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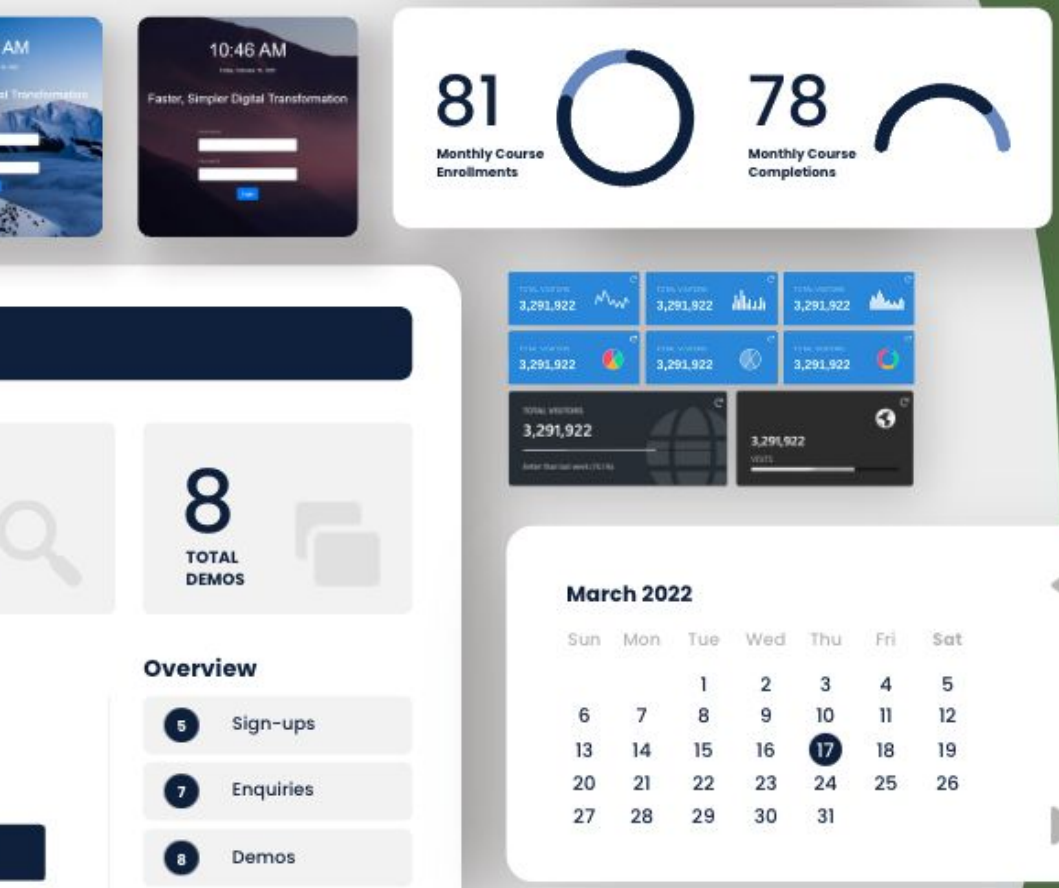

Joget DX

SLA & Deadlines

http://facebook.com/jogetworkflow

http://twitter.com/jogetworkflow

Last Revised on Jan 2023

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Prerequisites

1. Good understanding on how to design a Workflow Process with SLA & Deadlines

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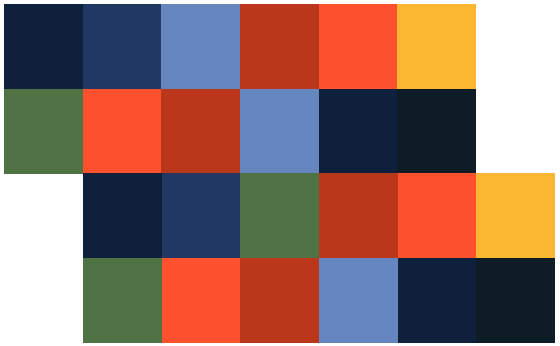
Content

1. Service Level Agreement (SLA)
2. Deadlines
3. Introduction to Deadline Plugin



Chapter 1

Service Level Agreement (SLA)

Service Level Agreement (SLA) Limit

- Why set limits?
  - By setting limits to workflow activities, you are able to define appropriate service levels for your processes.
  - Participants in the workflow can be made aware of adherence to these service levels.
  - You can generate reports to determine the efficiency of your processes e.g. identify bottlenecks, etc.

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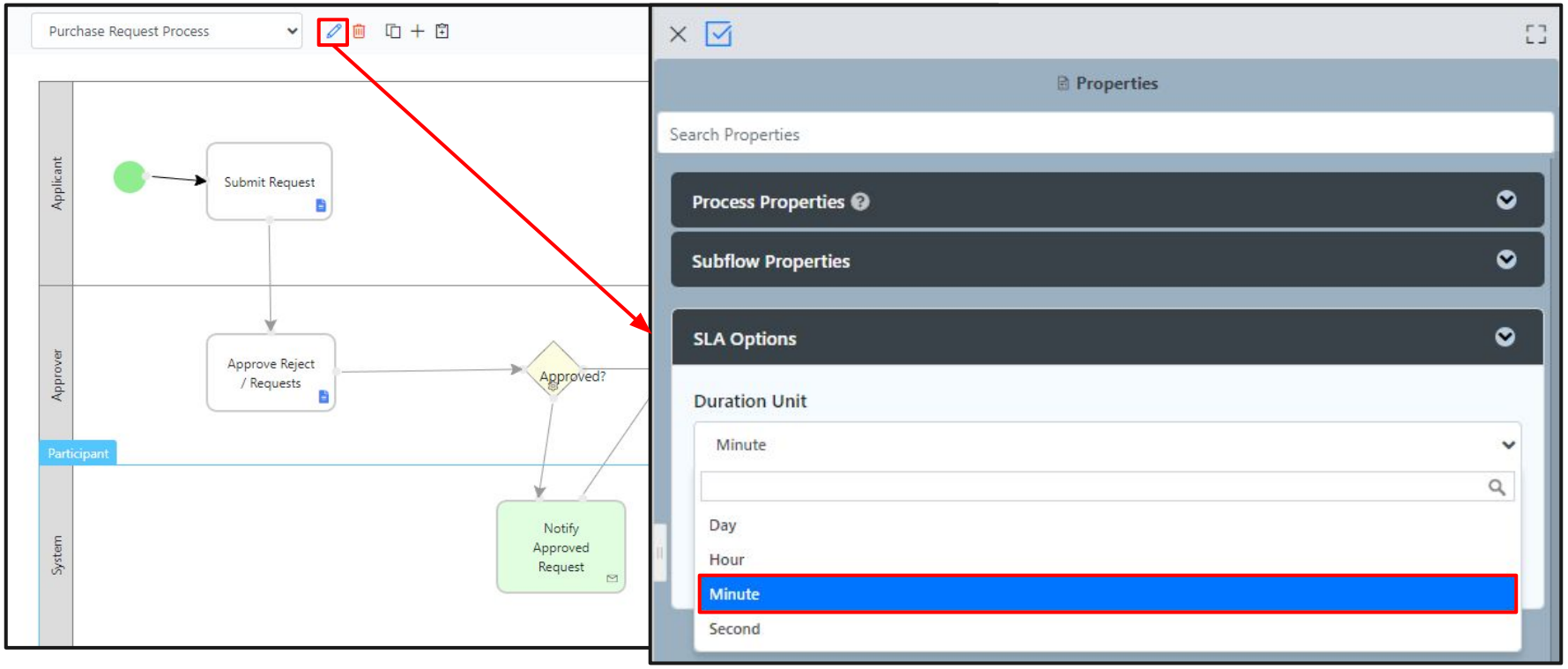
How to Set SLA Limit?

