



IBM Software Group

Migrating from JRules to Operational Decision Manager

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Business Rules L2 Support
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WebSphere® Support Technical Exchange



Agenda

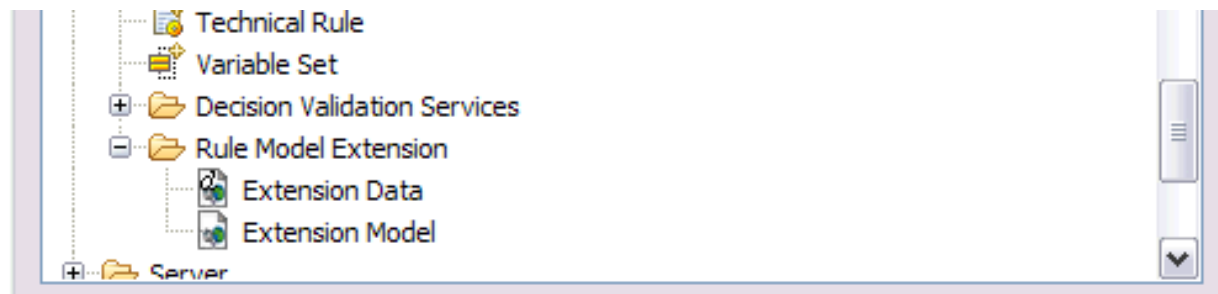
- Introduction
- Rule model extensions
- Authoring & rule management extensions
- Eclipse projects
- ODM applications
- Database data
- Client applications

Migration

- Benefit from new features and fixes
- Steps valid for migrations across V7.X/V8.X versions
- Coming from JRules V6.X, migrate to JRules V7.1.1 first
- Migration v. modification/fix pack installation
- Verify your configuration support with the new version in our online ODM system requirement page:
<http://www.ibm.com/support/docview.wss?uid=swg27023067>

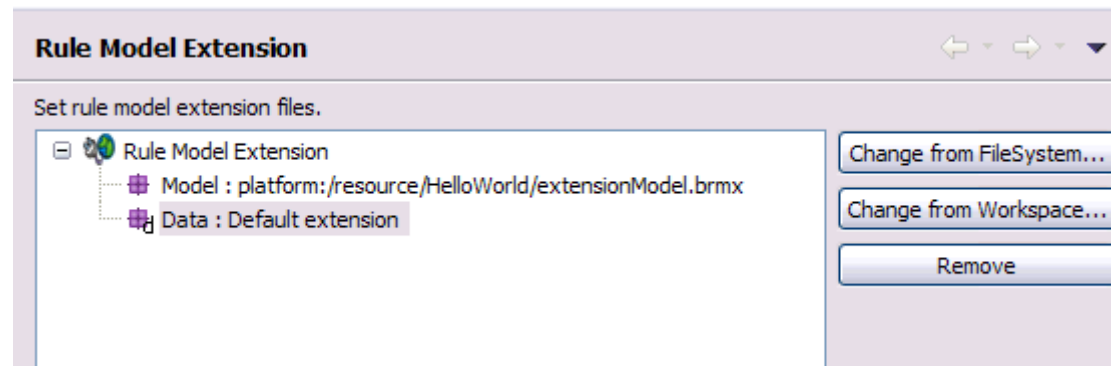
Rule model extensions

- Only if you extended the rule model
- Create a new extension files in Rule Designer & re-enter your extensions (do not re-use the existing files) : *"File > New > Other... > Rule Designer > Rule Model Extension > Extension [Model/Data]"*.



Rule model extensions (cont.)

- Apply extensions before migrating the data
- For Rule Designer, in the preferences of the new workspace where you will migrate your projects:



Rule model extensions (cont.)

