Select the desired location, and enter the name of the folder to be created in the Address field, for example sample\_ear. Then click OK.



5. Click on the **Deployer** tab and then click the **Connect** button. The following screen appears.

🛆 Login			x
User Name:	Administrator	SAD	
Password:	*****	SAL	
Host:	localhost	Connect	
Port:	50004	Cancel	
Transport	Layers		
No Layer		▼ Settings	

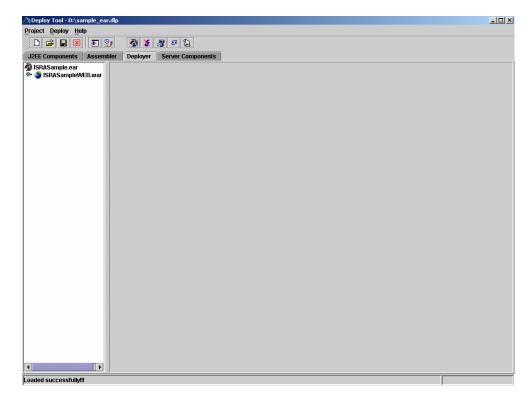
6. Enter the **Password**, and click **Connect**. The following screen appears.

∕ Deploy Tool - D:\sample_ear.dlp	
Project Deploy Help	
J2EE Components Assembler Deployer Server Components	
Connected.	

7. Click on the Load Ear button. The following screen appears.

Directories	Files	
<ul> <li>Productors.org</li> <li>Productors.org</li> <li>Productors.org</li> <li>RECYCLER</li> <li>ReflectionX</li> <li>Presources</li> <li>Pritesh</li> <li>P</li></ul>	FNImageViewer.ear	
© isapdb		
©  Server	Filters	
©- ⊇ softwares	Archive Files (.ear)	•

8. Navigate to the updated **ISRAConsole.ear** file. Refer to <u>Configuring</u> <u>Sample Application</u> section. Then click **OK**.



9. Right-click on ISRAConsole.ear file. In the context menu navigate to Deployment > Deploy Ear.

🛆 Deploy Tool -	D:\sample_ear.	dlp							
Project Deploy									
👹 🗅 🚅 星	I 🗵 🗉 🕺	; 🚳 🕽	🕻 🖓 🗷 🕻	3					
J2EE Compone	ents Assembl	ler Deploye	er Server Co	omponent	S				
ISRASample	EAR A	Descriptor	Log Configu	ration	JMS Connectivity	DataSource	DataSource Aliases		
🖻 🍯 ISRASan	<u>EAR</u>		Security View	Extra	nformation Ad	ditional			
		MAD Eiloe			File Name:				
	Deploy <u>m</u> ent →	🖓 Deploy E Update	Ctrl-P	000000	Context Root:				
	Properties	Undeploy	our r		Context tool.				
				00000			Modify	ý	
	1000			100000					
				20000					
				00000					
				00000					
	10000			100000					
				10000					
				00000					
				10000					
				00000					
•		<u> </u>							
Loaded succes									

10. Click Yes.

Applicati	on deployed 🔀
2	Application deployed successfully. Do you want to start it?
	Yes No

ISRA Console and Sample Application - deployed. The message "Application Started Successfully" is displayed in the status bar.

#### **Using the ISRA Console**

To access the ISRA Console, follow the steps below:

 Go to the location where the application is available (http://<AppServerName>: <AppServerPort>/<ApplicationContextRoot>)ApplicationContextRoot is ISRAConsole.
 For example : http://9.126.94.39:9088/ISRAConsole/

😻 ISRA Administration - Mozilla Firefox: IBM Edition		_ 🗆 🗙
Ele Edit View Higtory Bookmarks Tools Help		*
👍 • 🗼 • 💽 💿 🏠 🗈 http://9.126.94.64:9080/ISRAConsole/	Google	Q
📄 IBM Business Transfo 📄 IBM Standard Softwa 📄 IT Help Central 🧇 Join World Communit 🚞 IBM		
ISRA Administration Console		
JNDI Name: Submit.		
		1
The ISRA Administration console supports IBM Filenet Image Services Resource Adapter 3.4 Fix Pa (c) 2008 IBM Corporation	ck 1 and above.	

2. Enter the JNDI name of the library and click **Submit**.

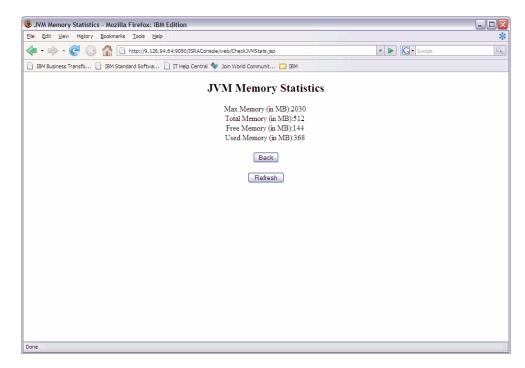
A page showing the current values configured in the ra.xml is shown along with controls to edit the ISRA logging levels.

A link has been provided on the page, to access the ISRA Sample Application.