- Define process-level **duration unit** (Duration unit will be **shared** among activities in the process)
- Set **SLA Limit** on targeted activity or process
- **SLA** can be affected by the use of Deadline plugins.

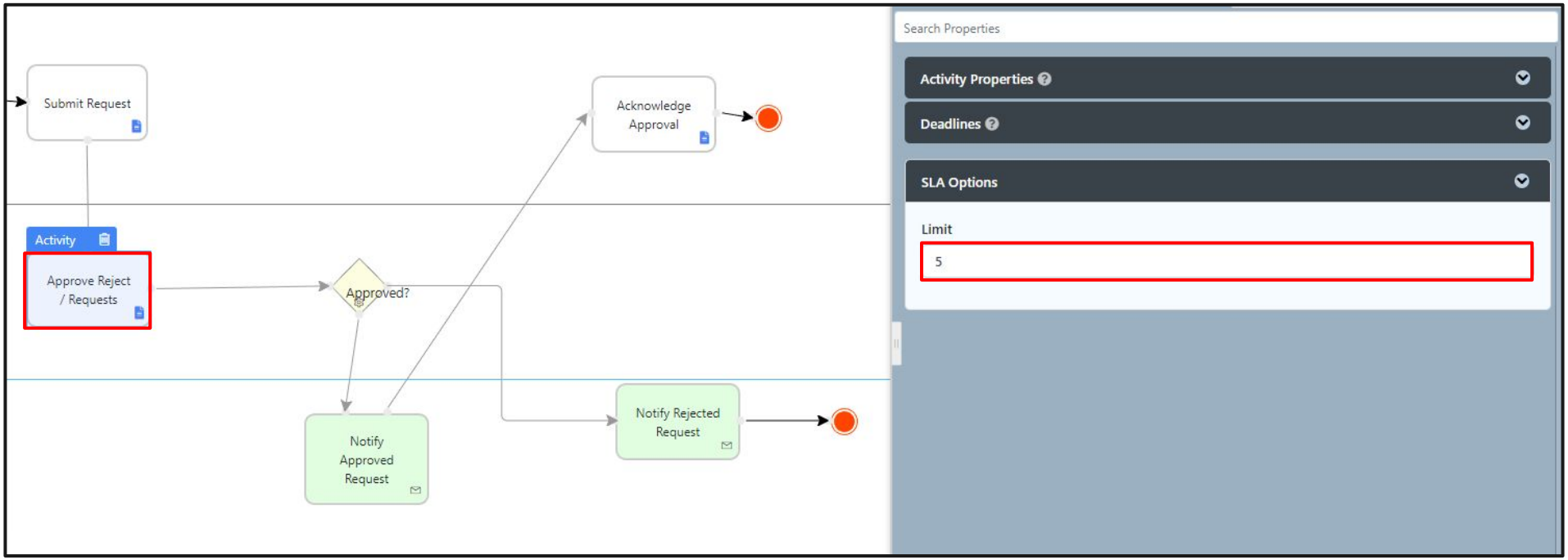
Define Duration Unit

- Edit process's properties to set the duration unit.
- Set to **minute**.



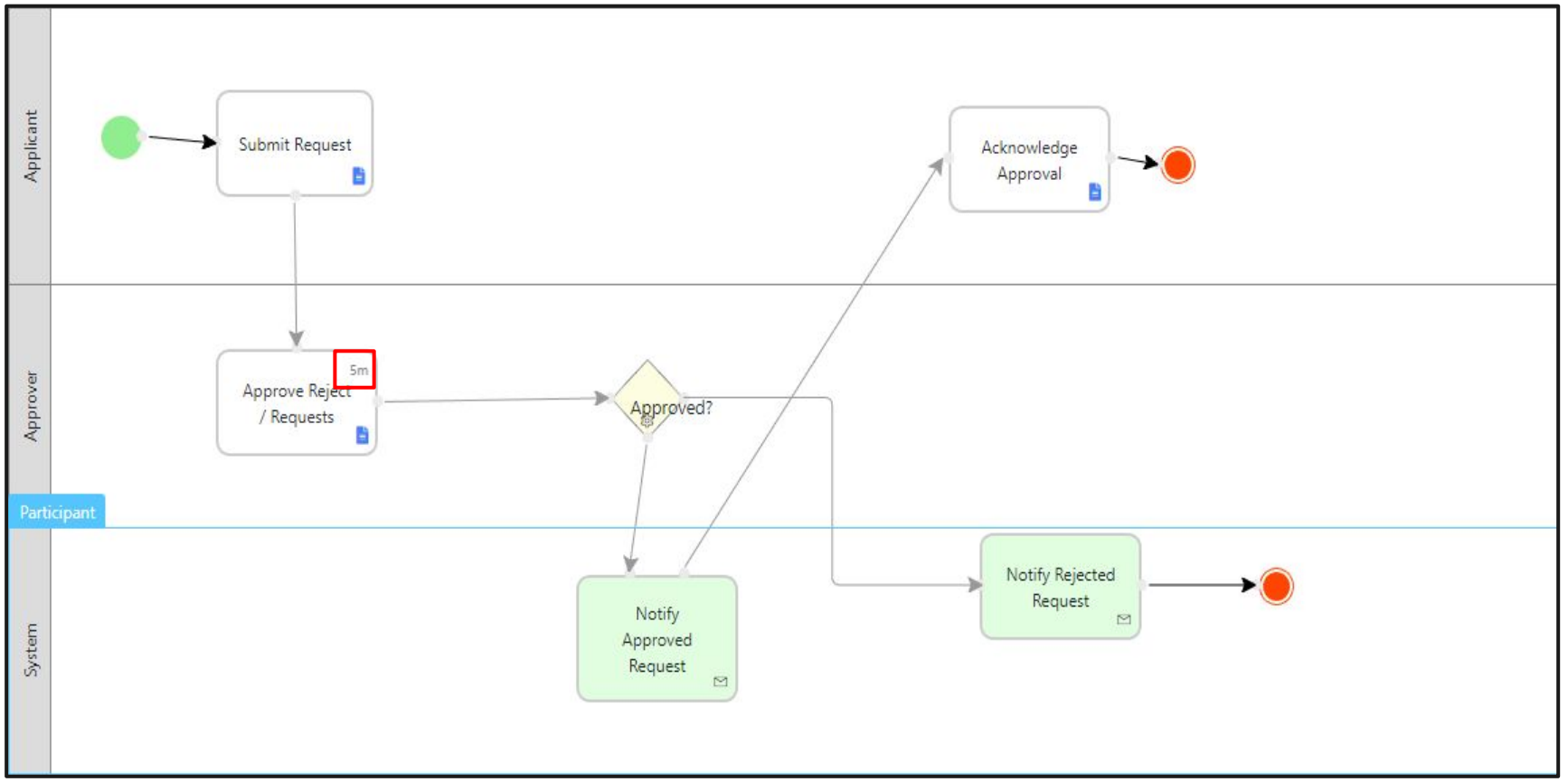
Set SLA Limit on Activity

- Set "**5**" in **Approve / Reject Request** activity. (Duration unit was set earlier to **minute**)



SLA Limit Indicator

- SLA will be reflected in process diagram itself.



