Status Report: JAliEn batch queues
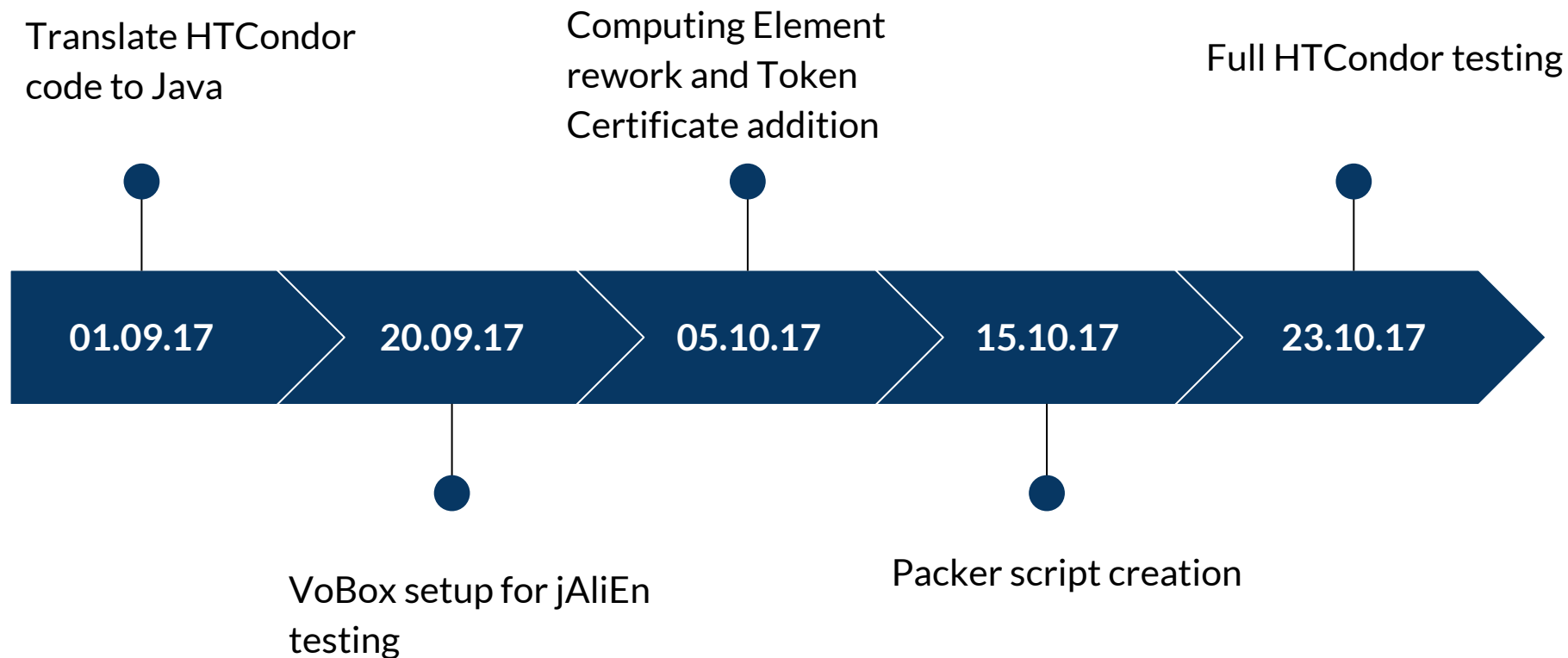
Ivan Shelest • November 2017
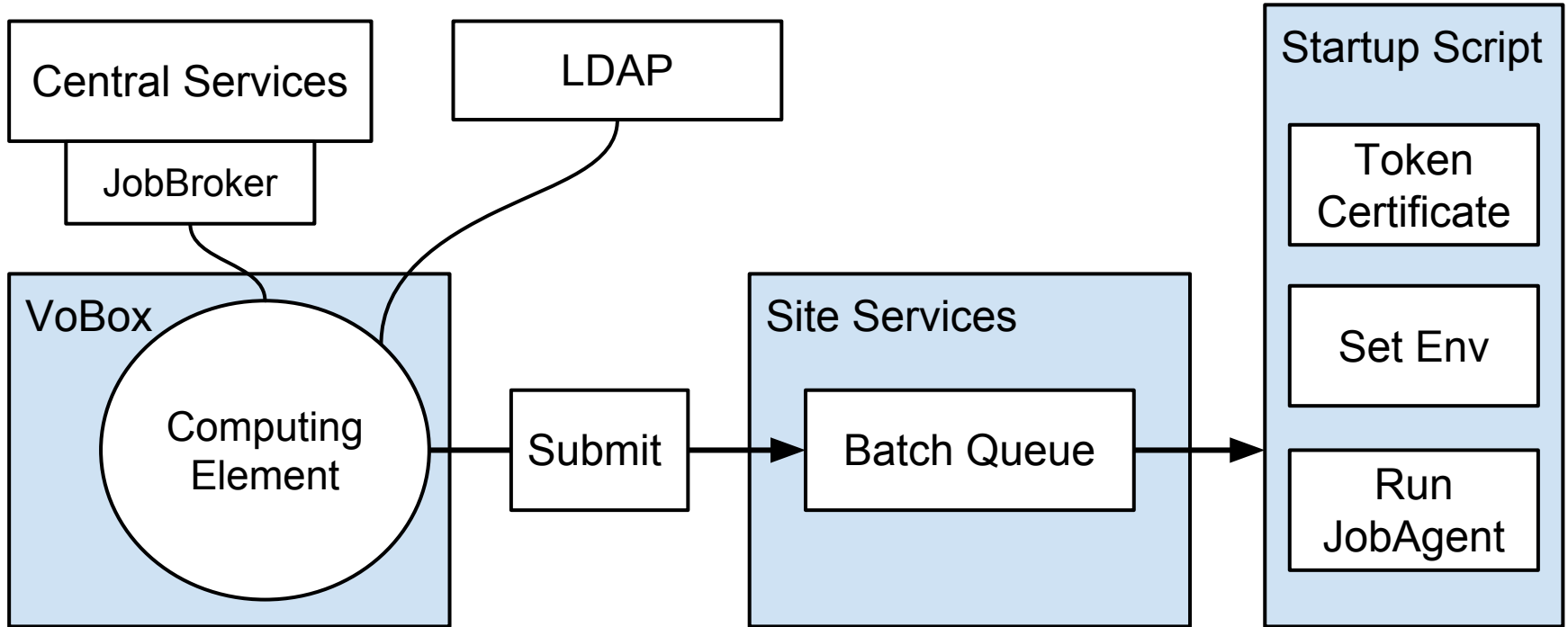
Overview

