




To be merged into TUTORIAL

## Long running tasks

scheduler

Long running tasks (LRT) in CzechIdM are available at the menu **Settings → Task scheduler**. LRT is a task which start is planned in advance and the instance runs at the background. Examples of LRT are identity lifecycle processes. The run of the LRT can be planned as one time run or periodically.


The first card of the form is **Running tasks**. It consists of the list of all currently running tasks. Progress bar of each running task is also available, if the LRT type supports it. Progress bar values are approximate and the total object count can change during LRT runs in some cases. In other words the LRT can start with progress 0/3598 which in a moment changes into na 0/1568 since there is some other change being done on the background of the application.

 Scheduler

Running tasks

Scheduled tasks

All tasks




HrEndContractProcess


identity lifecycle process - End contract

Parameters

core:instanceId: idm-primary

Processed ? / ?

 Interrupt task

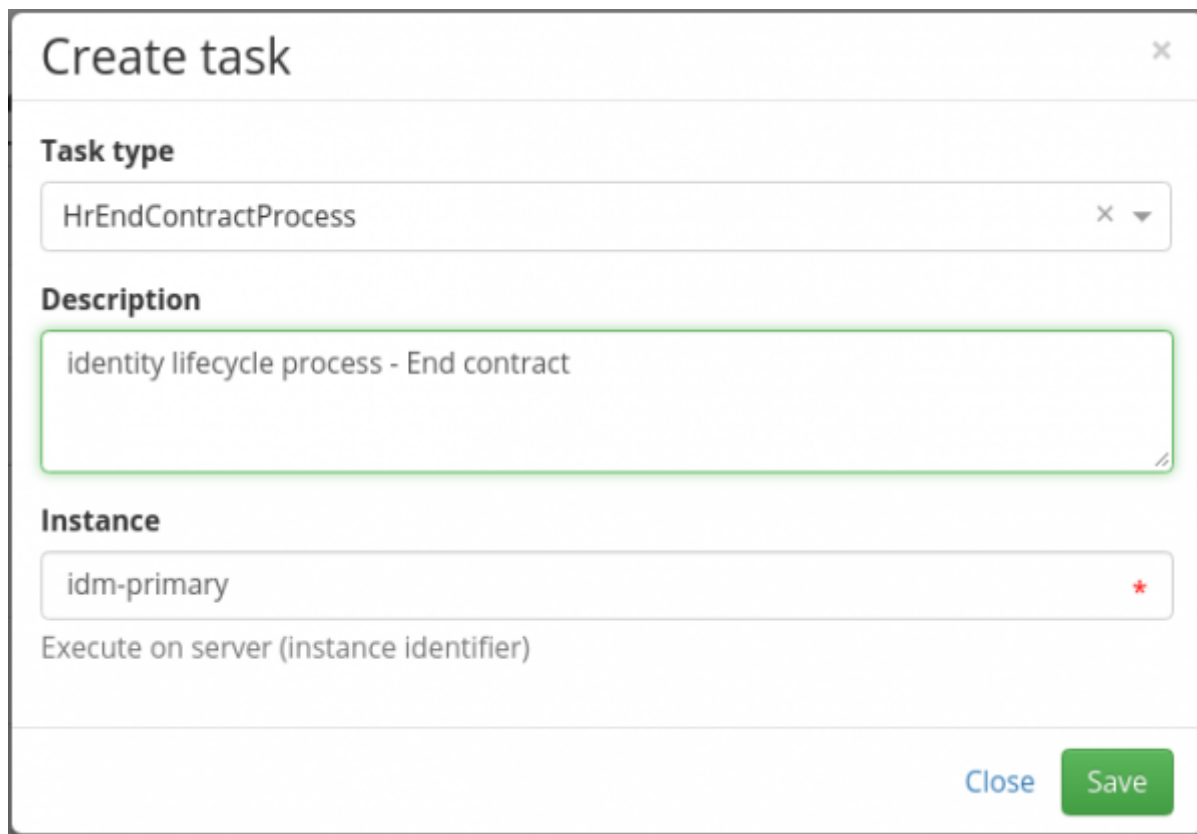
 End task

The next card **Scheduled tasks** shows the list of all available LRT. On the card one can create/delete tasks as well as plan the runs of the tasks or start the immediate run.

Scheduler						
<div> Running tasks Scheduled tasks All tasks </div>						
<div> <div>+ Add</div> <div></div> </div>						
Task type	Description	Instance	Task parameters	Scheduled starts	Actions	Id
HrContractExclusionProcess	Default	idm-primary		<div>+ Add</div>	<div> </div>	4f8f136
HrEnableContractProcess	Start of contract's validity.	idm-primary		<div>16.12.2017 01:45:00</div> <div>+ Add</div>	<div> </div>	4f8f136
HrEndContractProcess	Default	idm-primary		<div>+ Add</div>	<div> </div>	4f8f136
IdentityContractExpirationTaskExecutor	Remove roles by expired identity contracts (=> removes assigned roles).	idm-primary		<div>16.12.2017 01:00:00</div> <div>+ Add</div>	<div> </div>	4f8f136
IdentityRoleExpirationTaskExecutor	Remove expired roles.	idm-primary		<div>16.12.2017 01:15:00</div> <div>+ Add</div>	<div> </div>	4f8f136
IdentityRoleValidRequestTaskExecutor	Start of assigned role's validity.	idm-primary		<div>16.12.2017 01:30:00</div> <div>+ Add</div>	<div> </div>	4f8f136

## How to create a new LRT

When clicking on green button **Add** in the right upper corner we create a new LRT. On the popup window we choose the type of the task. In our example we choose the task that realize identity lifecycle process "end of user contract". We can also type the task description which will be then viewable at the list of all task. The last configurable option is instance, which defines the instance of CzechIdM that the task will run on. This choice has purpose only if the CzechIdM is installed in several instances. So in majority of cases the default value of **idm-primary** is the best choice. Then we save our new task by clicking on **Save**. Creating new LRT does not start the run instantly.



