
Joget DX

Using Your First Process Tool

 <http://facebook.com/jogetworkflow>

 <http://twitter.com/jogetworkflow>

Prerequisites

- Able to design a Process Flow.
- Understand the differences between activity and tool.

Content

1. Introduction to Process Tool
2. Using Email Tool in Process
3. Using Process Tool Plugin in Post Form Submission Processing



Chapter 1

Introduction to Process Tool

Plugin Types



App Builder Components & Supported Plugin Types

Userview Builder

- Userview Menu
- Userview Permission
- Userview Theme

Datalist Builder

- Datalist Binder
- Datalist Action
- Datalist Column Formatter
- Datalist Filter Type

Process Builder

- Deadline
- Process Participant
- **Process Tool**
- Process Form Modifier
- Decision Tool

Form Builder

- Form Element
- Form Load Binder
- Form Store Binder
- Form Options Binder
- Form Validator
- Form Permission
- Process Form Modifier
- **Post Form Submission Processing**
- Generator

Addon Builder

App Platform

- Audit Trail
- Hash Variable
- Web Service

Platform

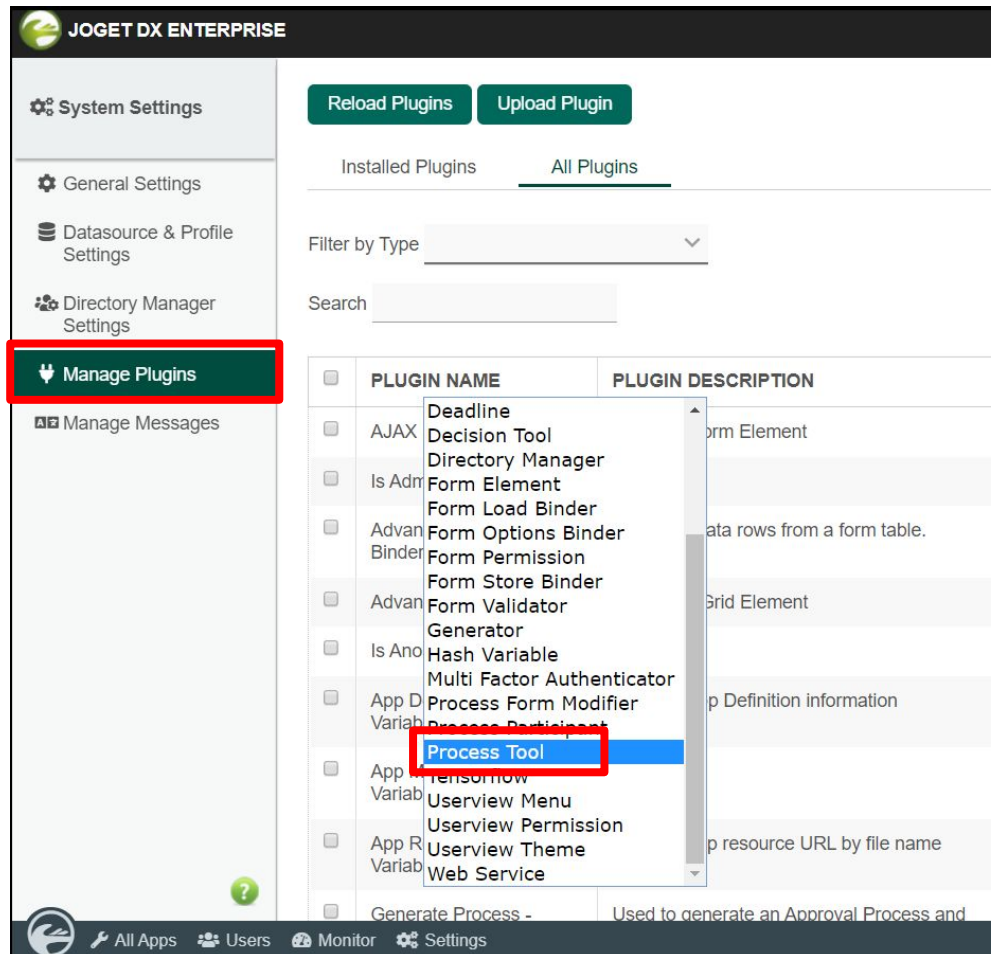
- Directory Manager
- Web Service

What Does It Mean?

- Being a plugin, it means that it is possible to add/extend the default functionalities of what we already have.

