How to use Agents with Fixed Priority Scheduling and Round-Robin Scheduling

Scope

- Jobs and Job Chains can be executed by Agents.
- Agents can be operated in an Agent Cluster:
  - Fixed Priority Scheduling
    - JobScheduler Master selects the first available Agent from a cluster for job execution.
    - Should an Agent not be available then the next available Agent is used.
    - JS-1554 - Getting issue details... [STATUS]
  - Round-Robin Scheduling
    - JobScheduler Master switches the Agent used for each job execution.
    - Should an Agent not be available then the next available Agent is used.
    - JS-1188 - Getting issue details... [STATUS]

- Example configuration files are provided for downloading.

Agent Cluster Configuration

Agent configuration for Fixed Priority Scheduling
Description

- The process class is assigned a Primary Agent and a Fallback Agent.

<table>
<thead>
<tr>
<th>Process Class configuration for Fixed Priority Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;process_class&gt;</td>
</tr>
<tr>
<td>&lt;remote_schedulers select=&quot;first&quot;&gt;</td>
</tr>
<tr>
<td>&lt;remote_scheduler remote_scheduler=&quot;<a href="http://agent1:4445%22/%3E">http://agent1:4445&quot;/&gt;</a></td>
</tr>
<tr>
<td>&lt;remote_scheduler remote_scheduler=&quot;<a href="http://agent2:4445%22/%3E">http://agent2:4445&quot;/&gt;</a></td>
</tr>
<tr>
<td>&lt;/remote_schedulers&gt;</td>
</tr>
</tbody>
</table>

- All jobs are executed by the Primary Agent.
- Only if the Primary Agent becomes unavailable then the Fallback Agent will become active.
- If later on the Primary Agent becomes available then subsequent jobs will be executed on that Agent.

Note that:

- Fixed Priority Scheduling requires that the select parameter is set to first as shown in the code block above.
- If the select parameter is not set then fixed priority scheduling will be carried out by default.

Example

- Download fixed_priority_scheduling_agent.zip
- Extract the archive to your live folder, a directory fixed_priority_scheduling_agent will be created.
- The process class - 01_ProcessClass_Fixed_Priority_Scheduling_Agent - has been configured for two Agents: adjust these values to point to your Agent installations.

Agent configuration for Round-Robin Scheduling
**Description**

- The process class is assigned two Agents that are used interchangeably.

  - **Process Class Configuration for Round-Robin Scheduling**

    ```xml
    <process_class>
      <remote_schedulers select="next">
        <remote_scheduler remote_schedulers="http://agent1:4445"/>
        <remote_scheduler remote_schedulers="http://agent2:4445"/>
      </remote_schedulers>
    </process_class>
    ```

  - Jobs are executed interchangeably on each Agent.
  - If one Agent becomes unavailable then the jobs will be executed on the remaining Agent.

**Note that:**

- Round-Robin Scheduling requires that the `select` parameter is set to `next` as shown in the code block above.
- If the `select` parameter is not set then fixed priority scheduling will be carried out by default.

**Example**

- Download `round_robin_scheduling_agent.zip`.
  - Extract the archive to your `live` folder, a directory `fixed_priority_scheduling_agent` will be created.
  - The process class `01_ProcessClass_Round_Robin_Scheduling_Agent` has been configured for two Agents: adjust these values to point to your Agent installations.

**References**

**Change Management References**
Documentation

- JobScheduler Reference Documentation:
  - the <process_class> element
  - the <remote_scheduler> element
  - the <job_chain process_class="..."/> attribute

See also

- How to execute Jobs and Job Chains with Agents