JENKINS AUTO BUILD FOR ALL APPLICATIONS

Cognitive Assistant for Networks (CAN) Release 6.0

JANUARY 20, 2023

AVANSEUS TECHNOLOGY PVT. LTD.

REVISION HISTORY

Version	Date	Change description	Created by	Updated by	Reviewed by
V 1.0	Jan, 2023	Initial Release	Naveen/Neha	Raksha	Chiranjib

Table of Contents

1. Focus

This document focus on steps to be performed to initiate Jenkins build which compiles and builds all the applications, creates docker build and pushes them to the desired Docker registry repository.

2. Modules Built in Jenkins

The modules required for CAN application to run successfully are mentioned below.

- CAN - Tomcat WAR application
- CAS - Tomcat WAR application
- Prediction controller - Spring boot WAR application
- Prediction worker - CPP application
- VBI - Python application
- LDAP - OpenDS
- MongoDB - MongoDB-4.4.5
- BatchHandler
- RecordProcessor
- PythonProcessor
- RTSP
- BCXP
- ThreeGPP
- AnsibleProcessor

From the above application list, VBI, LDAP & MongoDB binary would never change. Hence, there is no need to build their docker images repeatedly. For the remaining applications, we must build the binary and then create a docker image. Refer the document "**Docker Image Building for CAN Deployment**" on how to build docker images for our applications. However, using Jenkins, manual step can be avoided and automatically build the required applications & create Docker images.

3. Steps to Initiate Build

The steps to take the build are mentioned below.

1. Click here open the Jenkins URL. This URL is available only when you are connected to VPN.
2. The screen directs to a form to be filled up. Snapshot of the form is provided below.

Maven project Docker_build_6.0

This build requires parameters:

BRANCH

Please provide the branch name from GIT repository.

EMAIL_ID

Please provide an E-mail ID to which the build process has to be notified.

- [ ] CAN

Build CAN only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] CAS

Build CAS only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] PredictionController

Build PredictionController only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] PredictionWorker

Build PredictionWorker only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] BatchHandler

Build BatchHandler only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] RecordProcessor

Build RecordProcessor only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] PythonProcessor

Build PythonProcessor only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] RTSP

Build RTSP only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] BCXP

Build BCXP only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] ThreeGPP

Build ThreGPP only. If nothing is checked among the checkboxes, default is to build all modules.

- [ ] AnsibleProcessor

Build AnsibleProcessor only. If nothing is checked among the checkboxes, default is to build all modules.

- [x] DOCKER_BUILD

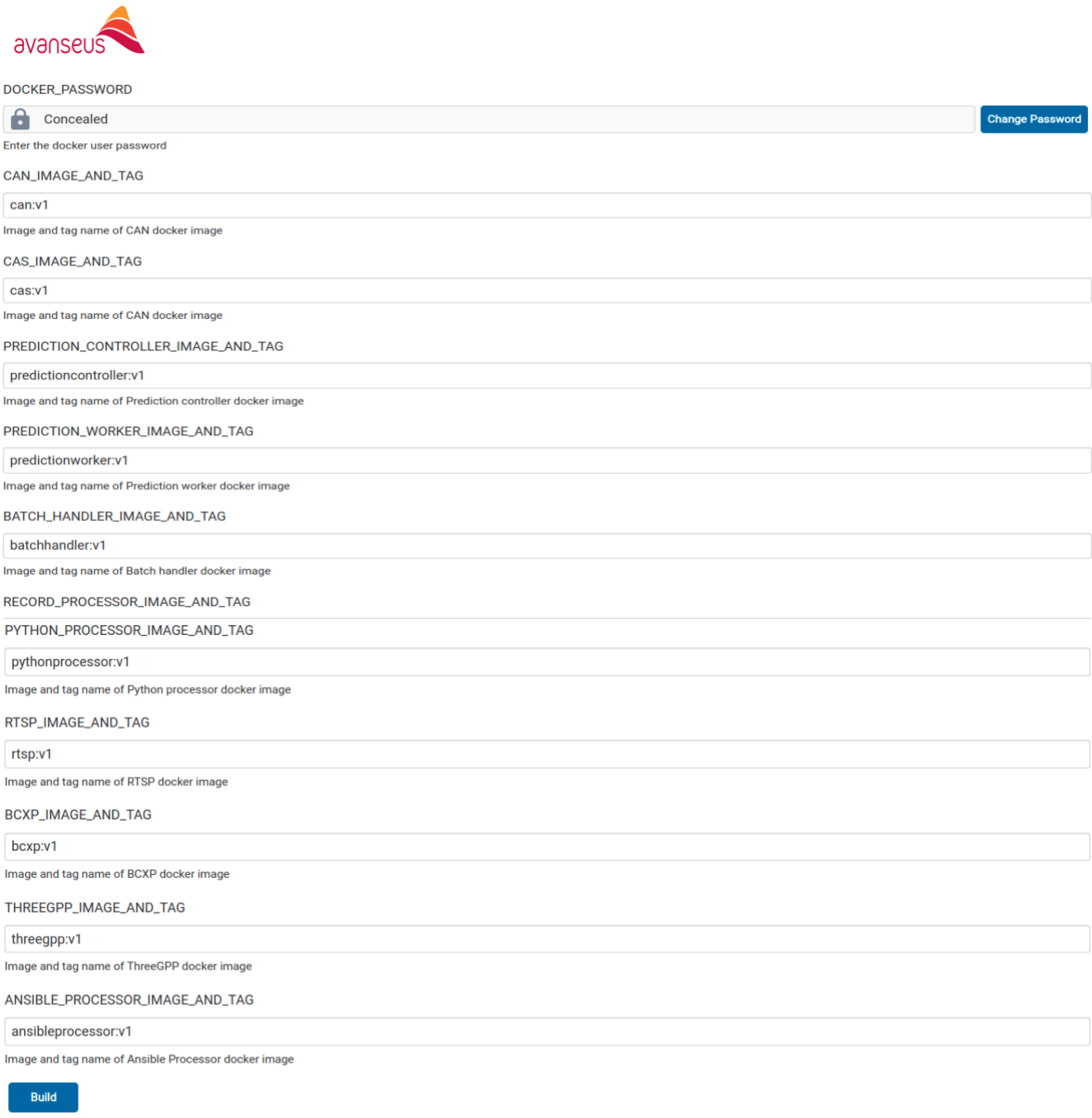
Do you want docker images to be built and pushed to Docker repository? You need to installed the Docker repository details below.