- For Decision Center, with the *set-extensions* ANT task, or the Decision Center console *Installation Settings Wizard* (after installing Decision Center):

The screenshot shows the IBM Decision Center installation wizard interface. The title bar reads "IBM Decision Center" and "Install". The breadcrumb trail is "Install Home > Step 1: Configure Database". A sidebar on the left lists the installation steps: "Step 1: Configure Database" (selected), "Step 2: Setup Message File", "Step 3: Setup Groups", "Step 4: Set Persistence Locale", and "Step 5: Set Configuration Parameters". The main content area is titled "Configure the Decision Center database" and contains the following text: "Configure the Decision Center database by first generating the SQL script that creates the datab executing the script and initializing the database". Below this, it says "Select the extension files you want to use:" with three radio button options: "Default extensions", "Custom extensions (brmx/brdx)" (which is selected), and "Custom extensions (Zip)". Underneath, it shows "Model extension file used: C:\extensionModel.brmx" and "Data extension file used: C:\extensionData.brdx", each with a "Browse..." button. A "Generate SQL" button is present. Below that, it states "The following SQL script has been generated: rule-team-server.sql" and a checked checkbox for "Execute the SQL script".

Authoring & rule management extensions

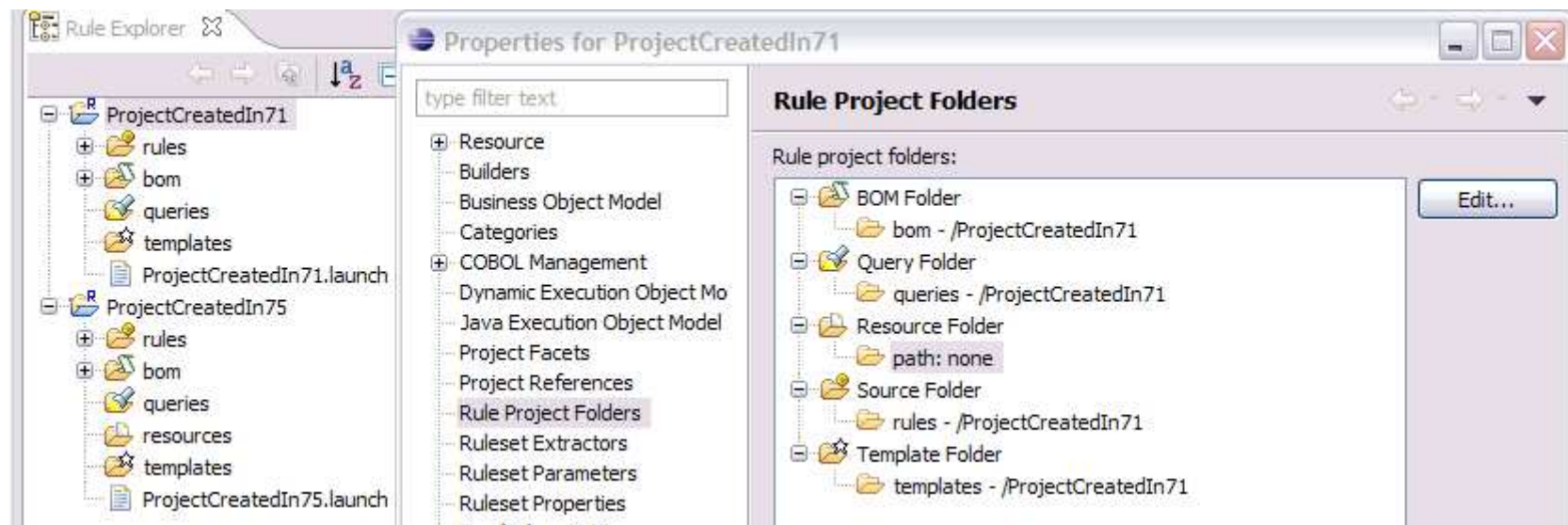
- Only if you created such extensions
 - ▶ in Rule Designer (Eclipse plug-ins)
 - ▶ in Decision Center (JARs in EAR/WAR)
- Import plug-in projects in new workspace, re-build and fix any deprecation warnings
- Apply extensions to new modules (see documentation)
- Decision Center Business console currently only supports authoring value editor customization

Eclipse projects

- Ensure Rule Designer is given sufficient memory:
 - ▶ in *<installDir>\ODM\eclipse.ini*
 - ▶ change the default *-Xmx512m* to the recommended *-Xmx1024m*
- Import XOM/BOM/Rule project(s) in new workspace
- Re-build

Eclipse projects (cont.)

