JENKINS AUTO BUILD FOR ALL APPLICATIONS

Cognitive Assistant for Networks (CAN) Release 5.5

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Revision History

Version	Date	Change description	Created by	Updated by	Reviewed by
V 1.0	July, 2021	Initial Release	Naveen	Sandeep Singh	Chiranjib

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1. Focus

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

2. Modules Built in Jenkins

Mentioned below are the modules which are needed for CAN application to run successfully:

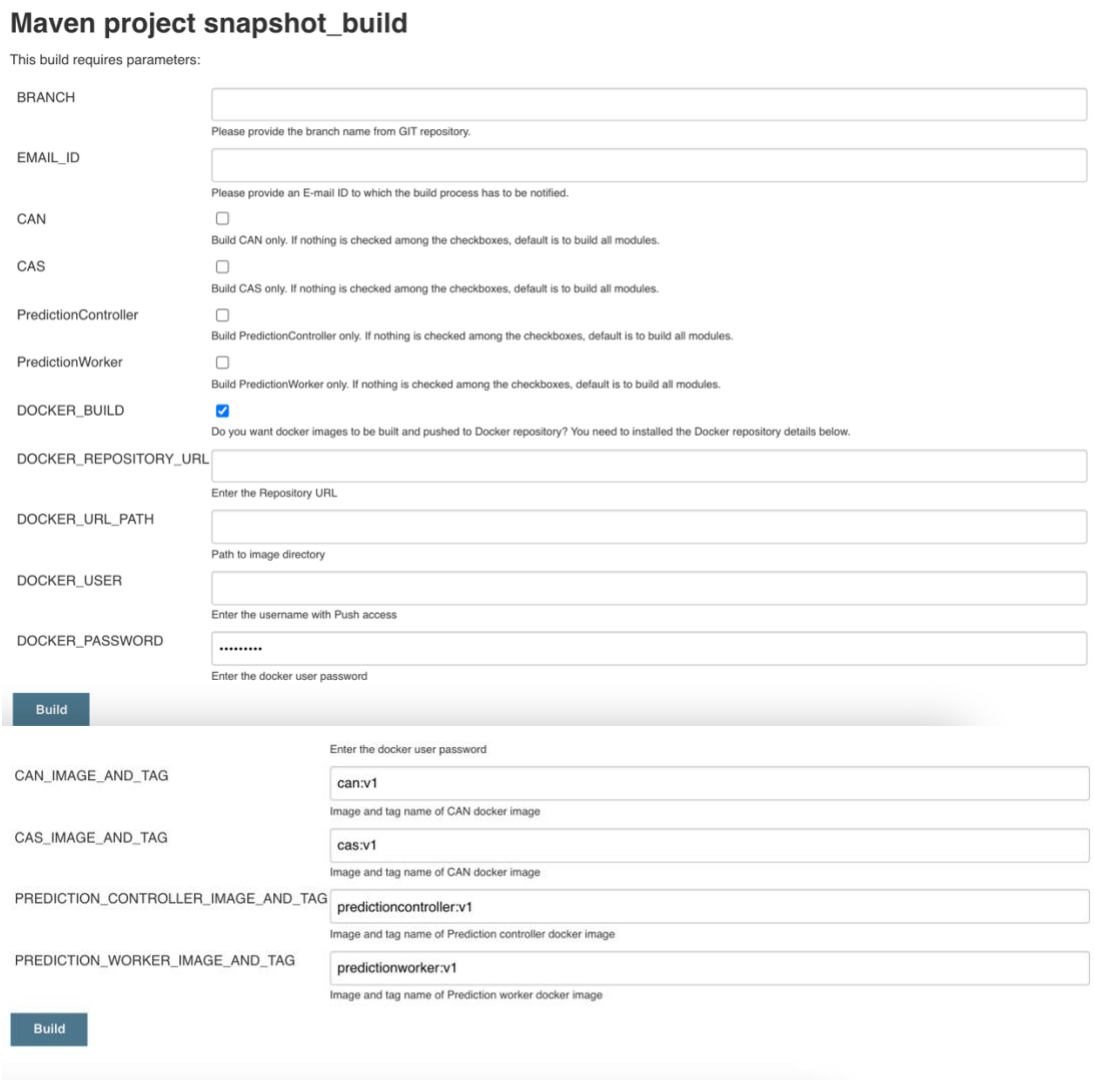
- CAN - Tomcat WAR application
- CAS - Tomcat WAR application
- Prediction controller - Spring boot WAR application
- Prediction worker - CPP application
- VBI - Python application
- LDAP - We use OpenDS
- MongoDB - We use MongoDB-4.4.5