Locating Available Process Tool Plugins

- System Settings -> Manage Plugins -> Process Tool

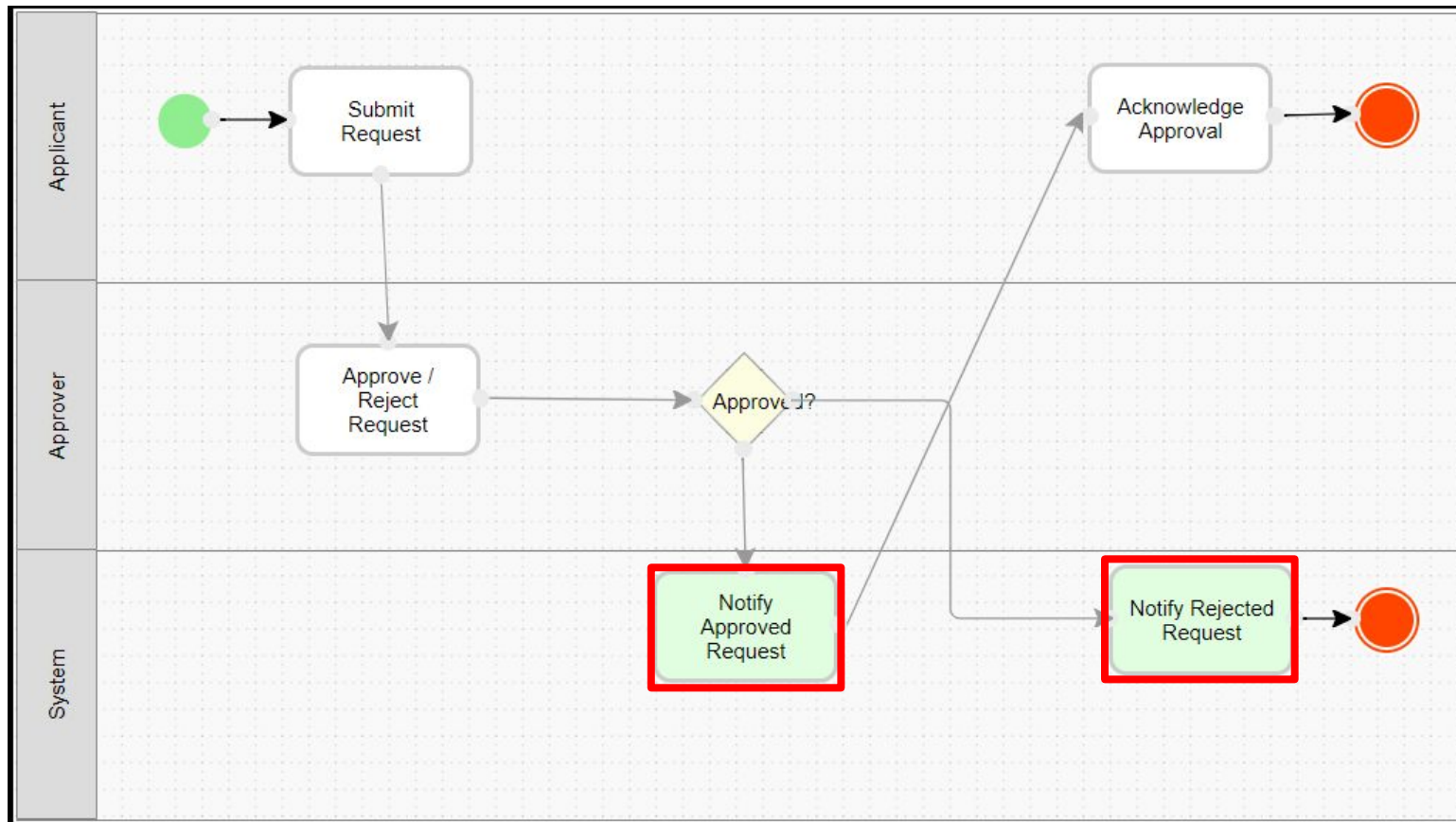


The screenshot shows the 'JOGET DX ENTERPRISE' interface. On the left sidebar, 'System Settings' is expanded, and 'Manage Plugins' is highlighted with a red box. The main content area shows the 'Manage Plugins' page with buttons for 'Reload Plugins' and 'Upload Plugin'. Below these are tabs for 'Installed Plugins' and 'All Plugins', a 'Filter by Type' dropdown, and a search bar. A table of plugins is displayed with columns 'PLUGIN NAME' and 'PLUGIN DESCRIPTION'. A dropdown menu is open over the table, listing various plugins, with 'Process Tool' highlighted in blue and also circled in red.

PLUGIN NAME	PLUGIN DESCRIPTION
Deadline	
Decision Tool	Form Element
Directory Manager	
Form Element	
Form Load Binder	
Form Options Binder	data rows from a form table.
Form Permission	
Form Store Binder	
Form Validator	Grid Element
Generator	
Hash Variable	
Multi Factor Authenticator	
Process Form Modifier	App Definition information
Process Participant	
Process Tool	
Userview Menu	
Userview Permission	
Userview Theme	App resource URL by file name
Web Service	

What Is a Process Tool?

- Process Tool plugin is used as part of the process flow – mapped to the Tool entity in a process flow.



