



Azure Artifacts



Storie 8 : collection of Azure Artifacts - install node, Build and publish artifacts.

<https://github.com/digitaledify/lms-public-services-project.git>

Azure DevOps Artifacts

Artifact is like a package or a container that holds important things needed for a software project. It could be the actual software code, images, documents, or anything else that's part of the project. Just like a box keeps things safe and organized, an artifact stores and manages these project items so that they can be easily used or shared.

Repo link

1. Introduction to Artifacts

Azure DevOps Artifacts is a package management service that allows teams to create, host, and share packages such as NuGet, npm, Maven, and more. It provides a centralized repository for managing dependencies and artifacts used in software development.

2. Key Features of Artifacts

a. Package Management

- Artifacts supports various package formats, including NuGet, npm, Maven, and others, making it versatile for different programming languages and **frameworks**.
- Teams can publish, consume, and version packages, ensuring consistency in dependency management.

b. Secure and Reliable Hosting

- Artifacts provides secure and reliable hosting for packages, ensuring high availability and performance.
- Role-based access control (RBAC) helps manage permissions and control who can access and publish packages.

c. Integration with Build Pipelines

- Artifacts seamlessly integrates with Azure DevOps build pipelines, enabling automatic package publishing and consumption as part of the CI/CD process.
- This integration simplifies dependency management and ensures that the right packages are used during builds.

d. Universal Package Management

- Azure Artifacts offers Universal Packages, which can store any file type, including binaries, scripts, and documentation, making it suitable for various types of artifacts beyond code libraries.

3. Benefits of Using Artifacts

- **Streamlined Dependency Management:** Artifacts centralizes the storage and management of packages, reducing the risk of using outdated or incompatible dependencies.

- **Improved Build and Deployment Efficiency:** Integration with build pipelines ensures that the correct packages are used consistently during builds and deployments.
- **Enhanced Collaboration:** Teams can easily share and version packages, promoting collaboration and reuse across projects.

4. Security and Compliance

- Azure DevOps Artifacts adheres to industry-standard security practices, offering features such as RBAC, audit logging, and secure connections to protect sensitive package data.
- Compliance certifications like SOC, ISO, and HIPAA ensure that Artifacts meets stringent compliance requirements.

.npmrc

In Azure DevOps, the **.npmrc** file is used to configure npm (Node Package Manager) settings for your project. This file allows you to specify settings such as the npm registry URL, authentication tokens, proxy settings, and other npm configurations.

