

Open Source Process Automation

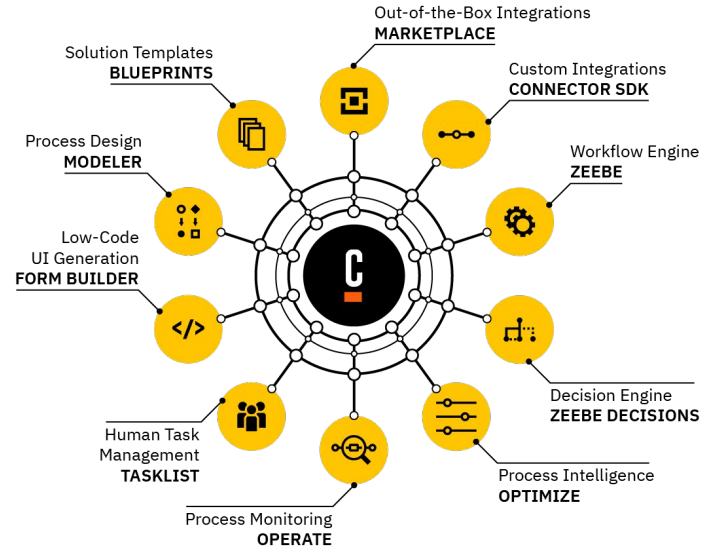
GETTING STARTED

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AGENDA

- ❑ What is Camunda?
- ❑ Camunda Labs Intro
- ❑ Business automation
- ❑ Architecture
- ❑ New project in Camunda
- ❑ Business assets
 - ❑ Data “objects” (variables)
 - ❑ Business processes
 - ❑ Forms
- ❑ Process administration
- ❑ Team collaboration



CAMUNDA OFFERINGS

- ❑ Camunda 8 Run
 - ❑ First part of the semester, used for homework and getting started experience
 - ❑ Local installation of Camunda
 - ❑ Zeebe Engine
 - ❑ Connectors
 - ❑ Operate
 - ❑ Tasklist
- ❑ Camunda 8 SaaS
 - ❑ Second part of the semester, used for your projects
 - ❑ Online
 - ❑ Only 30 days trial for process execution
 - ❑ Create more accounts if needed

WHAT IS Camunda?

Camunda Platform: The Universal Process Orchestrator



Design

Developers & business users collaborate to design & deploy processes with Camunda.



Modeler

Model & deploy business process diagrams with BPMN & DMN.

Available via web and desktop app.



Connectors

Out-of-the-box integrations to easily communicate with popular enterprise applications & protocols.



Integration Framework

Build & provision your own connectors to any system including home-grown & legacy applications.



Forms

Drag & drop creation of forms that power workflows that require human interaction.

Automate

Enterprise-grade automation platform. Built for today's business complexity, loved by developers.

POWERED BY ZEEBE



Workflow Engine

Next-generation, cloud-native BPMN workflow engine that unlocks unparalleled speed, scale & resilience.



Decision Engine

Automate decisions in end-to-end business processes via DMN.



Tasklist

Assign and execute tasks that require human interaction via easy-to-use Forms or via your own apps with the Tasklist API.



Operate

Real time visibility to monitor, analyze and resolve problems with any process instance.

Improve

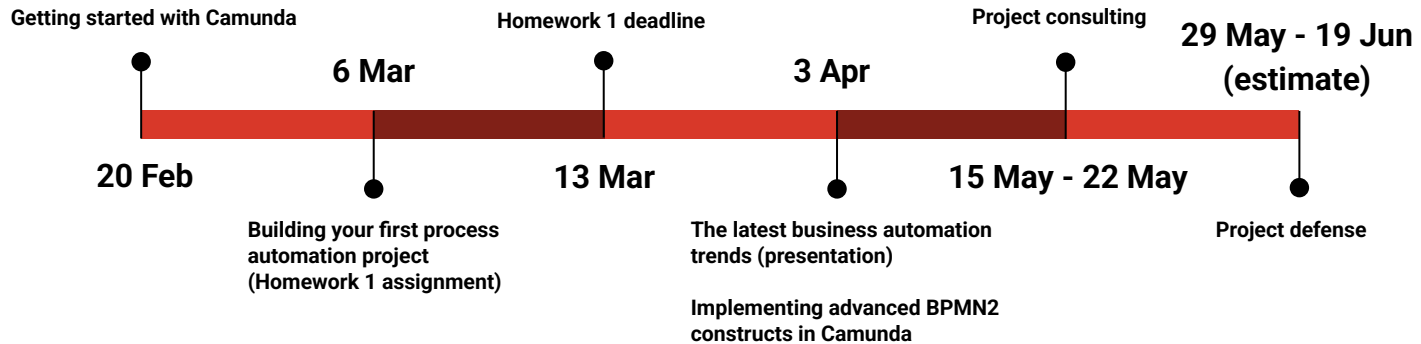
Teams have the insights to fix the highest ROI problems for their business processes.