From the application list mentioned above, VBI, LDAP & MongoDB binary would never change. Hence we need not build their docker images again and again. For rest of the applications, we would have to build the binary and then create a docker image. There is a document already available named “Docker image building for CAN deployment” on how to build docker images for our 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 to open the Jenkins URL. This URL is available only when you are connected to VPN.
2. You would see a form which needs to be filled up. Snapshot of the form is pasted below.



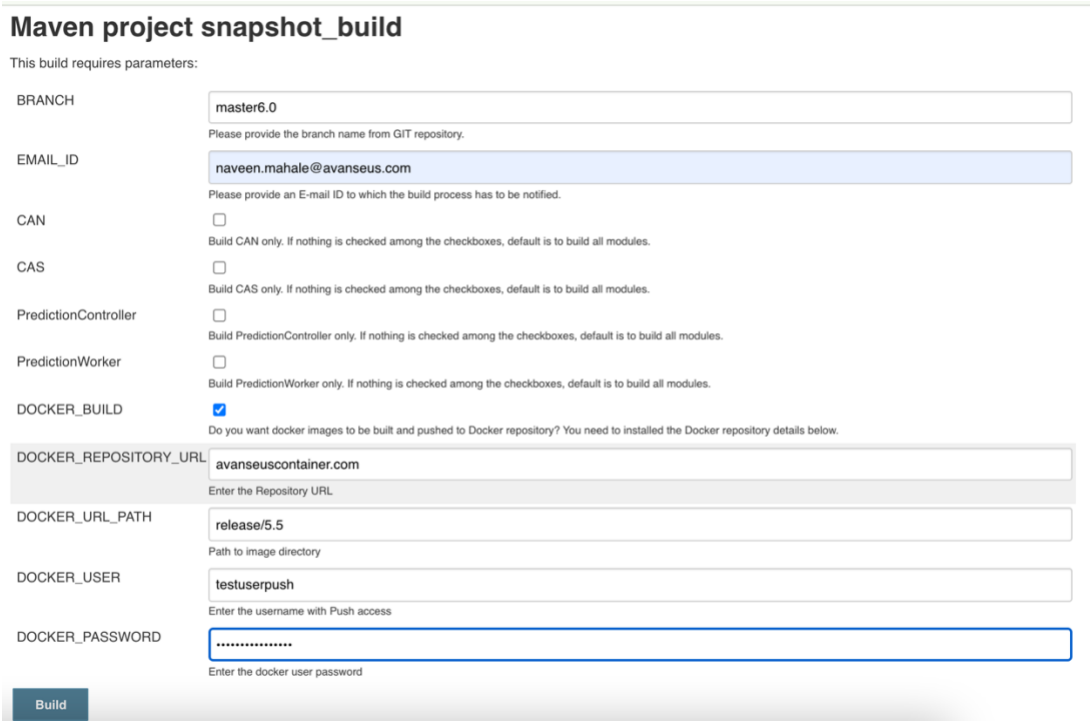
3. Description of each field in the form is provided below.
   a. BRANCH – Enter the branch name from GIT from where build needs to be taken
   b. EMAIL_ID – Enter your Email ID to which Email notifications on build status needs to be sent
   c. CAN – Checkbox to build only CAN
   d. CAS – Checkbox to build only CAS
   e. PredictionController – Checkbox to build only Prediction controller
   f. PredictionWorker – Checkbox to build only Prediction worker
   g. 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
   h. DOCKER_REPOSITORY_URL – Docker container registry domain
   i. DOCKER_URL_PATH – Docker URL path
   j. DOCKER_USER – Username which has push access to Docker registry
   k. DOCKER_PASSWORD – Password of the username mentioned above
   l. CAN_IMAGE_AND_TAG – CAN docker image & tag name
   m. CAS_IMAGE_AND_TAG – CAS docker image & tag name
   n. PREDICTION_CONTROLLER_IMAGE_AND_TAG – Prediction controller image & tag name

o. PREDICTION_WORKER_IMAGE_AND_TAG – Prediction worker image & tag name

Note:

- If CAN, CAS, PredictionController & PredictionWorker are 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.