Chapter Review

We have learnt to:

1. Understand Process Tool Plugin and being part of the Joget ecosystem.
2. Able to list down available Process Tool Plugins in the system.



Chapter 2

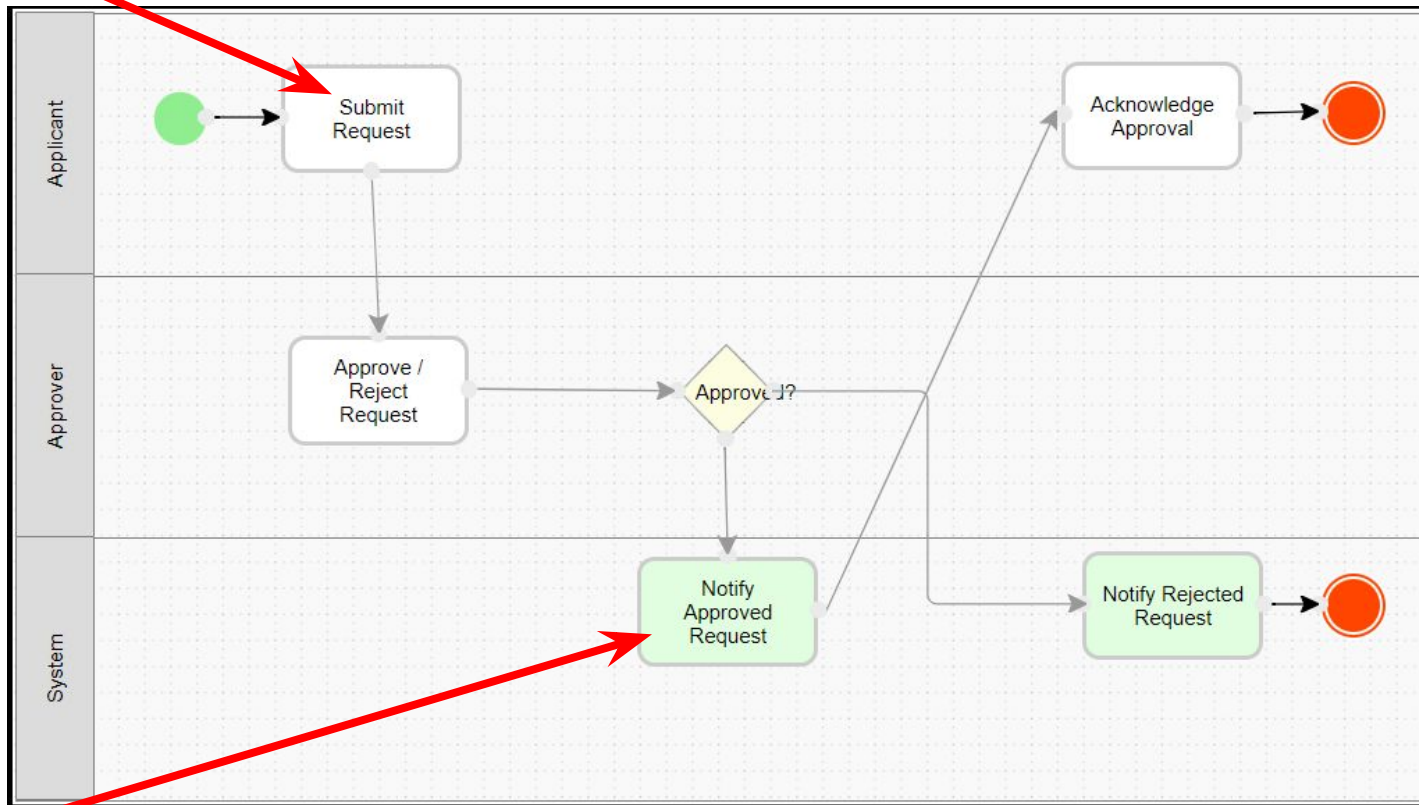
Using the Email Tool In Process

Email Tool - Process Tool Plugin

- Email Tool is one of many Process Tool plugins available.
- Process Tool plugins are extensible through Joget's Plugin architecture.

Note About the Mapping

- Activity is mapped to Form



- Tool is mapped to Process Tool

Adding the Email Tool

- On “Map Tools to Plugins”, click on “Add/Edit Plugin” for “Notify Rejected Request” tool.

