

Version Control

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Introduction

There are 2 types of version controls available in Joget App management. They are:-

- Application Version
- Process Version

These are the instances where versioning is involved with:-

- Process design update.
- App version update.
- App export/import.

Application Version

Coverage of Application Version

Component	Application Version	Process Version
Process	Yes	Yes
Form	Yes	
Datalist	Yes	
Userview	Yes	
App Properties	Yes	



Important

Each app version may hold more than one process version but one can only start a process instance of the current latest process version the app version is holding.

Updating Application Version



Running Process Instances

Updating application version will not affect any running process instances.

These are the instances when process version will change.

- Creation of new version from existing app version.

Design App:
HR Expenses Claim App

Version 1 Published

1 Forms & UI
2 Processes
3 Properties & Export
All Apps

Manage App Version

Version	Published	Notes
1	✓	Initial version

15 Page 1 of 1 Displaying 1 to 3 of 3

New Version Publish Unpublish View Delete

The current app version selected will be cloned (process, form, datalist, userview and properties including default plugin properties, message bundles, and environment variables) over to the next available version number.

- Import of App

Design Apps

All Apps

Design New App Import App

Published Apps

App Center
Asset Management and Tracking

Important Notes

- There can only be **one** published version at any point of time.
- End users will only be able to access the published version and consume what is available (accessing process, form, datalist, userview etc) in that version with the **exception** of process instance's form access. (Read more under process version below).
- When **switching** published version, please take note of possible impacts to the end users by assessing the differences between the current published version and the soon to be published one. For example, if you are using an environment variable as incremental counter, you may want to make sure that the new counter will start from where the old one left at.

Process Version

Inside an app version, it contains process design but process design has its own set of versioning called process version.



Important

Each process version belongs to only one app version.

Determine current process version

Under each process in processes tab, click on "Show Additional Info" link to reveal the **Process Definition ID**. You can find the process version in between the 2 hashes.

Design App:

HR Expenses Claim App

Version 1 Published

- Forms & UI
- Processes**
- Properties & Export
- All Apps

Design Process
Update via Saved XPDL
Run Process

Process name: **Expense Approval Process**

```

graph TD
    Start(( )) --> EditClaim[Edit Claim]
    EditClaim --> ApproveClaim[Approve Claim]
    ApproveClaim --> Rule1{Rule 1}
    Rule1 -- "Status=Submitted" --> VerifyClaim[Verify Claim]
    Rule1 -- "Status=Rejected" --> NotifyAppRej([Notify Approver Rejection])
    VerifyClaim --> Rule2{Rule 2}
    Rule2 -- "Verified" --> NotifyFinVer[Notify Finance Verified]
    Rule2 -- "Not Verified" --> ApproveClaim
    NotifyFinVer --> NotifyFinRej([Notify Finance Rejection])
    
```

Package ID: hr_expense

Process Definition ID: hr_expense#1#process1

Process Description:

Link To Run Process: http://localhost:8080/jw/web/client/app/hr_expense/1/process/process1?start=true

[Hide Additional Info](#)

Coverage of Process Version

Component	Application Version	Process Version
Process	Yes	Yes
Form	Yes	
Datalist	Yes	
Userview	Yes	
App Properties	Yes	

Updating Process Version

These are the instances when process version will change.

- Process design update via deployment from Process Builder or by uploading .xpdL definition file.
- Import of App

When one of the above takes place, Joget Workflow will find the next available process version and assign to it.

App Version	Process Version	Action Taken
1	1	
1	1 -> 2	Process design update

For example, in the table above, upon process design update via process builder, the process version will now turn to 2 from 1.

In some cases, one may perform a process design update on older app version even though there's a newer app version in place as illustrated in the table below.

App Version	Process Version	Action Taken
-------------	-----------------	--------------

1	1	
1	1 -> 3	Process design update
2	2	

In this case, app version 1 will now hold process version 3 and not 2.

Finding App Version of the Process Version

In the Monitor Apps section, one can navigate to the process instance view and click on the **Process Name** link to lead to the designer console of the app version. From the screenshot below, this particular instance is of process version 6 and it belongs to app version 3.

The screenshot shows the 'Monitor Apps' interface. On the left, there's a sidebar with 'Running Processes' selected. The main area displays details for a process instance:

- Process ID:** 64_hr_expense_process1
- Process Definition ID:** hr_expense#6#process1
- Process Version:** 6 (highlighted with a red box)
- Process name:** [Expense Approval Process](#)
- State:** open.running

Below the details, there's a breadcrumb trail: `localhost:8080/jw/web/console/app/hr_expense/3/processes/process1`. The 'Elements' tab is active, showing an HTML snippet:

```
<dt>Process ID</dt>
<dd>64_hr_expense_process1</dd>
<dt>Process Definition ID</dt>
<dd>hr_expense#6#process1</dd>
<dt>Process Version</dt>
<dd>6</dd>
<dt>Process name</dt>
<dd>
  <a target="_blank" href="/jw/web/console/app/hr_expense/3/processes/process1">
    " "
  </a>
</dd>
```

The href attribute in the link is highlighted with a red box.