Lab to collect artifacts of node js application

Collection of Artifact

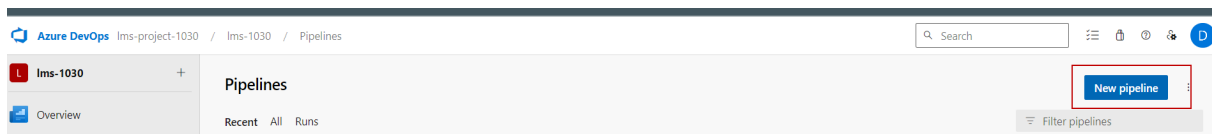
Three Step Process

- checkout
- Install node
- Build and

- Publish Artifacts

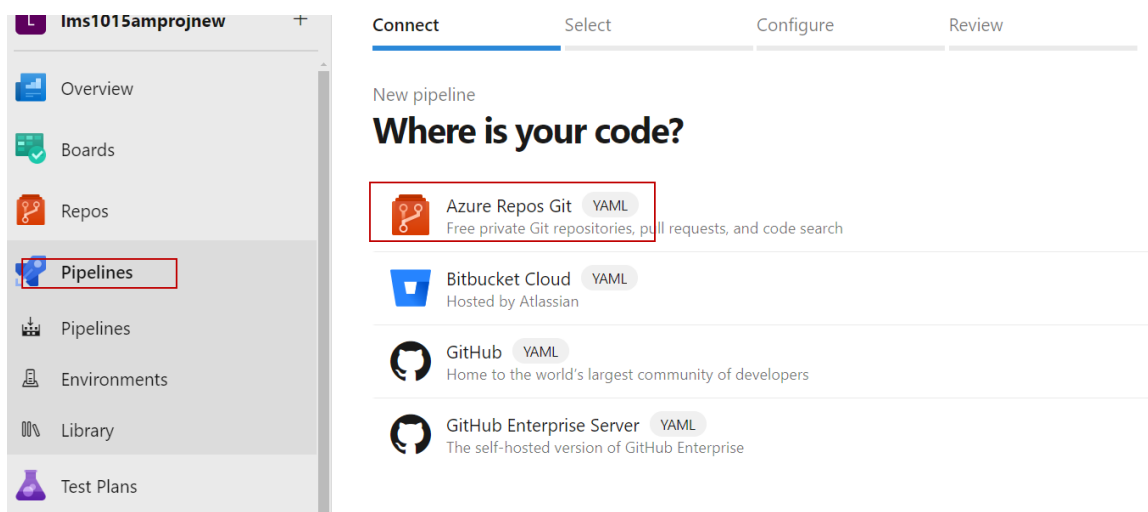
Step 1: install node

Create A pipeline



Select Node .js as we want to install nodejs our code base is nodejs

▼ Azure repo



Azure DevOps lms-project-1030 / lms-1030 / Pipelines









lms-1030 +

- Overview
- Boards
- Repos
- Pipelines**
- Pipelines
- Environments
- Library
- XAML
- Test Plans
- Artifacts

✓ Connect ✓ Select **Configure** Review

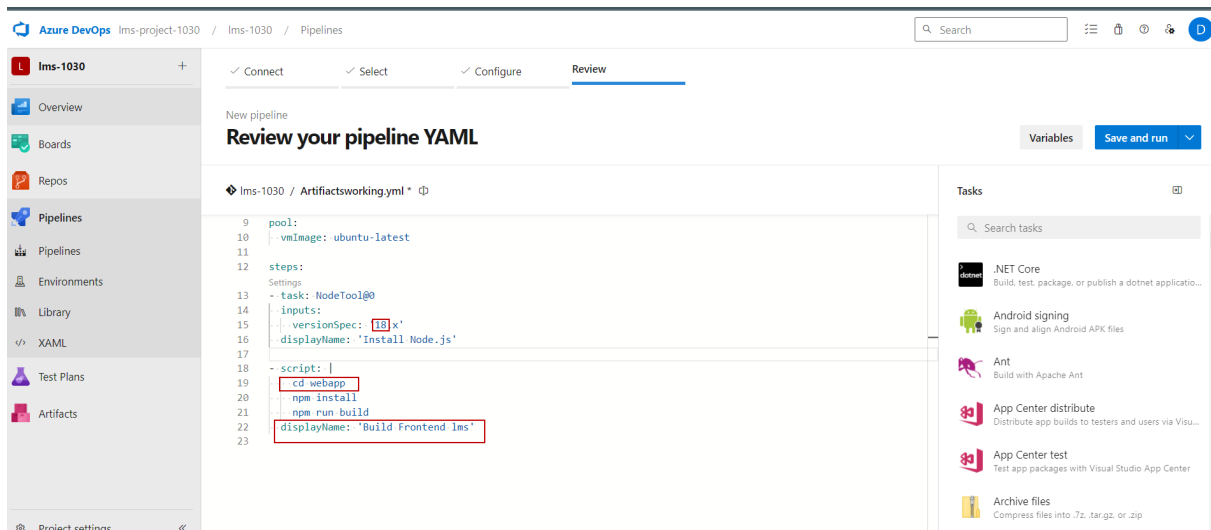
New pipeline

Configure your pipeline

-  **Docker**
Build a Docker image
-  **Docker**
Build and push an image to Azure Container Registry
-  **Deploy to Azure Kubernetes Service**
Build and push image to Azure Container Registry; Deploy to Azure Kubernetes Service
-  **Node.js**
Build a general Node.js project with npm.
-  **Node.js Express Web App to Linux on Azure**
Build a Node.js Express app and deploy it to Azure as a Linux web app.
-  **Node.js with Vue**
Build a Node.js project that uses Vue.
-  **Node.js with webpack**
Build a Node.js project using the webpack CLI.
-  **Node.js with React**
Build a Node.js project that uses React.