JOGET DX ENTERPRISE Home | Inbox | Profile (admin) | Logout

Design App: Purchase Requisition
Version 1 | Not Published

Forms & UI

Processes

Properties & Export

Performance

Logs

All Apps

Process name: Purchase Request Process



Show Additional Info

Map Participants to Users | Map Activities to Forms | **Map Tools to Plugins** | Map Routes to Plugins | Variable List

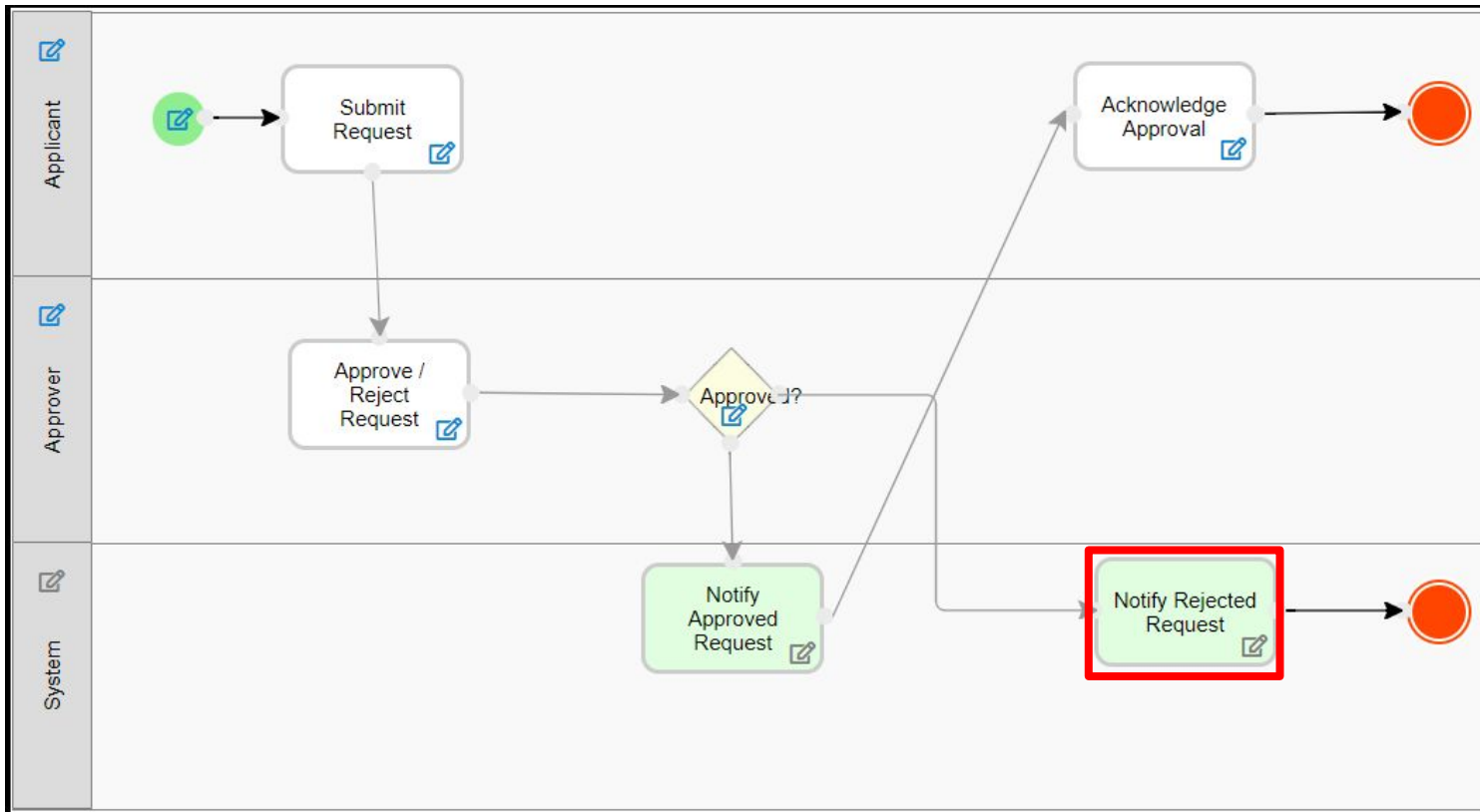
This is the list of tools defined in the Workflow design.

Notify Approved Request
ID : notifyApprovedRequest Add/Edit Plugin

Notify Rejected Request
ID : notifyRejectedRequest Add/Edit Plugin

Alternative Tool Plugin Mapping

- Click on “Configure Mapping” and click on “Notify Rejected Request” tool.



Configuring the Email Tool

- Select “Email Tool” from the available Process Tools.

MAP TOOLS TO PLUGINS - NOTIFY APPROVED REQUEST (NOTIFYAPPROV)		
Search <input type="text"/>		
PLUGIN NAME	PLUGIN DESCRIPTION	PLUGIN VE
Bean Shell Tool	Executes standard Java syntax	5.0.0
Counter Increment Tool	Counter Increment Tool is used to increase a workflow variable or an environment variable within a workflow.	5.0.0
Database Update Tool	Executes SQL INSERT and UPDATE statement on MySQL, Oracle or SQL Server database	5.0.0
Email Tool	Sends email message to targeted recipient(s)	5.0.0
Export Form Email Tool	Export form to pdf and send as email attachment to targeted recipient(s)	5.0.0
Form Data Update Tool	Used to update form data in a process.	5.0.0
Id Generator Tool		5.0.0
Import Tool	Import bulk data into a specific form's table by retrieving the CSV/Excel file from a form field and doing a simple column-to-field	5.0.0

Configuring the Email Tool

- Set up your mail information.
- Click “Next” to set up the email server.

