

Installing CP4BA on a TechZone OpenShift VMware image

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Introduction

This documentation will help you create your Cloud Pak for Business Automation (CP4BA) environment (starter pak configuration) to install the following Automation Platinum Demonstrations:

- Predictive decisioning
- Content management

This document will help you quickly install Cloud Pak for Business Automation on a blank OpenShift image provisioned from TechZone. It illustrates the setup from a Mac environment for IBMers. Microsoft users will have to install the corresponding tools (Docker/PowerShell) when necessary.

This is not intended to replace any setup instructions provided in the product documentation (see [related documentation](#)).

NOTE: IBMers are asked to avoid using package installer tools (e.g., Homebrew) and to use binary files. These instructions demonstrate how to access required files without using Homebrew.

Audience

This documentation is targeted to:

- IBM tech sellers
- IBM business partners technical specialists

Some instructions related to accessing specific tools may differ between these two audiences.

1-Installing prerequisite tools

The CP4BA setup uses scripts to install required tools on your computer. These scripts use Docker and Kubernetes commands, as well as the OpenShift command line interface (CLI).

The client side requirements are detailed in the CP4BA setup instructions at:

https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=deployment-preparing-starter#task_bhn_x3h_gmb_client.

The following instructions provide a summary of the required tools to set up CP4BA on your OpenShift VMware image.

1. [A macOS package installer \(business partners\): Homebrew](#)
2. [A powershell \(SZH\)](#)
3. [OpenShift command line interface \(CLI\)](#)
4. [Kubernetes CLI](#)

5. [Docker CLI or Podman](#)
6. htpasswd command

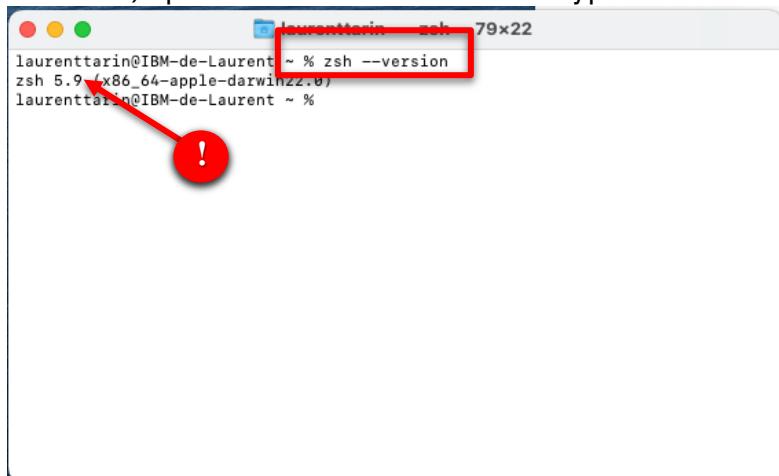
1.1 - Install Homebrew (Business partners on macOS)

Business partners can use Homebrew as an example to rapidly install the various required products on their macOS environment. You can get the Homebrew package installer from <https://brew.sh/>.

NOTE: IBMers are asked to avoid the use of package installers as much as possible and to proceed with the various installations using the binary files.

1.2 - Install a terminal shell

For Mac users, you can use **zsh** as your terminal. To validate that you have zsh installed, open a terminal window and type ‘**zsh –version**’:



A screenshot of a macOS terminal window titled 'Laurenttarin_zsh 79x22'. The window shows the command 'zsh --version' being run and its output: 'zsh 5.9 (x86_64-apple-darwin22.0)'. A red box highlights the command and its output. A red arrow points from a red circle containing an exclamation mark (!) towards the highlighted area.

```
laurenttarin@IBM-de-Laurent ~ % zsh --version
zsh 5.9 (x86_64-apple-darwin22.0)
laurenttarin@IBM-de-Laurent ~ %
```

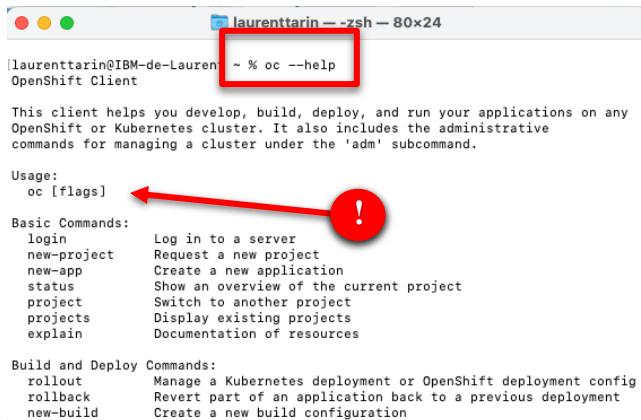
For Microsoft users, you can install PowerShell (see [Microsoft documentation: https://learn.microsoft.com/en-us/powershell/](#)) or zsh for Microsoft.

NOTE: You can find more information about how to install PowerShell on your environment on <https://github.com/ohmyzsh/ohmyzsh/wiki/Installing-ZSH>.

1.3 - Install OpenShift CLI

The ‘oc’ command is required to install CP4BA on your OpenShift environment. You can get the OpenShift CLI command and setup instructions for Mac and Microsoft Windows at: https://docs.openshift.com/container-platform/4.8/cli_reference/openshift_cli/getting-started-cli.html.

To validate that your **oc** command is correctly installed, type ‘**oc –help**’ from your terminal window:



```
laurenttarin@IBM-de-Lauren ~ % oc --help
OpenShift Client

This client helps you develop, build, deploy, and run your applications on any
OpenShift or Kubernetes cluster. It also includes the administrative
commands for managing a cluster under the 'adm' subcommand.

Usage:
  oc [flags] !
```

Basic Commands:

login	Log in to a server
new-project	Request a new project
new-app	Create a new application
status	Show an overview of the current project
project	Switch to another project
projects	Display existing projects
explain	Documentation of resources

Build and Deploy Commands:

rollout	Manage a Kubernetes deployment or OpenShift deployment config
rollback	Revert part of an application back to a previous deployment
new-build	Create a new build configuration