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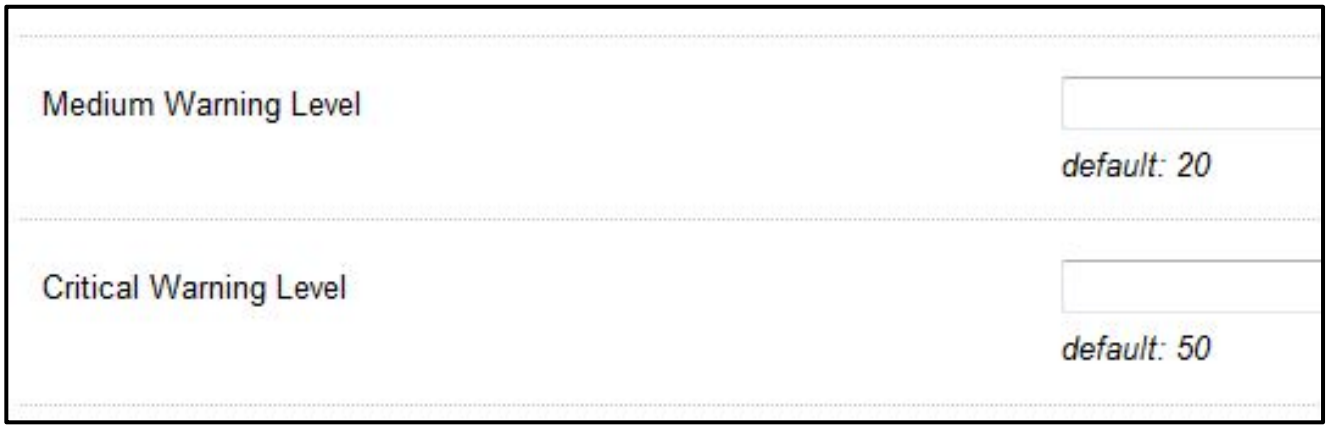
Service Level Monitor

- For activities that have defined **limits**, task assignments will have **due dates**.
- When processes that have limits are deployed, you will notice that the **Service Level Monitor** column in the Inbox will display a **colour coded square** .
- The colour of the Service Level Monitor will change from **GREEN** to **YELLOW** as the due date approaches. Once the due date is reached, the colour will be **RED**.

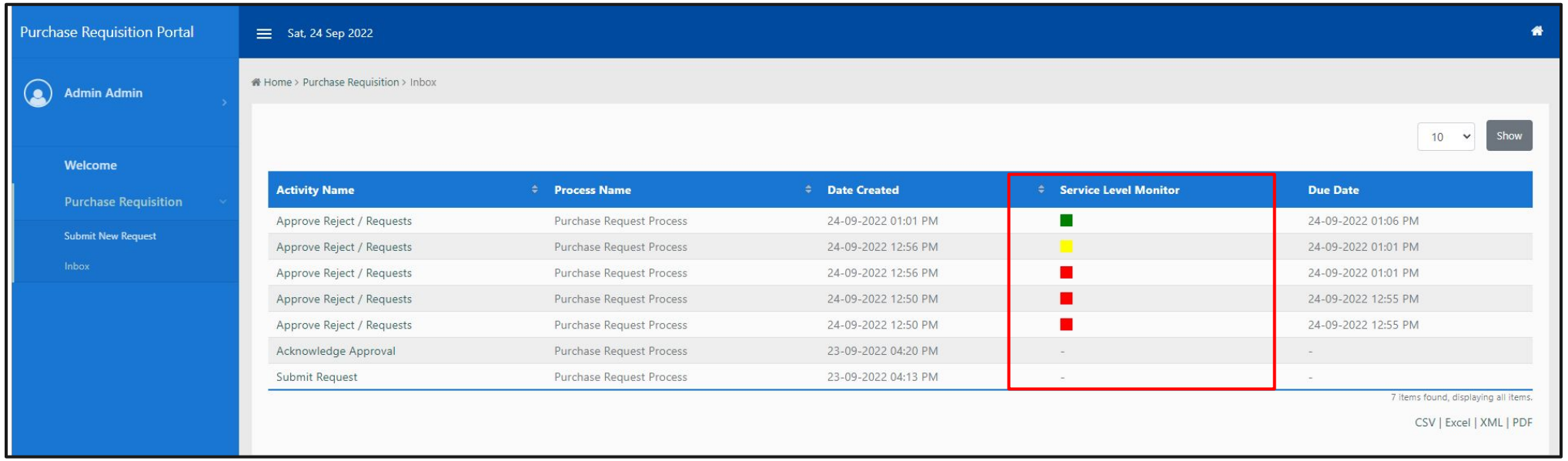
Defining SLA Indicator

- Medium Warning Level
  - Color: Yellow
  - Default Value: 20% of elapsed time.
- Critical Warning Level
  - Color: Red
  - Default Value: 50% of elapsed time.
- Can be changed in the System Settings. (System wide effect)