Batch queues rework

- Transferring job queue code from <u>Perl to Java</u>

- Setting up a <u>VoBox</u> for testing

- Adjusting the <u>Computing Element</u> code for the new queue classes

- Implementing the usage of <u>Token Certificates</u> by the Computing Element

- Code <u>testing</u>

- Creation of a <u>packer script</u> for remote JobAgent execution

Timetable

Translate HTCondor code to Java

Computing Element rework and Token Certificate addition

Full HTCondor testing

| 01.09.17 | 20.09.17 | 05.10.17 | 15.10.17 | 23.10.17 |

VoBox setup for jAliEn testing

Packer script creation

Work scheme

VoBox setup

Completed tasks

1. Production VoBoxes transferred from host AlienVM5 (alienvm5.cern.ch) to AlienVM3 (alienvm3.cern.ch)

2. Creation of voboxalice11 (voboxalice11.cern.ch) with Docker

3. Installation of user and host certificates on voboxalice11

4. Installation of Alien for comparison while testing new code

5. Starting all needed services on voboxalice11

6. Creation of a config in LDAP for voboxalice11 (Juno)

7. Running new Jalien code and testing the batch queues

Computing Element rework

Adjustments

1. Added safety checks at key points in the CE (analyze certificates, environment check before submitting, etc.)

2. Startup script creation

3. Added Token Certificate usage for the Startup script

4. Edited handling of the LDAP config for the job queues

5. Added an option to run the CE manually through the "jalien" command

6. Other corrections and optimisation compared to the Perl version

Job queues

Main queues for rework

- Fork - queue for local testing purposes

- HTCondor - currently working on voboxalice11.cern.ch (host alienvm5.cern.ch)

- Cream - code rework currently in progress

Other queues

- ARC
- BQS
- CONDOR
- DQS
- EDG

- LFS
- OCCI
- PBS
- SGE
- SLURM

Packer script

A single small package is created for faster access to a compiled version of the project or a separate class.