PLUGIN CONFIGURATION - NOTIFY REJECTED REQUEST (NOTIFYREJECTEDREQUEST)

Configure Email Tool ?

Configure Email Tool > SMTP Settings > Attachments

To (Specific email address)	<input type="text" value="sample@sample.com"/>
To (Participant ID)	<input type="text"/>
CC	<input type="text"/>
BCC	<input type="text"/>
Subject	Rejected Purchase Request Notification
Message	Hello there, your purchase request has been rejected

< Prev **Next >**

Configuring the Email Tool

- Set up the email server.

PLUGIN CONFIGURATION - NOTIFY REJECTED REQUEST (NOTIFYREJECTEDREQUEST)

SMTP Settings

Configure Email Tool > SMTP Settings > Attachments

From ?

SMTP Host ?

SMTP Port ?

Security ?

SMTP Username

SMTP Password

<#>

< Prev Next >

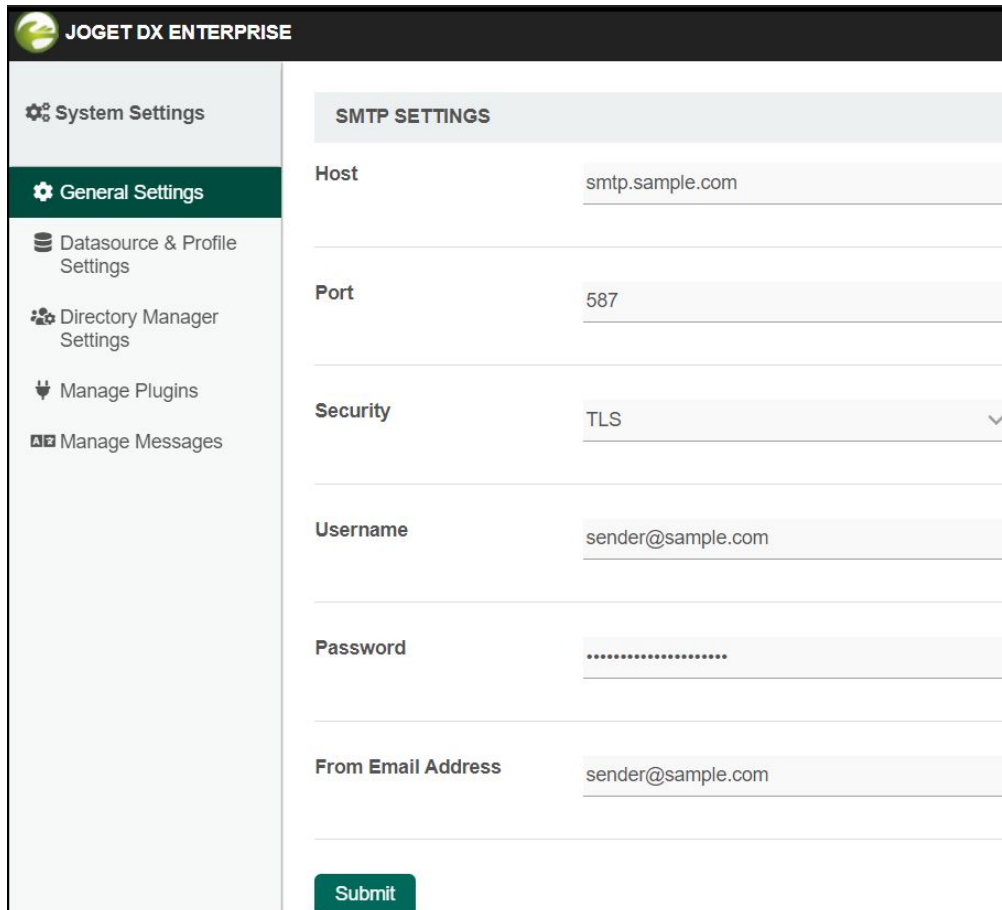
Send Test Email Submit Change Plugin

Good To Know

- Try the SMTP settings with an email client (e.g Outlook, Thunderbird) before using it with Email Tool.
- Make sure that your firewall allows outgoing email messages to be sent from Java.exe

Good To Know

- Email settings can be set in System Settings for better maintainability.