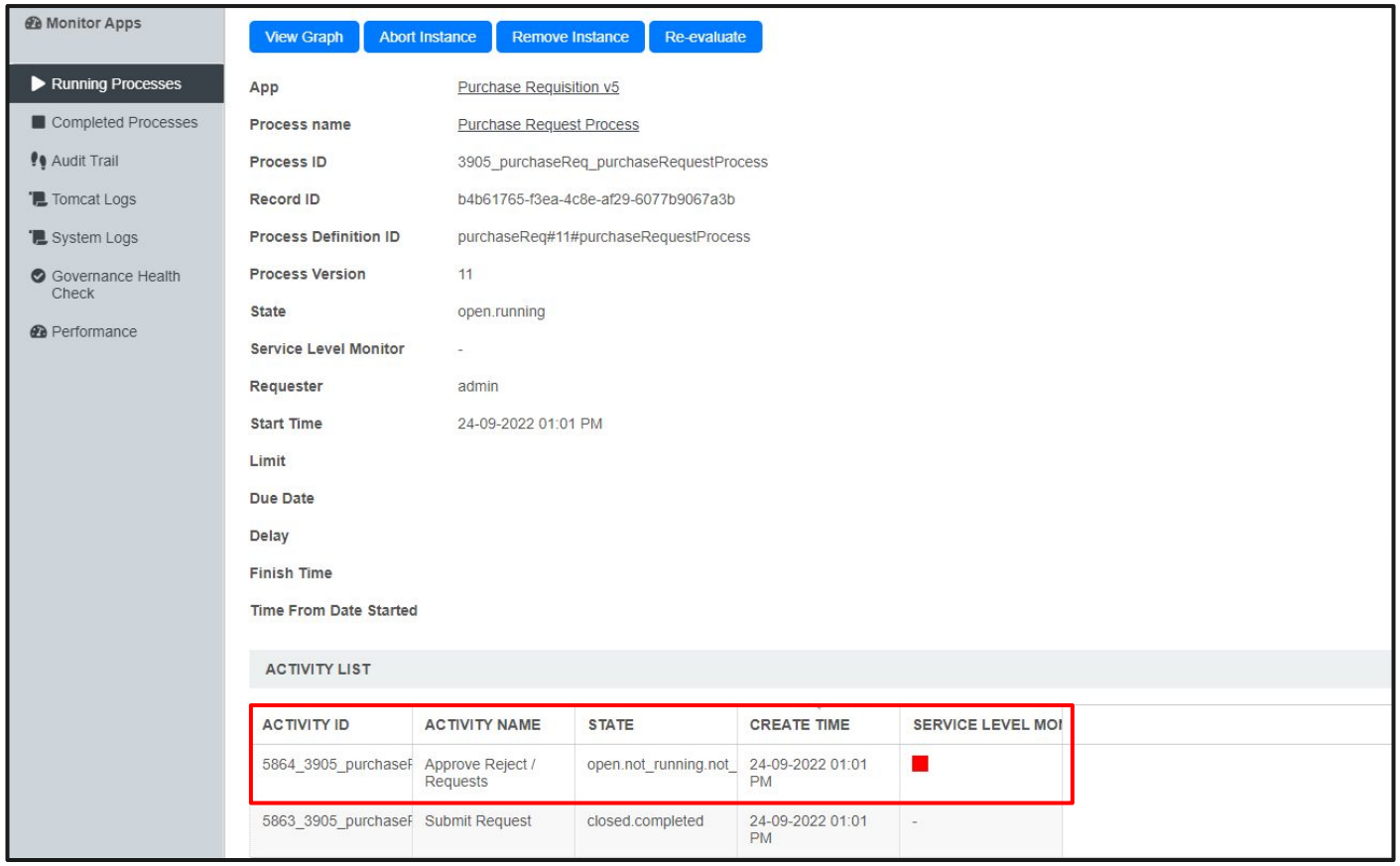
Service Level Monitor

- SLA Indicator will be seen in the task Inbox.



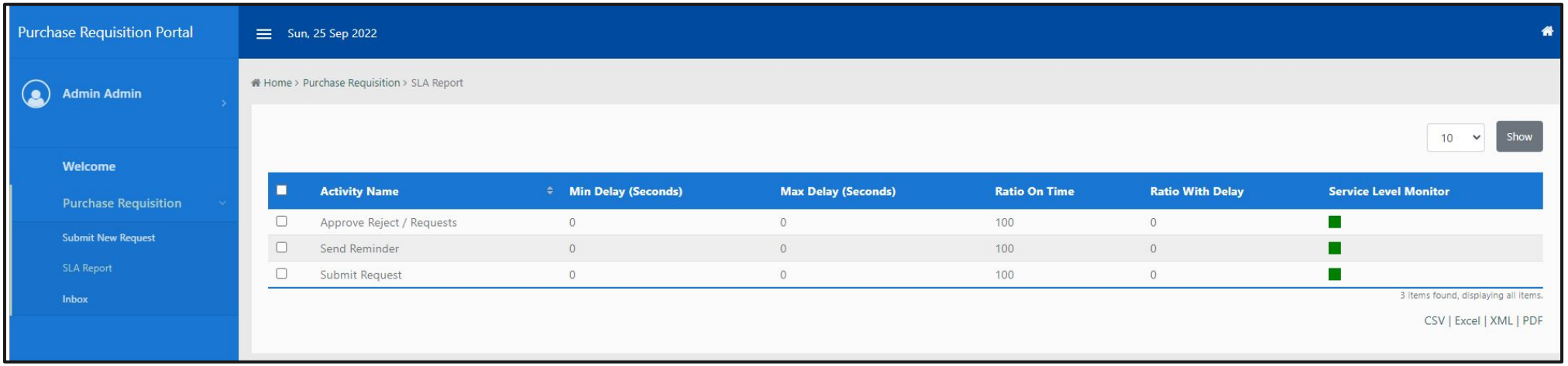
Process Monitoring

- SLA Indicator is also available in the Process Monitoring module for the administrator.



SLA Report on UI

- SLA Report can also be made available for end user (e.g. Manager) to inspect.
- Remember to enable the **Process Data Collector Plugin** before using the SLA Report menu.



- Reference: https://dev.joget.org/community/display/DX8/SLA+Report+Menu

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Chapter Review

- Set SLA limit to workflow activity, which enables the implementation of service level monitoring.

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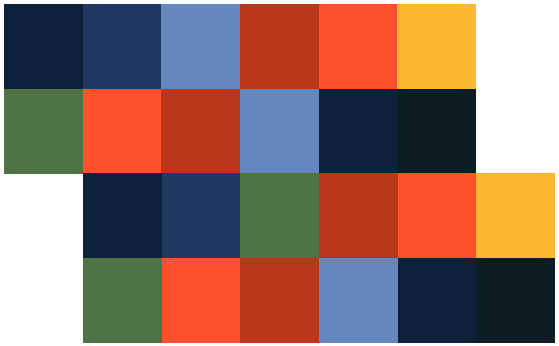
Exercise

- Tweak the SLA settings to only turn to YELLOW when half of the remaining time elapsed and...
- Change to RED when all the remaining time runs out.