1.4 - Install Kubernetes CLI

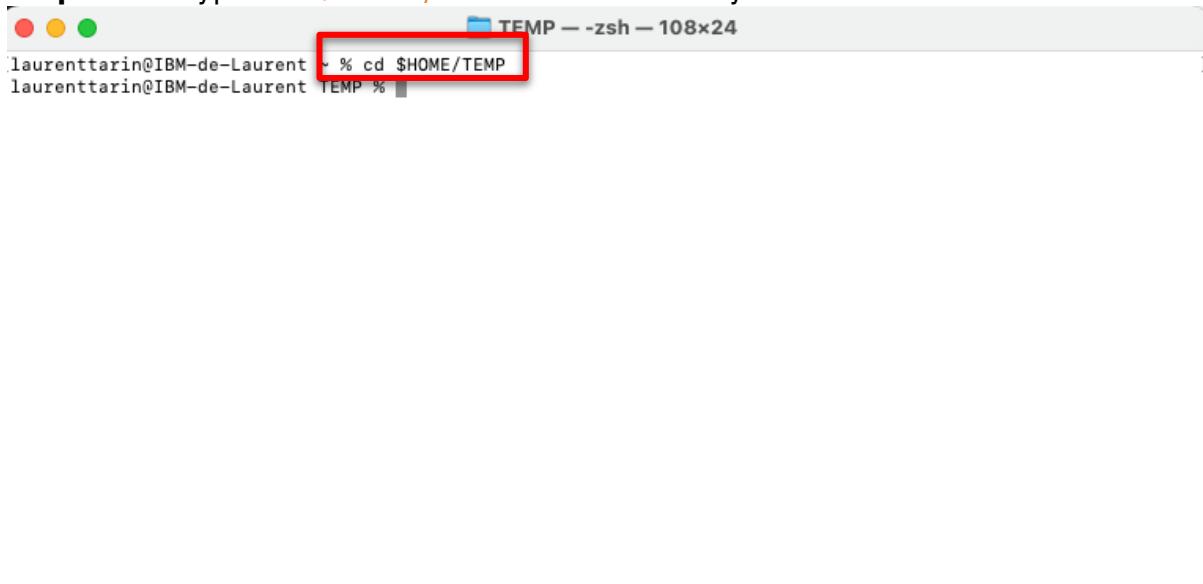
You must install the Kubernetes CLI on your environment. Kubernetes setup instructions are available here: <https://kubernetes.io/docs/tasks/tools/>.

NOTE: The instructions require the ‘curl’ command line to be installed as well. Curl is installed by default on macOS. Please refer to this [documentation](https://developer.zendesk.com/documentation/api-basics/getting-started/installing-and-using-curl/#installing-curl) (<https://developer.zendesk.com/documentation/api-basics/getting-started/installing-and-using-curl/#installing-curl>) to validate and/or proceed with installing.

Setup example for IBMers on macOS:

Step 1.4.1: Create a TEMP folder on your local computer (e.g., under your home directory) and open your zsh terminal window.

Step 1.4.2: Type ‘`cd $HOME/TEMP`’ to move into your TEMP folder.



```
laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP
```

Step 1.4.3: Get the latest version of the Kubernetes command by typing the following lines in your terminal window:

```
export KUBECTL_VERSION=`curl \
-s https://storage.googleapis.com/kubernetes-release/\
release/stable.txt`  
curl -LO "https://storage.googleapis.com/kubernetes-\
release/release/${KUBECTL_VERSION}/bin/linux/amd64/kubectl"
```

This will download the latest command version on your computer.

```
[laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP  
laurenttarin@IBM-de-Laurent TEMP % export KUBECTL_VERSION='curl \  
-s https://storage.googleapis.com/kubernetes-release/\  
release/stable.txt'  
curl -LO "https://storage.googleapis.com/kubernetes-\  
release/release/${KUBECTL_VERSION}/bin/linux/amd64/kubectl"  
  
% Total    % Received % Xferd  Average Speed   Time     Time      Time  Current  
          Dload Upload Total   Spent   Left  Speed  
100 46.9M  100 46.9M    0     0  9300k      0  0:00:05  0:00:05  --:--:-- 10.0M  
laurenttarin@IBM-de-Laurent TEMP % ]
```

Step 1.4.4: Make the command executable all users by typing ‘`chmod a+x kubectl`’.

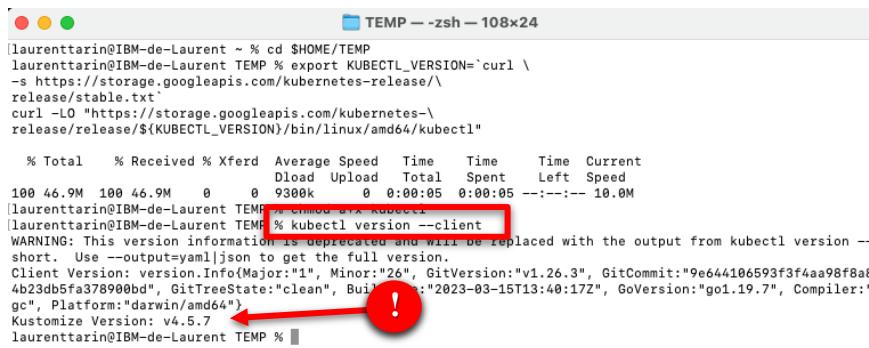
```
[laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP  
laurenttarin@IBM-de-Laurent TEMP % export KUBECTL_VERSION='curl \  
-s https://storage.googleapis.com/kubernetes-release/\  
release/stable.txt'  
curl -LO "https://storage.googleapis.com/kubernetes-\  
release/release/${KUBECTL_VERSION}/bin/linux/amd64/kubectl"  
  
% Total    % Received % Xferd  Average Speed   Time     Time      Time  Current  
          Dload Upload Total   Spent   Left  Speed  
100 46.9M  100 46.9M    0     0  9300k      0  0:00:05  0:00:05  --:--:-- 10.0M  
laurenttarin@IBM-de-Laurent TEMP % chmod a+x kubectl  
laurenttarin@IBM-de-Laurent TEMP % ]
```

Step 1.4.5: Move the kubectl command into a folder pointed in your **PATH** environment variable (type ‘**echo \$PATH**’ to see the possible location or add the current location of your kubectl command to your PATH environment variable).

Step 1.4.6: Type ‘`kubectl version –client`’ to validate that your kubectl command works:

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```
[laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP
[laurenttarin@IBM-de-Laurent TEMP % export KUBECTL_VERSION='curl \
-s https://storage.googleapis.com/kubernetes-release/\
release/stable.txt'
curl -LO "https://storage.googleapis.com/kubernetes-\
release/release/${KUBECTL_VERSION}/bin/linux/amd64/kubectl"
% Total    % Received % Xferd  Average Speed   Time   Time  Current
          Dload  Upload   Total Spent  Left Speed
100 46.9M  100 46.9M    0      0  9300K  0:00:05  0:00:05  --:-- 10.0M
[laurenttarin@IBM-de-Laurent TEMP % chmod +rx kubectl
[laurenttarin@IBM-de-Laurent TEMP % kubectl version --client
WARNING: This version information is deprecated and will be replaced with the output from kubectl version --short. Use --output=yaml|json to get the full version.
Client Version: version.Info{Major:"1", Minor:"26", GitVersion:"v1.26.3", GitCommit:"9e644106593f3f4aa98f8a8
4b23db5fa378900bd", GitTreeState:"clean", BuildDate:"2023-03-15T13:40:17Z", GoVersion:"go1.19.7", Compiler:"gc",
Platform:"darwin/amd64"}
Kustomize Version: v4.5.7
[laurenttarin@IBM-de-Laurent TEMP % ]
```

1.5 - Install the Docker CLI – Podman (IBMers)

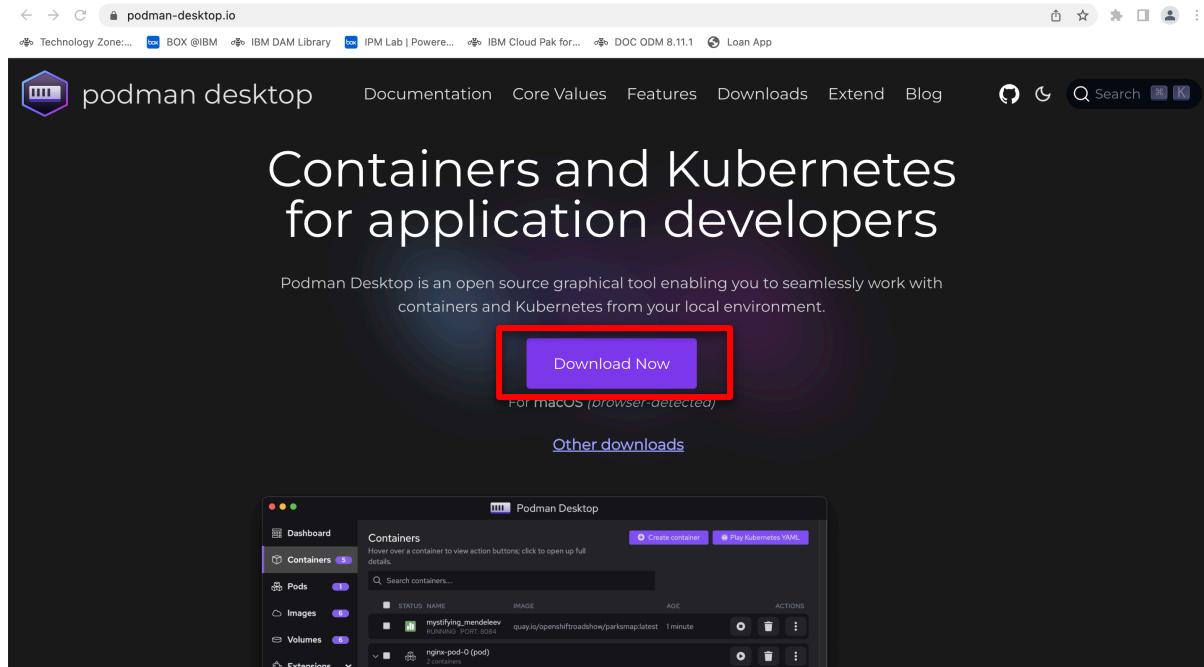
The Docker CLI is required to proceed with the CP4BA installation.

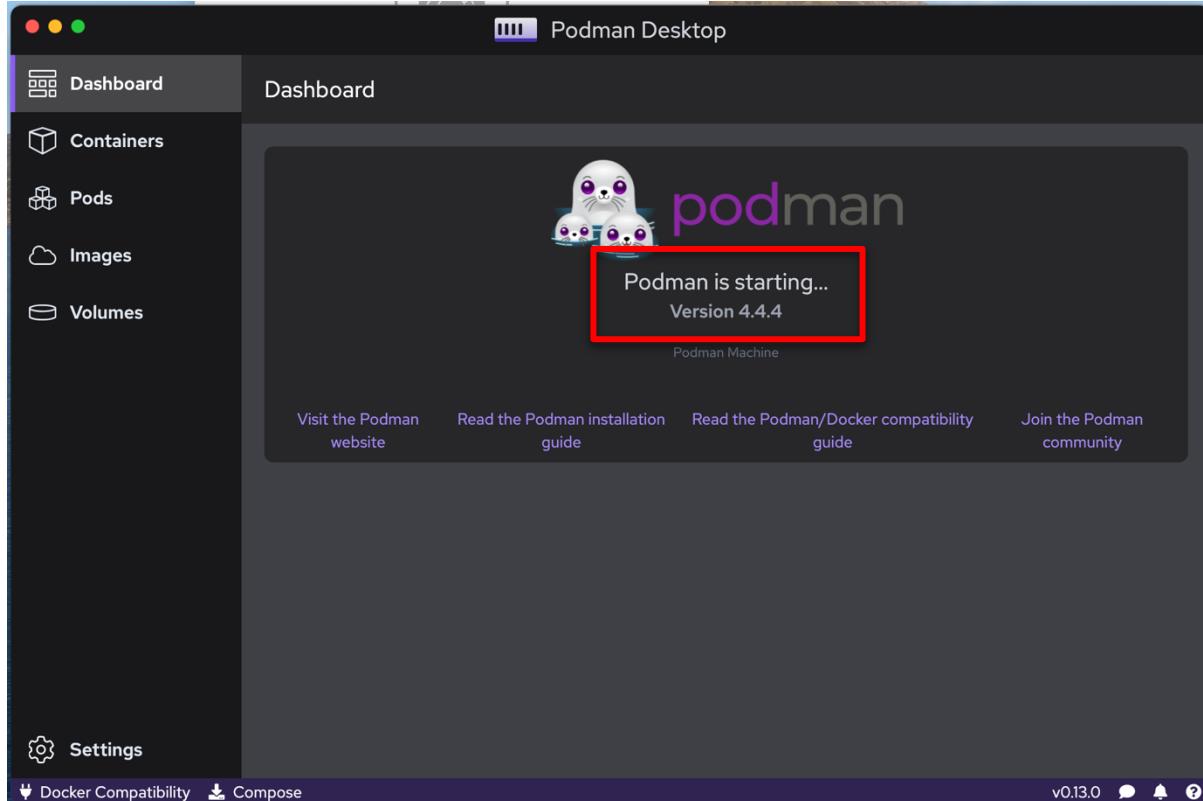
- IBMers: Please refer to <https://w3.ibm.com/w3publisher/docker-desktop/podman>.
- Business partners: You can use the Docker CLI of your choice or use [Homebrew](#) () to install Docker on your environment by typing ‘brew install docker’ in your terminal window.

For IBMers, follow these steps to [create the Docker symbolic link for installing Podman](#):

Step 1.5.1: Go to <https://podman-desktop.io/> to access the Podman Desktop Installer.

Step 1.5.2: Click **Download Now** to install Podman Desktop onto your computer.



Step 1.5.3: Start Podman Desktop.

Step 1.5.4: Type ‘`which podman`’ to get your Podman command location on your computer.