The screenshot displays the 'System Settings' page in the Joget DX Enterprise application. The left sidebar contains a navigation menu with the following items: System Settings, General Settings (highlighted), Datasource & Profile Settings, Directory Manager Settings, Manage Plugins, and Manage Messages. The main content area is titled 'SMTP SETTINGS' and contains the following fields:

Field	Value
Host	smtp.sample.com
Port	587
Security	TLS
Username	sender@sample.com
Password
From Email Address	sender@sample.com

A green 'Submit' button is located at the bottom of the form.

Exercise

- Test out the Email Tool functionality by going through the Workflow Process.
 - Make sure that the recipient's email is defined.
 - Take note of the server log if your email fails to reach.

```
INFO org.joget.apps.app.lib.EmailTool$1 - EmailTool: Sending email
from=no-reply@example.com, to=cc=, subject=Rejected Purchase Request Notification
ERROR org.joget.apps.app.lib.EmailTool$1 - org.apache.commons.mail.EmailException: At
least one receiver address required
org.apache.commons.mail.EmailException: At least one receiver address required
    at org.apache.commons.mail.Email.buildMimeMessage(Email.java:1148)
    at
org.apache.commons.mail.MultiPartEmail.buildMimeMessage(MultiPartEmail.java:254)
    at org.apache.commons.mail.HtmlEmail.buildMimeMessage(HtmlEmail.java:513)
    at org.apache.commons.mail.Email.send(Email.java:1266)
    at org.joget.apps.app.lib.EmailTool$1.run(EmailTool.java:196)
    at java.lang.Thread.run(Thread.java:619)
```

Tip: Common Mail Servers

Googlemail - Gmail	Server:	Authentication:	Port:
SMTP Server (Outgoing Messages)	smtp.gmail.com	SSL	465
	smtp.gmail.com	StartTLS	587
POP3 Server (Incoming Messages)	pop.gmail.com	SSL	995
	Please make sure, that POP3 access is enabled in the account settings. Login to your account and enable POP3.		

Outlook.com	Server:	Authentication:	Port:
SMTP Server (Outgoing Messages)	smtp.live.com	StartTLS	587
POP3 Server (Incoming Messages)	pop3.live.com	SSL	995

Yahoo Mail	Server:	Authentication:	Port:
SMTP Server (Outgoing Messages)	smtp.mail.yahoo.com	SSL	465
POP3 Server (Incoming Messages)	pop.mail.yahoo.com	SSL	995

Source: <http://www.arclab.com/en/amlc/list-of-smtp-and-pop3-servers-mailserver-list.html>

Chapter Review

We have learnt to:

1. Map a Process Tool to a Process Tool Plugin
2. Configure Email Tool Plugin



Chapter 3

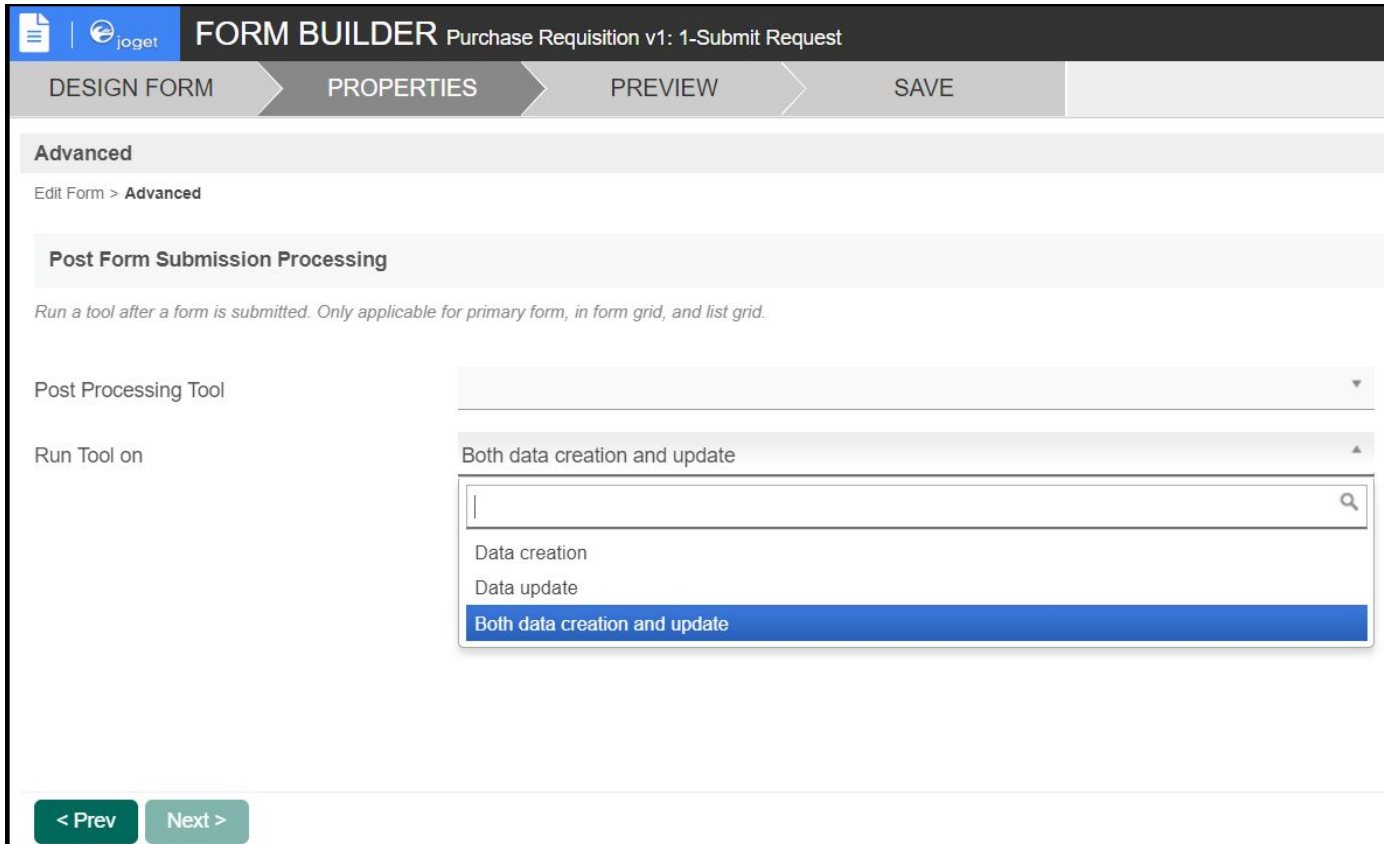
Using Process Tool in Post Form Submission Processing