Chapter 2

Deadlines

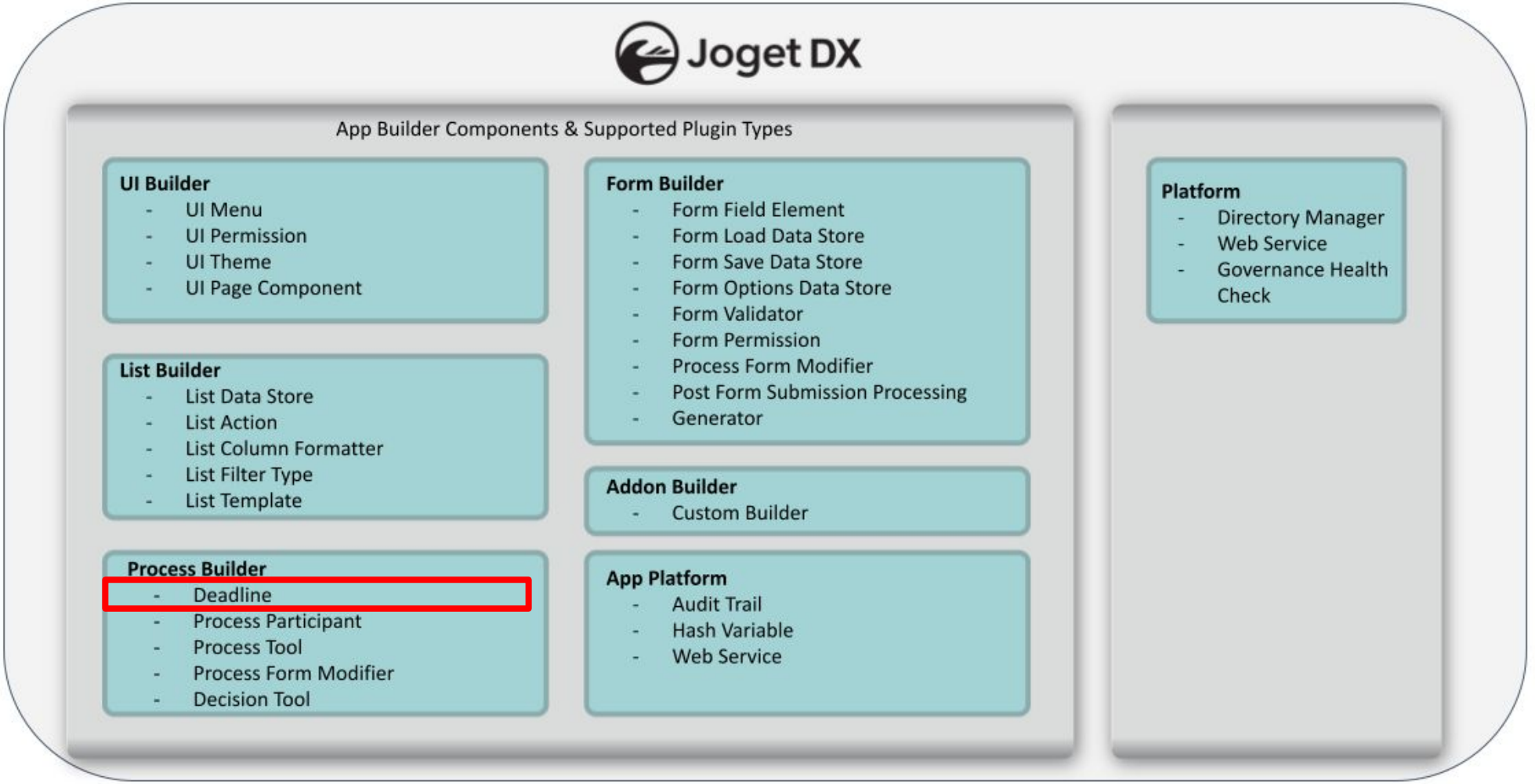
Deadlines and Exceptions

- For each activity, Deadline(s) can be set.
- Deadlines act as a timer which triggers an Exception transition to another activity when a specified duration has elapsed
- Deadlines that has reached its elapsed duration will be queued and then be picked up by the **Deadline Checker**.

Deadline reached

EXCEPTION

Plugin Types



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Deadlines

- Deadline execution can be **synchronous** or **asynchronous**.
- For **synchronous** execution, the current activity will no longer be active when the deadline is triggered.
  - Used in cases such as approval escalation.
- For **asynchronous** execution, the next activity will be executed while the current activity is still waiting.
  - Used in cases such as sending reminders.
- Multiple deadlines are supported for each activity.

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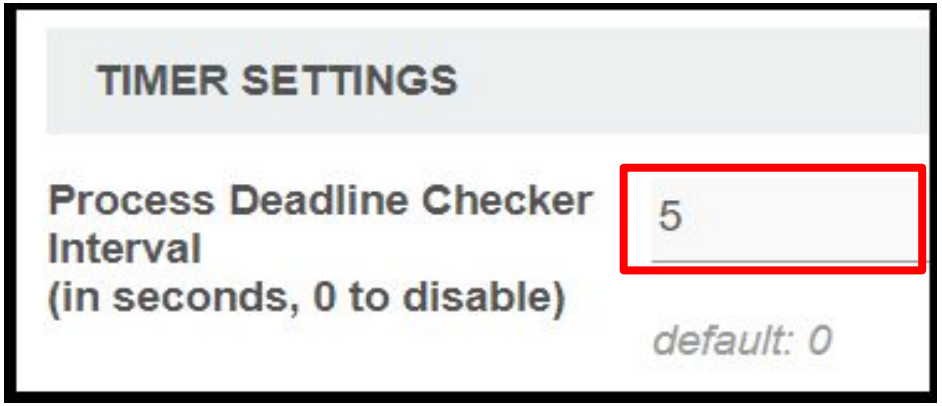
Deadline Checker

- The Deadline Checker kicks in at **specified intervals** when enabled.
- **Deadlines due** at the time will be **picked up** and processed in batches of 10 by the Deadline Checker until finish.
- The deadline checker will resume counting only when it completes processing all pending deadline tasks.
- Set an appropriate interval that suits your environment.

Activating Deadline Checker

- The **Process Deadline Checker** MUST be enabled under **System Settings** > **General Settings** for deadlines to work.
- This will enable periodic checks on activities' pending deadline tasks as defined by the **checker interval**.



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Deadline Checker Discussion

- What will the timeline be like for a Deadline set at 1 minute and Deadline Checker at 1 hour? (Think of the mailman analogy)

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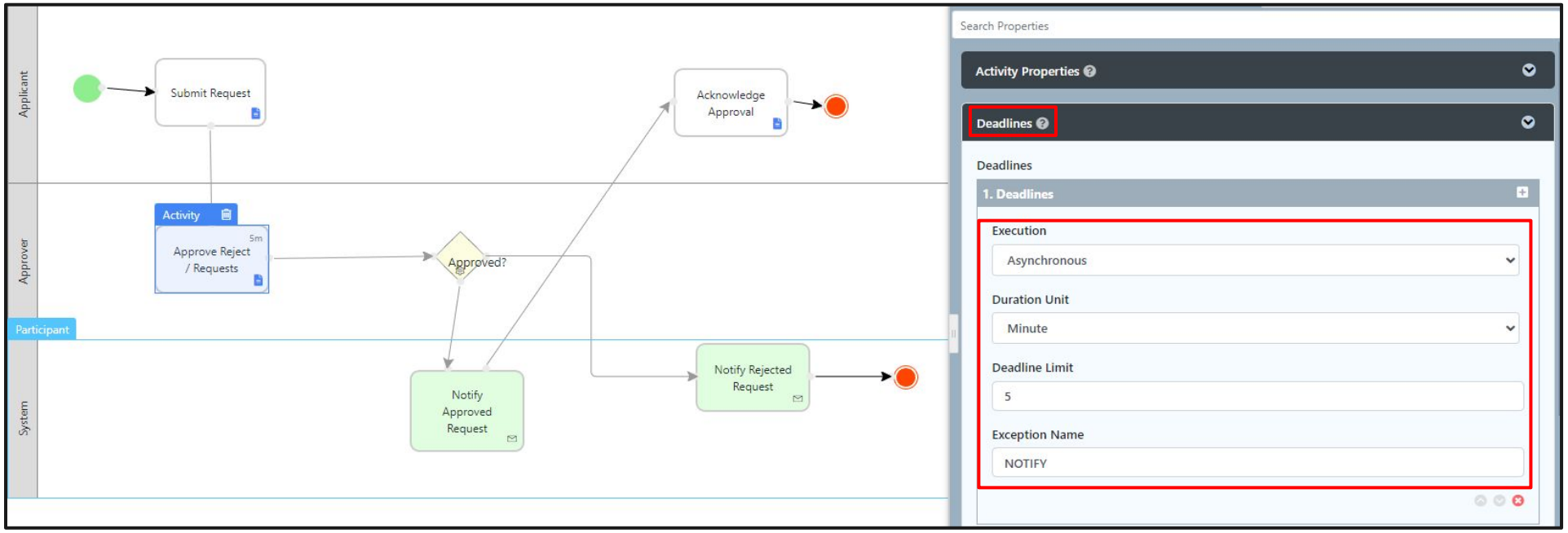
Setting Deadlines and Exceptions

