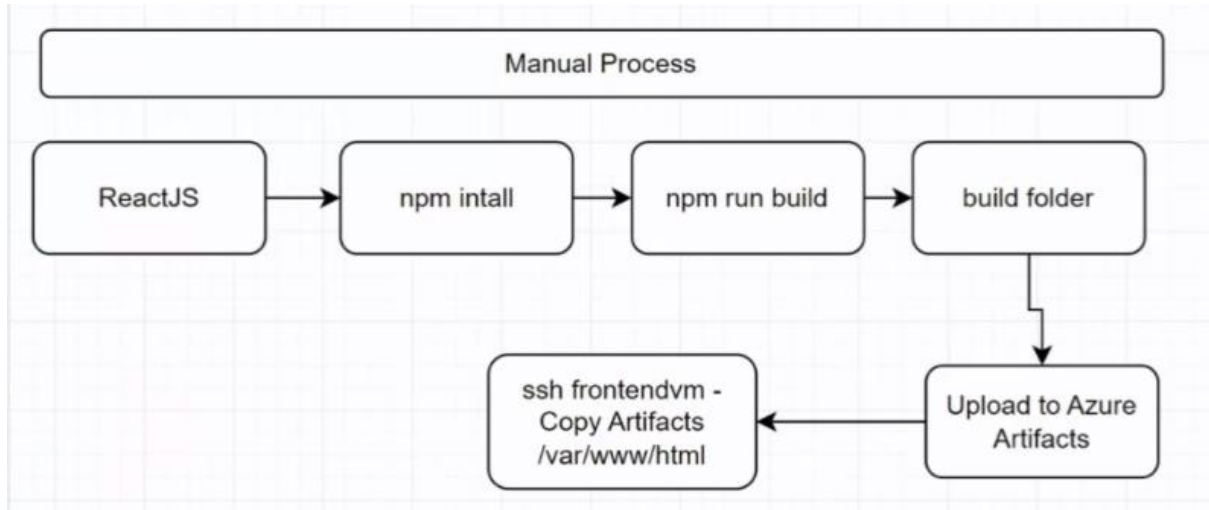


**25 August 2024**

**AGENGA – CONTINUING LEFT PART OF 11 August 2024**

1) Since, if we have to deploy application, automate it, make pipeline of it, then we should atleast know the manual process to deploy that application.

2) Our application was of react JS, so manual process is as below.



3) \$(System.DefaultWorkingDirectory) – It is a predefined variable

**System.DefaultWorkingDirectory**

The local path on the agent where your source code files are downloaded. For example:

`c:\agent_work\1\s`

By default, new build pipelines update only the changed files. You can modify how files are downloaded on the [Repository](#) tab.

This variable is agent-scoped. It can be used as an environment variable in a script and as a parameter in a build task, but not as part of the build number or as a version control tag.

4) Writing pipeline

i)

```

1  trigger: none
2
3  pool: Agentpool21
4
5  stages:
6  - stage: BuildStage
7    displayName: BuildStage
8    jobs:
9    - job: BuildJobs
10     displayName: BuildJobs
11     steps:

