JENKINS AUTO BUILD FOR ALL APPLICATIONS

Cognitive Assistant for Networks (CAN) 7.0

AUGUST 3, 2023

AVANSEUS TECHNOLOGIES PVT. LTD.

REVISION HISTORY

Version	Date	Change description	Created by	Updated by	Reviewed by
V 1.0	July, 2021	Initial Release	Naveen	Sandeep Singh	Chiranjib
V 2.0	August, 2023	Beta Release	Neha	Raksha	Chiranjib

Table of Contents

1. Focus

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

2. Modules Built in Jenkins

Mentioned below are the modules that are needed for CAN application to run successfully.

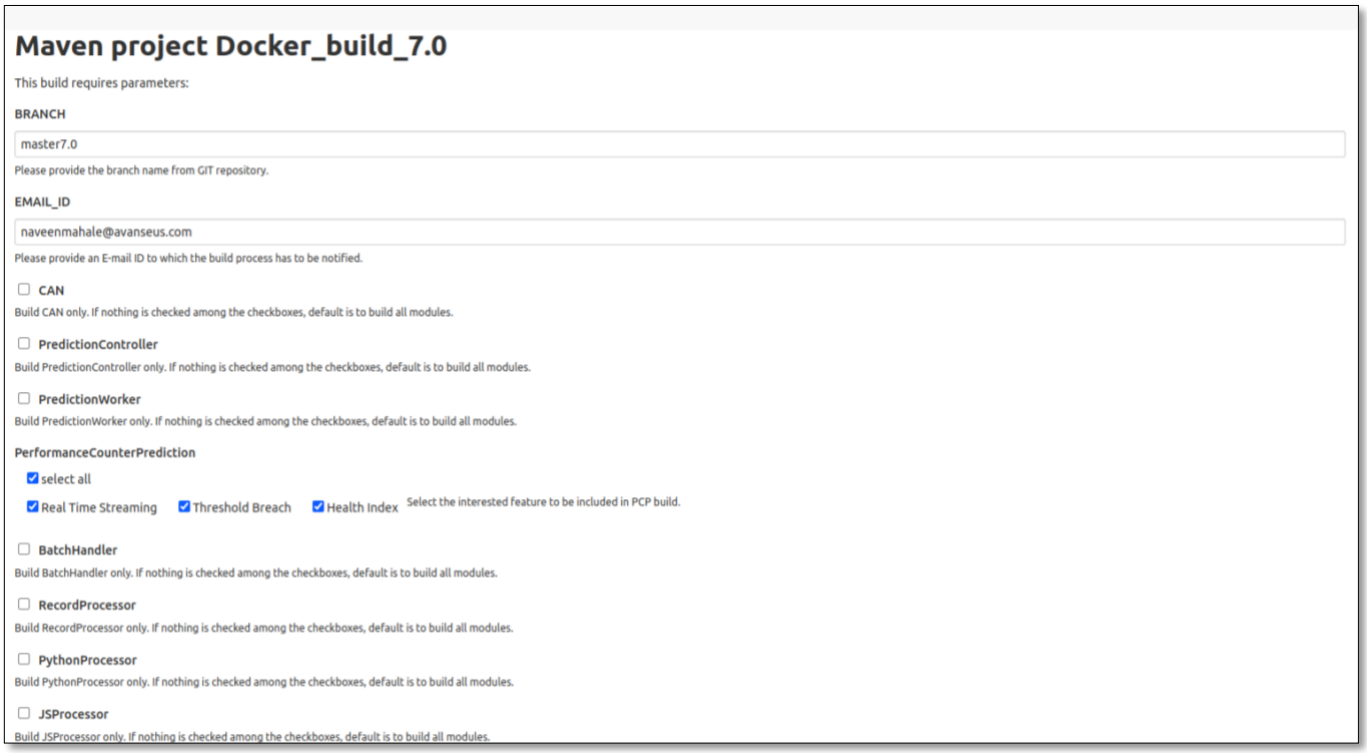
1. CAN - Tomcat WAR application
2. Prediction controller - Spring boot WAR application
3. Prediction worker - CPP application
4. Performance Counter Prediction
5. VBI - Python application
6. LDAP - We use OpenDS
7. MongoDB - We use MongoDB-4.4.5
8. BatchHandler
9. RecordProcessor
10. PythonProcessor
11. JSProcessor
12. RTSP
13. BCXP
14. 3GPP
15. AnsibleProcessor