History Bookmarks Tools Help		
2 😥 🏠 📄 http://9.126.94.64:90	)80/ISRAConsole/DisplayRAServlet	C Google
ransto 📋 IBM Standard Softwa 📋 IT I	Help Central 🧇 Join World Communit 🚞 I	3M
ICI	RA Administratio	Como la
15	KA Administratio	on Console
Set ISRA Logging	ISRA Release	Version : ISRA 3.4 Fix Pack 1
00 0		
<ul> <li>No Logging</li> <li>Warning and Exceptions Logging</li> </ul>	ISCF: Custom	Properties defined in ra.xml
<ul> <li>Information Logging</li> </ul>		
○ Debug Logging	Custom Property	Value
_	IS Domain Name	velocity3
Enable RPC Logging	IS Organisation Name:	IBM
Change Logging Level	Product Name	IBM FileNet Image Services Resource Adapter
Change Logging Lever	Product Version	ISRA 3.4.0.1 Enterprise
	Cache Refesh Interval (in minutes):	30
	Deployment Instance:	1
View JVM Statistics	Client Code Page:	Cp1252
	Char Set Encoding:	ISO8859_1
	Page Buffer Size (Bytes):	65536
ISRA Sample Application	Log File Name:	ISRA_1_0008.log
	RPC Log File Name:	ISRA_1_0008_RPC.log
	RPC Logging Mode:	0
Main Page	RPC Logging Mode:	0

Changes to the logging level settings are applied to ISRA with immediate effect. The changes to logging levels are updated in the properties displayed on the screen. The changes are valid till the application server is recycled. When the application server is restarted the log level settings specified in the ra.xml are used.

3. The JVM statistics can be used to study the memory usage in the Application Server JVM.



### **Configuring IBM FileNet Image Viewer**

Before deploying FNImageViewer, perform the following steps:

- 1. Extract FNImageViewer.war from FNImageViewer.ear.
- 2. Extract web.xml from FNImageViewer.war.
- **3.** Change the file **web.xml** file for the web application with the following content,

```
<?xml version="1.0" ?>
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems,
Inc.//DTD Web Application 2.3//EN"
"http://java.sun.com/j2ee/dtds/web-app_2_2.dtd">
<web-app id="WebApp_1">
</web-app>
```

- 4. Update web.xml in FNImageViewer.war.
- 5. Update FNImageViewer.war in FNImageViewer.ear.

After the above configuration, deploy the FNImageViewer.ear into SAP NetWeaver WAS 6.40.

## **Deploying IBM FileNet Image Viewer**

This section describes how to deploy the FNImageViewer on SAP WAS 6.40 Application Server in a managed environment. IBM FileNet Image Viewer application is used by the ISRA Sample Application to display documents of specific mime types (TIFF, JPEG and BMP). It is assumed that ISRA is deployed and configured for the target IS. Skip this section, if you do not want the IBM FileNet Image Viewer configured with the ISRA Sample application.

Note Before deploying FNImageViewer.ear on SAP WAS6.40, make an entry "ViewOne" in <welcome-file> tag of web.xml file present in FNImageViewer.war extracted from FNImageViewer.ear.

To deploy IBM FileNet Image Viewer, perform the following steps:

1. Run the **DeployTool.bat** file from the following location \\usr\<sap was instance>\J2E\JC00\j2ee\deploying to start the deploying tool of SAP WAS 6.40. The following screen appears.

Deploy Tool	_ 🗆 ×
Project Help	
J2EE Components Assembler Deployer Server Components	

2. Click Project > New Project.

Deploy Tool	
Project Help	
New Project Ctrl-N 🗵 🗉 👷	
Copen Project Cth-O embler Deployer Server Components	
Save Citi-s	
Save As	
S Close Project	
Options	
Errors in Project	
₽ Make All	
1.img.dlp	
3.sample.dtp	
4_isra_33_sap.dlp	
<u>5</u> .isra_33_sap.dlp	
Exit CHI-X	
J	

**3.** The following screen appears.

New Project Current Directory D:\ Directories System System A:\ A:\ A:\ C:\ C:\ C:\ C:\ C:\ C:\ C:\ C:\ C:\ C	Files bea DeployManager globalization img_iboss img_viewer img_viewer_34 installer_change_keys ISRA ISRA 3.2.1_PATCH1_INST ISRA 34 UTC
Address	ISRA 3.4.0_debug   isra12   isra123   Filters   Project Files. (.dlp)

4. Select the desired location, and enter the name of the folder to be created in the Address field, for example FNImageViewer. Then click OK.

🗥 Deploy Tool - C:\FNImageYiewer.dlp	
Project Deploy Help	
D 😂 🖬 🔀 🗉 💱 🖓 💋 🕼	
J2EE Components Assembler Deployer Server Components	

5. Click on the **Deployer** tab and then click the **Connect** button. The following screen appears.

△Login	×
User Name: Administrator	CAD
Password: *******	SAP
Host: localhost	Connect
Port: 50004	Cancel
Transport Layers	
No Layer	✓ Settings

6. Enter the **Password**, and click **Connect**. The following screen appears.

△>Deploy Tool - C:\FNImageViewer.	llp	_ 🗆 ×
Project Deploy Help		
🗅 🖨 🖬 🗵 🗉 👷	🚳 🗶 🏽 🔁	
J2EE Components Assembler	De Load Ear Server Components	
] J2EE Components Assembler	De Load Ear Server Components	
Connected.		