Add the following

change the node version 18 and add cd webapp in script as shown below

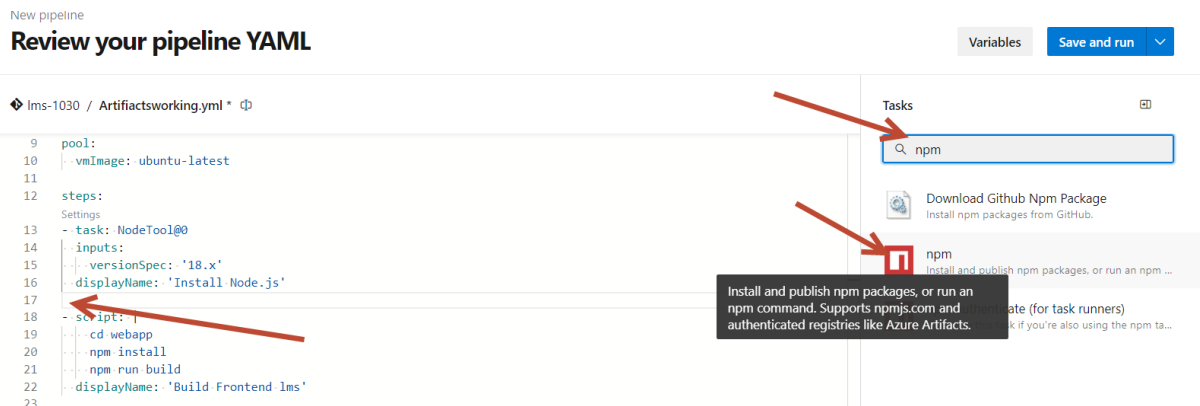


Step 2: install npm node modules

Select cursor on proper position



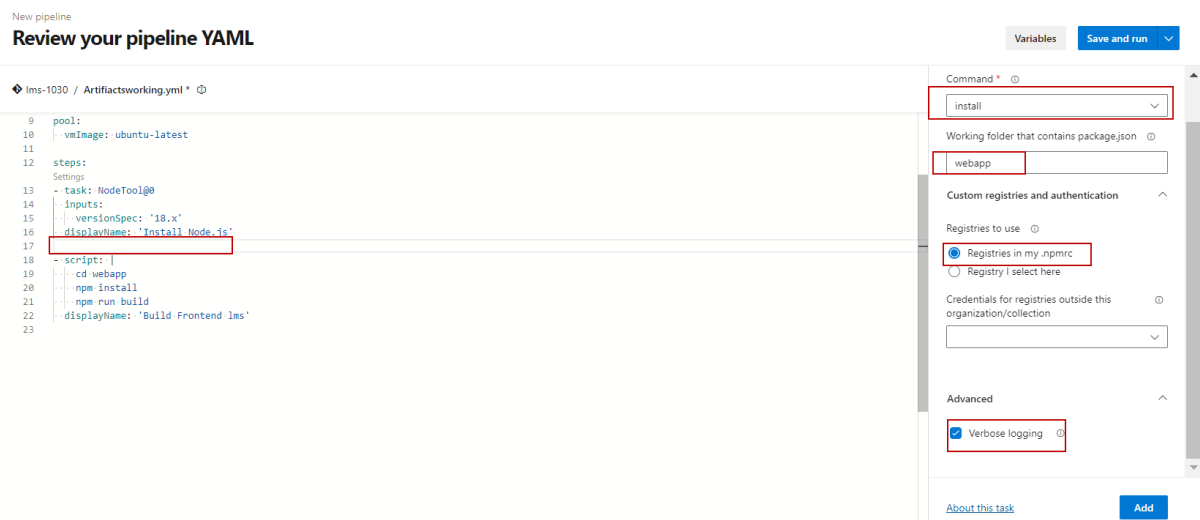
click on show assistance



To install npm i that is adding node modules

work dir is webapp and verbose is for detailing

> set cursor on correct position and click on ADD



after clicking on add

```
9  pool:
10    vmImage: ubuntu-latest
11
12  steps:
    Settings
13  - task: NodeTool@0
14    inputs:
15      versionSpec: '18.x'
16      displayName: 'Install Node.js'
    Settings
17  - task: Npm@1
18    inputs:
19      command: 'install'
20      workingDir: 'webapp'
21      verbose: true
22  - script: |
23      cd webapp
24      npm install
25      npm run build
26      displayName: 'Build Frontend lms'
27
```

