**PEGA Deployment Automation Guide**

**Version Control**

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| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Reviewer** | **Change Summary** |
| 0.1 | 20/11/2023 | Shraddha Dhumal | Vinod Junghare | Initial Draft |
| 1.0 | 21/11/2023 | Shraddha Dhumal | Vinod Junghare | Final Draft |

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# **PEGA Files in Gitlab**

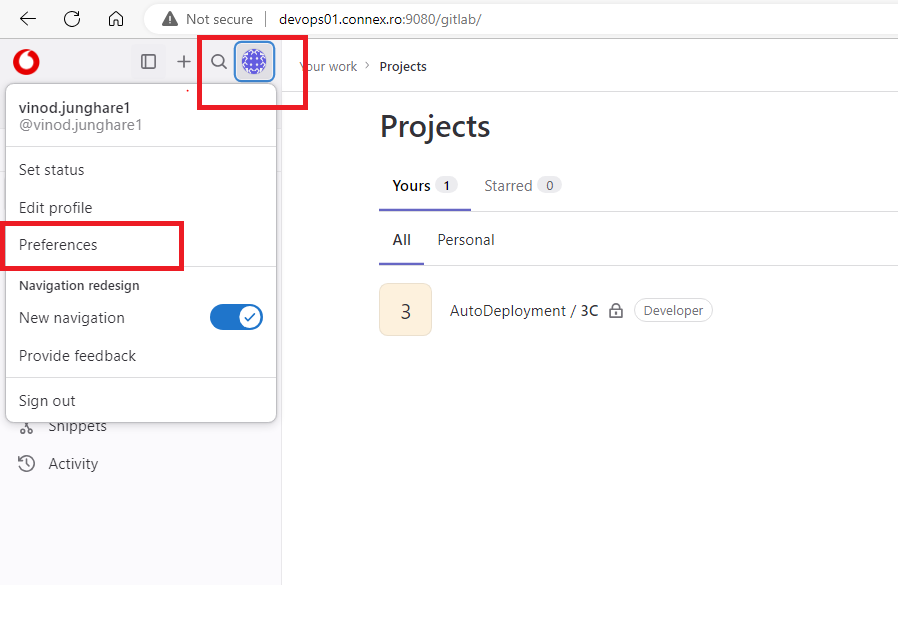
Below tables provides information on Gitlab Repo & branch details used in different DEX pipelines.

* Gitlab Repo used here is - <http://devops01.connex.ro:9080/gitlab/autodeployment/3c.git>
* The Repo contains branch named “PEGADeployment” where code & files used for different pipelines has been kept.

