

7.1 & 7.2 Dev-Ops Accelerator Pack

Setup and Configuration Instructions

Overview

7.1 & 7.2 Dev-Ops Accelerator Pack is a case management application for managing DevOps within Pega versions 7.1.x and 7.2.x. It allows you to make the most of the dev-ops tools in 7.1.X or 7.2.X and get you ready for Release Management coming in Pega 7.3.

7.1 & 7.2 Dev-Ops Accelerator Pack contains the following:

- **Guardrail Monitoring** - Monitor and enforce development best practices to increase code quality.
- **Branch Review & Release Management API's** - Automate and manage new releases of Pega applications from DEV to QA to PROD.
- **Rule & Database Comparison** – Compare 2 or more environments at the database level and displays differences on a single page.
- **Change Impact Analysis** - Analyses the impact of developer rule changes within the application. **DISCLAIMER:** This tool is developed by the Pega ECS (Engineering Customer Success) team and is not an officially supported Pega Product.

Requirements

- **Pega Version 7.1.x or 7.2.x**
- **Release Management Server Instance must be on 7.2.X**
- **2 – Pega 7 Instances for Dev & SDE (3+ Recommended Dev, SDE, and RM Server)**

Getting Started

Once the zip file for the 7.1 & 7.2 Dev-Ops Accelerator Pack has been downloaded from Pega Exchange extract all the contents to your local machine. The package should contain the following:

Name	Type
external Jars (see below this chart)	File Folder
DevOpsAccl_Server<XX>.zip	Zip File
DevOpsAccl_Client<XX>.zip	Zip File

The **external Jars** File folder should contain the following jar files:

- jdom-2.0.4.jar
- javaparser.jar
- GetDiffHelper20170418.jar

- ECT_TOOL.jar

Deployment Models

A Pega 7 instance is defined as one or multiple application servers connected to a single database instance. The Pega ECS team recommends at least 2 separate Pega 7 instances for the 7.1 & 7.2 Dev-Ops Accelerator Pack, however it can be deployed using a single Pega 7 instance if that is all that is available.

The Release Management Server (RMS) and Release Management Client (RMC) are the 2 main components that make up the 7.1 & 7.2 Dev-Ops Accelerator Pack.

- **Remote Management Server (RMS):** Controller node with a Management Dashboard
- **Release Management Client(s):** Dev and SDE Instances

NOTE: QA and Production do not need to have the RM Client components installed.

The Development application and Release Management Server can reside on the same Pega7 instance if necessary although it is recommended to deploy them on separate instances. The Release Management repository (if configured) should reside on a separate instance and is used for file storage only.

01 - Configure Release Management Server (RMS)

The Release Management Server should be set up prior to configuring any DEV, SDE, QA or PROD instances for use with the 7.1 & 7.2 Dev-Ops Accelerator Pack. The Release Management Server provides a Release Management dashboard and acts as the controller node for managing, gating and auditing the release process, and promotion from the development instance to subsequent QA, SDE, PROD and additional testing instances.

Import Release Management Server App

1. Login as the administrator@pega.com operator.
2. Select **Designer Studio** → **Application** → **Distribution** → **Import**
3. Select **Choose File** and browse to the location of the **external Jars** File Folder. (See [Getting Started](#) section)
4. Import each of the 4 Jar files one at a time:
 - a. **jdom-2.0.4.jar**
 - b. **javaparser.jar**
 - c. **GetDiffHelper20170418.jar**
 - d. **ECT_TOOL.jar**
5. Follow the import wizard prompts and accept the defaults for each.
6. Clear the cache and restart the instance.
7. Login again as the administrator@pega.com operator.
8. Select **Designer Studio** → **Application** → **Distribution** → **Import**
9. Select **Choose File** and browse to the location of the **DevOpsAccl_Server<XX>.zip**
10. Import the entire **DevOpsAccl_Server<XX>.zip**
11. Follow import wizard prompts and accept the defaults.

Create Release Management Server Operators

1. In Designer Studio, click **Create → Organization → Operator ID**.
2. Enter a short description and name for the Operator ID, and click **Create and open**.
3. On the **Profile** tab of the **Operator ID** form, in the **Application access** section, type **PRESTO: Administrator** in the **Access Group Field**.
4. Select the **Work** tab and click **Update** to Update the Organizational Unit.
5. Click **Save**.

02 - Configure Release Management Client(s) (DEV & SDE)

Perform these steps on each of the Dev and SDE instances you wish to manage from the Release Management Server Dashboard you previously configured. Typically, users will set up one or more development (source) nodes, as well as separate test, QA and PROD nodes to promote too.

NOTE: The QA, PROD and testing instances do not need the Release Management Client component if they will only be “pushed to”.