- **Deadlines** are set at **activities**.
- **Exceptions** are set at **transitions**.
- Exceptions transition to another **activity** or **tool**.
- These are required for the deadline feature to work.

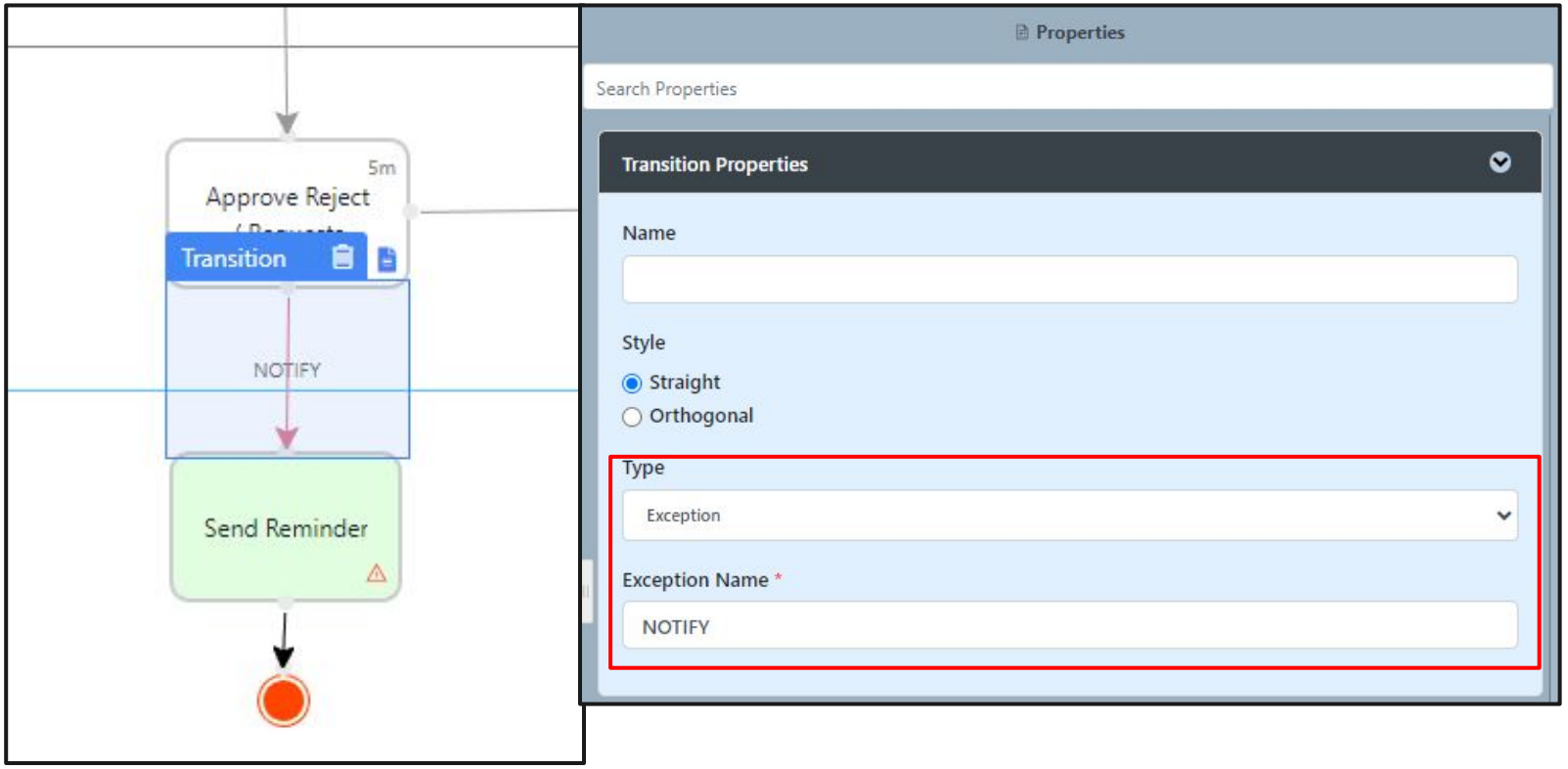
Add a New Deadline

- Add a new Deadline to the **Approve / Reject Request** activity.
- Add **Asynchronous** deadline, set it to 5 minutes.
- Set an exception name. It **must** be unique.