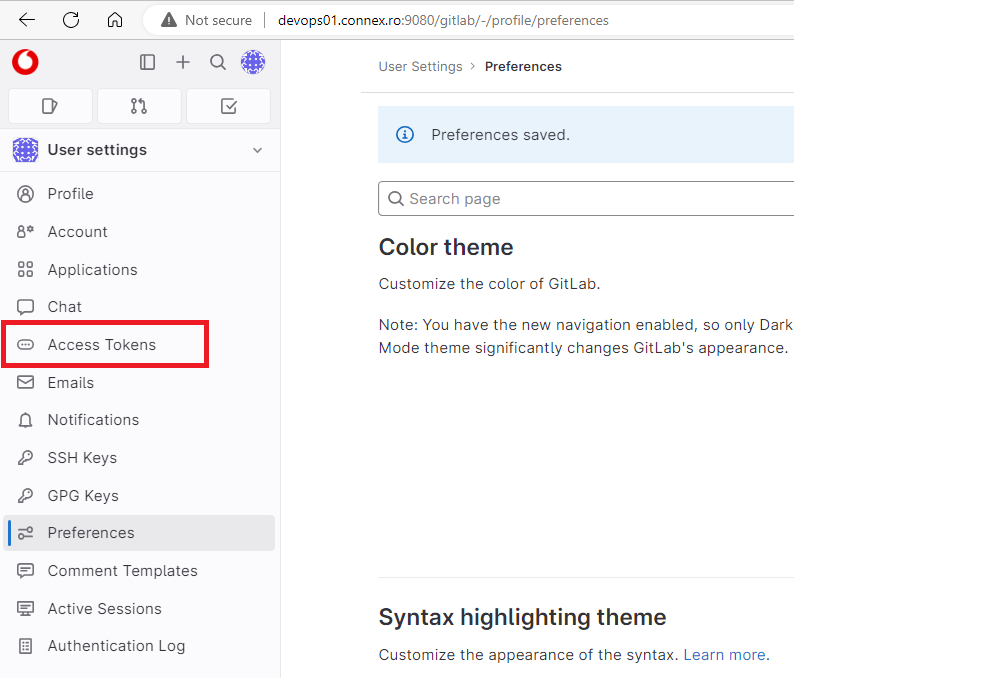
|  |  |  |  |
| --- | --- | --- | --- |
| **Branch** | **Branch Purpose** | **File** | **File Purpose** |
| PEGADeployment | This branch contains files to be used in PEGADeployment for deployment of both UAT and PET Pipelines. | PEGA\_Deployment/ Environment.txt | File contains mapping of username to be used to login to server based on the environment. |
| PEGAJenkins/PEGAUploadToNexus | This file is referred in Nexus Upload Pipeline & contains logic to versioned code, config files & load to Nexus |
| PEGAJenkins/PEGA\_UAT\_Deployment | This file is referred in UAT deployment pipeline & contains logic to deploy application code and database deployment. |
| PEGAJenkins /PEGA\_PET\_Deployment | This file is referred in PET deployment pipeline & contains logic to deploy application code and database deployment. |

# **Gitlab User token creation**

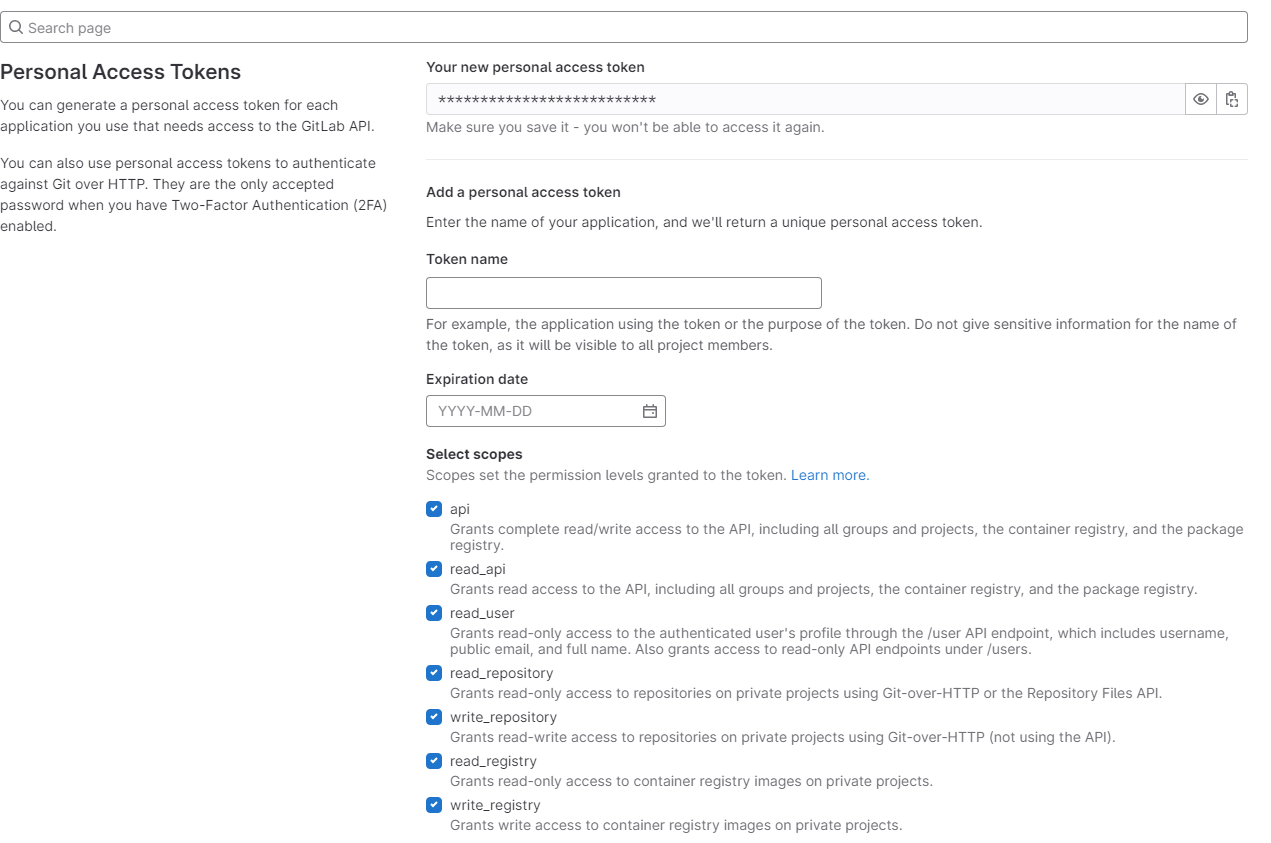
* For Jenkins to communicate with GitLab, a user access token needs to be created. Gitlab does not allow simple user/password logins anymore.
* This token can be set to expired as per requirement with a default timeline of 1 year as expiry.
* Below process shows process of user creation in Gitlab
  + Login to Gitlab with authorized user.
  + Click on Blue icon & then on preferences tab.