7. Click on the Load Ear button. The following screen appears.

🛆 Choose ear file	×
Current Directory	
C:\ISRA3301\Sample	
Directories	Files
🗢 📄 Documents ar 📥 📑	📮 source
🗣 🗀 dummy 🔤 💳	ISRASample.ear
🗣 🛄 FileNet 👘 🙆	Ex ISTASample.ea
🗣 🦲 fnsw 🛛 🧕	
📃 🔚 🛄 img_screens 🔤 🚞 👔	
P- 🗀 ISRA3301 - 🖓	
- Docs	
🗣 🧰 FNImageVi 🛛 🚃	
🗣 🗋 Jar	
<ul> <li>Image: Sample</li> <li>Image: SystemMa</li> </ul>	
© ⊇ Util	
<ul> <li>P ⊇ j2sdk1.4.2_05</li> <li>P ⊇ j2sdk1.4.2_08</li> </ul>	Filters
© ☐ JEsuk 1.4.2_00 © ☐ JBuilder9 ▼	Archive Files (.ear) 🔻
Address C:\ISRA3301\Sample\FNIma	geviewer.ear
	Canad
OK	Cancel

8. Navigate to the updated **FNImageViewer.ear** file. Refer to <u>Configuring</u> <u>IBM FileNet Image Viewer</u> section. Then click **OK**.

∧Deploy Tool - C:\FNImage¥iewer. Project Deploy Help	dp	
J2EE Components Assembler	Deployer Server Components	
FNImageViewer.ear		
.oaded successfully!!!		_

 Right-click on FNImageViewer.ear file. In the context menu navigate to Deployment > Deploy Ear.

A Deploy Tool - C:\FNImageYiewer.dlp	<u>- 0 ×</u>
Project Deploy Help	
JZEE Components Assembler Deployer Server Components	
FNImageView     FAR     Pescriptor     Log Configuration     JMS Connectivity     DataSource Aliases	
Context Security View Extra Information Additional	
Deployment > 2 Deploy Ear CtthE File Name:	
Properties Update Ctri-P Context Root:	
The please service and the context root.	
Modify	
Loaded successfully!!!	

10. Click Yes.



FNImageViewer is deployed. The message "Application Started Successfully" is displayed in the status bar.

## **IBM FileNet Image Viewer Quick Start Feature**

The Quick Start feature provides a mechanism for initializing a Web browser, Java, and Image Viewer session. The background task required to initialize an Image Viewer session is done at the time when the Web browser is initialized, prior to the time when Image Viewer is actually required. This reduces the startup time of Image Viewer. This feature is supported on various Operating Systems, such as Microsoft Windows 98, NT, 2000 Professional, and XP. The only Web browser supported for this feature is Internet Explorer. The Quick Start feature is not enabled by default; user needs to manually enable it.

### **Enabling Quick Start Feature**

To enable quick start feature:

- 1. Extract FNImageViewer.ear from the patch.
- 2. Check the availability of "quickstart.htm" file in the FNImageViewer.war extracted from FNImageViewer.ear
- 3. Extract ISRAConsole.ear from the patch.
- 4. Extract ISRASampleWEB.war file from ISRAConsole.ear.
- 5. Extract 'DisplayDocument.jsp' file from ISRASampleWEB.war.
- **6.** Add the highlighted tag to the file as shown in the code segment below:

```
<APPLET CODEBASE = "/FNImageViewer/FNJavaVlFiles" ARCHIVE
="ji.jar"
CODE = "ji.applet.jiApplet.class" NAME = " viewONE" WIDTH =
"100%"
HEIGHT = "97%" HSPACE = 0 VSPACE = 0 ALIGN = middle
MAYSCRIPT="true">
-- -- --
<%if(RAVersion2.equalsIgnoreCase("Enterprise")){%>
-- -- --
<param name="UserId" value="<%=userId%>">
<param name="UserId" value="<%=userId%>">
<param name="guickstartURL" value="quickstart.htm">
<%}/*End of if condition where
RAVersion2.equalsIgnoreCase("Enterprise")*/%>
```

- 7. Save and close the file.
- 8. Bundle the new file into ISRASampleWEB.war
- 9. Bundle the WAR file into ISRAConsole.ear.
- **10.** Undeploy the old ISRAConsole.ear
- **11.** Deploy the new ISRAConsole.ear.
- **12.** Open a document in IBM FileNet Image Viewer.
- **13.** Right-click the document to open the context menu.
- 14. From the context menu, click Preferences > QuickStart to enable the Quick Start feature. A 'tick' icon appears on the left-hand side of the Quick Start menu indicating that the feature is enabled.