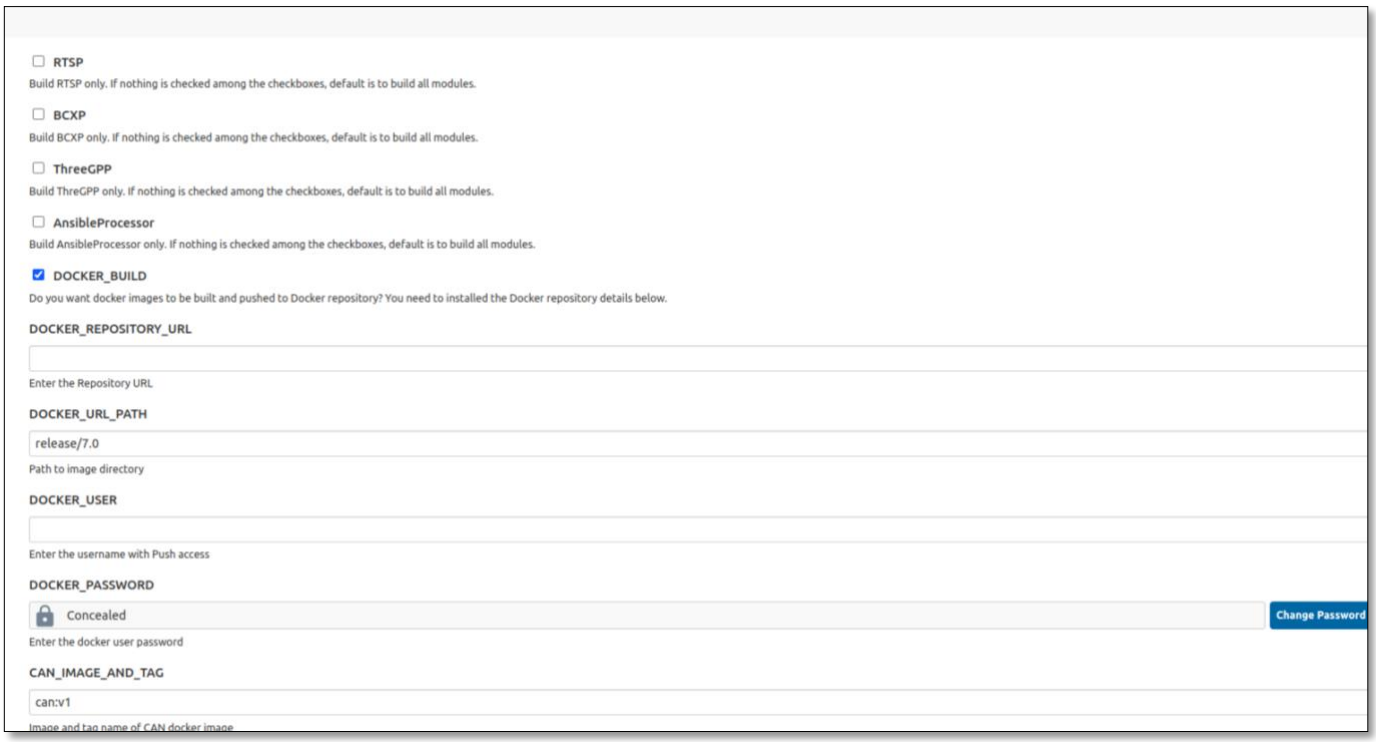
From the application list mentioned above, VBI, LDAP & MongoDB binary would never change. Hence, we need not build their docker images repeatedly. For rest of the applications, we would have to build the binary and then create a docker image. There is a document available named "**Docker image building for CAN deployment**" on how to build docker images for CAN applications. However, using Jenkins, we can prevent using manual step and automatically build required applications & create Docker images.