Import Release Management Client App

1. Login as the administrator@pega.com operator.
2. Select **Designer Studio → Application → Distribution → Import**
3. Select **Choose File** and browse to the location of the **external Jars** File Folder. (See [Getting Started](#) section)
4. Import each of the 4 Jar files:
 - a. **jdom-2.0.4.jar**
 - b. **javaparser.jar**
 - c. **GetDiffHelper20170418.jar**
 - d. **ECT_TOOL.jar**
5. Follow the import wizard prompts and accept the defaults for each.
6. Clear the cache and restart the instance.
7. Login again as the administrator@pega.com operator.
8. Select **Designer Studio → Application → Distribution → Import**
9. Select **Choose File** and browse to the location of the **DevOpsAccl_Client<XX>.zip**
10. Import the entire **DevOpsAccl_Client<XX>.zip**
11. Follow import wizard prompts and accept the defaults.

Subscribe to a Release Management Server

1. Login to the Release Management Client using the default operator. (**PrestoClient/Presto@123**)
2. At the DevOps Accelerator Pack Configuration screen enter the following information:
 - a. `http://<RELEASE-SERVER-IPADDRESS-AND-PORT>/prweb/PRRestService/RMFRestInterface/Work-Cover-/RMFRestService`
 - b. Release Server Operator Username
 - c. Release Server Operator password
3. Click Save Configuration

4. Click Subscribe on the left menu
5. Click the App Name from the drop down that you want to subscribe to the Release Server
6. Select Type "Create New Wrapper Application"
7. Select an Associated RuleSet
8. Select the application which goes to production
9. Select which Access Groups you would like to have access to the Release Client Dashboard
10. Click Create New App
11. Click Baseline New Application

Configure Applications Environment & Release Details (on Release Management Server)

NOTE: Perform this step only after the Dev and SDE instances have been subscribed to the Release Management Server.

1. Login to the Release Management Server with the operator you configured in the [Create Release Management Server Operators](#) section.
2. Select **Register/Add New Application** from the dropdown in the top right.
3. The *Manage Application Page* will be displayed.
4. Expand **Application Details** and specify the following in the fields.
 - a. Application Name (As configured on the Dev instances)
 - b. Application Version
 - c. Description
 - d. Application IT Owner
5. Expand **Environment Details** and add the information for all of the relevant environments (DEV, SDE, QA and PROD) required for pulling, synching and promoting the application.
 - a. Add in the Environment name, select the Environment type and enter/select the lead operator ID.
 - b. If you have the complete environment details, click the gear next to additional details and complete the following fields.
 - i. Complete Environment Details
 - ii. DB Access Details (Read-Only)

NOTE: If you do not have the complete environment details, ensure the lead operator is listed correctly correct and the case will get routed to them to complete the environment details.

- iii. Click the plus next to Approvers and add relevant approvers to route cases to before advancing to the next step in the release management process. The user has the option to route to the approver(s) before and after promotion.
 1. Before entering the environment – approval required before code & rules are packaged and deployed on target
 2. Next higher environment- approval required before moving to the next higher environment
- c. Select the icon under **Checklist/Questionnaire Items** to configure any checklist items or questions to display before promoting or pulling from the environment.

- i. Select the approval questions to move the case to the next steps
 - ii. The questions are tied to the role instead of the operator because some roles may require the same questions but are held by different operators
6. Expand **Deployment Tool Details** and enter any Deployment tool details (If using 3rd party deployment tools such as jenkins). If you are not the 7.1 & 7.2 Dev-Ops Accelerator Pack inherently uses the built-in Pega APIs to handle the deployment process.
7. Expand **Project Management Tools Details** to enter 3rd party project tracking systems such as JIRA and populate the release catalog.
 - a. Enter the project details if tracking systems are used.
 - b. Test Connection to ensure details for tracking systems are correct
8. Click Submit
9. Now you should see the Overview of releases in your Application.
10. Release Catalog on Release Management Dashboard
11. In the Release Management Server Dashboard in the Build and Release tab you have to click plus icon(+) to create the new release
12. Once the new Release screen comes then you have to give release details like Release Name Release Description and Release Date.
13. If you are doing branch migrate then you have to check the Branch Migrate box, otherwise uncheck it if you are doing ruleset promotion.
14. Submit the Release catalog screen

03 - Release Management Release Process

Once the 7.1 & 7.2 Dev-Ops Accelerator Pack environment has been configured as described above, you are now ready to use 7.1 & 7.2 Dev-Ops Accelerator Pack for dev ops within your environment. Follow the instructions below to create a branch-merge and promote it to subsequent SDE, Testing and PROD instances.

Initiate a branch merge to SDE (On DEV Instance) Dev→SDE

NOTE: Releases must be pre-defined in the release catalog on the Release Management Server before a developer can select a release to merge into. The release catalog should be created on the Release Management Server and maintained by the release manager.

1) Initiate a Branch-merge in the Developer Studio

- a. Open Application
- b. Click target next to application name (Warranty)
- c. Select Actions→Merge Branches under Current development branches
- d. Checkmark the Branches to Merge and click next.