Enabling the Quick Start feature will add an icon within the System tray (bottom right of the Windows Desktop) and a menu item "IBM FileNet JavaView QuickStart for Internet Explorer" under Start > Programs > Startup menu. After enabling Quick Start, if the machine is rebooted, the Quick Start feature remains enabled. Disabling the Quick Start feature will remove the Quick Start icon from the System tray and the menu item "IBM FileNet JavaView QuickStart for Internet Explorer" from the Start > Programs > Startup menu.

#### Known Issues in the Quick Start Feature

Following are the known issues in IBM FileNet Image Viewer:

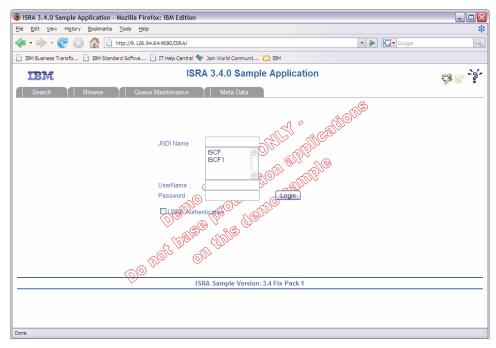
- Web session will not end until Quick Start feature is disabled or the user explicitly logs out of the session with the Web server. If the Quick Start feature is enabled, closing the browser window(s) will not terminate the session with the Web server.
- If Quick Start is enabled and Internet Explorer is not the default browser, then on machine re-login or reboot, a message will display asking whether to make Internet Explorer the default browser. To avoid the message:
  - **1.** Open a browser window.
  - 2. Select **Tools** > Internet Options.
  - 3. Click **Programs** tab and deselect the check box corresponding to "Internet Explorer should check to see whether it is the default browser".
  - 4. Click Apply.
  - 5. Click OK.
- If Always button is not selected on the security dialog box of the security certificate associated with the Image Viewer, then on machine re-login or reboot, a security dialog box is displayed.
- QuickStart feature is not available in Image Viewer if web server is accessed using IP address instead of host name in the URL.

## **Testing Sample Application**

After the ISRA Sample Application is started, the steps to verify the deployment and access the ISRA Sample Application are:

1. Open a Web browser and enter the URL http://<server:port>/context\_root For example: http://9.126.94.39:9088/ISRA/

The Web application context\_root is case sensitive. On a SAP WAS 6.40 Server, the default port number is **50000**. The default context\_root of the Sample Application is ISRA.



2. Enter valid **Username** and **Password** for the configured IS (check configured ConnectionFactory for IS details) and click **Logon**.

ISRA 3.4.0 Sample Application	- Mozilla Firefox: IBM Edition		_ 🗆 🛛
Eile Edit View Higtory Bookmark	s <u>T</u> ools <u>H</u> elp		*
💠 • 🔶 • 😴 🛞 🏠 🗈	http://9.126.94.64:9080/ISRA/web/SearchWAS.jsp	V Soogle	Q)
📄 IBM Business Transfo 📄 IBM Sta	ndard Softwa 🗋 IT Help Central 🧇 Join World Communit 🚞 IBN		
IBM	ISRA 3.4.0 Sample Ap	oplication (Enterprise)	🖓 🕷 - ÌŚ-
Search Browse	Queue Maintenance Meta Data		
Search for Documents :		User: SysAdmin JNDI Name: ISCF ISI	Jomain: velocity3
Query : Folder Name : Max Rows :	<pre>select F_DOCNUMBER, F_DOCFORMAT, F_PAGES from FnDocument where F_DOCNUMBER &gt; 1 1 16 * Search Documents</pre>	].	
Done			
L'OTTLE			

**3.** Click **Help (?)** icon, on the Sample Application page, for details on the interaction parameters and options.

4

# **LDAP Configuration**

In addition to direct IS logging, ISRA 3.4.0 also supports LDAP Authentication by third party Servers.

It is necessary to map users present on the LDAP Server to the IS before using LDAP Authentication.

**Note** The installation of LDAP Server and creation of users on the LDAP machine are out of the scope of this document.

IBM FileNet provides two utilities - Idap\_export and Idap\_import, to map existing users on the LDAP Server to the IS. These utilities are part of the IS package and must be executed on the machines running the LDAP Server and the IS.

The ldap\_export utility is used to export usernames on the LDAP Server to an xml file. While, the ldap\_import utility imports usernames that have been mapped to the xml file and creates corresponding users on the IS.

It is mandatory that the ldap\_import algorithm and the xml file be present on the same machines, where IS exists. The ldap\_import algorithm uses a hashing algorithm to generate user passwords for the IS.

### Mapping Existing LDAP Server Users to IS

To configure user IDs in an IBM FileNet IS library:

- Create user entries on the LDAP server. The user attribute "uid" will be used to create a user on IS. The remaining attributes (including "password") can be assigned any value.
- 2. Use the LDAP\_EXP.exe utility to export the user entries created into an XML file.
- 3. LDAP\_EXP program has the following parameters options:

Option	Description
s <server></server>	LDAP server name or IP address, required value.
p <port></port>	LDAP port number, optional value, 389 is default.
d <binddn></binddn>	LDAP administrator bind domain name (DN), required value.
w <bindpw></bindpw>	LDAP administrator bind password, required value.
t <ldap server="" type=""></ldap>	Required value for server type: msft – Microsoft Active Directory sun – Sun One Directory (iPlanet) nov – Novell eDirectory(NDS).