Optimize

Get the insights you need to understand and continuously improve your business processes.

LECTURES AND LABS

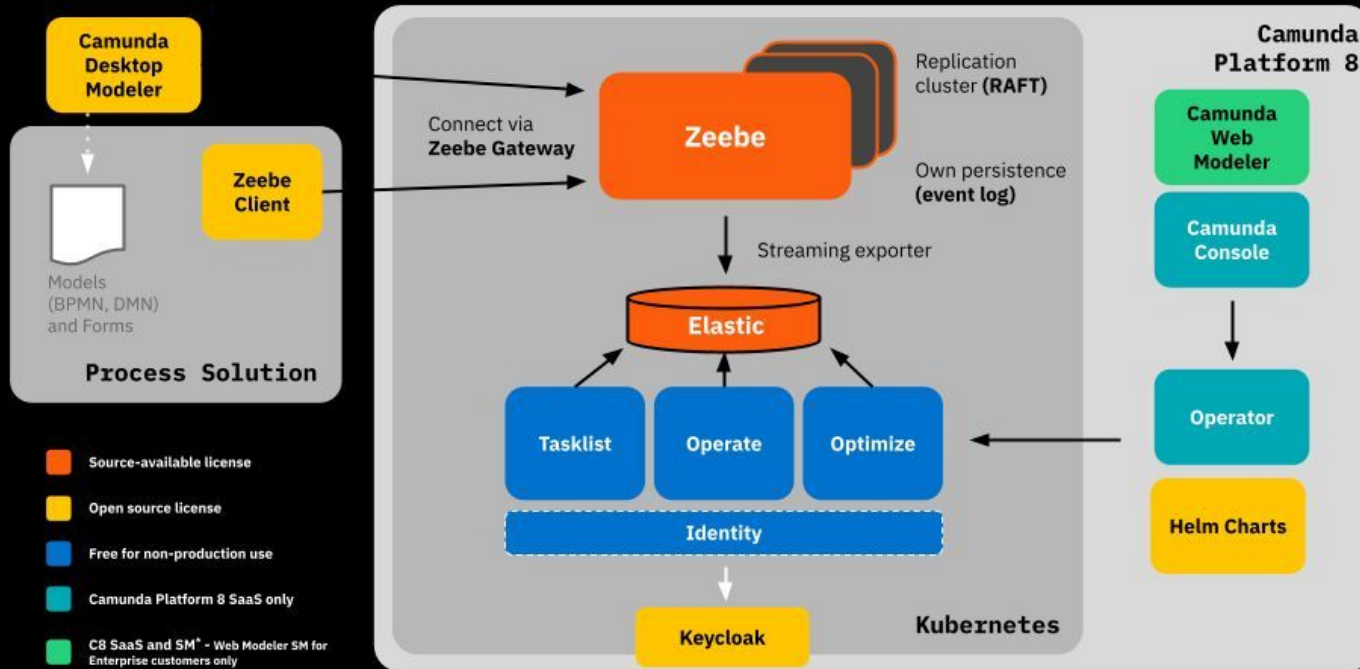


FROM A MODEL TO PRODUCTION



ARCHITECTURE

Camunda Platform Components



SETUP - THE FIRST STEPS

- ❑ Download and install [OpenJDK 21 Java](#) (*Oracle JDK 21 will work too if you have already installed it before*), just remember the location where you installed Java for next steps
- ❑ Download [Desktop Modeler](#)
- ❑ [Install and start Camunda 8 Run](#) (latest available is 8.6.9, scroll down for download)
 - ❑ camunda8-run-x.y.z-darwin-aarch64.tar.gz (M-based Mac)
 - ❑ camunda8-run-x.y.z-darwin-x86_64.tar.gz (Intel-based Mac)
 - ❑ camunda8-run-x.y.z-linux-x86_64.tar.gz
 - ❑ camunda8-run-x.y.z-windows-x86_64.zip

CAMUNDA 8 RUN START COMMANDS

- ❑ Run using command line from inside the unzipped directory:

- ❑ Linux/Mac

```
export JAVA_HOME="/usr/lib/jvm/java-21-openjdk-21.0.5.0.11-1.fc41.x86_64"  
./start.sh
```

- ❑ Windows (Command prompt)

```
set JAVA_HOME="C:\Program Files\Java\jdk-21"  
set JAVA_VERSION=21  
.\c8run.exe start
```

- ❑ Windows (PowerShell)

```
$env:JAVA_HOME="C:\Program Files\Java\jdk-21"  
$env:JAVA_VERSION=21  
.\c8run.exe start
```

- ❑ Replace JAVA_HOME value with location where you installed Java on your system, it must be the directory which contains the *bin* directory, however it must not be a part of the path. Make sure to surround it with "" so whitespaces in the path are recognized.

CAMUNDA 8 RUN STOP COMMANDS

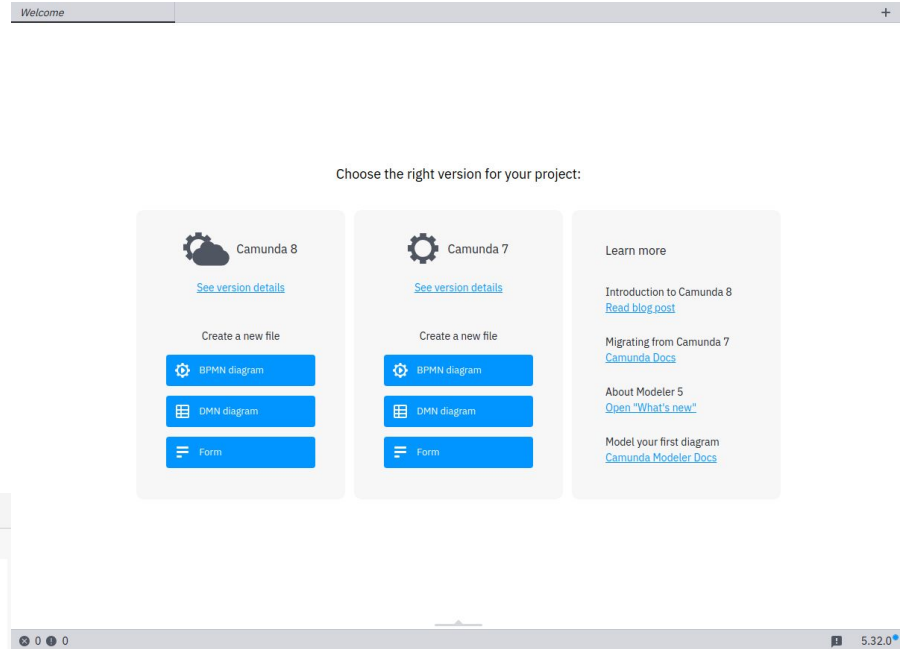
- ❏ Linux/Mac
`./shutdown.sh`
- ❏ Windows
`.\c8run.exe stop`

ACCESS CAMUNDA COMPONENTS

- ❑ All Camunda 8 Run components can be accessed using the username/password combination **demo/demo**.
- ❑ Tasklist and Operate are available at:
 - ❑ Tasklist: <http://localhost:8080/tasklist>
 - ❑ Operate: <http://localhost:8080/operate>
- ❑ Following components do not have a web interface, they are used internally
 - ❑ Zeebe Gateway: <http://localhost:26500>
 - ❑ Connectors: <http://localhost:8085>
- ❑ For more information see [Local installation with Camunda 8 Run](#) and related documentation