* Once into preference clink on Access token on the left panel



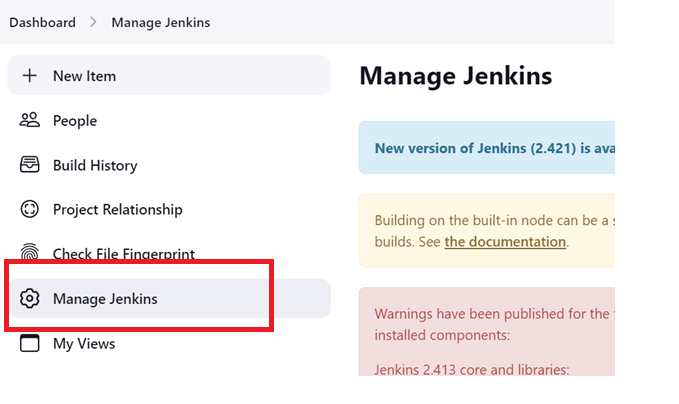
* On Personal access token screen, select all the access, provide the token name and click on generate token.
* The created token can be observed under personal access token.
* Please make sure to note and store it as once page is gone the token cannot be seen again, a new token must be created incase access token is missed or forgotten.



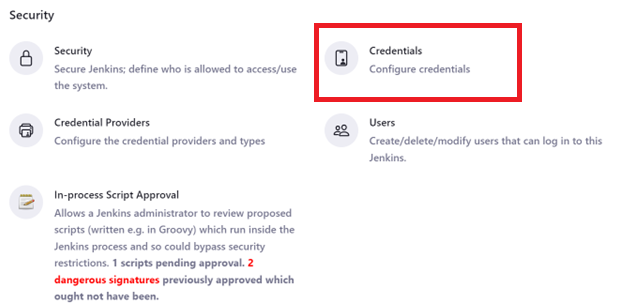
* The above created access token needs to be configured in Jenkins as credentials, which can then be used to communicate with Gitlab from Jenkins.