```

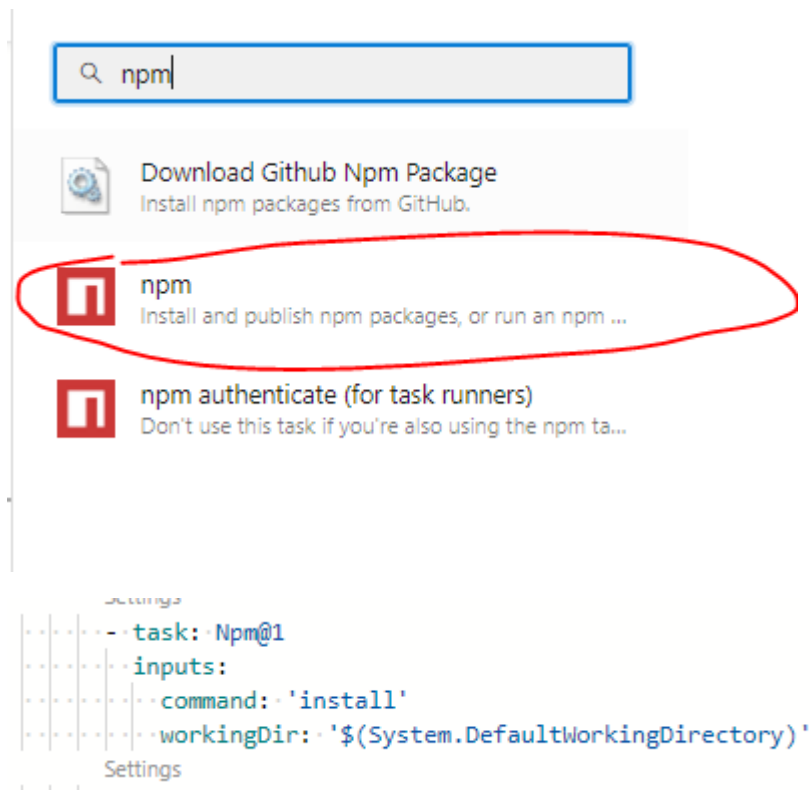
## ii) SEARCH IN ASSISTANT – node installer

```

| | | steps:
| | |   Settings
| | |   - task: NodeTool@0
| | |     inputs:
| | |       versionSource: 'spec'
| | |       versionSpec: '16.x'
| | |   Settings

```

## iii) SEARCH IN ASSISTANT – npm



Search results for 'npm':

- Download Github Npm Package  
Install npm packages from GitHub.
- npm**  
Install and publish npm packages, or run an npm ...
- npm authenticate (for task runners)  
Don't use this task if you're also using the npm ta...

```

| | | - task: Npm@1
| | |   inputs:
| | |     command: 'install'
| | |     workingDir: '$(System.DefaultWorkingDirectory)'
| | |   Settings

```

## iv) SEARCH IN ASSISTANT – npm



## ← Publish Pipeline Artifacts ⓘ

File or directory path \* ⓘ

Artifact name ⓘ

Artifact publish location \* ⓘ

Custom properties ⓘ

About this task

Add

```
task: PublishPipelineArtifact@1
inputs:
  targetPath: '$(System.DefaultWorkingDirectory)/build'
  artifact: 'todoapp-ui-artifacts'
  publishLocation: 'pipeline'
```

vi) Now run pipeline so our build is ready

← **Jobs in run #20241010.12**

ReactTodoUIMonolith.git

BuildStage

✓ BuildJobs	2m 3s
✓ Initialize job	4s
✓ Checkout ReactTodoUI...	5s
✓ NodeTool	2s
✓ Npm	26s
✓ Npm	1m 16s
✓ PublishPipelineArtifact	5s
✓ Post-job: Checkout Re...	<1s
✓ Finalize Job	<1s
✓ Report build status	<1s

✓ **BuildJobs**

```

1 Pool: Agentpool21
2 Queued: Today at 11:36 PM [manage_parallel_jobs]
3 Agent: Testagent21
4 Started: Today at 11:36 PM
5 Duration: 2m 3s
6
7 The agent request is already running or has already completed.
8 ▶ Job preparation parameters
43 📦 1 artifact produced
44 Job live console data:
45 Starting: BuildJobs
46 Async Command Start: DetectDockerContainer
47 Async Command End: DetectDockerContainer
48 Async Command Start: DetectDockerContainer
49 Async Command End: DetectDockerContainer
50 Finishing: BuildJobs

```

vii) Now we can see our build has come into azure artifacts

kuberdev66666 / Todoapp / Pipelines / ReactTodoUIMonolith.git / 20241010.12 / Published artifacts