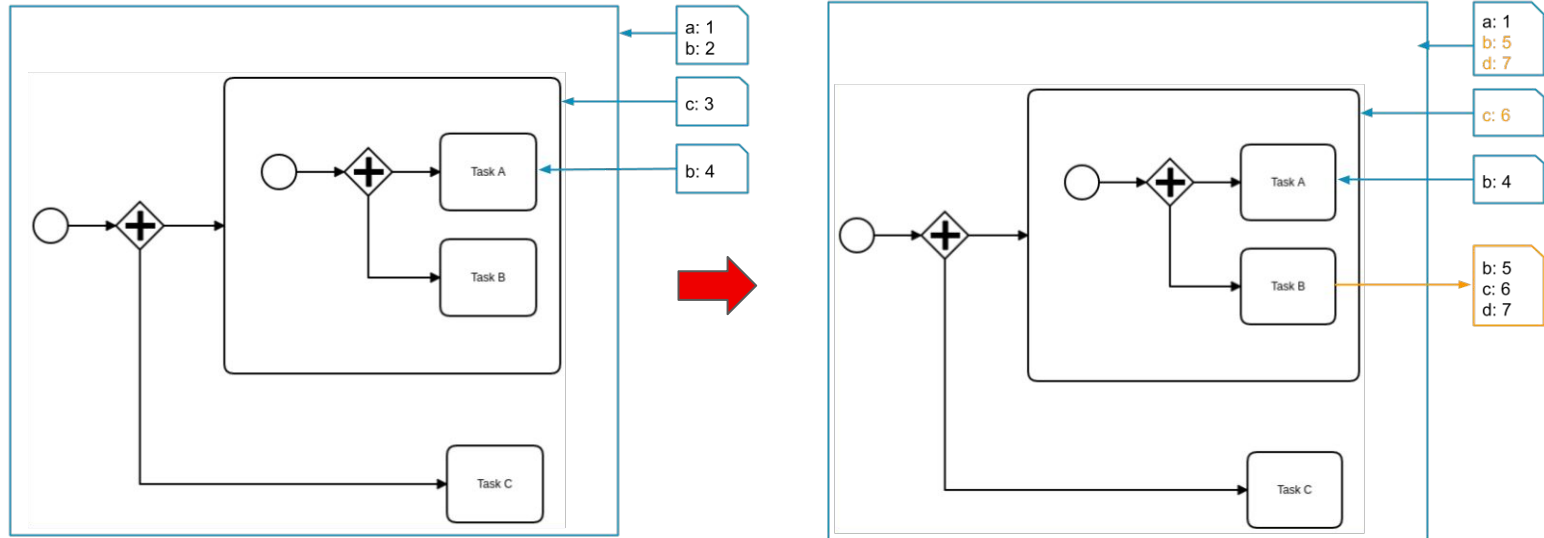
NEW “PROJECT” IN CAMUNDA

- ❑ Camunda 8 Run
 - ❑ No Project, just files on file system
 - ❑ Deploy files
- ❑ Camunda 8 SaaS
 - ❑ Proper project
 - ❑ Deploy whole project
- ❑ Create assets
 - ❑ Business Process
 - ❑ Form
 - ❑ DMN Model



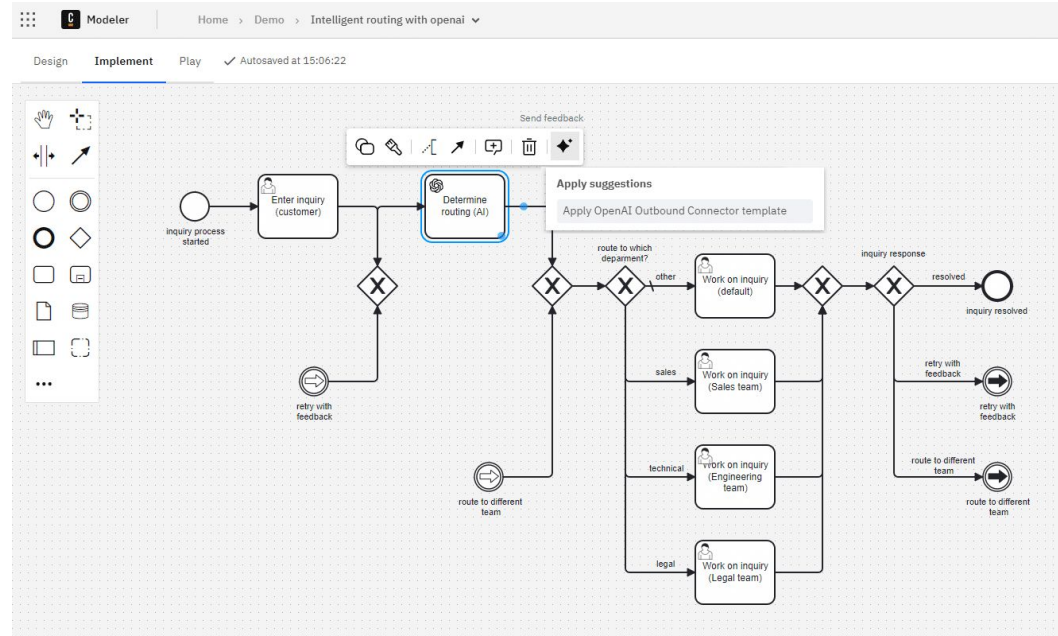
DATA MODELING

- ❑ No Data Object representation
- ❑ A variable has a name and a JSON value
- ❑ The visibility of a variable is defined by its variable scope.



