Artifact upload and ensuring the retention policy using devNext

Last edited by **VREDDY10** 7 months ago

❗ **Note:**

- This feature is available with devNext V4.0.0.
- This devNext upload supports currently Jenkins CI.

This feature is designed to simplify the process of uploading build artifacts to Artifactory. It introduces a devNext command that allows Jenkins CI jobs to upload build artifacts along with Build Info details to Artifactory. Additionally, it ensures compliance with the repository's configured retention policy.

1.1 Information Required in the Profile File (.ini File)

```
[artifact]
ARTIFACTORY_SERVER= <SERVER_NAME_OF_THE_ARTIFACTORY> ;# Mandatory
ARTIFACT_REPOS= <LIST_OF_ARTFATORY_RESPOSITORIES_SEPARATED_BY_COMMA> ; # Mandatory
ARTIFACT_OUT= <RELATIVE_PATH_TO_THE_SOURCE_DIR/FILE_TO_UPLOAD> ; # Mandatory
ARTIFACT_EXCLUDES= <RELATIVE_PATH_TO_THE_SOURCE_DIR/FILE_TO_BE_EXCLUDED_SEPARATED_BY_COMMA>
ARTIFACT_NAME= <NAME_FOR_THE_ARCHIVE_WHICH_WILL_BE_UPLOADED_TO_ARTIFACTORY>
```

Example:

```
[artifact]
ARTIFACTORY_SERVER = jfrog.chennai.visteon.com
ARTIFACT_REPOS = NISSAN_P13A_EL2_CRE_MY2024_EP30319_NightlyBuilds,NISSAN_P13A_EL2_CRE_MY2024_EP30319_Release
ARTIFACT_OUT = programs/nissan/my2024/p13a-el2/out/IMG/P13A_RUN1/release/IMG_BUILD/images
ARTIFACT_EXCLUDES = programs/nissan/my2024/p13a-el2/out/IMG/P13A_RUN1/release/CMakeFiles
ARTIFACT_NAME = ${projectname:OEM}_${projectname:VARIANTNAME}
```

a. ARTIFACTORY_SERVER (Mandatory):
This key holds the value of the domain name of the Artifactory server where your repositories are available to store the build artifacts.

Example:

> `ARTIFACTORY_SERVER=jfrog.chennai.visteon.com`

b. ARTIFACT_REPOS (Mandatory):
This key must be assigned with a list of the names of the project's Artifactory repositories separated by a comma as mentioned in the example.

Example:

> `ARTIFACT_REPOS=NISSAN_P13A_EL2_CRE_MY2024_EP30319_NightlyBuilds,NISSAN_P13A_EL2_CRE_MY2024_EP30319_Release`

❗ **Note:** The Command line input '--repo-name' will be validated against repo list provided in this variable.

c. ARTIFACT_OUT (Mandatory):

- Path of the directory/file, relative to the workspace. If the path is a folder, the folder will be archived in ".tar.gz" format, and the name for the file will be taken, if specified, from the following key **ARTIFACT_NAME**
- If it is a file, it will be directly uploaded with the same name of the file.

Example:

i) If it is a directory path:

> `ARTIFACT_OUT= programs/nissan/my2024/p13a-el2/out`

ii) If it is a File Path

> `ARTIFACT_OUT= programs/nissan/my2024/p13a-el2/out/archive.tar.gz`

d. ARTIFACT_EXCLUDES (Optional):
Path of the directory(s)/file(s), relative to the workspace, separated by a comma which are to be excluded from the archive.

Example:

> `ARTIFACT_EXCLUDES= programs/nissan/my2024/p13a-el2/out/IMG/P13A_RUN1/release/CMakeFiles`

❗ **Note:** This variable is applicable only in case of the ARTIFACT_OUT is a directory.

FAQs at https://jira.visteon.com/tag/qit/

e. ARTIFACT_NAME (Optional):

Name for the archive file that will be created for the ARTIFACT_OUT directory.

- ❗ **Note:** If ARTIFACT_NAME is not defined or --artifact-name argument is not passed, "JOB_BASE_NAME" value will be used as default artifact name.
- This variable is applicable only in case of the ARTIFACT_OUT is a directory.