DOCKER_REPOSITORY_URL

Enter the Repository URL

DOCKER_URL_PATH

Path to image directory



3. Description of each field of the form is provided below.
   a. BRANCH – Enter the branch name from GIT from where build needs to be taken.
   b. EMAIL_ID – Enter the Email ID to which email notifications on build status needs to be sent.
   c. CAN – Checkbox to build only CAN.
   d. CAS – Checkbox to build only CAS.
   e. PredictionController – Checkbox to build only Prediction controller.
   f. PredictionWorker – Checkbox to build only Prediction worker.
   g. BatchHandler – Checkbox to build only BatchHandler.
   h. RecordProcessor – Checkbox to build only RecordProcessor.
   i. PythonProcessor – Checkbox to build only PythonProcessor.
   j. RTSP – Checkbox to build only RTSP.
   k. BCXP – Checkbox to build only BCXP.

l. ThreeGPP – Checkbox to build only ThreeGPP.
m. AnsibleProcessor – Checkbox to build only AnsibleProcessor.
n. DOCKER_BUILD – Checkbox to confirm if Docker images need to be created. If checked, then other parameters related to Docker registry needs to be provided.
o. DOCKER_REPOSITORY URL – Docker container registry domain.
p. DOCKER_URL_PATH – Docker URL path.
q. DOCKER_USER – Username that has push access to Docker registry.
r. DOCKER_PASSWORD – Password for the username mentioned above.
s. CAN_IMAGE_AND_TAG – CAN docker image & tag name.
t. CAS_IMAGE_AND_TAG – CAS docker image & tag name.
u. PREDICTION_CONTROLLER_IMAGE_AND_TAG – Prediction controller image & tag name.
v. PREDICTION_WORKER_IMAGE_AND_TAG – Prediction worker image & tag name.
w. BATCH_HANDLER_IMAGE_AND_TAG – BatchHandler image & tag name.
x. RECORD_PROCESSOR_IMAGE_AND_TAG – RecordProcessor image & tag name.
y. PYTHON_PROCESSOR_IMAGE_AND_TAG – PythonProcessor image & tag name.
z. RTSP_IMAGE_AND_TAG – RTSP image & tag name.
aa. BCXP_IMAGE_AND_TAG – BCXP image & tag name.
bb. THREEGPP_IMAGE_AND_TAG – ThreeGPP image & tag name.
cc. ANSIBLE_PROCESSOR_IMAGE_AND_TAG – AnsibleProcessor image & tag name.

Note:

- If CAN, CAS, PredictionController, PredictionWorker, BatchHandler, RecordProcessor, PythonProcessor, RTSP, BCXP, ThreeGPP, AnsibleProcessor are unchecked, then all the applications will be built.
- If DOCKER_BUILD parameter is checked and related information of docker registry is provided, Jenkins will create docker builds for the applications & upload them to the configured Docker registry server.
- If DOCKER_BUILD parameter is unchecked, only binary will be built & it would be available for download over a HTTP server here .

4. Snapshot of a filled-up form that takes build of all applications & uploads them to development docker registry container is provided below.

avanseus

Maven project Docker_build_6.0

This build requires parameters:

BRANCH

master6.0

Please provide the branch name from GIT repository.

EMAIL_ID

naveenmahale@avanseus.com

Please provide an E-mail ID to which the build process has to be notified.

☐ CAN

Build CAN only. If nothing is checked among the checkboxes, default is to build all modules.

☐ CAS

Build CAS only. If nothing is checked among the checkboxes, default is to build all modules.

☐ PredictionController

Build PredictionController only. If nothing is checked among the checkboxes, default is to build all modules.