```
laurenttarin@IBM-de-Laurent scripts % which podman
/opt/podman/bin/podman
```

Step 1.5.5: Note your Podman command location (i.e., ‘`/opt/podman/bin/podman`’).

Step 1.5.6: Type ‘`sudo ln -s /opt/podman/bin/podman /opt/podman/bin/docker`’ to create the symbolic link to Podman (1). Then, type your local computer admin password (2).

```
bash-3.2$ sudo ln -s /opt/podman/bin/podman /opt/podman/bin/docker
```

Step 1.5.7: Type ‘`which docker`’ to verify the symbolic link.

```
laurenttarin@IBM-de-Laurent scripts % which docker
/opt/podman/bin/docker
```

NOTE: You can also validate the link by typing ‘`ls -l /opt/podman/bin`’.

```
laurenttarin@IBM-de-Laurent scripts % ls -l /opt/podman/bin
total 133512
lrwxr-xr-x 1 root wheel 22 Apr 13 13:36 docker -> /opt/podman/bin/podman
-rw-r--r-- 1 root wheel 22017984 Mar 28 01:44 gvproxy
-rw-r--r-- 1 root wheel 41560192 Mar 28 01:44 podman
-rw-r--r-- 1 root wheel 4774832 Mar 28 01:44 podman-mac-helper
laurenttarin@IBM-de-Laurent scripts %
```

Step 1.5.8: ‘**type bash**’ to test Docker in a bash shell.

```
laurenttarin@IBM-de-Laurent script % bash
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
bash-3.2$ !
```

Step 1.5.9: Type ‘**which docker**’ to check the link under bash.

```
laurenttarin@IBM-de-Laurent scripts % bash
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
bash-3.2$ which docker
/opt/podman/bin/docker
bash-3.2$ !
```

Your docker command is now accessible for the scripts working with bash shell.

Step 1.5.10: Type ‘**exit**’ to return to zsh.

```
laurenttarin@IBM-de-Laurent scripts % bash
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
bash-3.2$ which docker
/opt/podman/bin/docker
bash-3.2$ exit
exit
laurenttarin@IBM-de-Laurent scripts % !
```

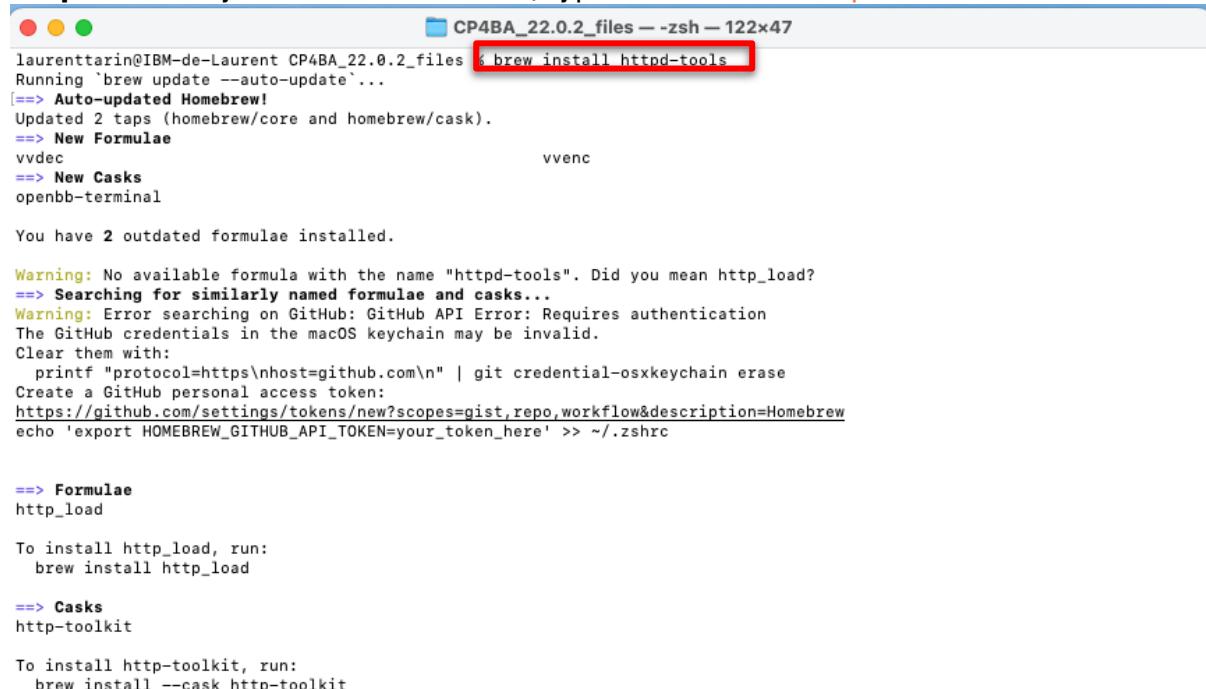
1.6 - Install the htpasswd command

To install the htpasswd, we will use Homebrew.

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Step 1.6.1: In your terminal window, type ‘ brew install httpd-tools ’.



```
CP4BA_22.0.2_files --zsh -- 122x47
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % brew install httpd-tools
Running `brew update --auto-update`...
[==> Auto-updated Homebrew!
Updated 2 taps (homebrew/core and homebrew/cask).
==> New Formulae
vvdec
==> New Casks
openbb-terminal

You have 2 outdated formulae installed.

Warning: No available formula with the name "httpd-tools". Did you mean http_load?
==> Searching for similarly named formulae and casks...
Warning: Error searching on GitHub: GitHub API Error: Requires authentication
The GitHub credentials in the macOS keychain may be invalid.
Clear them with:
printf "protocol=https\nhost=github.com\n" | git credential-osxkeychain erase
Create a GitHub personal access token:
https://github.com/settings/tokens/new?scopes=gist\_repo,workflow&description=Homebrew
echo 'export HOMEBREW_GITHUB_API_TOKEN=your_token_here' >> ~/.zshrc