Option	Description
	ibm – IBM Directory.
b <basedn></basedn>	LDAP Base DN, optional value.
g <grouplist filename=""></grouplist>	Group list file for input, optional value.
o <xml filename="" output=""></xml>	XML output filename, optional value.
l <log filename=""></log>	Log Filename to use, optional value.
1	Check for special characters on <id> tags only</id>
E	Remove all escape characters – '\'.
k	Use paged results. Windows to AD only.
Z	Use secure socket connection.
x <grouplist filename=""></grouplist>	Group list file name for output, optional value.
V	Verbose log output.
c1 <user class="" object=""></user>	Class type for User, default is 'person'.
c2 <group class="" object=""></group>	Class type for Group, default is 'groupofuniquenames'.
a1 <user attribute=""></user>	Attribute to be used for user; default is 'dn'.
a2 <group attribute=""></group>	Attribute to be used for group; default is 'dn'
a3 <member attribute=""></member>	Attribute to be used for member; default is 'uniqueMember'

Note User may use /?, -?, /h or -h to generate help.

Example command lines:

• Sun One directory(iPlanet) server:

```
ldap_exp -s SunSrvr1 -d "cn=Directory Manager" -w
":/,.++=" -t sun -b "dc=iPlanet, dc=com"
```

• Microsoft Active Directory(AD) server:

```
ldap_exp -s Win2KSrvr1 -d
"CN=Administrator,CN=Users,DC=win2ksrvr1,DC=com" -w
":/,.++=" -t msft -b "dc=win2ksrvr1,dc=com"
```

• Novell eDirectory(NDS) server:

```
ldap_exp.exe -s NovSrvrl -d "cn=Admin, o=server" -w
":/,.++=" -t nov -b "o=wa"
```

• IBM Directory server:

```
ldap_exp -s IBMSrvr1 -d "Cn=Administrator" -w ":/,.++="
-t ibm
```

- -b "dc=ibmsrvr1, dc=com"
- **4.** Use the LDAP\_IMPORT.exe for IS libraries to import the user entries from XML file into the specified IBM FileNet IS library.

Parameters:

/?	Help screen
/h <host>[:organization]</host>	IS host or domain name, organization.
/u <id> (used with /p)</id>	Authorized IS user name
/p" <pwd>" (used with /u)</pwd>	Encrypted IS user password.
/i <file></file>	XML input file

For example, to import user entries from XML file:

```
C:\>ldap_import /hIMGSERV:FileNet /ildap_exp.xml
```

- **Note** Options are not case sensitive. All the information or error messages are logged to the system log or the file 'ldap\_importyyyymmddlog.txt'. If Username and password are not specified in the command, it prompts for username and password.
  - **5.** The IBM FileNet users created will have a password generated from the corresponding user IDs.

## **Changing ISRA Specific Parameters for LDAP**

The configurable properties to be set (modified) in **ra.xml** are:

- LdapImplClassName
- LdapImplClassString
- InherentLogin

Refer to <u>LdapImplClassName</u>, <u>LdapImplClassString</u>, and <u>InherentLogin</u>, in section <u>Configurable ra.xml Properties</u> for details on the configuration of the respective entities.

5

# Undeployment

This section describes the undeployment procedure to remove ISRA and the Sample Application from the SAP WAS 6.40 Server.

## **Undeploying ISRA**

To undeploy ISRA using the Visual Administrator, perform the following steps:

 In the SAP NetWeaver Administrative Console, navigate to Services. Refer to <u>Configuring Deployed ISRA</u> section for details. Click Deploy. The following screen appears.

nnect View Tools Help           Image: View Tools Help         <	Deploy Deploy & Start
Image: Service Service Components         P ABAP Communic         Additional Info         Deployed Components         P addition Administration Administrati	
Cluster     Properties     Additional Info       Cluster     Deployed Components       P Application Action A Application Lock     Properties       Administration Action A Application Lock     Properties       P Application Lock     Properties       P Asplication Lock     Properties	
Cluster  Cluster  Cluster  Cluster  Cluster  Deployed Components  Cluster  Deployed Components  Cluster  Cluster  Deployed Components  Cluster  Cluster  Deployed Components  Cluster  Cluster  Cluster  Deployed Components  Cluster  Cluster Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster  Cluster	
• ** Services       • ** ABAP Communic       • ** Application Ac       • ** Application Code       • ** Server 0 0_40352       • ** Server 0 0_4035       • ** Server	
ABAP Communic Administration Ac Application Clein Application Locki Clean Clean Application Clein Clean Cl	
<ul> <li></li></ul>	
Application Clien     Application Lock     Basic Administra     ClassLoader Vie	
← Application Locki ← Basic Administra ← ClassLoader Vie	
- 📯 Basic Administra - 🛠 ClassLoader Vie	
- 📯 ClassLoader Vie	Deploy & Start
	Deploy & Start
- 📯 Configuration Ad	
- 📯 Connector Conta	Update
Constructions	
- 📯 Distributed Static	Get Client Jar
	Remove
- 😤 IIOP Provider	
— 📯 Java Mail Client	
- 😤 JCo RFC Provide	Start Application
- 😴 JDBC Connector	
- 📯 JMS Connector	Stop Application
→ Jino Privider	
	Single File Update
- 📯 Key Storage	
- 😤 Leak Detector	App Info
- 😤 Licensing Adapte	
- 🛠 Locking Adapter	
CogViewer     Server Application Container	
Remory Info	
Applications	
Connected to localhost	<b>()</b> 100%

 Under Deployed Components, navigate to Deploy Service > Server 0 <id>> connector > sap.com/isra\_34sap. The following screen appears.