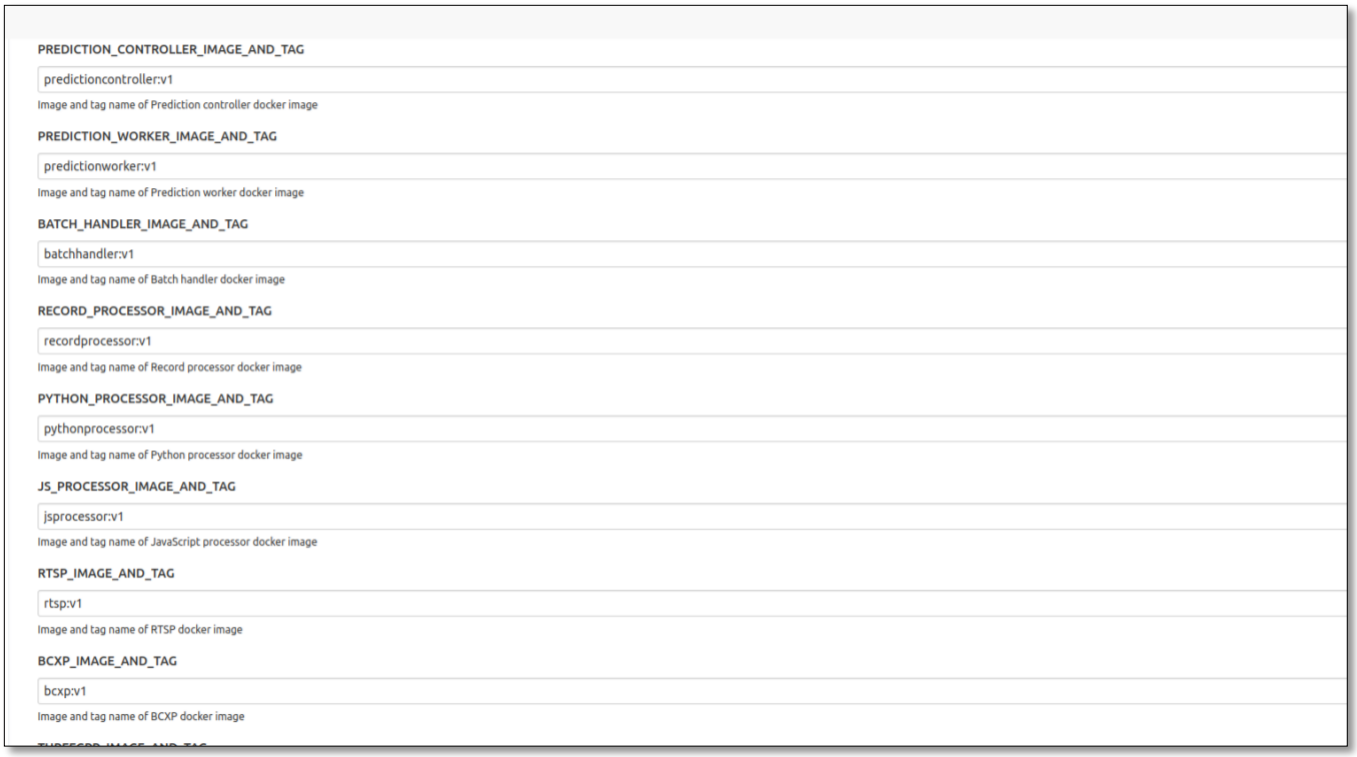
3. Steps to Initiate Build

Mentioned below are the steps to take the build.

1. Click here for the Jenkins URL. This URL is available only when you are connected to VPN.
2. You would find a form that needs to be filled up. Snapshot of the form is pasted below.







3. Description of each field in the form is provided below.
   a. BRANCH – Enter the branch name from GIT from where build needs to be taken
   b. EMAIL_ID – Enter your Email ID to which Email notifications on build status needs to be sent