Search

← **Artifacts**

Published

Name	Size
📁 todoapp-ui-artifacts	3 MB
📄 asset-manifest.json	517 B
📄 background.jpg	620 KB
📄 devopsinsiderslogo.png	8 KB
📄 favicon.ico	4 KB
📄 index.html	649 B
📄 logo192.png	6 KB
📄 logo512.png	10 KB
📄 manifest.json	486 B
📄 robots.txt	67 B
📁 static	2 MB
📁 css	921 B
📁 js	2 MB

5) Now we have to deploy these artifacts on our frontend vm in deploy stage

```

- stage: DeployStage
  displayName: DeployStage
  jobs:
  - job: Deployjob
    displayName: Deployjob
    steps:

```

6) All stages run on different different agents

7) Now we have to download our artefacts

8) SEARCH IN ASSISTANT – “download pipeline artifacts”

Variables
Validate and save
⌵
⋮

←

## Download Pipeline Artifacts ⓘ

Download artifacts produced by \* ⓘ

☒ Current run  
☐ Specific run

Artifact name ⓘ

todoapp-ui-artifacts
⌵

Matching patterns ⓘ

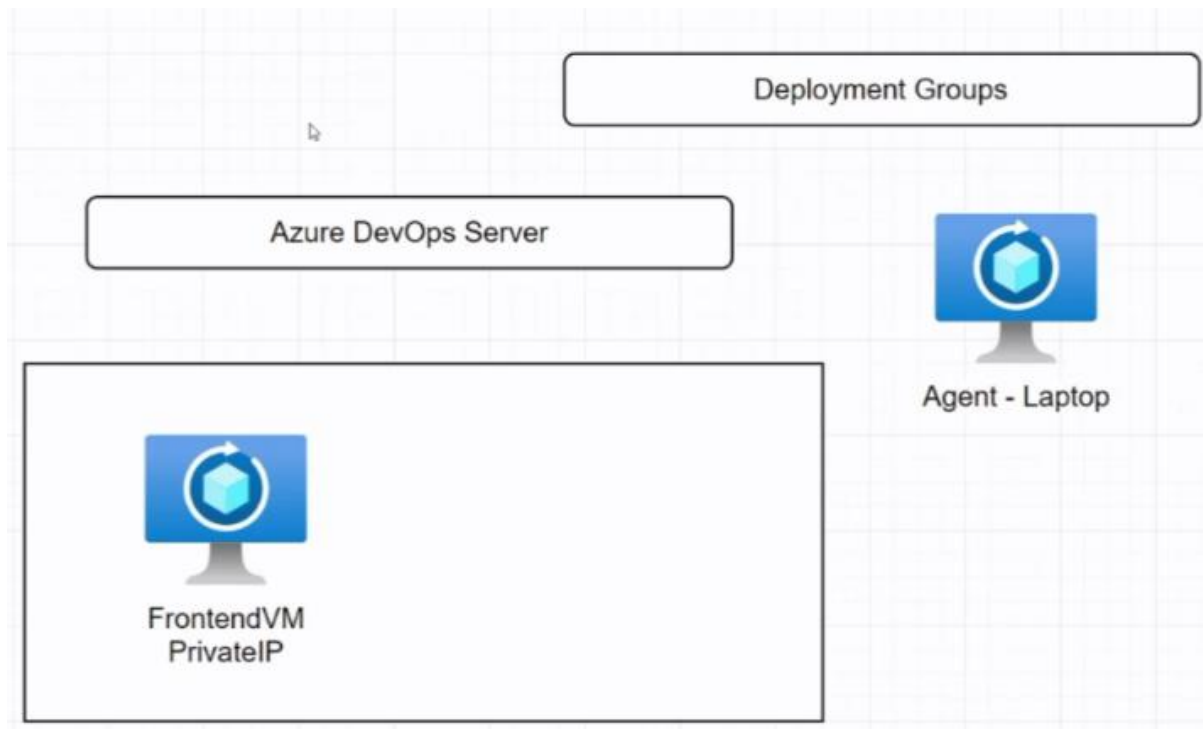
\*\*

Destination directory \* ⓘ

\$(System.DefaultWorkingDirectory)/dhondhu

Add

```
Settings
- task: DownloadPipelineArtifact@2
  inputs:
    buildType: 'current'
    artifactName: 'todoapp-ui-artifacts'
    targetPath: '$(System.DefaultWorkingDirectory)/dhondhuArtifacts'
```