**Note** The id of Server 0 depends on the patch level version of **J2EE Engine** used in SAP NetWeaver WAS 6.40.

△ Visual Administrator - [J2E\Serve	r 0 0_40352\Services\Deploy]	_ 🗆 ×
Connect View Tools Help		
🚳 🖑 🗷 🛷		
Global Configuration	Runtime Properties Additional Info	
Cluster	Deployed Components	
🕈 🏘 Services	📯 Deploy Service	
- 📯 ABAP Communic		
Application Clien	ender and the second s	
Application Locki	P ** connector	Deploy
— 😤 Basic Administra	📴 🗹 sap.com/com.sap.jdo	
- 📯 ClassLoader Vie - 📯 Classpath Resol	© ✓ sap.com/isra_33_sap	Deploy & Start
- P Configuration Ad	with a connector 15 ♥ with EJBContainer	
🗕 📯 Connector Conta	• A JDBCConnector	Update
- 📯 Deploy	©- 🙀 JMSConnector	· · · · · · · · · · · · · · · · · · ·
- 📯 Destinations - 📯 Distributed Statis	Age Configurator     Age Monitoring Configurator	Get Client Jar
- PISINGUEU State	• • • • • • • • • • • • • • • • • • •	Get Client Jai
– 😤 File Transfer	🗢 🎪 webdynpro	
- 📯 HTTP Provider	🗣 🦗 webservices_container	Remove
- 😪 lice Provider		
- 📯 JCo RFC Provide		Start Application
- 😤 JDBC Connector		
- 📯 JMS Connector - 📯 JMS Provider		Stop Application
- P JMX Adapter		
- 😤 JMX Notification		Single File Update
- 📯 JNDI Registry		Single File Opuale
- 📯 Key Storage - 🛠 Leak Detector		
— 📯 Licensing Adapte		App Info
- 😤 Locking Adapter		
- 📯 Log Configurator - 📯 LogViewer	Server      Application     Container	
A Log viewer		
— 📯 Message Info 💌	Applications	
Applications		
Connected to localhost		100%

3. Click **Remove**. The following screen appears.

△Remove		x
Application: sap.com/isra_33_sap		
Components	Servers	
connector	Server 0 0_40352	
	OK Cancel	

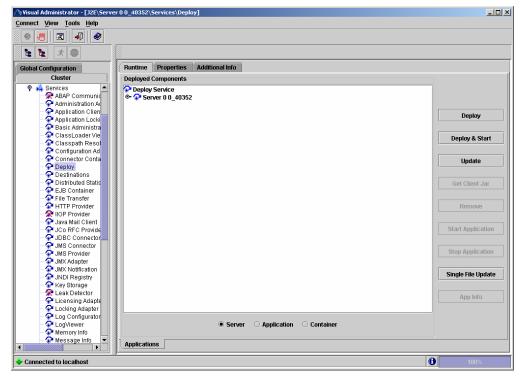
4. Click OK to undeploy ISRA.

**ISRA** gets undeployed.

## **Undeploying ISRA Console and Sample Application**

To undeploy ISRASample using Visual Administrator, perform the following steps:

 In the SAP NetWeaver Administrative Console, navigate to Services. Refer to <u>Configuring Deployed ISRA</u> section for details. Click Deploy. The following screen appears.



 Under Deployed Components, navigate to Deploy Service > Server 0 <id>> servlet\_jsp > sap.com/ISRA Console. The following screen appears.