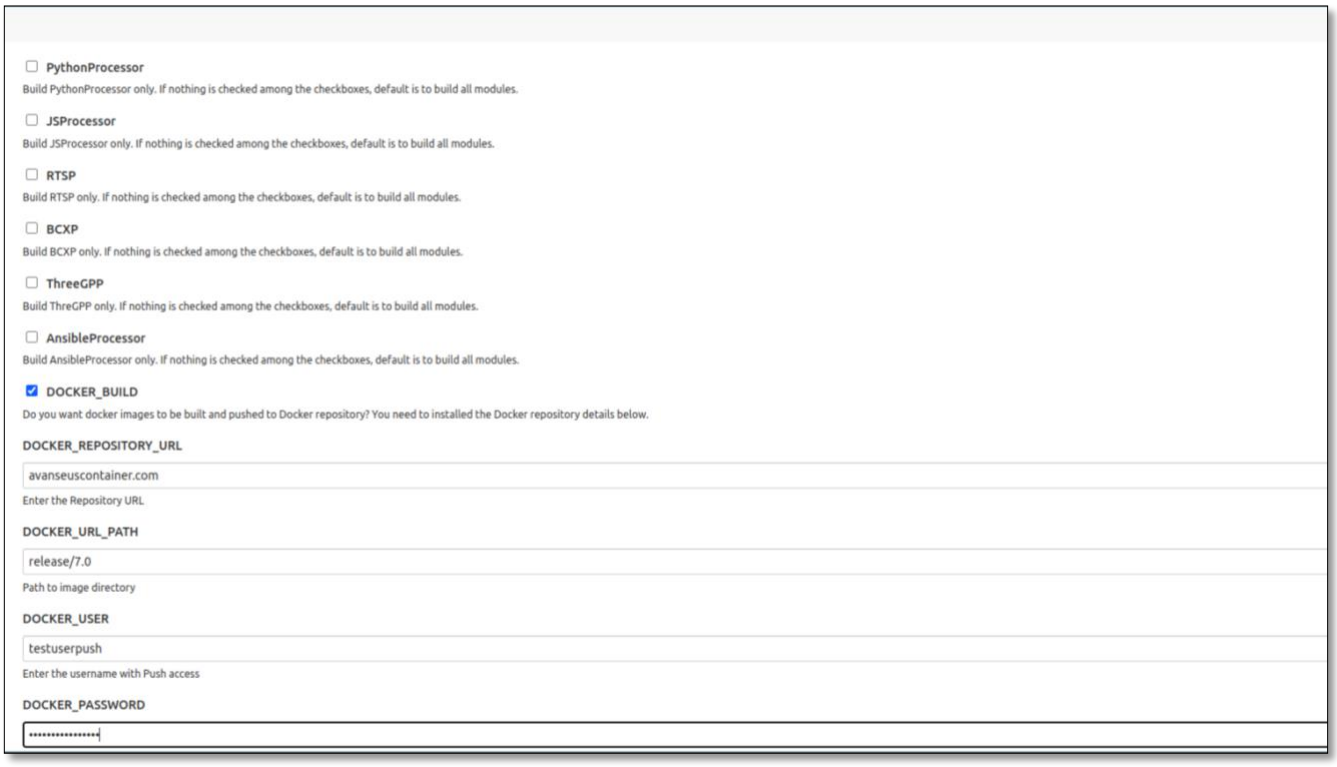
c. CAN – Checkbox to build only CAN
d. PredictionController – Checkbox to build only Prediction controller
e. PredictionWorker – Checkbox to build only Prediction worker
f. PerformanceCounterPrediction -
    - Checkbox Real Time Streaming to build only Real Time Streaming
    - Checkbox Threshold Breach to build only Threshold Breach
    - Checkbox Health Index to build only Heath Index
    - Checkbox select all to build all the three modules
g. BatchHandler – Checkbox to build only BatchHandler
h. RecordProcessor – Checkbox to build only RecordProcessor
i. PythonProcessor – Checkbox to build only PythonProcessor
j. JSProcessor - Checkbox to build only JSProcessor
k. RTSP – Checkbox to build only RTSP
l. BCXP – Checkbox to build only BCXP
m. ThreeGPP – Checkbox to build only ThreeGPP
n. AnsibleProcessor – Checkbox to build only AnsibleProcessor
o. 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
p. DOCKER_REPOSITORY_URL – Docker container registry domain
q. DOCKER_URL_PATH – Docker URL path
r. DOCKER_USER – Username which has push access to Docker registry
s. DOCKER_PASSWORD – Password of the username mentioned above
t. CAN_IMAGE_AND_TAG – CAN docker image & tag name
u. CAS_IMAGE_AND_TAG – CAS docker image & tag name
v. PREDICTION_CONTROLLER_IMAGE_AND_TAG – Prediction controller image & tag name
w. PREDICTION_WORKER_IMAGE_AND_TAG – Prediction worker image & tag name
x. PCP_IMAGE_AND_TAG – PCP image & tag name
y. BATCH_HANDLER_IMAGE_AND_TAG – BatchHandler image & tag name
z. RECORD_PROCESSOR_IMAGE_AND_TAG – RecordProcessor image & tag name
aa. PYTHON_PROCESSOR_IMAGE_AND_TAG – PythonProcessor image & tag name
bb. JS_PROCESSOR_IMAGE_AND_TAG – JSProcessor image and tag name
cc. RTSP_IMAGE_AND_TAG – RTSP image & tag name
dd. BCXP_IMAGE_AND_TAG – BCXP image & tag name
ee. THREEGPP_IMAGE_AND_TAG – ThreeGPP image & tag name
ff. ANSIBLE_PROCESSOR_IMAGE_AND_TAG – AnsibleProcessor image & tag name