2) Get Merge Details

- a. Select the Ruleset and Version to create the new product rule (Package of branch content)
- b. Select the Release Name from the dropdown bottom under Release Configuration.
- c. Click Create New Release check box and fill out requested details (If Desired)
- d. Click Next.

3) Environment Comparison

- a. Select the Source and Destination environments to compare.

NOTE: This is not the destination environment you are going to be merging into. The destination environment for the branch merge must be configured in the Release Cases on the Release Management Dashboard.

- b. Click Compare.

NOTE: By default, Pega Applications are excluded from this comparison. Checkmark the **Include Pega Application** checkbox if you wish to include these.

- c. This comparison table shows the differences in the Rule Instances, Data Instances Database Objects (If any) between the source (development) and target instances excluding those encompassed in the current branch merge request.
- d. Select (checkmark) any additional rules/rulesets your current branch is dependent on. Selecting these instances will include the rules/rulesets in the deployment request.
- e. To select individual rules, click the difference counts and checkmark the box next to the desired rule.
- f. Click Next to Proceed

4) Dependency Management

- a. Review all Hotfixes and third party JARs. Checkmark the box to include these when packaging the deployment request.
- b. Enter any additional Deployment and or Rollback Instructions specific to your environment.
- c. Fill in the Deployment Overview field (if desired).
- d. Click Next

5) Branch Review

- a. Review the merge request. Compliance scores are displayed on the bottom.
 - i. Compliance scores are shown on the first page.
 - ii. Click the tabs to review the actual content in the branch that will be merged into the target environment.
 - iii. Click the Change Impact Report tab to show the rule change impact on the destination instance for the current deployment request.
 - iv. Click Project Best Practices Report to show all specific best practices and guardrail violations.
- b. Click Finish to create the deployment request. The request will be created on the Release Management Server (Dashboard) and the next (review/approval) step will be handled on the Release Management Server (Dashboard).

Process Deployment Request (On Release Management Server) DEV → SDE

- 1) Log into the Release Management Server to display the Release Management Dashboard.
- 2) Select the application from the Select Application dropdown and the desired release from the Select Release dropdown to process the recent deployment request.
- 3) **Review Branch**
 - a. Click the Branch Review ID (BR-#) shown on the tile for the source (Dev) instance to open the Branch Review dialogue.
 - b. Click Branch Review (Review) to open the branch review case.

- c. Click Review to open up the source environment to manually review the rules contained in the branch.
- d. Add a comment to the Comments box and click the Approve/Reject button to continue.
- e. Close the Branch Review dialogue.

4) Review Deployment Request

- a. Click the Deployment Request ID (DR-#) shown on the tile for the target instance.
- b. Click Deployment (Migration) to open the deployment request case.
- c. Review all relevant information and click Migrate to push the package to the target instance.
- d. View the Import Status to view the merge process and verify the branch was successfully merged into the target instance was successful.
 - i. Click Retry if it has failed to attempt the retry the merge into the target instance.
 - ii. Click Restart Migration to re-package all items and then attempt the merge into the target instance (SDE).
- e. Click Ok when finished.
- f. Checkmark the Select Sync Environments box to merge changes (if any) from the target environment (SDE) back into the source environment (Dev). This is required to re-load the dev with the current baseline rulesets present in the target environment.
- g. Click Sync Up to sync the changes back to the source environment.

NOTE: This step will only be required if the target instance is a repository or SDE.

- h. Return to the Release Management Dashboard and click the refresh icon. A new Deployment Request will be created for the next higher environment (If exists).

Process Deployment Request (On Release Management Server) SDE → QA / QA → PROD

- 1) Log into the Release Management Server to display the Release Management Dashboard.
- 2) Select the application from the Select Application dropdown and the desired release from the Select Release dropdown to process the deployment request.
- 3) Review Deployment Request
 - a. Click the Deployment Request ID (DR-#) shown on the tile for the target instance (QA/Prod).
 - b. Click Deployment (Migration) to open the deployment request case.
 - c. Review all relevant information and click Migrate to push the package to the target instance (QA/Prod).

NOTE: Deployment requests to PROD and or QA may require approval from a release manager (These options are configurable in the Release cases.

- d. View the Import Status to view the merge process and verify the branch was successfully migrated into the target instance (QA/PROD) was successful.
 - i. Click Retry if it has failed to attempt the retry the merge into the target instance.
 - ii. Click Restart Migration to re-package all items and then attempt the merge into the target instance (QA/PROD).

- e. Click Ok when finished.
- f. Return to the Release Management Dashboard and click the refresh icon. A new Deployment Request will be created for the next higher environment (If exists).

04- Support

For support with the 7.1 & 7.2 Dev-Ops Acceleration pack you can post your questions and suggestions to the 7.2 Dev-Ops Acceleration Pack section of the [Pega 7 Upgrade Center forum](#).