==> Formulae
http_load

To install http_load, run:
brew install http_load

==> Casks
http-toolkit

To install http-toolkit, run:
brew install --cask http-toolkit
```

2- Provisioning a VMWare Image on TechZone

You must now provision a VMWare image containing Openshift on TechZone. This documentation explains how to install CP4BA on that VMWare image.

Step 2.1: Log into TechZone using your IBM ID and go to the IBM VMware with OpenShift UPI or IPI reservation pages:

OpenShift Cluster (VMware on IBM Cloud) – UPI – Public image	Apr 9, 2023 OpenShift Cluster (VMware on IBM Cloud) - UPI - Public Ibmcloud 2: us-east, jp-tok, eu-de Self-Managed UPI OpenShift cluster (VMware on IBM Cloud) with ODF (OCS) support.	https://techzone.ibm.com/my/reservations/create/63a3a25a3a4689001740dbb3
OpenShift Cluster (VMware on IBM Cloud) – IPI – Public image	Apr 9, 2023 OpenShift Cluster (VMware on IBM Cloud) - IPI - Public Ibmcloud 2: us-south, us-east, eu-de, jp-tok Self-Managed IPI OpenShift cluster (VMware on IBM Cloud) with ODF (OCS) support. <small>Environment details:</small>	https://techzone.ibm.com/my/reservations/create/63dba359cc19150018af084f

NOTE: The same setup instructions detailed in this document applies to both of these 2 images.

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Step 2.2: Click Reserve now.

The screenshot shows the 'Create a reservation' interface. In the top left, there are four tabs: 'Select a environment/infrastructure' (selected), 'Select a reservation type', 'Fill out your reservation', and 'Complete'. Below these tabs, there is a section titled 'Single environment reservation option' with three radio button options: 'Reserve now' (selected), 'Schedule for later', and 'Request multiple environments'. A red box highlights the 'Reserve now' option. At the bottom of this section, there is a note about workshop requests being submitted 72 hours before start time. Below this note are 'Cancel', 'Reset', and 'Submit' buttons, along with a small illustration of a hand pointing at a city skyline.

Step 2.3: Select Customer demo in the purpose and enter the customer opportunity number. Otherwise, select Practice/Self education (1). Enter a description (2) and select a geography (3) closest to your location.

The screenshot shows the 'Create a reservation' interface with annotations numbered 1, 2, and 3. Annotation 1 points to the 'Purpose' dropdown menu, which is set to 'Practice / Self-Education'. A red box highlights this selection. Annotation 2 points to the 'Purpose description' text area, which contains the text 'Cloud Pak for Business Automation demo'. A red box highlights this description. Annotation 3 points to the 'Preferred Geography' dropdown menu, which lists several regions: 'AMERICAS - us-south region - dal10 datacenter', 'AMERICAS - us-east region - wdc04 datacenter', 'EUROPE - eu-de region - fra04 datacenter', and 'AP - ap-tok region - tck02 datacenter'. The 'EUROPE - eu-de region - fra04 datacenter' option is selected and highlighted with a red box. On the right side of the screen, there is a sidebar with sections for 'Collection: TechZone Certified Base Images', 'Environment: OpenShift Cluster (VMware on IBM Cloud) - IPI - Public', 'Environment details', and 'Self-service options'.

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Step 2.4: Select **500GB** (1) for the storage size. Select **5 work nodes count** (2). Select **8xCPU 32GB-100GB** for the worker node flavor (3). Click **Submit** (4)

The screenshot shows the 'Create a Reservation' page for TechZone Certified Base Images. It includes sections for environment details, self-service options, and reservation policy. The 'Notes' section is empty.

Step 2.5: Click **Done** and wait for the ‘Your environment is ready’ notification email. The reservation should last between 30 minutes to 2 hours maximum.

The screenshot shows the confirmation page after a reservation has been created. It includes a message about the reservation being created, a survey invitation, and links to manage reservations. The 'Done' button is highlighted with a red box.

NOTE: you can proceed with step 3 waiting for your environment to be ready.

3- Download the CP4BA Setup archive

To proceed with the CP4BA install, you first must download an archive containing different commands and scripts that you will need to set up on your OpenShift environment.

Step 3.1: Go to the packages download site: <https://github.com/IBM/cloud-pak/tree/master/repo/case/ibm-cp-automation>

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IBM / cloud-pak Public

Code Pull requests Actions Security Insights

cloud-pak / repo / case / ibm-cp-automation /

camgit Merge update for case 86d91c1 2 weeks ago History

...	Update the case format	3 years ago
1.0.3	Update the case format	3 years ago
1.0.4	Update the case format	3 years ago
1.0.5	Update case tgz with new certificate. (#624)	2 years ago
1.0.6	Update case tgz with new certificate. (#625)	2 years ago
2.0.0	Update the case format	3 years ago
2.1.0	Update case tgz with new certificate. (#624)	2 years ago
2.2.0	Update case tgz with new certificate. (#624)	2 years ago
2.2.1	Update case tgz with new certificate. (#624)	2 years ago
2.2.2	Update case tgz with new certificate. (#624)	2 years ago
2.2.3	Update case tgz with new certificate. (#624)	2 years ago
2.2.4	Update case tgz with new certificate. (#624)	2 years ago

Step 3.2: Scroll down to the 4.1.3 version (1) and click 4.1.3 (2).

github.com/IBM/cloud-pak/tree/master/repo/case/ibm-cp-automation

Technology Zone... BOX @IBM IBM DAM Library IBM Lab | Powers... IBM Cloud Pak for... DDC ODM 8.11.1 Loan App

3.2.17	Merge update for case	3 months ago
3.2.18	Merge update for case	2 months ago
3.2.19	Merge update for case	2 weeks ago
3.2.2	Merge update for case	2 years ago
3.2.3	Merge update for case	2 years ago
3.2.4	Merge update for case	2 years ago
3.2.5	Merge update for case	last year
3.2.6	Merge update for case	last year
3.2.7	Merge update for case	last year
3.2.8	Merge update for case	last year
3.2.9	Merge update for case	last year
4.0.0	Merge update for case	10 months ago
4.0.1	Merge update for case	9 months ago
4.0.2	Merge update for case	8 months ago
4.0.3	Merge update for case	7 months ago
4.0.4	Merge update for case	6 months ago
4.0.5	Merge update for case	5 months ago
4.0.6	Merge update for case	4 months ago
4.1.0	Merge update for case	4 months ago
4.1.1	Merge update for case	3 months ago
4.1.2	Merge update for case	2 months ago
4.1.3	Merge update for case	2 weeks ago
index.yaml	Merge update for case	2 weeks ago
resources/ibmcpa...	Merge update for case	2 weeks ago

Step 3.3: Click **ibm-cp-automation-4.1.3.tgz**.

IBM / cloud-pak Public

Code Pull requests Actions Security Insights

cloud-pak / repo / case / ibm-cp-automation / 4.1.3 /

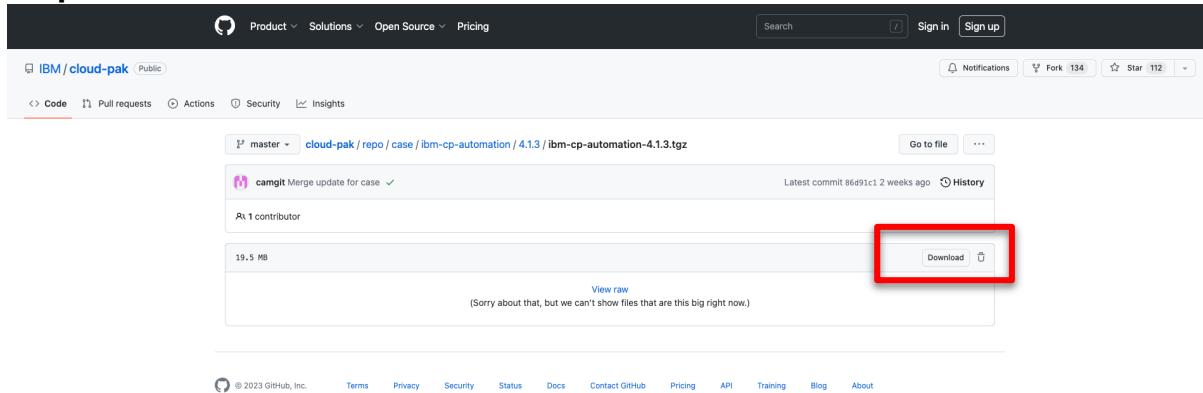
camgit Merge update for case 86d91c1 2 weeks ago History

ibm-cp-automation-4.1.3.tgz	Merge update for case	2 weeks ago
version.yaml	Merge update for case	2 weeks ago

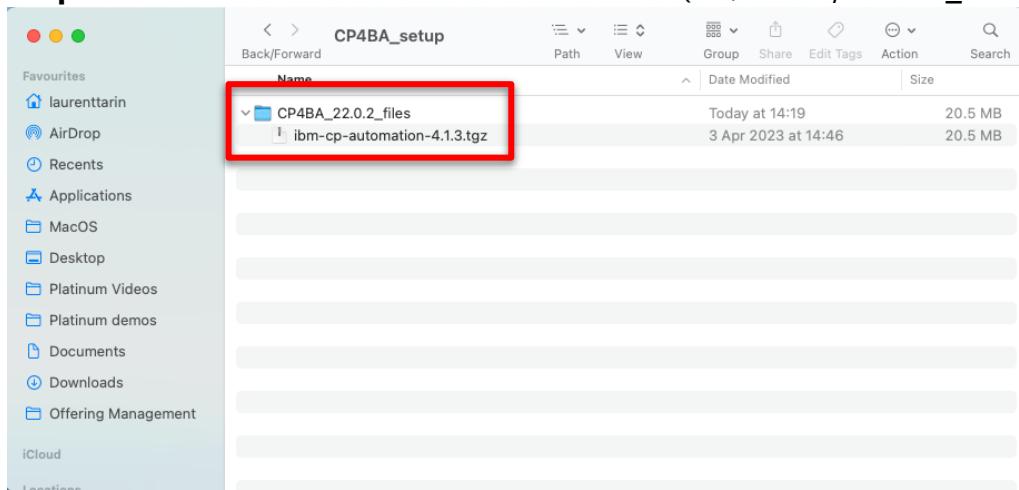
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Step 3.4: Click Download.



Step 3.5: Move the archive file in a local folder (ie \$HOME/CP4BA_22.0.2_files).



Step 3.6: Type 'cd \$HOME/<your install dir>' (ie \$HOME/CP4BA_22.0.2_files) in your Terminal window.

A screenshot of a terminal window titled 'CP4BA_22.0.2_files -- zsh -- 108x24'. The user is Laurenttarin@IBM-de-Laurent. The terminal shows several commands being run:

```
laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP
laurenttarin@IBM-de-Laurent TEMP % export KUBECONFIG='curl \
-s https://storage.googleapis.com/kubernetes-release/
release/stable.txt'
curl -LO "https://storage.googleapis.com/kubernetes-
release/release/${KUBECONFIG}/bin/linux/amd64/kubectl"
% Total    % Received % Xferd  Average Speed   Time     Time      Time  Current
          Dload  Upload Total Spent   Left Speed
100 46.9M 100 46.9M    0     0  9300k   0:00:05  0:00:05 ---:-- 10.0M
laurenttarin@IBM-de-Laurent TEMP % chmod a+x kubectl
laurenttarin@IBM-de-Laurent TEMP % kubectl version --client
WARNING: This version information is deprecated and will be replaced with the output from kubectl version --short. Use --output=yaml|json to get the full version.
Client Version: version.Info{Major:"1", Minor:"26", GitVersion:"v1.26.3", GitCommit:"9e644106593f3f4aa98f8a8
4b23db5fa378900bd", GitTreeState:"clean", BuildDate:"2023-03-15T13:40:17Z", GoVersion:"go1.19.7", Compiler:"gc",
Platform:"darwin/amd64"}
Kustomize Version: v4.5.7
laurenttarin@IBM-de-Laurent TEMP % cd $HOME/Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files %
```

The last command in the terminal, 'cd \$HOME/Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files', is highlighted with a red box.

Step 3.7: Type 'ls' to make sure your archive is there.

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```
CP4BA_22.0.2_files -- zsh -- 108x24
[laurenttarin@IBM-de-Laurent ~ % cd $HOME/TEMP
laurenttarin@IBM-de-Laurent TEMP % export KUBECTL_VERSION=`curl \
-s https://storage.googleapis.com/kubernetes-release/
release/stable.txt` \
curl -LO "https://storage.googleapis.com/kubernetes-
release/release/${KUBECTL_VERSION}/bin/linux/amd64/kubectl"
% Total    % Received % Xferd  Average Speed   Time     Time      Time  Current
          Dload  Upload Total Spent   Left Speed
100 46.9M  100 46.9M    0     0  9300K   0:00:05  0:00:05  --:--:-- 10.0M
[laurenttarin@IBM-de-Laurent TEMP % chmod a+x kubectl
[laurenttarin@IBM-de-Laurent TEMP % kubectl version --client
WARNING: This version information is deprecated and will be replaced with the output from kubectl version --short. Use --output=yaml|json to get the full version.
Client Version: version.Info{Major:"1", Minor:"26", GitVersion:"v1.26.3", GitCommit:"9e644106593f3f4aa98f8a8
4b23db5fa378900bd", GitTreeState:"clean", BuildDate:"2023-03-15T13:40:17Z", GoVersion:"go1.19.7", Compiler:"gc",
Platform:"darwin/amd64"}
Kustomize Version: v4.5.7
[laurenttarin@IBM-de-Laurent TEMP % cd $HOME/Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % ls
ibm-cp-automation-4.1.3.tgz
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % !
```