# **Adding Credentials in Jenkins**

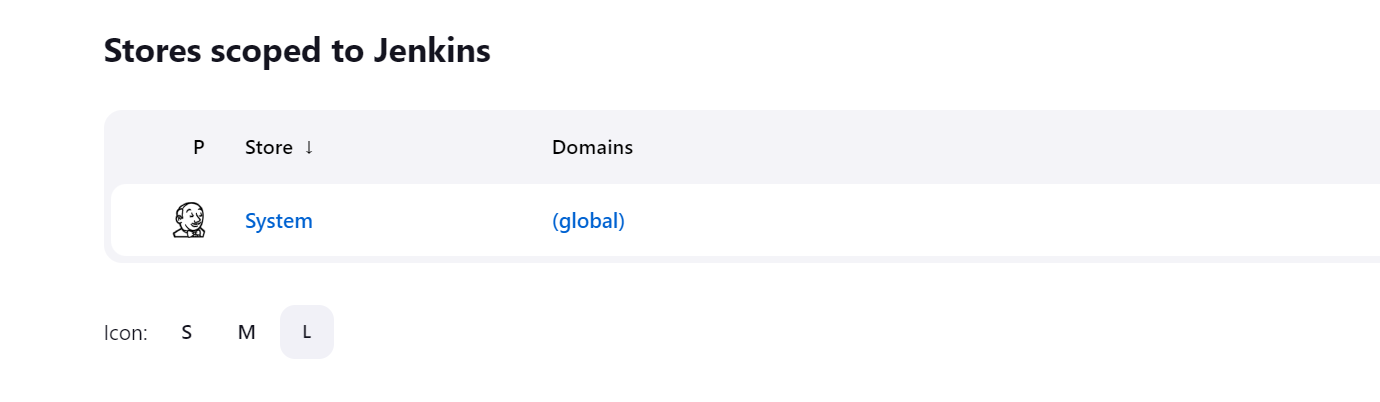
* Process below to add credentials in Jenkins.
  + Login to Jenkins with authorized id, for adding credentials in Jenkins elevated access is required.
  + Click on Manage Jenkins



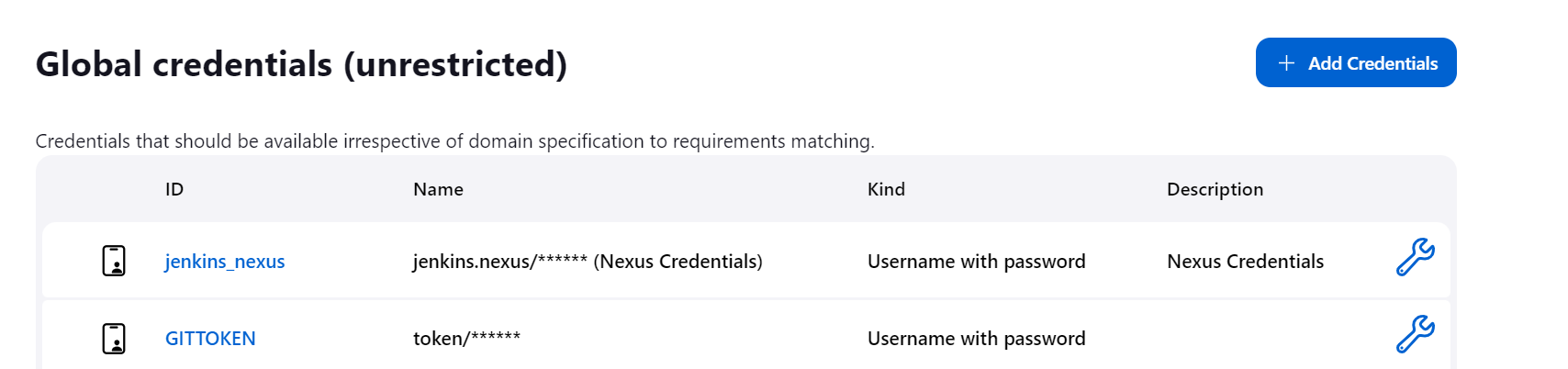
* Once in Managed Jenkins page, click on credentials



* Search for system and click on the global domain.