**Create task**

**Task type**

HrEndContractProcess

**Description**

identity lifecycle process - End contract

**Instance**

idm-primary

Execute on server (instance identifier)

Close Save

## Planning LRT runs

In previous step we prepared new LRT, run of which we now want to plan. In our example we want that the LRT will run every day at 1:15 AM. To do so we click on the green button **Add** in the row with our previously created LRT and the column **Planned runs**.

## New scheduled run

Type

Cron

Cron expression

0 15 1 \* \* ?

Quartz cron expression

Close Save

In next popup window, we can choose from these three options:

- One time run - By choosing the date via calendar we plan one run of the LRT. If the time was entered in the past, then the task is launched right away.
- Cron - Periodical runs. Syntax of this option follows the CRON syntax, if you are not familiar with the CRON syntax, click on the link **Expression** on the window. In our example we set the cron to a value of 0 15 1 \* \* ?
- Dependent task - By choosing the other task - when other task successfully ends, then this task will run.

Every LRT can have several planned runs in the future. Planned run can be of course deleted. We can do that by clicking on the red cross sign next the planned run in the column **Planned runs**.

We can also start the LRT instantly. Use the green button with the sign of triable in the row with chosen LRT.

## Audit LRT

On card **All tasks** there is a list of all runs of all LRT (including currently running ones).

Scheduler						
Running tasks Scheduled tasks All tasks						
Run all created tasks Filter						
	State	Created	Task type	Parameters	Description	Processed
<input type="checkbox"/>	Executed	30.08.2017 20:50:00	IdentityRoleValidRequestTaskExecutor	core:instanceId: idm-primary	fdafdsafad	0 / 0
<input type="checkbox"/>	Executed	30.08.2017 20:45:00	IdentityRoleValidRequestTaskExecutor	core:instanceId: idm-primary	fdafdsafad	0 / 0
<input type="checkbox"/>	Executed	30.08.2017 20:43:15	HrEndContractProcess	core:instanceId: idm-primary	identity lifecycle process - End contract	1 / 1

After clicking on magnifying glass next to the task there is task detail available. We can see the







information about the running time, processed objects etc...

## Long Running Task detail page

### Dry Run

Dry Run is tool in CzechIdm which allows us to run current Long Running Task with no changes after. Only results which this current task will produce in future non-DryRun run are displayed.

You can reach this tool by going to *Task scheduler-Scheduled tasks* and than you hit blue play button (Example in the picture below).

Running tasks Scheduled tasks All tasks						
+ Add						
Task type	Description	Instance	Task parameters	Scheduled starts	Actions	Id
HrContractExclusionProcess	Default	Idm-primary		+ Add	  	4f8f136
HrEnableContractProcess	Start of contract's validity.	Idm-primary		16.12.2017 01:45:00 ✖ + Add	  	4f8f136

Than in detail page of current Long Running Task you can see *Basic information* about task but mostly connected with Dry Run, Processed items and Queue.

### Processed items

This agenda shows you all entities which were processed by current task or in case of Dry Run it will shows all entities which are in queue. It is displayed with sign "Not executed" which means that this process was just in demo-run(Dry Run).

Basic information

Processed items

Queue

Filter

State	Entity	Entity type	Created	Id
Not executed	Marek Klement (klemema) - Boss	eu.bcvsolutions.idm.core.api.dto.IdmidentityContractDto	15.12.2017 11:35:31	fbc8089

1 - 1 of 1 records

### Queue

Queue is basically list of items which were already processed by this Scheduled task(executed-not Dry Run).

Basic information					
○ Processed items					
○ Queue					
State	Entity	Entity type	Created		
Executed	Marek Klement (klemema) - Default	eu.bcvolutions.idm.core.api.dto.IdmidentityContractDto	15.12.2017 11:47:04		
Executed	Administrator (admin) - Organization Two (two)	eu.bcvolutions.idm.core.api.dto.IdmidentityContractDto	15.12.2017 11:47:04		

Detail

If we open detail of our Long Running Task than we can choose from three other pages:

- Basic information
- Processed items
- Queue

Both pages Processed items and Queue is same in Dry Run. It is up to user if it is processed with Dry Run or normal run.

Basic information

This page contains basic information about Long Running Task:

- Created: timestamp when was this Long Running Task created at the page *Scheduled tasks*
- Started: timestamp when was this Long Running Task runned at the page *All tasks*
- Task type: type of current task
- Instance
- Parameters: other parameters of this task
- Description
- Processed: two numbers- Number of items with result executed/ How many should be processed
- Task duration: How long does the task last - if you roll over with mouse than you can see exact time
- Result

Basic information

Created

15.12.2017 11:46:58

Started

15.12.2017 11:47:04

Task type

HrEnableContractProcess

Instance

ldm-primary

Task will be executed on server (instance identifier)

Parameters

core:InstanceId: ldm-primary

core:dryRun: false

Description

Start of contract's validity.

Processed

6 / 6

Task duration

a few seconds

Result

✔ Executed

[Back](#)

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