9) Now use or create service connection

10) **SEARCH IN ASSISTANT** – “copy files over ssh”

←

Copy files over SSH ⓘ

SSH service connection \* ⓘ

Frontend vm service connection ▾

Source folder ⓘ

\$(System.DefaultWorkingDirectory)/dhondhu

Contents \* ⓘ

\*\*

Target folder ⓘ

/var/www/html

Advanced ▾

About this task

Add

Settings

```
task: CopyFilesOverSSH@0
inputs:
  sshEndpoint: 'Frontend vm service connection'
  sourceFolder: '$(System.DefaultWorkingDirectory)/dhondhuArtifacts'
  contents: '**'
  targetFolder: '/var/www/html'
  readyTimeout: '20000'
```

11) While running pipeline got below



Jobs in run #20241010.15

ReactTodoUIMonolith.git

BuildStage

> BuildJobs

2m 6s

DeployStage

DeployJob

20s

Initialize job

3s

Checkout ReactTodoUI...

5s

DownloadPipelineArtifact

5s

CopyFilesOverSSH

5s

Post-job: Checkout Re...

<1s

Finalize Job

<1s

CopyFilesOverSSH

Starting: CopyFilesOverSSH

Task : Copy files over SSH

Description : Copy files or build artifacts to a remote machine over SSH

Version : 0.246.3

Author : Microsoft Corporation

Help : <https://docs.microsoft.com/azure/devops/pipelines/tasks/deploy/copy-files-over-ssh>

Setting up SSH service connection to remote host 52.172.166.134.

Found 16 files to copy to the remote machine.

Copying file /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/asset-manifest.json to /var/www/html/asset-manifest.json on remote machine.

##[error]failed to copy /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/asset-manifest.json. Error: fastPut: Permission denied Local: /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/asset-manifest.json

at fnterror (/home/azureuser/agents/\_work/\_tasks/CopyFilesOverSSH\_67cec91b-0351-4c2f-8465-d74b3d2a2d96/0.246.3/node\_modules/ssh2-sftp-client/lib/ssh2-sftp-client.js:14:11)

at cbfinal (/home/azureuser/agents/\_work/\_tasks/CopyFilesOverSSH\_67cec91b-0351-4c2f-8465-d74b3d2a2d96/0.246.3/node\_modules/ssh2-sftp-client/lib/ssh2-sftp-client.js:15:11)

at FSReqCallback.oncomplete (node:fs:187:23)

code: 3,

custom: true

Copying file /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/background.jpg to /var/www/html/background.jpg on remote machine.

##[error]failed to copy /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/background.jpg. Error: fastPut: Permission denied Local: /home/azureuser/agents/\_work/1/s/dhondhuArtifacts/background.jpg

at fnterror (/home/azureuser/agents/\_work/\_tasks/CopyFilesOverSSH\_67cec91b-0351-4c2f-8465-d74b3d2a2d96/0.246.3/node\_modules/ssh2-sftp-client/lib/ssh2-sftp-client.js:14:11)