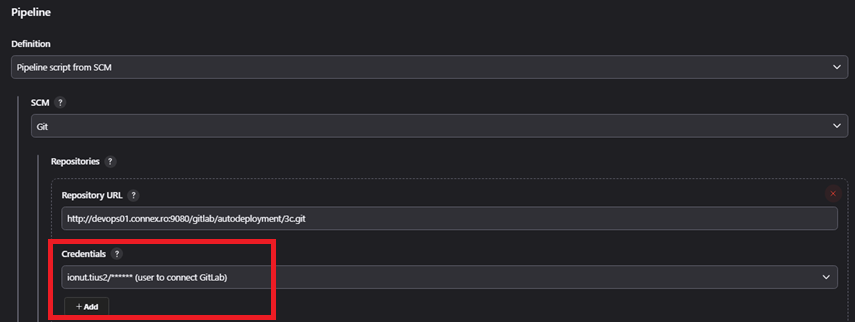
* On Global credentials page, you will be able to see “Add Credentials” option.



* On Credentials page, select option Username with Password, add your username in field & copy the access token to the password field & save the credentials.

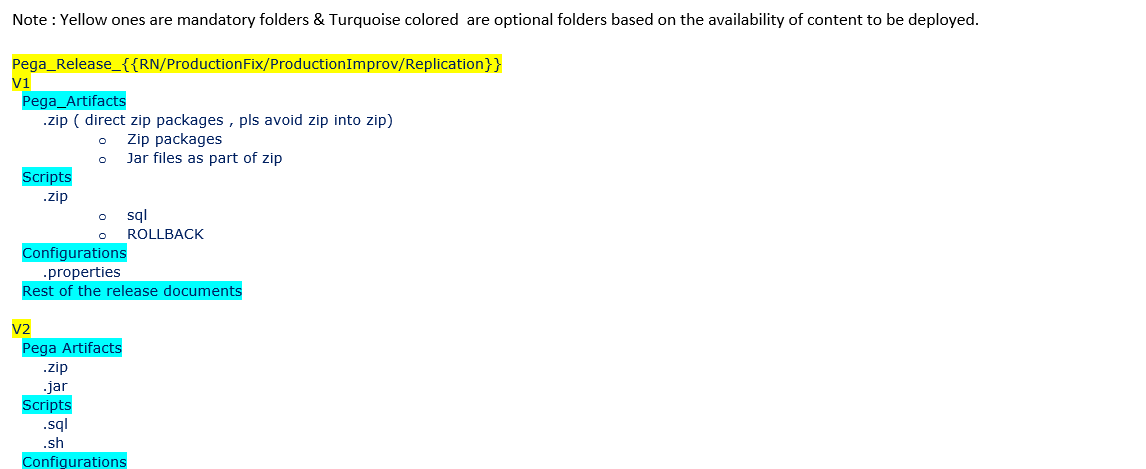


* Finally, the added credentials can be used into Pipeline as below.