Usage

- The package is placed on a web server and is downloaded from a specific URL

- Any updates can be downloaded from there as well

Packing

- The script unpacks main ".jar" files from the Jalien project

- The unnecessary files are removed for less space consumption

- All needed files are then packed into a single ".jar"

- This package needs to be updated when the project is modified

Packer usage
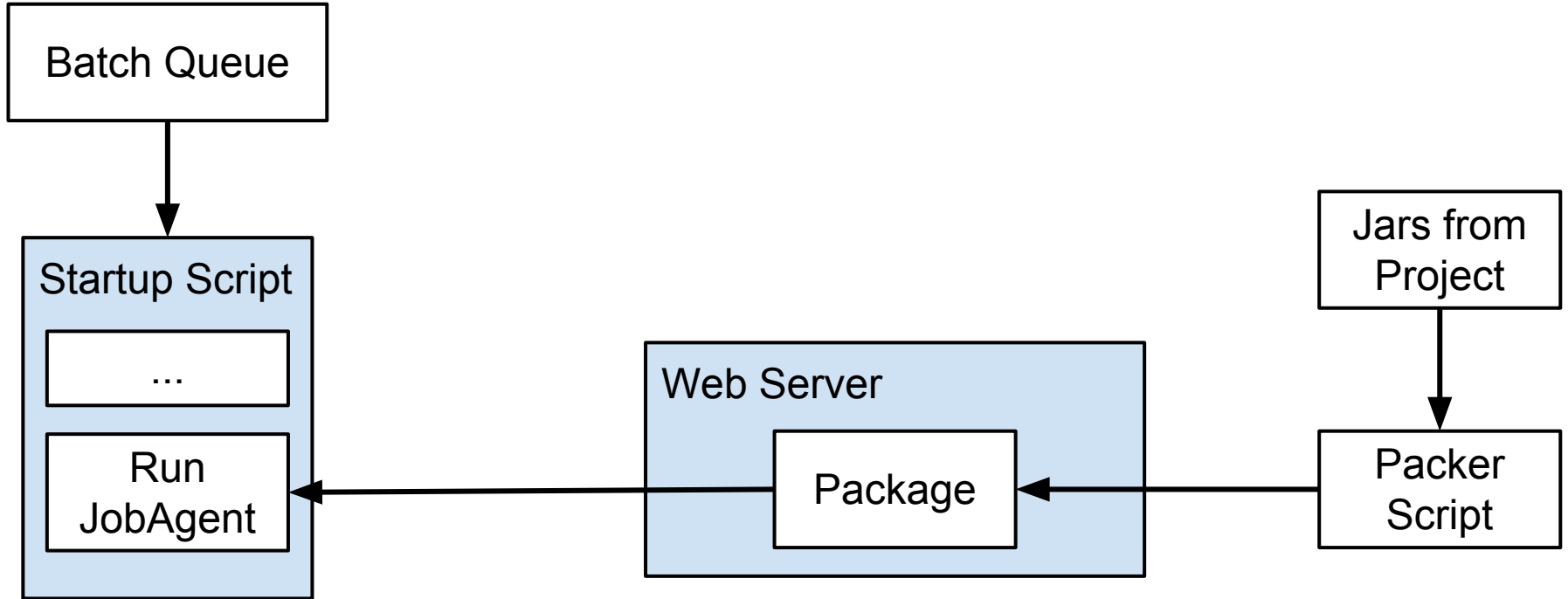
Work in progress

List for November

1. Final adjustments of the HTCondor code for a full stable version

2. Run and test Cream on VoBox11

3. Rework other job queue code

4. Add the new code version to CVMFS

Thank you