- If migrating from JRules and want to publish additional resources along with your rule project to Decision Center, manually add the resource folder:



ODM applications

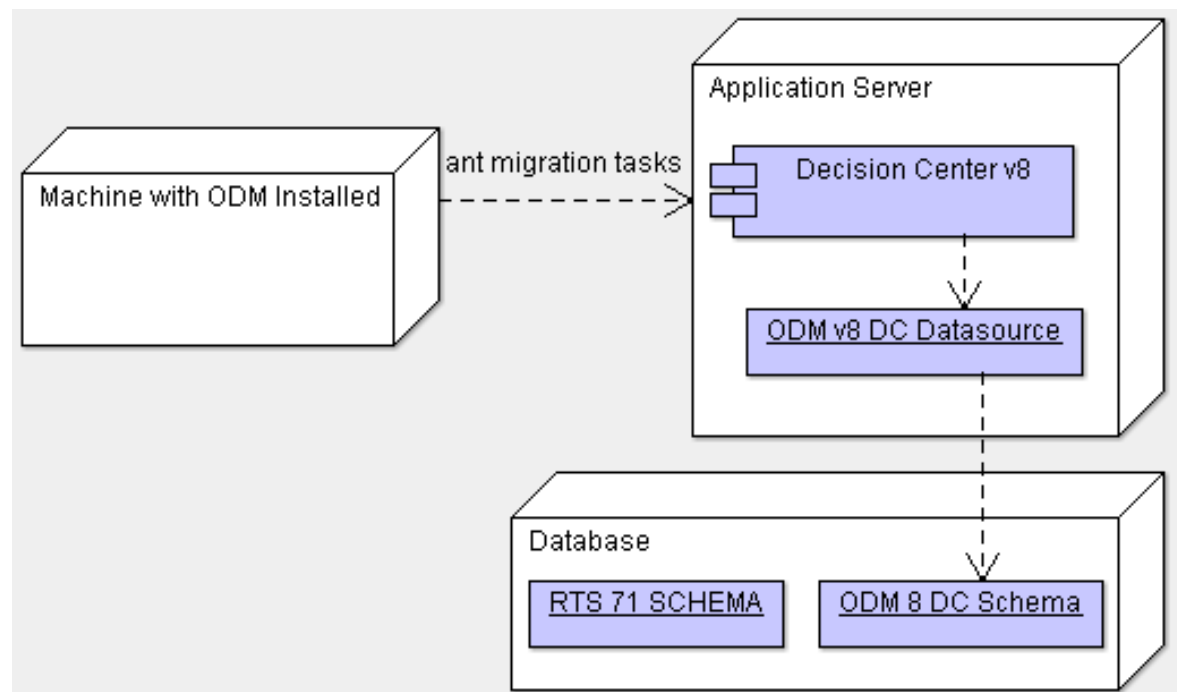
- Java EE modules (EARs/WARs):
Decision Center/Rule Execution Center consoles,
eXecution Unit, SSP, Transparent Decision Service...
- Apply same changes to descriptors of new modules:
 - ▶ Additional roles for Decision Center
 - ▶ Custom settings
- Redeploy following the installation documentation

Database data

- Decision Center projects
- Rule Execution Server data
- Decision Warehouse trace

Decision Center projects

- Create a new schema on the same database



Decision Center projects (cont.)

- Create tables on new schema using the Decision Center console *Installation Settings Wizard*:



- If also upgrading database version, perform the upgrade before or after the migration

Decision Center projects (cont.)

- Use *gen-migrationXY-role* ANT task to generate script granting required privileges for migration to the new database user : select permissions on the old schema
- Use *gen-migrationXY-script* ANT tasks to create SQL script to migrate the data from old schema to new one
- Set the following parameters (+ *teamserver-anttasks.properties*):
 - ▶ -Dserver.url=<server url>
 - ▶ -DdatasourceName=<new data source name>
 - ▶ -DoldDatabaseSchemaName=<database user used in previous data source>
 - ▶ -DoutputFile=<resulting SQL script file>

Decision Center projects (cont.)