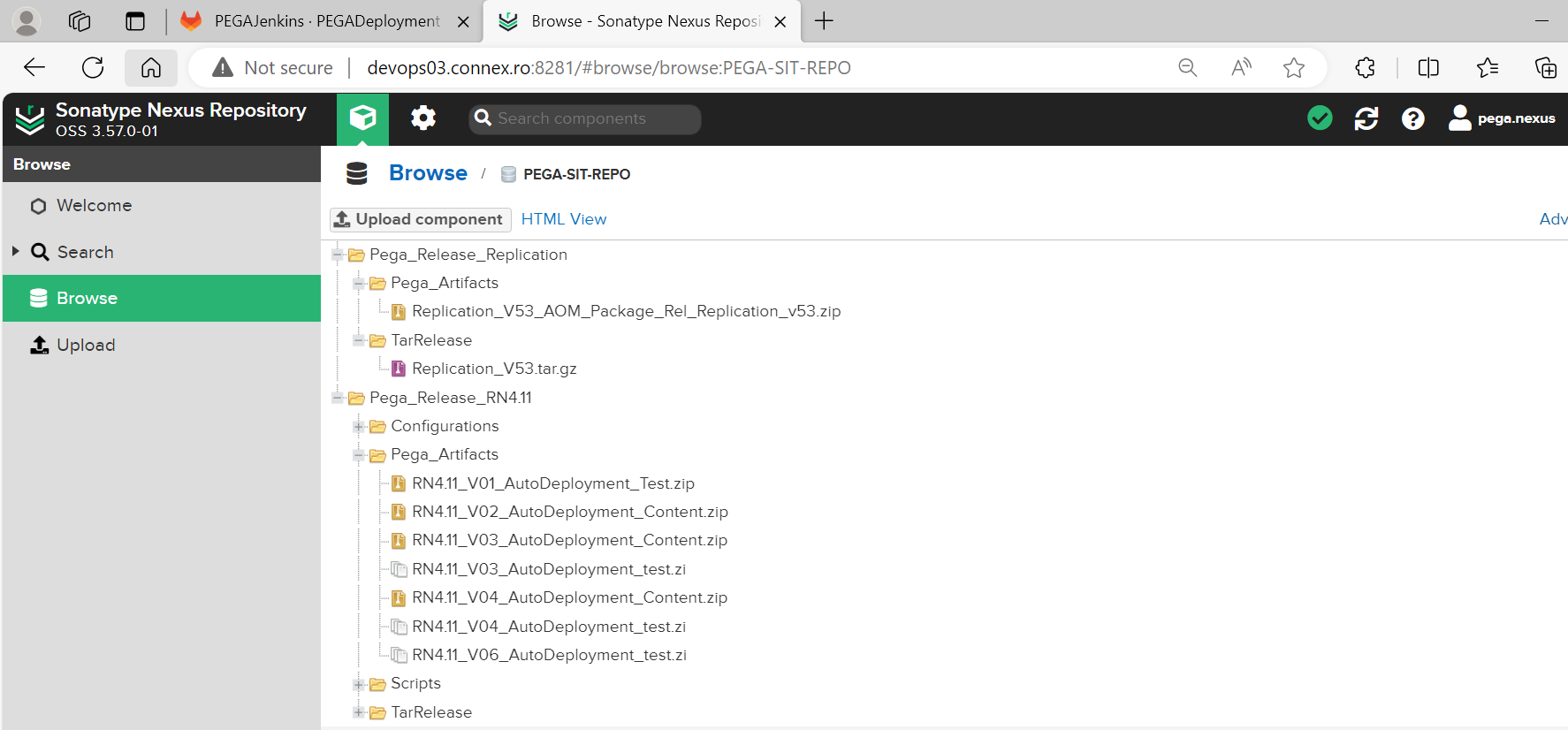


# **Nexus Upload Pipeline**

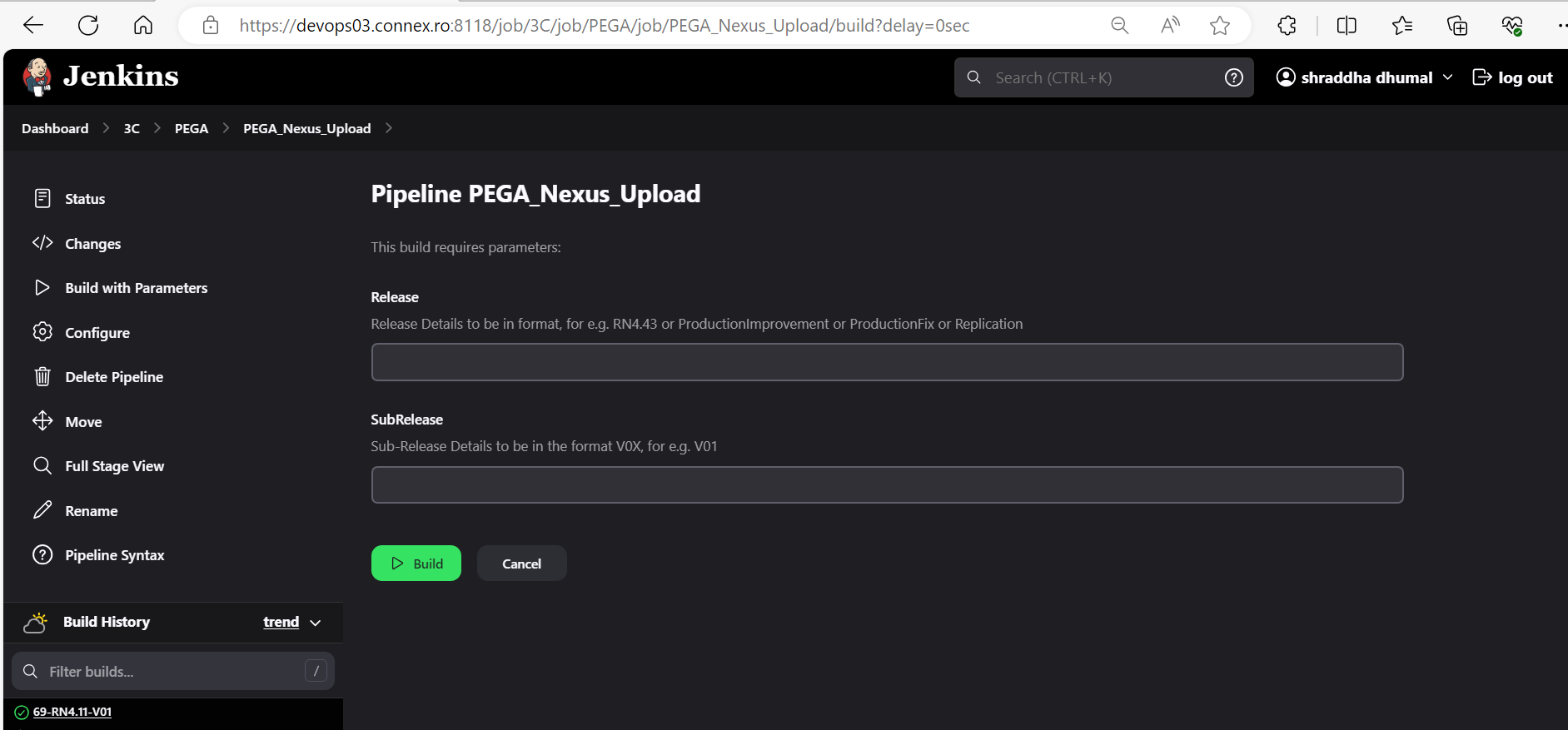
* This pipeline performs following tasks –
  + Copy release artifacts from DLV server to Jenkins temporary workspace.
  + For PEGA dev team delivers the release directly onto DLV server.
  + Run this Workspace copy against specific set of rules defined in shell script to restructure, versionize & load it to nexus.
  + Clean & release Workspace memory post successful or unsuccessful action.
  + Nexus Upload is common pipeline that should be used to load code & config versionize files to Nexus.
  + Deliverables agreed from PEGA Dev Team as below.