**Note** The id of Server 0 depends on the patch level version of **J2EE Engine** used in SAP NetWeaver WAS 6.40.

I 📲 🖉 🛷		
t t 🔿		
lobal Configuration	Runtime Properties Additional Info	
Cluster	Deployed Components	
🕈 🏟 Services 📃	Peploy Service	-
ABAP Communic		
Administration Ad	🙀 appclient	
Application Clien	🗣 🙀 com.sap.security.ume	Deploy
Application Locki	🗢 🙀 connector	beproy
😪 Basic Administra	connector15	
ClassLoader Vie	🗣 🦗 EJBContainer	Deploy & Start
Classpath Resol	🗢 🙀 JDBCConnector	
Configuration Ad	🗢 🙀 JMSConnector	
Connector Conta	🗢 🙀 Log Configurator	Update
Deploy Destinations	🗢 🙀 Monitoring Configurator	
Destinations     Distributed Statis		
EJB Container		Get Client Jar
File Transfer		
HTTP Provider	er ✓ sap.com/com.sap.engine.docs.examples	Remove
2 IIOP Provider	er ✓ sap.com/com.sap.lcrabapapi	Remove
Alava Mail Client	er ✓ sap.com/com.sap.security.core.admin	
JCo RFC Provide	© ✓ sap.com/com.sap.uddi © ✓ sap.com/FNImage//jewer	Start Application
JDBC Connector		
- SIMS Connector	Sap.com/ISRA Application 3.4.1. Sap.com/c~monitoring~systeminfo	
SIMS Provider	<ul> <li>Sap.com/cc~monitoring~systeminio</li> <li>✓ sap.com/tc~sec~app</li> </ul>	Stop Application
- Adapter	e ✓ sap.com/c~sec~app e ✓ sap.com/c~wd~dispwda	· · · · · · · · · · · · · · · · · · ·
JMX Notification	© ✓ sap.com/tc~wd~uispwda	
JNDI Registry	© ✓ sap.com/tc~webadministrator~abapco	Single File Updat
Key Storage	Image: Substantiation and the substantiat	
- 🛠 Leak Detector	I solution to the solution in the solution of the solution	
Cicensing Adapte	© ∰ webdynpro	App Info
Locking Adapter	e- d webservices container	•
- Configurator		
- PLogViewer	Server      Application      Container	
- 📯 Memory Info		
Message Info 💌	Amlicatione	
•	Applications	

3. Then click **Remove**. The following screen appears.

Remove	×
Application: sap.com/ISRA_Sample	
Components	Servers
servlet_jsp	Server 0 0_40352

4. Click OK to undeploy ISRA Console and Sample Application.

**ISRA Sample** gets undeployed. Similarly, **FNImageViewer** can also be undeployed.

6

# Troubleshooting

This section describes how to troubleshoot ISRA.

## **Disabling NCH Broadcasts**

ISRA users (application client) need to access IS libraries across routers on networks where broadcasts are disabled. This is done by creating alias entries for the IS libraries in the hosts file, where ISRA is deployed. ISRA must locate the IP address of the NCH server to find other IS services for an IS setup.

ISRA attempts to find the NCH server by generating broadcast packets, even if the NCH server was not reachable using broadcasts. User can disable NCH server location broadcasts to reduce broadcast traffic on the network.

User may want to disable NCH broadcasts if:

- Routers are present between servers,
- Want no broadcast activity on the networks,
- Want to force a multi-homed server to use a specific IP address configured by the operating system network directory search facility.

To specify the alias in the hosts file:

- Locate hosts file on the server. It is located in the /etc folder on UNIX/Linux systems. On a Microsoft Windows Server, it is located in the \system32\drivers\etc under the Windows installation directory.
- 2. Open the hosts file with a preferred text editor. If a host file does not exist, create a new file using the preferred text editor.
- 3. For each IBM FileNet library that user needs to connect through ISRA, entries should be made in the hosts file as <IP address of domain:organization> <domain-organization>-nch-server, where:
  - <IP address of domain:organization> is IP address of an IBM FileNet domain and organization identifying the target IBM FileNet library system (NCH Server).
  - <domain-organization> is domain and organization name. The rules to follow while specifying the domain-organization name are:
    - Delete all characters except ASCII alphanumeric characters and hyphens.
    - Convert all upper case characters to lower case.
    - Insert a hyphen between the domain and organization names.
    - Append nch-server as a literal.

For example, if an IBM FileNet library has a domain, fn\_is, and organization IBM, and its IP address is 123.45.6.78, the hosts file entry will be 123.45.6.78 fnis-IBM-nch-server

# Appendix A: ra.xml

### ra.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE connector PUBLIC '-//Sun Microsystems, Inc.//DTD Connector
1.0//EN' 'http://java.sun.com/dtd/connector_1_0.dtd'>
<connector>
  <display-name>ISRA</display-name>
  <vendor-name>IBM</vendor-name>
  <spec-version>1.0</spec-version>
  <eis-type>IBM FileNet Image Services</eis-type>
  <version>3.4.0</version>
  cense>
    <license-required>false</license-required>
  </license>
  <resourceadapter>
    <managedconnectionfactory-
class>com.filenet.is.ra.spi.FN_IS_SpiManagedConnectionFactory</managedc
onnectionfactory-class>
    <connectionfactory-
interface>javax.resource.cci.ConnectionFactory</connectionfactory-
interface>
    <connectionfactory-impl-
class>com.filenet.is.ra.cci.FN_IS_CciConnectionFactory</connectionfacto
ry-impl-class>
    <connection-interface>javax.resource.cci.Connection</connection-
interface>
    <connection-impl-
class>com.filenet.is.ra.cci.FN_IS_CciConnection</connection-impl-class>
    <transaction-support>NoTransaction</transaction-support>
    <config-property>
      <description>Domain name of the Image Services
Server</description>
      <config-property-name>DomainName</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>FileNetIS</config-property-value>
    </config-property>
    <config-property>
      <description>Organization name of the Image Services
Server</description>
      <config-property-name>OrganizationName</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>IBM</config-property-value>
    </config-property>
    <config-property>
      <description>0-Exceptions and Warnings; 1-Info; 2-Debug
Level</description>
      <config-property-name>LoggingLevel</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>0</config-property-value>
```