- Migration ANT tasks example (*gen-migrationXY-role* first):

```
> ant gen-migration75-script -DoldDatabaseSchemaName=RTS71 -DoutputFile=.migration.sql
Buildfile: build.xml
```

```
gen-migration75-script:
[gen-migration75-script] [serverURL] 'http://localhost:9080/teamserver'
[gen-migration75-script] [datasourceName] 'jdbc/ilogDataSource'
[gen-migration75-script] [username] 'rtsAdmin'
[gen-migration75-script] [password] '*****'
```

BUILD SUCCESSFUL

```
> ant execute-schema -Dfile=.migration.sql
```

...

- Alternatively, the SQL script can be sent to the DBA

Decision Center projects – Troubleshooting

- Error while running *gen-migrationXY-script* ANT task:
SQLException - “table or view does not exist”
- Possible causes:
 - ▶ Old or new schema name incorrect
 - ▶ Tables not created in new schema
 - ▶ New database user lacks permissions on old schema
- Solution: adjust ANT task parameters and/or give permissions to new db user with *gen-migrationXY-role*

Decision Center projects – Troubleshooting (cont.)

- Error while run *execute-schema* to grant roles:
'CREATE ROLE RTSMIG70' : ORA-01031: insufficient privileges
- Cause: the user of the new schema does not have the required privileges on the database to grant permissions
- Solution: run the SQL script with a database user that is granted administrator privileges

Decision Center projects – Troubleshooting (cont.)

- Decision Center console fails to open projects after migration:
 - ▶ “*table or view does not exist*” error in the browser
 - ▶ diagnostic “*Database schema version*” test fails with
“*Expected: JRules 8.0; Found: JRules 7.5*”
 - ▶ ““*RTS71*”.“*BASELINE*”.“*RULEAPP*”: invalid identifier” error in browser
 - ▶ *Installation Settings Wizard* comes up instead of homepage

Decision Center projects – Troubleshooting (cont.)

- Possible causes:
 - ▶ datasource does not point at schema with new tables
 - ▶ datasource user does not have privileges on schema

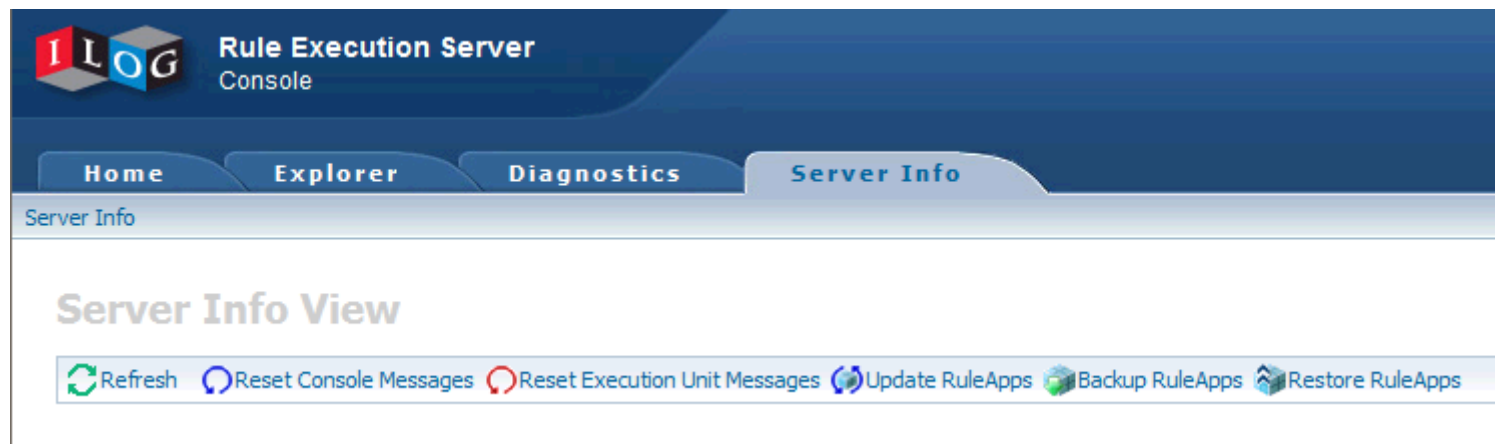
- Solutions: ensure that
 - the datasource points at the new schema/tables
 - the database user has the required permissions
 - the migration script ran successfully

Rule Execution Server data

- No RuleApp migration is required between V7.X/V8.X versions, the database can be re-used
- If coming from V7.1 and wanting to use the new managed XOM feature, you just need to extend the existing database to include the XOM repository with
 - ▶ Console *Installation Settings Wizard*
 - ▶ `<InstallDir>/executionserver/databases/xomrepository_<database>.sql` script

Rule Execution Server data (cont.)