Step 3: public build artifacts to artifacts

click on show assistance

✓ Connect ✓ Select ✓ Configure **Review**

New pipeline

Review your pipeline YAML

Variables **Save and run**

ims-1030 / Artifactsworking.yml

```

9 pool:
10   vmImage: ubuntu-latest
11
12 steps:
13   - task: NodeTool@0
14     inputs:
15       versionSpec: '18.x'
16     displayName: 'Install Node.js'
17   - task: Npm@1
18     inputs:
19       command: 'install'
20       workingDir: 'webapp'
21       verbose: true
22     script: |
23       cd webapp
24       npm install
25       npm run build
26     displayName: 'Build Frontend lms'
27

```

Tasks

publish

- Build, test, package, or publish a dotnet application...
- Index sources and publish symbols
- npm
- Publish build artifacts**
- Publish build artifacts to Azure Pipelines or a Windows file share
- Publish Pipeline Artifacts
- Publish Pipeline Metadata
- Publish Quality Gate Result

Set cursor position correctly

/ Ims-1030 / Pipelines

Search

← Ims-1030 (5)

Variables **Run**

dev Ims-1030 / azure-pipelines-5.yml

```

5 trigger:
6   - dev
7
8 pool:
9   vmImage: ubuntu-latest
10
11 steps:
12   - task: NodeTool@0
13     inputs:
14       versionSpec: '18.x'
15     displayName: 'Install Node.js'
16   - task: Npm@1
17     inputs:
18       command: 'install'
19       workingDir: 'webapp'
20       verbose: true
21     script: |
22       cd webapp
23       npm install
24       npm run build
25     displayName: 'npm build frontend'
26   - task: PublishBuildArtifacts@1
27     inputs:
28       PathToPublish: 'webapp/dist'
29       ArtifactName: 'frontend'
30       publishLocation: 'Container'
31
32

```

← Publish build artifacts

Path to publish * webapp/dist

Artifact name * frontend

Artifact publish location * Azure Pipelines

Max Artifact Size 0


Advanced

About this task **Add**

Final pipeline script

New pipeline

Review your pipeline YAML

lms-1030 / Artifactsworking.yml * 

```
1  # Node.js
2  # Build a general Node.js project with npm.
3  # Add steps that analyze code, save build artifacts, deploy, and more:
4  # https://docs.microsoft.com/azure/devops/pipelines/languages/javascript
5
6  trigger:
7    - dev
8
9  pool:
10   | vmImage: ubuntu-latest
11
12  steps:
13    Settings
14    - task: NodeTool@0
15      | inputs:
16      |   versionSpec: '18.x'
17      |   displayName: 'Install Node.js'
18    Settings
19    - task: Npm@1
20      | inputs:
21      |   command: 'install'
22      |   workingDir: 'webapp'
23      |   verbose: true
24      | script: |
25      |   cd webapp
26      |   npm install
27      |   npm run build
28      |   displayName: 'Build Frontend lms'
29    Settings
30    - task: PublishBuildArtifacts@1
31      | inputs:
32      |   PathToPublish: 'webapp/dist'
33      |   ArtifactName: 'frontend'
34      |   publishLocation: 'Container'
```

Save and run

← Jobs in run #20240226.1

Ims-1030 (2)

Jobs

✓ Job 9s

✓ Initialize job 2s

✓ Checkout Ims-1030@dev to s 1s

✓ Install Node.js <1s

Npm 4s

Build Frontend Ims

PublishBuildArtifacts

Post-job: Checkout Ims-1030@dev t...

Npm

1 Starting: Npm

2 =====

3 Task : npm

4 Description : Install and publish npm packages, or run an npm

5 Version : 1.231.0

6 Author : Microsoft Corporation

7 Help : <https://docs.microsoft.com/azure/devops/pipeline>

8 =====

9 /opt/hostedtoolcache/node/18.19.1/x64/bin/npm --version

10 10.2.4

11 /opt/hostedtoolcache/node/18.19.1/x64/bin/npm config list

12 npm verb cli /opt/hostedtoolcache/node/18.19.1/x64/bin/node /op

13 ; "env" config from environment

14 npm info using npm@10.2.4

15

16 npm info using node@v18.19.1

17 npm verb title npm config list

18 npm verb argv "config" "list"