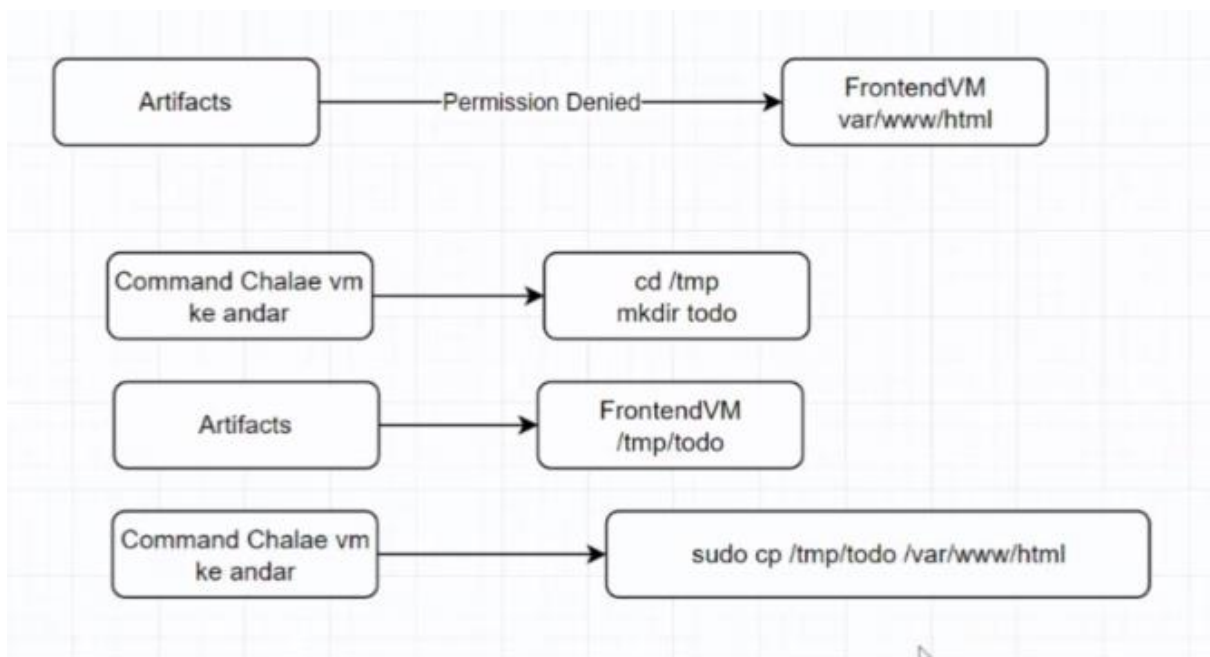
at cbfinal (/home/azureuser/agents/\_work/\_tasks/CopyFilesOverSSH\_67cec91b-0351-4c2f-8465-d74b3d2a2d96/0.246.3/node\_modules/ssh2-sftp-client/lib/ssh2-sftp-client.js:15:11)

at FSReqCallback.oncomplete (node:fs:187:23)

code: 3,

custom: true

12) So to resolve above permission error we will do so



13) SEARCH – SSH

←

SSH ⓘ

SSH service connection \* ⓘ

Frontend vm service connection ▾

Run \* ⓘ

☒ Commands
 ☐ Script File
 ☐ Inline Script

Commands \* ⓘ

cd /tmp  
 mkdir todo

Advanced ▾

About this task

Add

```

targetName: 'C:\system\default\working\directory\bin'
Settings
- task: SSH@0
  inputs:
    sshEndpoint: 'Frontend vm service connection'
    runOptions: 'commands'
    commands: |
      cd /tmp
      mkdir todo
    readyTimeout: '20000'
Settings
- task: CopyFilesOverSSH@0
  inputs:
    sshEndpoint: 'Frontend vm service connection'

```

14) update as below

```

Settings
- - task: CopyFilesOverSSH@0
- - inputs:
- -   sshEndpoint: 'Frontend-vm-service-connection'
- -   sourceFolder: '$(System.DefaultWorkingDirectory)/dhondhuArtifacts'
- -   contents: '**'
- -   targetFolder: '/tmp/todo'
- -   readyTimeout: '20000'

```

#### 15) SEARCH – SSH

```

Settings
- - task: SSH@0
- - inputs:
- -   sshEndpoint: 'Frontend-vm-service-connection'
- -   runOptions: 'commands'
- -   commands: |
- -     sudo rm -rf /var/www/html/*
- -     sudo cp -r /tmp/todo/* /var/www/html
- -     sudo rm -rf /tmp/todo
- -   readyTimeout: '20000'