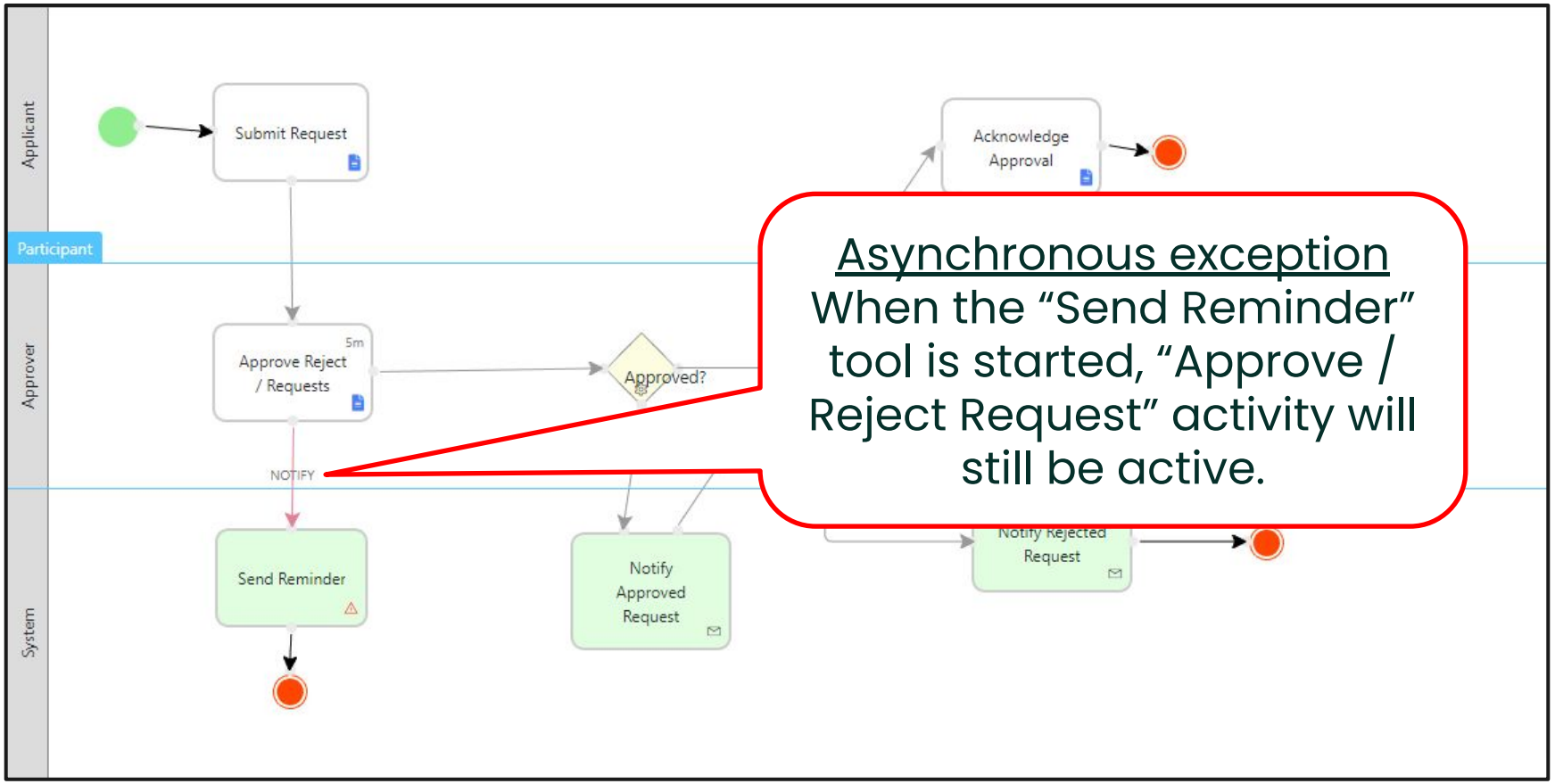


Add a New Deadline

- Add a new Tool, name it as **Send Reminder**.
- Link them up and set transition type to **Exception**. Set the exception name as the one declared earlier.



Setting Deadlines and Exceptions



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Process Monitoring

- Study on how deadline would affect your process instance in Process Monitoring.
- Differentiate types of “state” of activity/process.
  - closed.completed
  - closed.terminated
  - close.aborted
  - open.not_running.not_started

Exercise 1

- Verify that the deadline works as designed by mapping the newly created Tool to a Email Tool plugin.
- Configure the Email Tool accordingly.
- Test if the Email Tool is triggered by the Deadline by starting up a new process instance.
- Optionally, you may use Bean Shell Tool to output to the server log to test this too.

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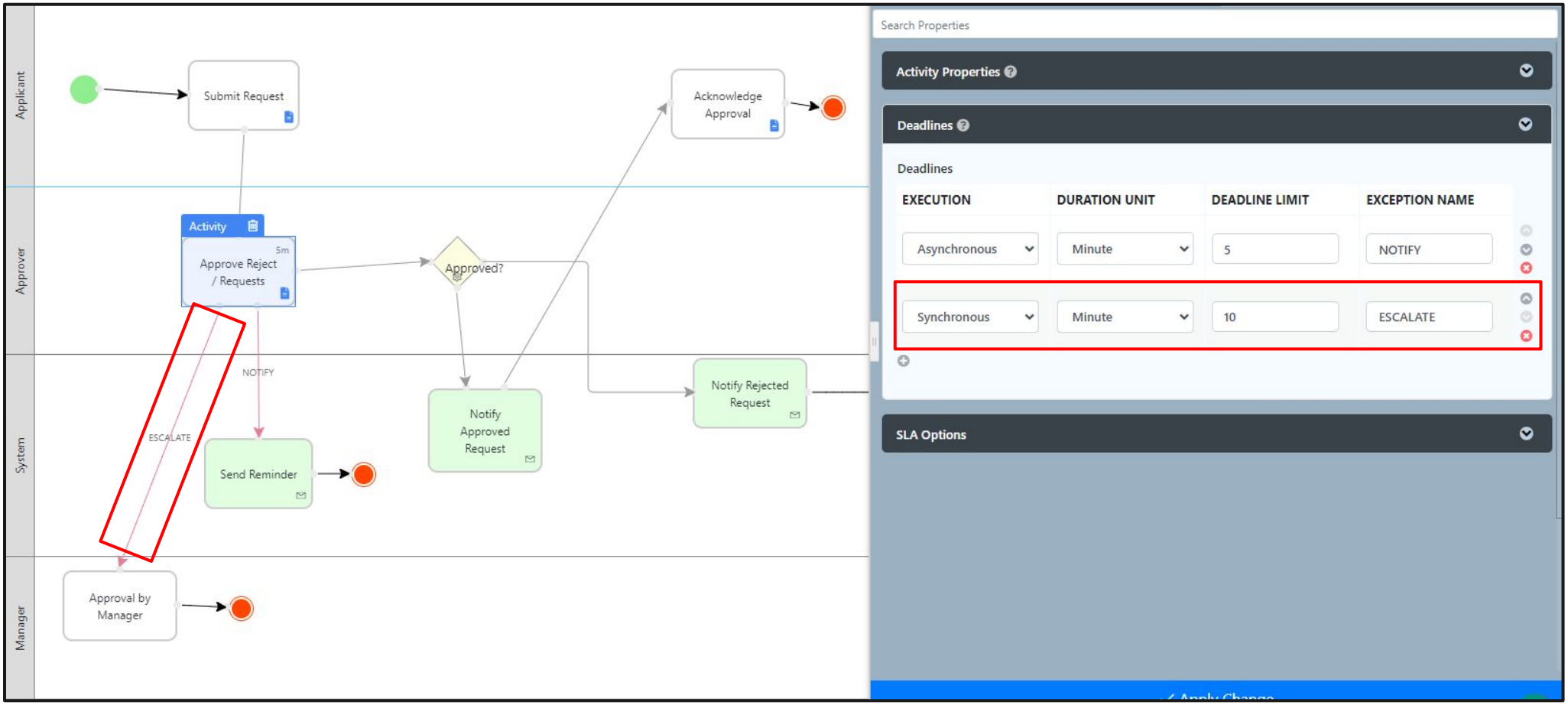
Exercise 2

- Add a second level approval for when the first level approver does not respond in certain period, the second approver will take over.
- Choose the appropriate time frame and type of deadline.
- Configure the new participant's mapping accordingly after deployment of the new process flow.

Exercise 2


Applicant
Approver
System
Manager
Submit Request
Acknowledge Approval
Activity
5m
Approve Reject / Requests
Approved?
NOTIFY
ESCALATE
Notify Approved Request
Notify Rejected Request
Send Reminder
Approval by Manager
Search Properties
Activity Properties
Deadlines
Deadlines
EXECUTION
DURATION UNIT
DEADLINE LIMIT
EXCEPTION NAME
Asynchronous
Minute
5
NOTIFY
Synchronous
Minute
10
ESCALATE
SLA Options

Good To Know

- One activity may contains one or more Deadlines.
- Each Deadline has its own Duration Unit, unlike SLA.