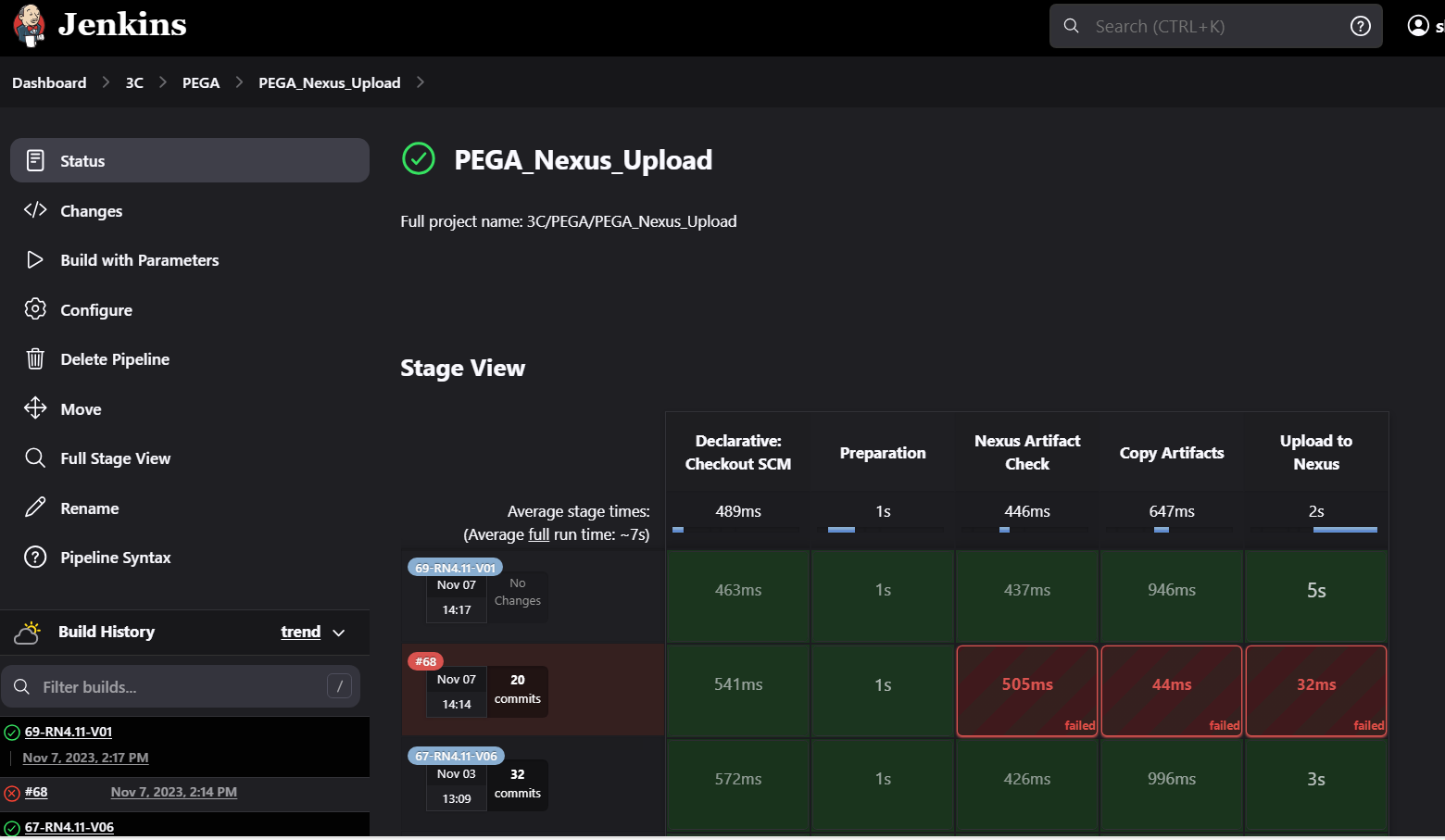
* + - Snapshot post versioning & loading into Nexus.



* + - The PEGA\_Nexus\_Upload Pipeline takes 2 inputs namely ***Release and SubRelease*** which needs to be Versioned & loaded to nexus.



* + - Snapshot below showing different stages of PEGA\_Nexus\_Upload pipeline post run.



# **Code Deployment Pipeline**

* + This pipeline is used to deploy necessary files from given release & Hotfix.
  + This pipeline needs to be used post PEGA\_Nexus\_Upload Pipeline as this Pipeline pulls data from Nexus for deployment.
  + The pipeline can be used to deploy UAT as well PET Deployments.
  + Pipeline performs below task –
    - Download release artifact tar file for given Release & Sub Release.
    - Extract artifacts into folder with Release number in Jenkins Workspace.
    - Perform Deployment of respective application based on files available.
    - PEGA\_UAT\_Deployment and PEGA\_PET\_Deployment Pipelines takes 2 inputs parameters namely Release & Sub Release together & Environment on which deployments needs to be performed
* Once given requirement inputs, Pipeline will perform below stages based on the files available for deployment.