- Migration only required when coming from V6.X (to 7.1.1)
- Export RuleApps before migration with V6.X *res-fetch-all/res-fetch* ANT tasks, or *Backup RuleApps* button:



Rule Execution Server data (cont.)

- Create new tables with the *repository_<database>.sql* & *xomrepository_<database>.sql* scripts or the Rule Execution Server console *Installation Settings Wizard*:



The screenshot shows the WebSphere Rule Execution Server Console. The main heading is "Installation Manager". Below it, there is a section titled "Persistence details" with an information icon. The details are as follows:

Database Product Name	Apache Derby
Database Product Version	10.3.3.0 - (652961)
Driver Name	Apache Derby Embedded JDBC Driver
Driver Product Version	10.3.3.0 - (652961)
JDBC URL	jdbc:derby:resdb
Schemas	APP, NULLID, SQLJ, SYS, SYSCAT, SYSCS_DIAG, SYSCS_UTIL, SYSFUN, SYSIBM, SYSPROC, SYSSTAT
Username	RES

Below the details, the text reads: "Step 1: Welcome to the Rule Execution Server Installation Manager".

Rule Execution Server data (cont.)

- Import RuleApps into new schema with V7.1 *res-deploy* ANT task or *Restore RuleApps* button:



Decision Warehouse trace

- The database can be re-used but may require to run a script on the existing schema
- If migrating from V7.0:
<InstallDir>/executionserver/databases/migrate_trace_<database_name>_from_700.sql
- If migrating from V7.1/V7.5 to V8.0:
<InstallDir>/executionserver/databases/migrate_trace_<database_name>_from_750.sql

Client Applications

- Re-build Rule Execution Server/Decision Center client code with new product libraries
- Fix deprecation warnings/errors
- Re-package with up-to-date classes & libraries
- Re-deploy your applications

Summary

- When moving to a new version, consider what needs to be migrated and the order in which to proceed
- Verify your configuration remains supported
- Keep your configuration up-to-date: plan fix pack installations
- Applying fix pack does not require code/data migration: just update client libraries and re-deploy applications
- Keep all modules at the same version/fix pack level

Related links

- Blog entry on migration from JRules to ODM:
https://www.ibm.com/developerworks/mydeveloperworks/blogs/aimsupport/entry/migrating_from_jrules_to_websphere_operational_decision_management_wodm
- Technotes:
 - ▶ ODM download document:
<http://www.ibm.com/support/docview.wss?uid=swg24031636>
 - ▶ Installing ODM: <http://www.ibm.com/support/docview.wss?uid=swg21595346>
 - ▶ Find the version of JRules/WODM component:
<http://www.ibm.com/support/docview.wss?uid=swg21400738>
- ODM V8.0.1 documentation: <http://pic.dhe.ibm.com/infocenter/dmanager/v8r0m1>
- ODM system requirements:
<http://www.ibm.com/support/docview.wss?uid=swg27023067>

Additional WebSphere Product Resources

- Learn about upcoming WebSphere Support Technical Exchange webcasts, and access previously recorded presentations at:
http://www.ibm.com/software/websphere/support/supp_tech.html
- Discover the latest trends in WebSphere Technology and implementation, participate in technically-focused briefings, webcasts and podcasts at:
<http://www.ibm.com/developerworks/websphere/community/>
- Join the Global WebSphere Community:
<http://www.websphereusergroup.org>
- Access key product show-me demos and tutorials by visiting IBM® Education Assistant:
<http://www.ibm.com/software/info/education/assistant>
- View a webcast replay with step-by-step instructions for using the Service Request (SR) tool for submitting problems electronically:
<http://www.ibm.com/software/websphere/support/d2w.html>
- Sign up to receive weekly technical My Notifications emails:
<http://www.ibm.com/software/support/einfo.html>

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