PROCESS MODELING

- ❑ BPMN2 support
- ❑ Focus on execution semantics
- ❑ Data I/Os
- ❑ Human tasks
- ❑ Decisions and calculations
- ❑ External calls
- ❑ Catching and triggering events
- ❑ Export to PNG, JPEG, SVG



FORM MODELING

- ❏ Form types
 - ❏ Process start form (only Camunda 8 SaaS)
 - ❏ Task form
- ❏ Widget library able to bind different types of data (Text field, Date time, Checkboxes, Selection...)

The screenshot displays a form modeling tool interface. At the top, there is a toolbar with icons for edit, view, and settings, along with an 'Autosaved at 3:31:57 PM' indicator and a 'Connect to diagram' button. The main workspace is divided into three sections:

- Components:** A sidebar on the left containing a search bar and a grid of widget categories: 'Basic input' (Number, Date time, Text field, Text area), 'Selection' (Checkbox, Checkbox group, Radio group, Select, Tag list), and 'Presentation' (Image view, Spacer, Separator, Text view, Table). A blue 'AI Form Generator' button is located at the bottom of this sidebar.
- Form Preview:** The central area showing a form titled 'Patient Safety Assessment for Clinical Drug Trial'. It includes sections for 'Patient Information' (Name, Date of Birth, Gender), 'Medical History' (three conditions: Asthma, Migraine, High Blood Pressure, each with an 'Under treatment' checkbox), and 'Current Medication' (a list with 'Beta blockers' and 'Asthma spray' and a search field).
- Properties Panel:** A sidebar on the right for the 'TAG LIST' widget, showing fields for 'Field label', 'Field description', 'Key', and 'Options source', along with toggle switches for 'Disabled' and 'Read only'.

PROCESS ADMINISTRATION

- ❏ Provided by Operate
- ❏ Quick access to:
 - ❏ Process Definitions
 - ❏ Process Instances
 - ❏ Execution errors
- ❏ Filtering

The screenshot displays the Operate Process Administration interface. The top navigation bar includes 'Operate', 'Dashboard', 'Processes', and 'Decisions'. The main area is titled 'Batch Modification Mode' and shows a process definition for 'complexProcess'. The process flow includes a 'Start bus threads' event, an 'Upper task' (with 3 instances selected), a 'message' task, a 'Subprocess started' event, a 'Subprocess task' (with 3 instances selected), a 'Subprocess finished' event, a 'Lower task' (with 29 instances), a '5 seconds' timer, and a 'Message task'. A notification bar indicates: 'Modification scheduled: Move 3 instances from "Upper task" to "Subprocess task". Press "Apply Modification" button to confirm.' Below the process diagram is a table of 'Process Instances' with 29 results, showing 3 items selected.

| Name | Process Instance Key | Version | Start Date | End Date | Parent Process Instance Key | Operations |
|----------------|----------------------|---------|---------------------|----------|-----------------------------|------------|
| complexProcess | 9007199254743398 | 2 | 2024-07-04 13:12:39 | -- | None | ⊞ |
| complexProcess | 6755399441058615 | 2 | 2024-07-04 13:12:39 | -- | None | ⊞ |
| complexProcess | 4503599627373507 | 2 | 2024-07-04 13:12:39 | -- | None | ⊞ |

TASK ADMINISTRATION

Provided by Tasklist

The screenshot displays a web application interface for task administration. The main header shows 'Tasklist' with tabs for 'Tasks' and 'Processes'. A 'Filters' button is located on the left side. The 'Tasks queue' is visible on the left, listing several tasks with their status, priority, and due dates. The 'Selected task details' view is open for 'Company registration', showing a form with fields for company details, work phone, E-mail, company address, and income details. A 'Form' label points to the input fields. On the right, a 'Details' sidebar shows creation date, candidates, priority, due date, and follow-up date. A 'Task summary' label points to the 'Follow up date' section.