Good To Know

- It is also possible to set use a **Workflow Variable** as the Deadline limit.
  (Remember to declare the Workflow Variable and set the value according to the date format defined)

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Important Note

- SLA will **NOT** manipulate the flow of your Workflow Process, Deadline **will**.
- Deadlines will highly unlikely get triggered on the dot as it depends on the Deadline Checker Interval cycle & deadline tasks processing times.
- Deadline interval will begin again only after all deadline tasks in queue has completed processing.
- Do NOT set deadlines on Tool, it's only meant for Activities.

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Chapter Review

1. Set deadline and design exception handling.
2. Understand the difference between Synchronous and Asynchronous deadline.
3. Understand the overall deadline behavior

Reference:
https://dev.joget.org/community/display/DX8/Deadlines+and+Escalations

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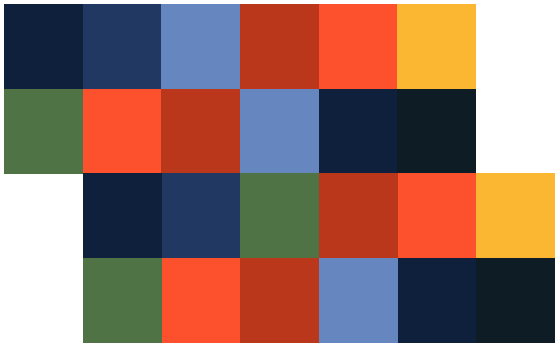
Just In Case...

- You can download the base Purchase Requisition app - **11.3.jwa** to observe and interact with SLAs and Deadlines.

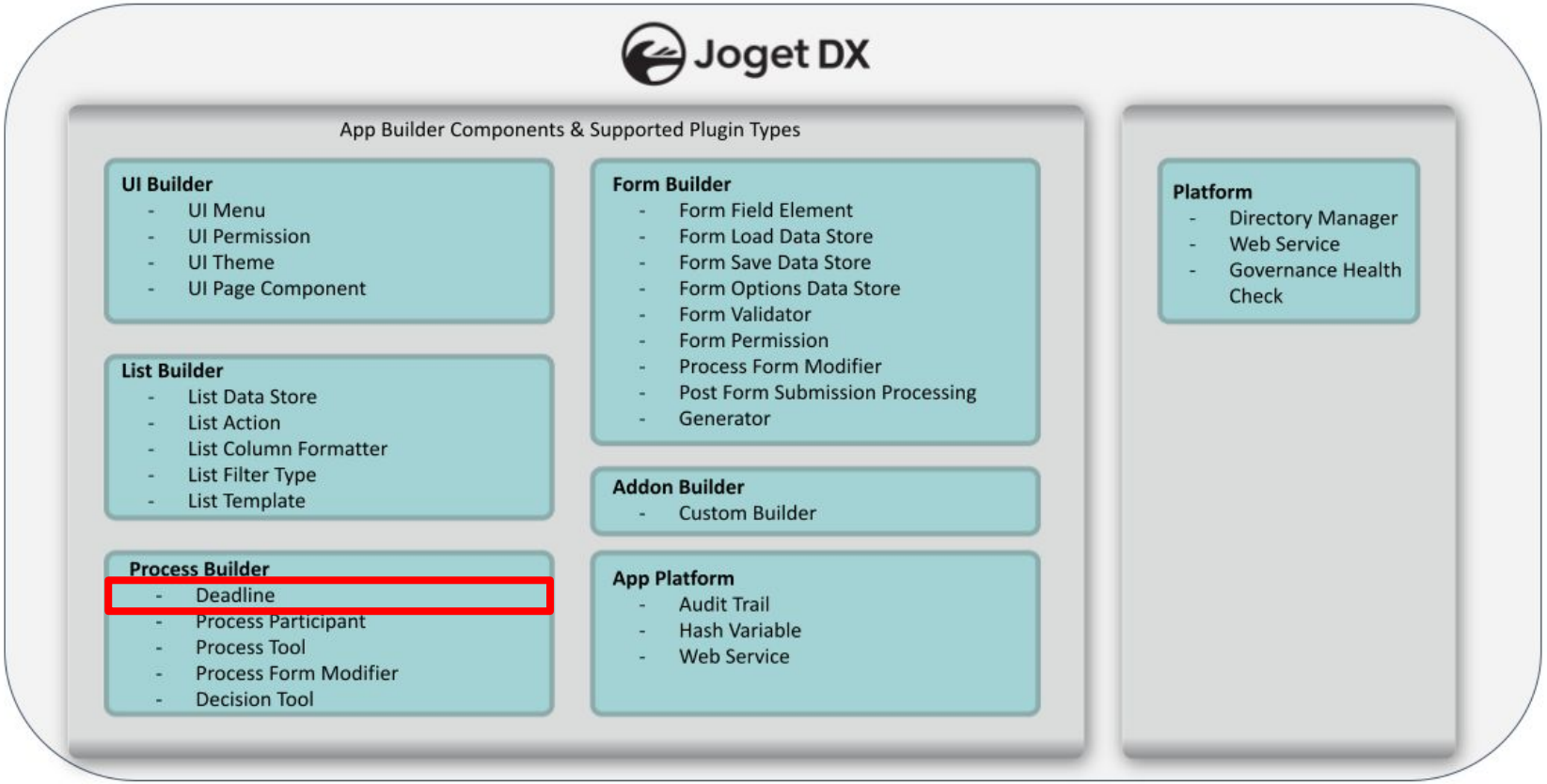


Chapter 3
Introduction to Deadline Plugin

Deadline Plugin

- **Deadline plugin** will influence the calculation of **SLA** and **Deadlines** in a process flow.

Plugin Types



4

Office Working Hour Deadline Plugin

- **Office Working Hour Deadline Plugin** is an essential addition to the working environment where **SLAs** and **deadlines** are implemented.
- This plugin will intercept and override how calculations are made by Joget when calculating due dates for SLAs and deadlines imposed on a process.
- The Office Working Hour Deadline plugin takes the following into account during calculations:
  - Holidays
  - Working Hours
  - Working Days

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Exercise

Consider a synchronous deadline where:

- ➔ Activity started at : Friday 5.50pm
- ➔ Deadline trigger set to : 30 minutes
- ➔ Last deadline checked : 5.55pm
- ➔ Deadline interval : every 1 hour
- ➔ Office Hours : Weekdays 9am - 6pm

Ignoring the deadline task processing time, when does the synchronous deadline trigger?

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Exercise - Optional

- Configure the Office Working Hour Deadline plugin into your existing App.
- Observe the changes to the due dates on SLA and Deadline.

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Chapter Review

- Able to understand the impact of Deadline plugins to Deadline and SLAs calculations.

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Module Review

1. Set SLA limit to workflow activity, which enables the implementation of service level monitoring.
2. Set deadline and design exception handling.
3. Understand the difference between Synchronous and Asynchronous deadline.
4. Understand the overall deadline behavior
5. Understand the Deadline Plugin and its purposes.

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