Form Post Submission Processing

- Introduced in version 5, a Process Tool plugin is also known as a Form Post Submission Processing plugin.
- A Process Tool plugin can be attached to an individual form and invoked upon form submission.

Form Post Submission Processing

- In Form's properties, **Post Form Submission Processing** settings can be found.



The screenshot shows the Joget Form Builder interface for a form titled "Purchase Requisition v1: 1-Submit Request". The "PROPERTIES" tab is active, and the "Advanced" section is expanded to show "Post Form Submission Processing" settings.

Post Form Submission Processing

Run a tool after a form is submitted. Only applicable for primary form, in form grid, and list grid.

Post Processing Tool: [Empty dropdown menu]

Run Tool on: Both data creation and update

[Searchable list of options: Data creation, Data update, Both data creation and update (highlighted)]

< Prev Next >

Identify the Form To Apply To

JOGET DX ENTERPRISE

Design App:
Purchase Requisition

Version 1 Not Published

Create

FORMS

- 1-Submit Request
-
purchase_requests
- 2-Approve / Reject Request
-
purchase_requests
- 3-Acknowledge Approved
-
purchase_requests

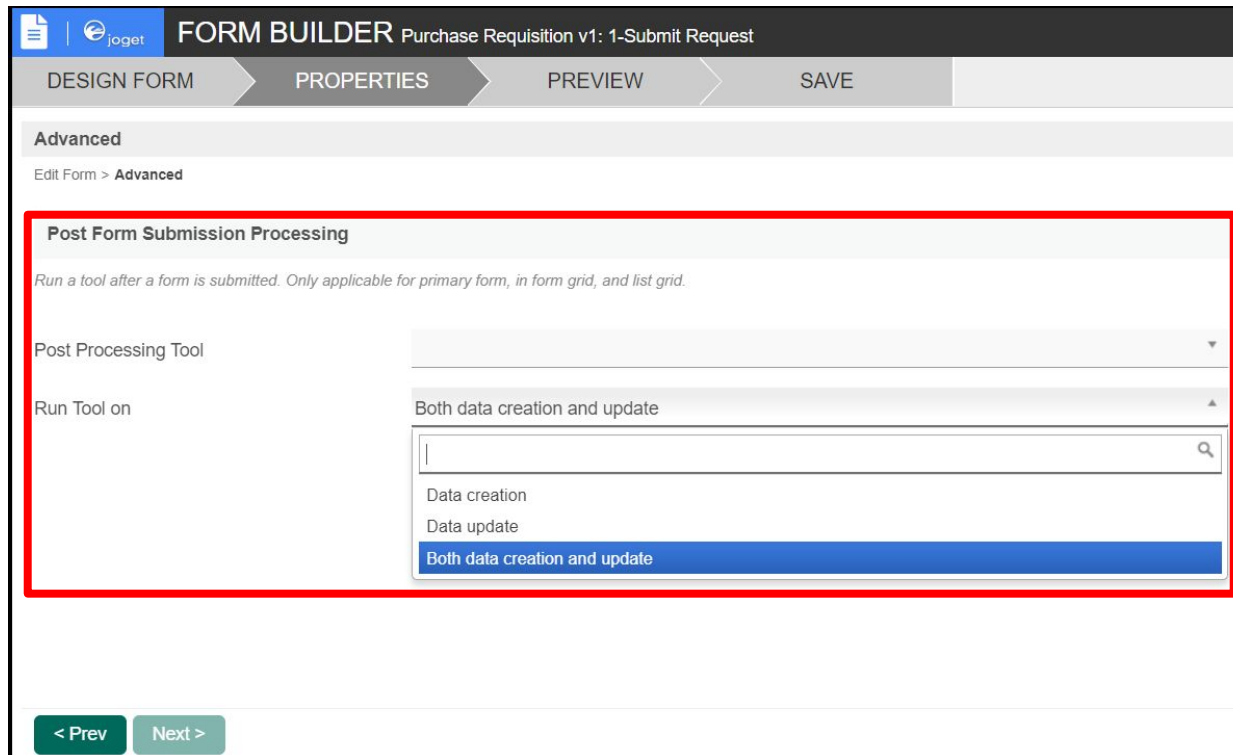
Search

```

graph TD
    subgraph Applicant
        S[Submit Request] --> A[Approve / Reject Request]
        A --> D{Approved?}
        D --> SA[Acknowledge Approval]
    end
    subgraph Approver
        A
        D
    end
    subgraph System
        NA[Notify Approved Request]
        NR[Notify Rejected Request]
    end
    D --> NA
    D --> NR
    NA --> SA
    NR --> SA
    
```