Important Notes

1. One will always **start** a new process instance using the **latest** process version of the current **published** version.
2. By updating the process design in the same app version, **all existing running process instances in the same app version will automatically be updated** to the new process flow in the background. Do **not** perform this unless it is absolutely necessary in a production server.



Do not repetitively update process design in a short time

Process migration will take place once process design is changed. Repetitive process change deployment will disrupt existing process instances migration in the background. You will be seeing the following sample log messages when migration takes place.

Log

```
INFO 28 Apr 2017 10:41:52 org.joget.apps.app.service.AppServiceImpl$1 - Updating running
processes for hr_expense from 4 to 5
INFO 28 Apr 2017 10:41:54 org.joget.apps.app.service.AppServiceImpl$1 - Completed updating
running processes for hr_expense from 4 to 5
```



Process Migration

The following will take place during migration of process instances:-

1. Abort pending process instances.
2. New process instances will be created. (A new process instance ID will be created in which you can find the linkage in the database table **wf_process_link**)
3. Resume by matching previous pending activities IDs with the new Process version's design.

After you update the process design, do remember to check all the activity/plugin mappings to make sure that they are current and in sync with your process design.

Access of Forms

Process instance that contains activity mapping(s) make use of the forms created under the **same app version**. Regardless of the current published app version, the process instance's assignment will show form mapped to it, of the same app version the process instance falls under.



Published Version

Published Version of App does not affect access of forms by process instance.

Do not remove an app version in a production server if there's still process instances running out from it.

For example, in the table and screenshot below, **123_hr_expense_process1** will show forms mapped according to its activity mappings under app version 1 regardless of whether app version 1 or 2 is published or not.

On the other hand, **124_hr_expense_process1** will show forms from app version 2.

App Version	Process Version	Action Taken
1	1	Started a process instance 123_hr_expense_process1
2	2	Started a process instance 124_hr_expense_process1

Design App:

HR Expenses Claim App

Version 1

Published

1 Forms & UI

2 Processes

3 Properties & Export

← All Apps

Design Process

Update via Saved XPDL

Run Process

Process name: **Expense Approval Process**

Package ID

Process Definition ID

Process Description

Link to Run Process

Hide Additional Info

hr_expense

hr_expense#1#process1

http://localhost:8080/jw/web/client/app/hr_expense/1/process/process1

Map Participants to Users

Map Activities to Forms

Map Tools to Plugins

Variable List

This is the list of activities defined in the Workflow design.

Approve Claim
ID : approve_claim

Form Name	
	HR Expense Approval Form Remove Mapping ☐ Remove Save as Draft Button ☐ Show The Next Assignment When Completed

Verify Claim
ID : verify_claim

Form Name	
	HR Expense Finance Form Remove Mapping ☐ Remove Save as Draft Button ☐ Show The Next Assignment When Completed

By accessing the form record created by a process instance of different app version, you may not be seeing the exact form used during the process instance flow process. As such, you can clone the form from the originating app version into the current app version that you are working on so that you can then gain access to the very form used during the process flow.

For example, in the screenshot below, we are seeing a form with 3 fields in a process instance assignment. Remember that the form that is being used for this process instance originates from the app version the process instance started in.

Main
Welcome

New Claim
New Expenses Claim

Personal Expenses
Resubmission (0)
Draft (1)
Submitted (0)
Approved (1)
Rejected (0)
Closed (0)

Approver Task List
Approver Inbox (0)

Expense Approval Process - Edit Claim

Expense Claim Details

RefREF-000017
Title *Sample Submission
Remark
Submitted ByCat Grant

Note: The title should appear in this format, example, Jan 06

Expenses Item(s)

For the same record row, when viewed in a CRUD userview menu, there's an extra field given that in the current published version, a field has been added to the form.

Main
Welcome

New Claim
New Expenses Claim

Personal Expenses
Resubmission (0)
Draft (1)
Submitted (1)
Approved (1)
Rejected (0)
Closed (0)

Management
All Records

Expense Approval Process - Edit Claim

Expense Claim Details

RefREF-000017
Title *Sample Submission
Remark
New Remark
Submitted ByCat Grant

Note: The title should appear in this format, example, Jan 06

Expenses Item(s)

In order to resolve the possible confusion and displaying the correct form intended for the record row, the following actions can be taken:-

1. Copy the form from earlier app version into current published app version.
2. Identify the app/process version each record originates from by adding a hidden field in the form by using the appropriate hash variable (e.g. #assignment.processVersion#).
3. Create a CRUD userview menu for each specific app/process version with version filter in place for each app/process version.



How to obtain current app version?

The following code can be used in Bean Shell in:-

- Process Tool
- Form Post Submission Processing Tool

Java code

```
import org.joget.apps.app.model.AppDefinition;
String appVersion = appDef.getVersion().toString();
```