19 npm verb logfile logs-max:10 dir:/home/vsts/.npm/_logs/2024-02-

20 npm verb logfile /home/vsts/.npm/_logs/2024-02-26T06_57_48_3342

21 npm verb exit 0

22 npm info ok

23 loglevel = "verbose"

24 userconfig = "/home/vsts/work/1/npm/45.npmrc"

25

26 ; node bin location = /opt/hostedtoolcache/node/18.19.1/x64/bin

27 ; node version = v18.19.1

← Jobs in run #20240226.1

Ims-1030 (2)

Jobs

✓	Job	54s
✓	Initialize job	2s
✓	Checkout Ims-1030@dev to s	1s
✓	Install Node.js	<1s
✓	Npm	30s
✓	Build Frontend Ims	16s
✓	PublishBuildArtifacts	1s
✓	Post-job: Checkout Ims-1030@d...	<1s
✓	Finalize Job	<1s

✓ Job

1 Pool: [Azure Pipelines](#)
2 Image: ubuntu-latest
3 Queued: Just now [[manage parallel jobs](#)]
4 Agent: Hosted Agent
5 Started: Just now
6 Duration: 54s
7
8 The agent request is already running or has already
9 ▶ Job preparation parameters
44 [1 artifact](#) produced
45 Job live console data:
46 Starting: Job
47 Async Command Start: DetectDockerContainer
48 Async Command End: DetectDockerContainer
49 Async Command Start: DetectDockerContainer
50 Async Command End: DetectDockerContainer
51 Finishing: Job

How to check collected artifacts

The screenshot shows the Azure DevOps interface for the 'Ims-1030' project. The left sidebar contains navigation links: Overview, Boards, Repos, Pipelines (highlighted with a red box), Environments, Library, XAML, Test Plans, and Artifacts. The main area displays the 'Pipelines' tab with a table of 'Recently run pipelines'.

Pipeline	Last run
Ims-1030 (2) <small>#20240226.1 • Set up CI with Azure Pipelines</small> <small>Individual CI for dev</small>	Just now 59s
Ims-1030 (1) <small>#20240224.1 • Update azure-pipelines-4.yml for Azure Pipelines</small> <small>Manually triggered for dev</small>	Saturday 1m 59s
Ims-1030 <small>#20240224.7 • Update azure-pipelines-4.yml for Azure Pipelines</small> <small>Individual CI for dev</small>	Saturday 53s

ims-1030

+

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Library

XAML

Test Plans

Artifacts

← Jobs in run #20240226.1

ims-1030 (2)

Jobs

✓

Job

54s

✓

Initialize job

2s

✓

Checkout ims-1030@dev to s

1s

✓

Install Node.js

<1s

✓

Npm

30s

✓

Build Frontend Ims

16s

✓

PublishBuildArtifacts

1s

✓

Post-job: Checkout Ims-1030@d...

<1s

✓

Finalize Job

<1s

✓

Report build status

<1s

✓ Job

1 Pool: [Azure Pipelines](#)

2 Image: ubuntu-latest

3 Agent: Hosted Agent

4 Started: Today at 12:27 PM

5 Duration: 54s

6

7 ▶ Job preparation parameters

42 E) 1 artifact produced

ims-1030

+

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Library

XAML

Test Plans

Artifacts

✓ #20240226.1 • Set up CI with Azure Pipelines

ims-1030 (2)

Run new

ⓘ

This run is being retained as one of 3 recent runs by dev (Branch).

View retention leases

Summary

Triggered by devops

View 36 changes

Repository and version

Time started and elapsed

Related

Tests and coverage

ims-1030

dev

de12e7cb

Today at 12:27 PM

53s

work items

1 published

Get started

Jobs

Name

Status

Duration

Job

Success

54s

Artifacts collected here

Azure DevOps

ims-project-1030 / Ims-1030 / Pipelines / Ims-1030 (2) / 20240226.1 / Published artifacts

Search

Ims-1030

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Library

XAML

Test Plans

Artifacts

Artifacts

Published

Name	Size
frontend	3 MB
assets	3 MB
dl-logo.png	17 KB
index.html	416 B
loading.gif	14 KB
mockServiceWorker.js	8 KB
vite.svg	2 KB