```
</config-property>
    <config-property>
      <description>0-No Logging; 1-Console Logging; 2-File Logging; 3-
Both(File and console) </description>
      <config-property-name>LoggingMode</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>3</config-property-value>
    </config-property>
    <config-property>
      <description>Page data fetch size (in kilo bytes)</description>
      <config-property-name>PageBufferSize</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>64</config-property-value>
    </config-property>
    <config-property>
      <description>Cache refresh interval(in minutes)</description>
      <config-property-name>CacheRefreshInterval</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>30</config-property-value>
    </config-property>
    <config-property>
      <description>Security cache mode(1-caches users and groups 2-
caches groups only)</description>
      <config-property-name>SecurityCacheMode</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>1</config-property-value>
    </config-property>
    <config-property>
      <description>Selective metadata refresh(1-printer cache 2-doc
class cache 4-key fields cache 8-menu values cache )</description>
      <config-property-name>MetaDataCacheRefreshMode</config-property-
name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>15</config-property-value>
    </config-property>
    <config-property>
      <description>Name of the Product</description>
      <config-property-name>ProductName</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>IBM FileNet Image Services Resource
Adapter</config-property-value>
    </config-property>
    <config-property>
      <description>Product Version</description>
      <config-property-name>ProductVersion</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>ISRA 3.4.0 Enterprise</config-property-</pre>
value>
    </config-property>
    <config-property>
      <description>ISRA Logfile name (can include path) </description>
      <config-property-name>LogFileName</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
```

```
<config-property-value>ISRA.log</config-property-value>
    </config-property>
    <config-property>
       <description>Maximum Size of ISRA LogFile (in mega
bytes)</description>
        <config-property-name>LogFileSize</config-property-name>
        <config-property-type>java.lang.Integer</config-property-type>
        <config-property-value>5</config-property-value>
    </config-property>
      <config-property>
               <description>LDAP Authentication Class
Name</description>
           <config-property-name>LdapImplClassName</config-property-
name>
           <config-property-type>java.lang.String</config-property-
type>
           <config-property-
value>com.filenet.is.ra.fnis.FN_IS_IPlanetImpl</config-property-value>
    </config-property>
    <config-property>
               <description>Server details for LDAP Authentication
</description>
           <config-property-name>LdapImplClassString</config-property-
name>
           <config-property-type>java.lang.String</config-property-
type>
           <config-property-
value>filenetserver;389;ou=Users,ou=FileNet,dc=FilenetRoot</config-
property-value>
    </config-property>
    <config-property>
               <description>Inherently login through LDAP
authentication or not 0-Direct IS Login;1-LDAP
Authentication</description>
         <config-property-name>InherentLogin</config-property-name>
         <config-property-type>java.lang.Integer</config-property-type>
         <config-property-value>0</config-property-value>
    </config-property>
    <config-property>
       <description>ISRA instance that is currently being deployed on a
single machine; Min Value = 1, Max Value = 10</description>
        <config-property-name>DeploymentInstance</config-property-name>
        <config-property-type>java.lang.Integer</config-property-type>
        <config-property-value>1</config-property-value>
    </config-property>
   <config-property>
      <description>Parameter to enable PCH Logging in ISRA
</description>
      <config-property-name>PCHLogging</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>Disabled</config-property-value>
   </config-property>
   <config-property>
         <description>LDAP Anonymous user login flag</description>
         <config-property-name>AllowAnonymousUser</config-property-
name>
         <config-property-type>java.lang.Boolean</config-property-type>
```

```
<config-property-value>true</config-property-value>
 </config-property>
 <config-property>
      <description>0-No Logging; 1-File Logging</description>
      <config-property-name>RPCLogging</config-property-name>
      <config-property-type>java.lang.Integer</config-property-type>
      <config-property-value>0</config-property-value>
    </config-property>
 <config-property>
      <description>Codepage for ISRA</description>
      <config-property-name>ClientCodepage</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>cp1250</config-property-value>
 </config-property>
 <config-property>
      <description>Locale of the Image Services Server (two letter ISO
language code, for example en, de, ar, ja)</description>
      <config-property-name>ISLocale</config-property-name>
      <config-property-type>java.lang.String</config-property-type>
      <config-property-value>en</config-property-value>
  </config-property>
  <config-property>
   <description>It is a configurable parameter to Ignore [77,0,11 The
object is busy] error, incase of DocMigration</description>
   <config-property-name>IgnoreObjectBusyMsgInDocMigration</config-
property-name>
   <config-property-type>java.lang.Boolean</config-property-type>
   <config-property-value>false</config-property-value>
 </config-property>
    <authentication-mechanism>
      <authentication-mechanism-type>BasicPassword</authentication-
mechanism-type>
      <credential-
interface>javax.resource.security.PasswordCredential</credential-
interface>
    </authentication-mechanism>
    <reauthentication-support>false</reauthentication-support>
  </resourceadapter>
</connector>
```

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