Add Process Tool To the Form

- In the form identified, open the form in the Form Builder.
- Go to the properties, configure the **Post Form Submission Processing** settings.



The screenshot shows the Joget Form Builder interface for a form titled "Purchase Requisition v1: 1-Submit Request". The interface has a top navigation bar with buttons for "DESIGN FORM", "PROPERTIES", "PREVIEW", and "SAVE". The "PROPERTIES" tab is active, and the "Advanced" section is expanded. Below the "Advanced" section, there is a breadcrumb "Edit Form > Advanced". The "Post Form Submission Processing" section is highlighted with a red border. It contains the following elements:

- Post Form Submission Processing** (Section Header)
- Run a tool after a form is submitted. Only applicable for primary form, in form grid, and list grid.* (Description)
- Post Processing Tool** (Dropdown menu)
- Run Tool on** (Dropdown menu)
- A search input field with a magnifying glass icon.
- A list of options: "Data creation", "Data update", and "Both data creation and update" (which is highlighted in blue).

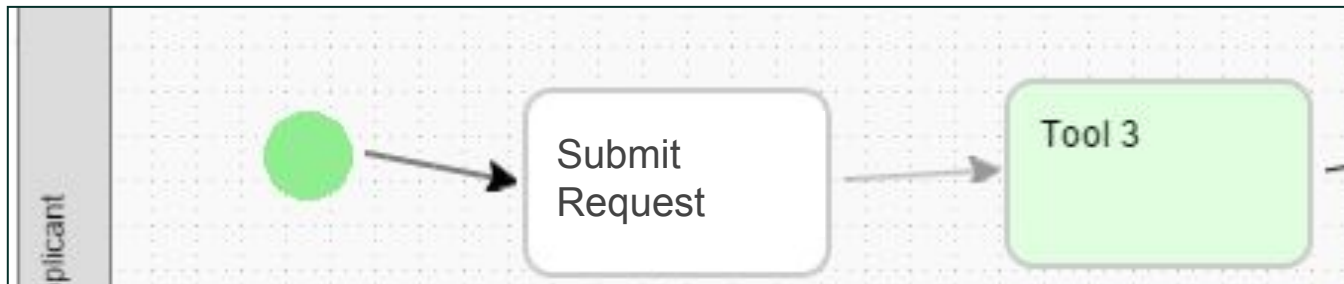
At the bottom of the interface, there are two buttons: "< Prev" and "Next >".

Which Processing Tool to choose?

- You may choose any Process Tool plugin of your preference or re-use the Email Tool that you have learned earlier.

Discussion

- If there's a Process Tool mapped to a Form (Submit Request) and there's a Tool (Tool 3) to be followed after in the process flow, which tool executes first?



Discussion

- With the ability to add a Process Tool to individual form, there seems to be a continuation/flow by having the form itself. What's the significance of having it versus having the Process Tool in a Workflow Process?

Module Review

- Understand Process Tool Plugin and being part of the Joget ecosystem.
- Able to list down available Process Tool Plugins in the system.
- Map a Process Tool to a Process Tool Plugin.
- Map a Form to a Process Tool Plugin.
- Configure Email Tool Plugin.

Stay Connected With Joget

- www.joget.org
- community.joget.org
- twitter.com/jogetworkflow
- facebook.com/jogetworkflow
- youtube.com/jogetworkflow