Example:

```
ARTIFACT_NAME= P13A_EL2_OUT
```

1.2. Command for Artifact upload

devNext command to upload build artifacts with retention policy being upheld.

```
dn ci upload --profile <profile-url> --dir <directory-path> --repo-name <repo-name> [--artifactory-server <server_Name>
```

❗ **Note:**

- In the above command, it is mandatory to provide the "repo-name" details and it must be of one of the repositories mentioned in the "ARTIFACT_REPOS" variable in the profile.
- "**--dst-dir**" is the Path of Artifact file within the Artifactory Repository

Examples:

1. General Example:

   a. **With --dst-dir**
   ```
   dn ci upload --profile profile.ini --repo-name NISSAN_P13A_EL2_CRE_MY2024_EP30319_Release --dst-dir REL_20241210_V3 --dir .
   ```

   b. **Without --dst-dir**
   ```
   dn ci upload --profile profile.ini --repo-name NISSAN_P13A_EL2_CRE_MY2024_EP30319_Release --dir .
   ```

2. Overrides the Artifactory Server Name:

   ```
   dn ci upload --profile profile.ini --dir . --artifactory-server jfrog.chennai.visteon.com --repo-name
   NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS
   ```

3. Overrides the Artifactory Server Name, Artifact out

   ```
   dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
   NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --src-dir program/my2025/out
   ```

4. Overrides the Artifactory Server Name, Artifact out and excludes:

   ```
   dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
   NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --src-dir program/my2025/out --excludes
   program/my2025/out/lib,program/my2025/out/doc
   ```

5. Overrides the Artifactory Server Name, Artifact out, excludes and Artifact Name:

   ```
   dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
   NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --src-dir programs/nissan/my2024/p13a-el2/out/archive.tar.gz --artifact-name
   b10_integration_out
   ```

6. Other Examples

   ```
   dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
   NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --src-dir programs/nissan/my2024/p13a-el2/out/archive.zip
   ```

```
dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --src-dir programs/nissan/my2024/p13a-el2/out/archive.tar.gz --artifact-name
b10_integration_out
```

```
dn ci upload --profile profile.ini --dir .--artifactory-server jfrog.chennai.visteon.com --repo-name
NISSAN_P13A_EL2_CRE_MY2024_EP30319_NIGHTLYBUILDS --artifact-name b10_integration_out
```

1.3. What must be configured?

To maintain the retention policy, the following must be configured for the smooth flow complete process.

1.3.1 Artifactory Retention Policy

The following property "**repository.retention.builds**" must be configured to the Artifactory Repository(s) to be considered for the Retention Policy and to delete the builds and respective artifacts automatically. Note that the value for this field is a number and should be greater than **1**.

Raise a ServiceNow Request for the same: https://visteon.service-now.com/vss?
id=sc_category&sys_id=40e25548dbb6fb40370e94d6db9619a0&catalog_id=af482c51db847300656e9674db961901

For further support reach out to Artifactory Team: artifactory@visteon.com

Example:

```
repository.retention.builds = 30
```

Where 30 is the number of Build Artifacts allowed for the repository. If it exceeds, the older Builds and their related artifacts will be deleted prior to uploading the next Build artifact. This is done to ensure that the retention policy and thus the repo.quota are satisfied.

1.3.2 Configuration of SSH key

You need to configure the **SSH Key** in the default location of **$HOME/.ssh**. This key should have permission to upload and delete the builds and artifacts from the project-specific repositories.

Note: Once the ssh keys got generated, the public key must be configured in the Artifactory. To configuring the same please follow the instructions /steps mentioned in the below PPT. For further support reach out to Artifactory Team: artifactory@visteon.com

Link to PPT: SSH Configuration - Artifactory

The Default .ssh key(Private key) path is consider as follows:

```
${HOME}/.ssh/id_rsa
```

Example:
/home/jenkins/.ssh/id_rsa

In case you want to keep the ssh key in a customized file/directory, define JFROG environment variable as described below:

```
(for Linux) export JFROG_CLI_SSH_KEY_PATH=<path_to_the_SSH_KEY>
Or
(for Windows) set JFROG_CLI_SSH_KEY_PATH=<path_to_the_SSH_KEY>
```

Example (Linux) 1:

export **JFROG_CLI_SSH_KEY_PATH**=/home/jenkins/.ssh/id_rsa

Example (Linux) 2:

export **JFROG_CLI_SSH_KEY_PATH**=/home/jenkins/mykeys/id_rsa

1.3.3 Configure the .netrc file with Artifactory Access Credentials

To ensure retention policy, a user id having permission to **read** the retention property of the Artifactory repository must be configured in the ".netrc" file as follows:

```
machine <ARTIFACTORY_SERVER_URL> login <USERNAME(CDSID)> password <ACCESSTOKEN>
```

Example:

```
machine jfrog.bangalore.visteon.com login CDSID password ACCESSTOKEN
```

If the ".netrc" file was not configured with the credential of Artifactory

1. If PAT is enabled in gitconfig (devnext.auth)
   1. devNext upload command and the Job will be terminated.
2. If PAT is not enabled in gitconfig (devnext.auth)
   1. Credentials provided for Visteon git servers will be considered.
   2. If no Visteon git server entries are found in ".netrc", default credentials provided in ".netrc" are taken.
   3. If no credentials are defined in ".netrc", devNext upload command and the Job will be terminated.

Q2A Forum: Q&A platform helps find answers, ask your questions, learn and share knowledge.

Support: If you've got any questions about above-mentioned steps, please reach out to 📧 devNext.support@visteon.com

FAQs at https://q2a.visteon.com/tag/git/