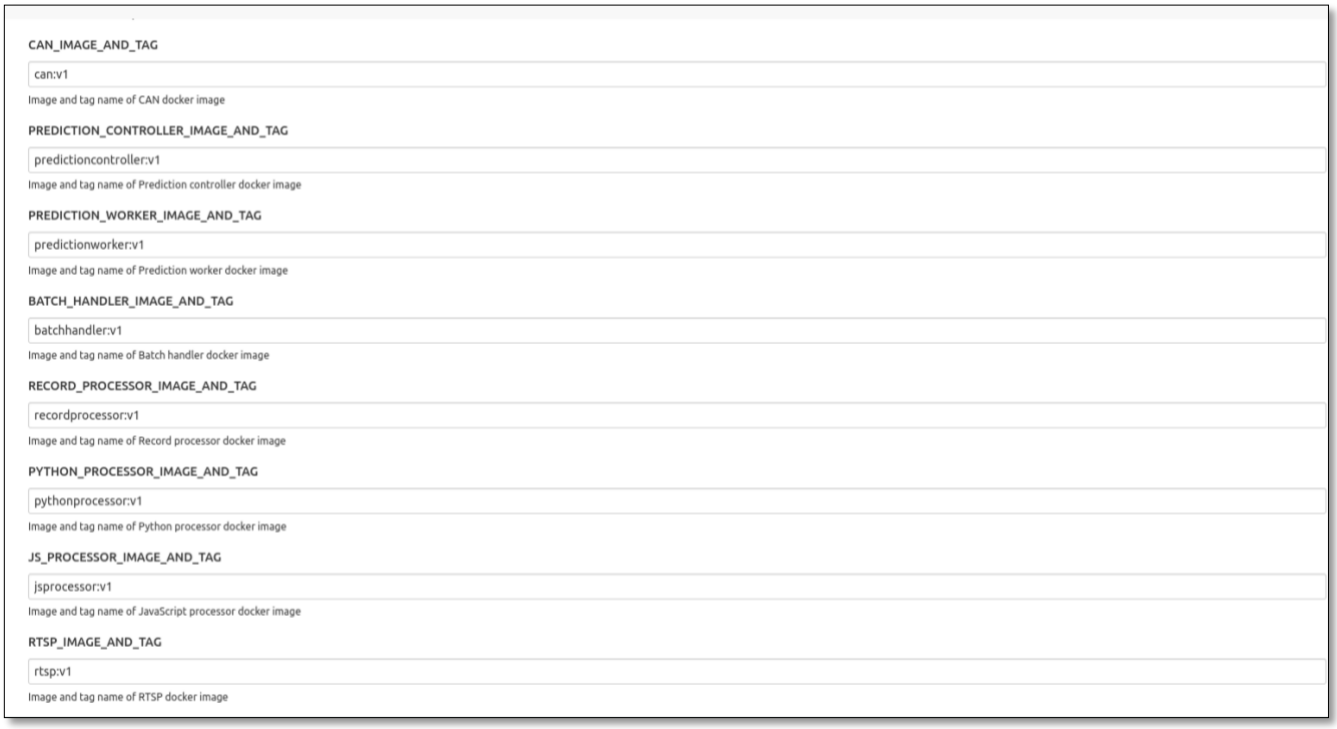
Note:

- If CAN, CAS, PredictionController, PredictionWorker, PerformanceCounterPrediction, BatchHandler, RecordProcessor, PythonProcessor, JSProcessor,RTSP, BCXP, ThreeGPP, AnsibleProcessorare unchecked, then all the applications will be build.
- If DOCKER_BUILD parameter is checked and related information of docker registry is provided, then Jenkins would create docker builds for the applications & upload them to the configured Docker registry server.
- If DOCKER_BUILD parameter is unchecked, then only binary will be built & would

be available for download over a HTTP server here .

4. Provided below is a filled-up form snapshot which takes build of all applications & uploads to development docker registry container.





5. Initiate build on clicking “BUILD” button. The user would receive Email notifications on the build status.