☐ PredictionWorker

Build PredictionWorker only. If nothing is checked among the checkboxes, default is to build all modules.

☐ BatchHandler

Build BatchHandler only. If nothing is checked among the checkboxes, default is to build all modules.

☐ RecordProcessor

☐ PythonProcessor

Build PythonProcessor only. If nothing is checked among the checkboxes, default is to build all modules.

☐ RTSP

Build RTSP only. If nothing is checked among the checkboxes, default is to build all modules.

☐ BCXP

Build BCXP only. If nothing is checked among the checkboxes, default is to build all modules.

☐ ThreeGPP

Build ThreGPP only. If nothing is checked among the checkboxes, default is to build all modules.

☐ AnsibleProcessor

Build AnsibleProcessor only. If nothing is checked among the checkboxes, default is to build all modules.

☑ DOCKER_BUILD

Do you want docker images to be built and pushed to Docker repository? You need to installed the Docker repository details below.

DOCKER_REPOSITORY_URL

avanseuscontainer.com

Enter the Repository URL

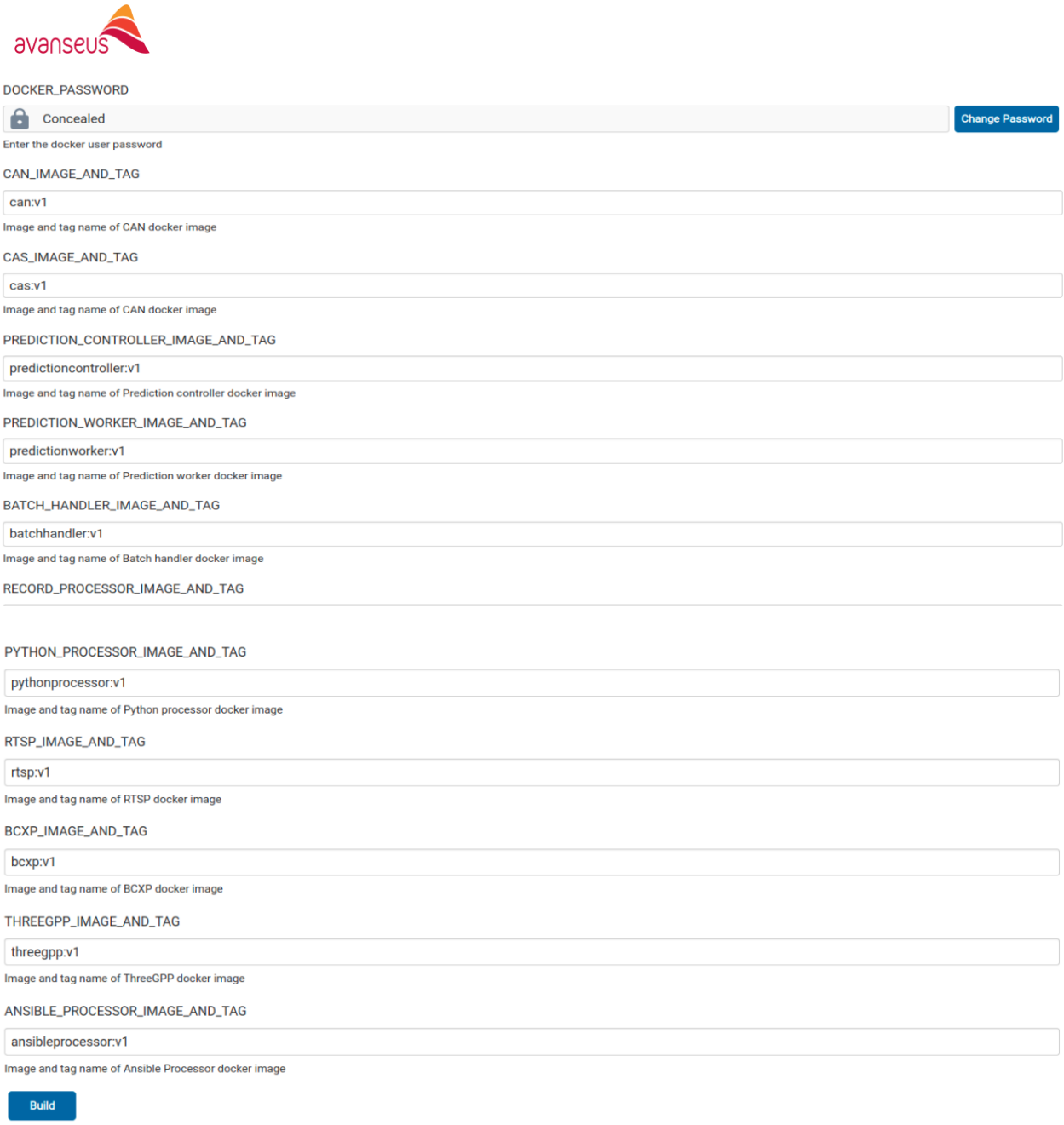
DOCKER_URL_PATH

release/6.0

Path to image directory

DOCKER_USER

testuserpush



5. Initiate build on clicking the **Build** button. The user receives email notifications on the build status.