Filters

Tasks queue

- All open tasks
- Company registration
Business unit management
Unassigned
20 May
High
01 Jun
- Open an account
Camundia Customer Support
Me
Monday, 11:46
Medium
Tomorrow
- Loan approval
Camundia Credit Request
John Doe
11 Jun
Medium
27 Jun
- Register the passenger
Flight registration
Unassigned
Yesterday
Critical
21 Jun
- Loan approval
Camundia Credit Request
Me
02 Jun
Low
17 Jun
- Loan approval
Camundia Credit Request
John Doe
Medium

Selected task details

Company registration
Business unit management
Unassigned
Assign to me

Task | **Process**

Company details
Legal company name

Name

Work phone: 012345 | E-mail: 012345

Company Address
Address

City: enter city | ZIP Code: 012345

Income details

| Yearly income | Amount |
|---------------|--------|
| 2023 | |
| 2022 | |
| 2021 | |

Details

Creation date: 20 May 2024, 15:23

Candidates: No candidates

Priority: High

Due date: 01 June 2024

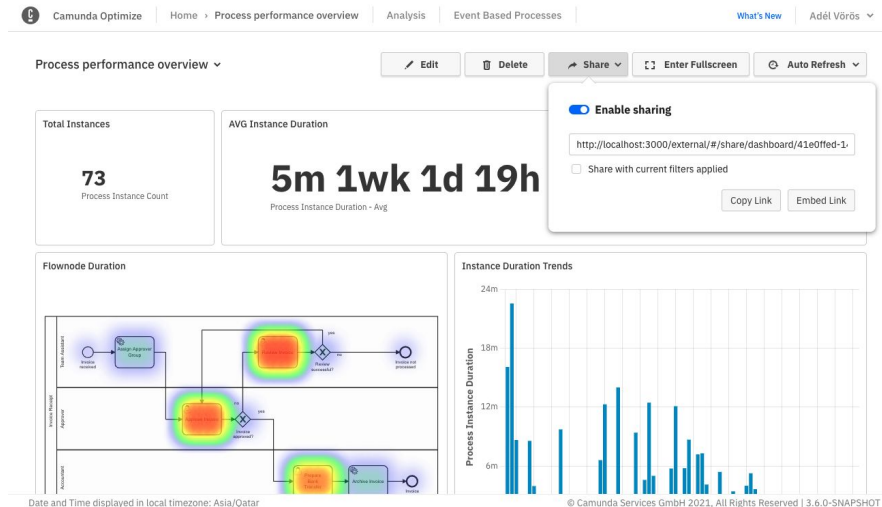
Follow up date: No follow up date

Form

Task summary

PROCESS MONITORING

- ❏ Provided by Optimize
- ❏ Process reports
- ❏ Task reports



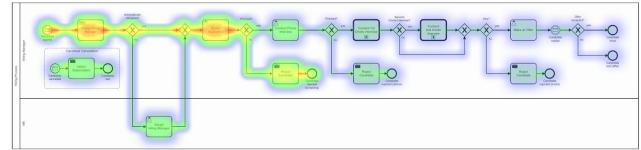
Date and Time displayed in local timezone: Asia/Qatar

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Hiring Overview - Detailed

Toggle Theme Leave Fullscreen Auto Refresh

Hiring Process - Detailed



Running Detailed

| Process Definit... | Process Instanc... | Start Date | Variables | |
|--------------------|--------------------|-------------------|------------|---------------|
| | | | Department | JobExperience |
| hiring-demo | 40f1b787-6865... | 2020-03-17 16:... | IT | Senior |
| hiring-demo | 40e92cc8-6865... | 2020-03-17 15:... | Sales | Beginner |
| hiring-demo | 40e20095-6865... | 2020-03-17 14:... | Sales | Associate |
| hiring-demo | 40d7a018-6865... | 2020-03-17 14:... | IT | Associate |
| hiring-demo | 40ce9f15-6865... | 2020-03-17 13:... | Sales | Associate |
| hiring-demo | 40cb6b90-6865... | 2020-03-17 12:... | IT | Mid-Senior |
| hiring-demo | 40c9eed9-6865... | 2020-03-17 11:... | Marketing | Senior |
| hiring-demo | 40bdaf70-6865... | 2020-03-17 10:... | IT | Beginner |
| hiring-demo | 40a56d1a-6865... | 2020-03-17 10:... | Sales | Senior |

Number Hires

94

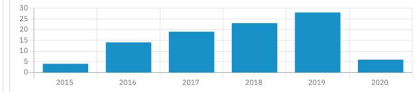
Running

80

Made Offer

0

Number Hires per Year



TEAM COLLABORATION

- ❑ Camunda 8 Run
 - ❑ Copy a folder with files between team members
- ❑ Camunda 8 SaaS
 - ❑ Team members can contribute to the same online project

THANK YOU



[linkedin.com/company/red-hat](https://www.linkedin.com/company/red-hat)



[youtube.com/user/RedHatVideos](https://www.youtube.com/user/RedHatVideos)



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twitter.com/RedHat