```

#### 16) Now got below error

←

Jobs in run #20241010.17

ReactTodoUIMonolith.git

BuildStage		
>	BuildJobs	2m 1s
DeployStage		
▼	Deployjob	17s
	Initialize job	2s
	Checkout ReactTodoUI...	5s
	DownloadPipelineArtifact	4s
	SSH	2s
	CopyFilesOverSSH	<1s
	SSH	<1s

SSH

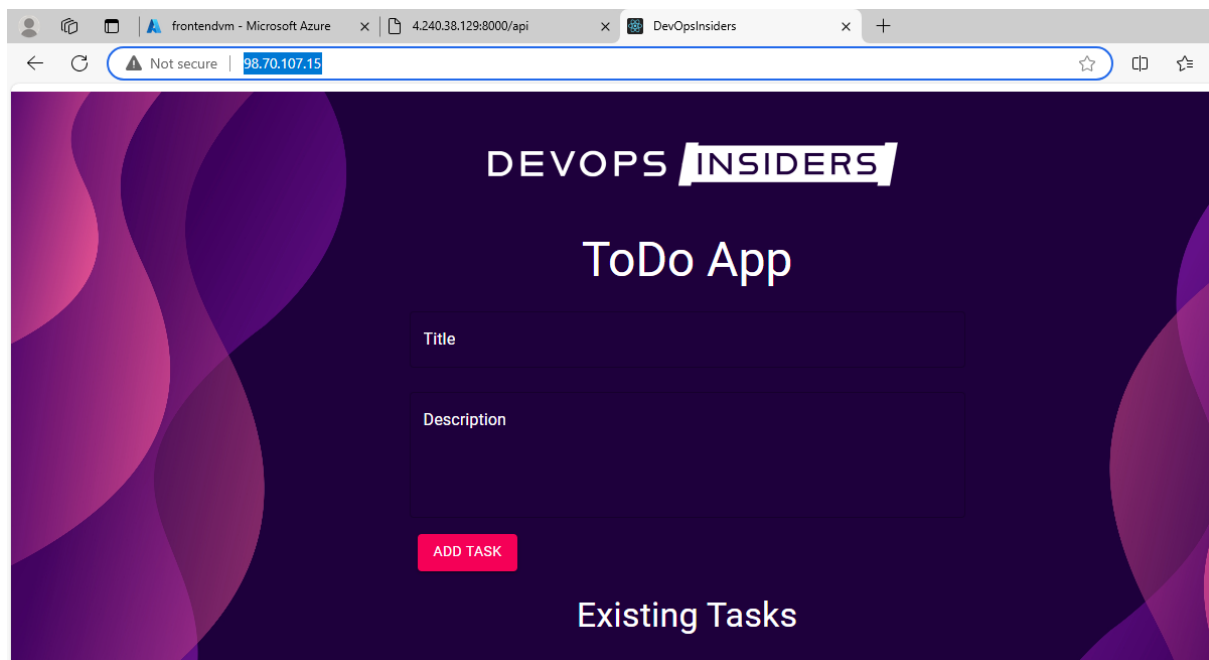
```

1  Starting: SSH
2  =====
3  Task      : SSH
4  Description : Run shell commands or a script on a remote machine using SSH
5  Version   : 0.245.1
6  Author    : Microsoft Corporation
7  Help      : https://docs.microsoft.com/azure/devops/pipelines/tasks/deploy/ssh
8  =====
9  Trying to establish an SSH connection to ***@52.172.166.134:22
10 Successfully connected.
11 cd /tmp
12 mkdir todo
13 ##[error]mkdir:
14 ##[error]cannot create directory 'todo'
15 ##[error]: File exists
16 Finishing: SSH

```

#### 17) Remove todo folder as below from frontend vm





21) Now suppose if developer changes colour code in todo app so enter into src folder and make changes in theme.js file