Step 3.8: Un-archive the file by typing:

```
' tar -xvf ibm-cp-automation-4.1.3.tgz
cd ibm-cp-automation/inventory
cd cp4aOperatorSdk/files/deploy/crs
tar -xvf cert-k8s-22.0.2.tar'
```

```
crs -- zsh -- 108x24
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % tar -xvf ibm-cp-automation-4.1.3.tgz
cd ibm-cp-automation/inventory
cd cp4aOperatorSdk/files/deploy/crs
tar -xvf cert-k8s-22.0.2.tar
!
x ibm-cp-automation/
x ibm-cp-automation/LICENSE
x ibm-cp-automation/README.md
x ibm-cp-automation/case.yaml
x ibm-cp-automation/certifications/
x ibm-cp-automation/certifications/files/
x ibm-cp-automation/certifications/files/ExternalSecurityReport.pdf
x ibm-cp-automation/certifications/ibmcpp.yaml
x ibm-cp-automation/digests.yaml
x ibm-cp-automation/inventory/
x ibm-cp-automation/inventory/cp4aOperatorSdk/
x ibm-cp-automation/inventory/cp4aOperatorSdk/README.md
x ibm-cp-automation/inventory/cp4aOperatorSdk/actions.yaml
x ibm-cp-automation/inventory/cp4aOperatorSdk/files/
x ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/
x ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/
x ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/cert-k8s-22.0.2.tar
x ibm-cp-automation/inventory/cp4aOperatorSdk/inventory.yaml
x ibm-cp-automation/inventory/cp4aOperatorSdk/resources.yaml
!
```

NOTE: Make sure you have the correct archive version in your tar -xvf command.

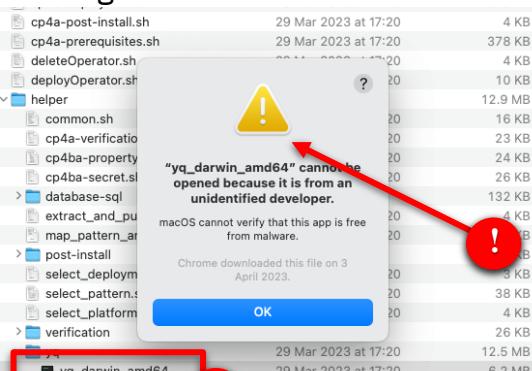
Step 3.9: The setup scripts will use the 'yq' command. This is a command-line YAML processor, based on jq.

The 'yq' command binary file is provided in the CP4BA archive you have just extracted. The binaries are located in \$HOME/<You install directory>/ /ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/cert-kubernetes/scripts/helper/yq

User guide
Installing Cloud Pak for Business Automation on an OpenShift VMware image

Name		Date Modified	Size
CP4BA_22.0.2_files		Today at 14:26	71.9 MB
ibm-cp-automation		Today at 14:26	51.4 MB
case.yaml		30 Mar 2023 at 20:50	2 KB
certifications		30 Mar 2023 at 20:50	470 KB
digests.yaml		30 Mar 2023 at 20:50	83 KB
inventory		Today at 14:26	50.7 MB
cp4aOperatorSdk		Today at 14:29	43.9 MB
actions.yaml		30 Mar 2023 at 20:50	3 KB
files		Today at 14:29	43.8 MB
deploy		Today at 14:29	43.8 MB
crs		Today at 14:29	43.8 MB
cert-k8s-22.0.2.tar		30 Mar 2023 at 20:50	17 MB
cert-kubernetes		Today at 14:29	26.8 MB
ACA		29 Mar 2023 at 17:20	175 KB
BAI		29 Mar 2023 at 17:20	1 KB
BAN		29 Mar 2023 at 17:20	2 KB
descriptors		Today at 14:29	1.8 MB
FNCM		29 Mar 2023 at 17:20	40 KB
LICENSE		29 Mar 2023 at 17:20	42 KB
ODM		29 Mar 2023 at 17:20	20 KB
README.md		29 Mar 2023 at 17:20	521 bytes
scripts		Today at 14:29	24.7 MB
ADP		29 Mar 2023 at 17:20	185 KB
baw-std		29 Mar 2023 at 17:20	51 KB
cp4a-clusteradmin-setup.sh		29 Mar 2023 at 17:20	110 KB
cp4a-deployment.sh		29 Mar 2023 at 17:20	349 KB
cp4a-post-install.sh		29 Mar 2023 at 17:20	4 KB
cp4a-prerequisites.sh		29 Mar 2023 at 17:20	378 KB
deleteOperator.sh		29 Mar 2023 at 17:20	4 KB
deployOperator.sh		29 Mar 2023 at 17:20	10 KB
helper		Today at 14:29	12.9 MB
common.sh		29 Mar 2023 at 17:20	16 KB
cp4a-verification.sh		29 Mar 2023 at 17:20	23 KB
cp4ba-property.sh		29 Mar 2023 at 17:20	24 KB
cp4ba-secret.sh		29 Mar 2023 at 17:20	26 KB
database-sql		Today at 14:29	132 KB
extract_and_push_images.sh		29 Mar 2023 at 17:20	4 KB
map_pattern_and_CR.sh		29 Mar 2023 at 17:20	2 KB
post-install		Today at 14:29	119 KB
select_deployment_type.sh		29 Mar 2023 at 17:20	3 KB
select_pattern.sh		29 Mar 2023 at 17:20	38 KB
select_platform.sh		29 Mar 2023 at 17:20	4 KB
verification		Today at 14:29	26 KB
yq		29 Mar 2023 at 17:20	12.5 MB
yq_darwin_amd64	!	29 Mar 2023 at 17:20	6.2 MB
yq_linux_amd64		29 Mar 2023 at 17:20	6.3 MB
jdbc		29 Mar 2023 at 17:20	10.6 MB
loadPrereqImages.sh		29 Mar 2023 at 17:20	7 KB
update_subscription.sh		29 Mar 2023 at 17:20	14 KB
upgradeOperator.sh		29 Mar 2023 at 17:20	22 KB
inventory.yaml		30 Mar 2023 at 20:50	190 bytes

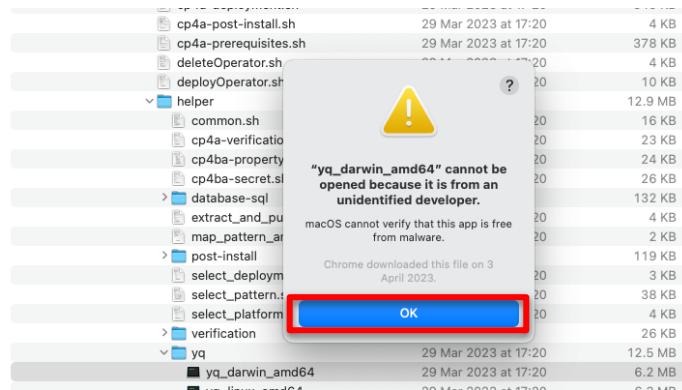
Step 3.10: Mac users - Double click on the **yq_darwin_amd64** file. You should get a warning message:



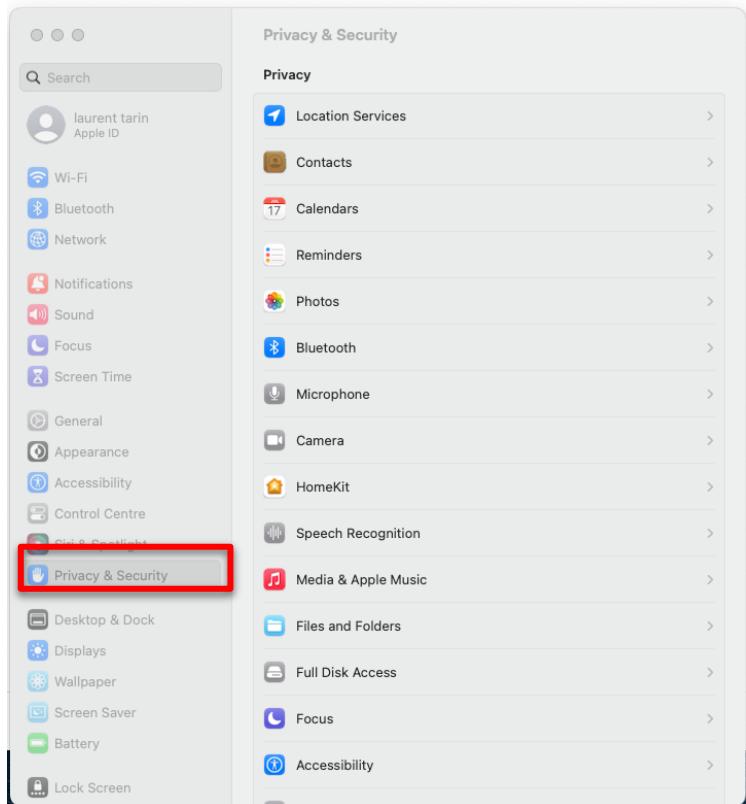
Step 3.11: Click OK.

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

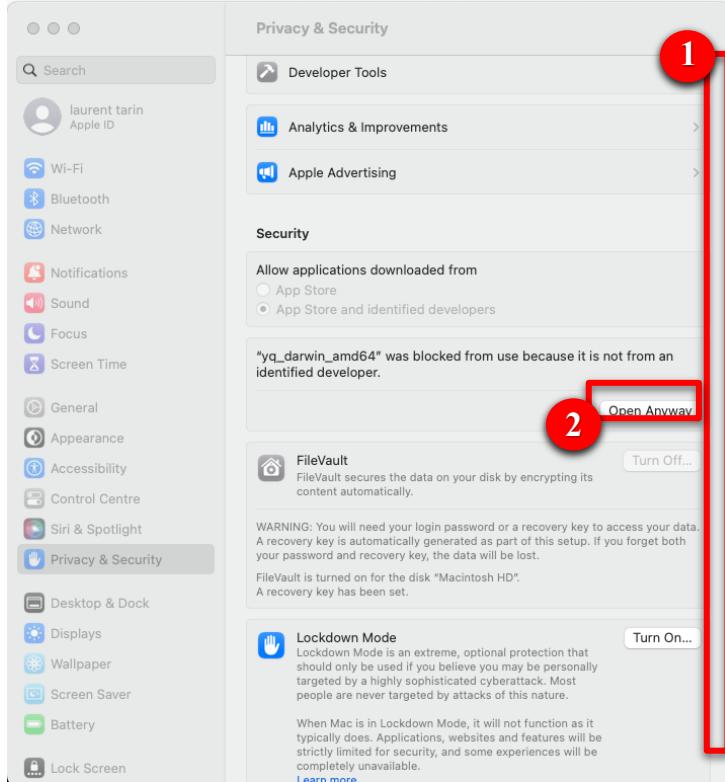


Step 3.12: Open your Mac System Settings panel/ Privacy and security section.



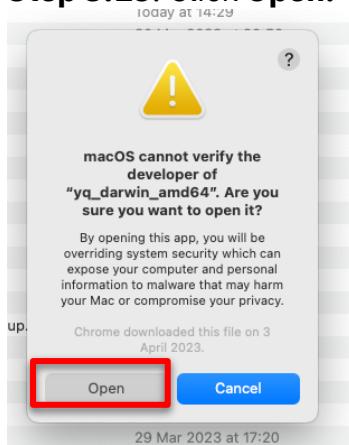
User guide
Installing Cloud Pak for Business Automation on an OpenShift VMware image

Step 3.13: Scroll down to the security section (1) and click **Open Anyway** (2) for the "yq_darwin_amd64" to unblock the command.



Step 3.14: Enter your **username** and **password** to authorize the action.

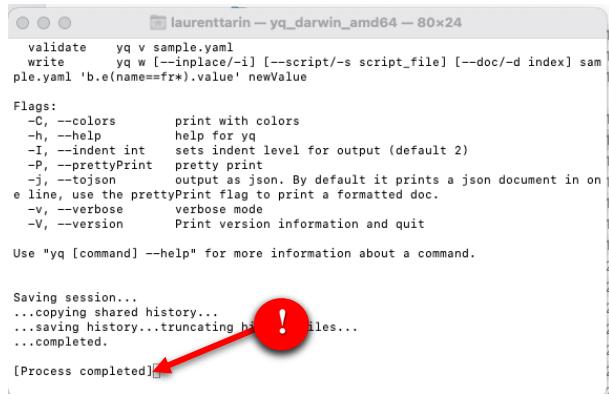
Step 3.15: Click **Open**.



A terminal window will appear and show that the command is now accessible to the script:

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Installing Cloud Pak for Business Automation on an OpenShift VMware image



```
validate    yq v sample.yaml
write      yq w [--inplace/-i] [--script/-s script_file] [--doc/-d index] sam
ple.yaml 'b.e(name==fr*).value' newValue

Flags:
-C, --colors      print with colors
-H, --help        help for yq
-I, --indent int  sets indent level for output (default 2)
-P, --prettyPrint pretty print
-J, --toJson        output as json. By default it prints a json document in one line, use the prettyPrint flag to print a formatted doc.
-v, --verbose     verbose mode
-V, --version      Print version information and quit

Use "yq [command] --help" for more information about a command.

Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```

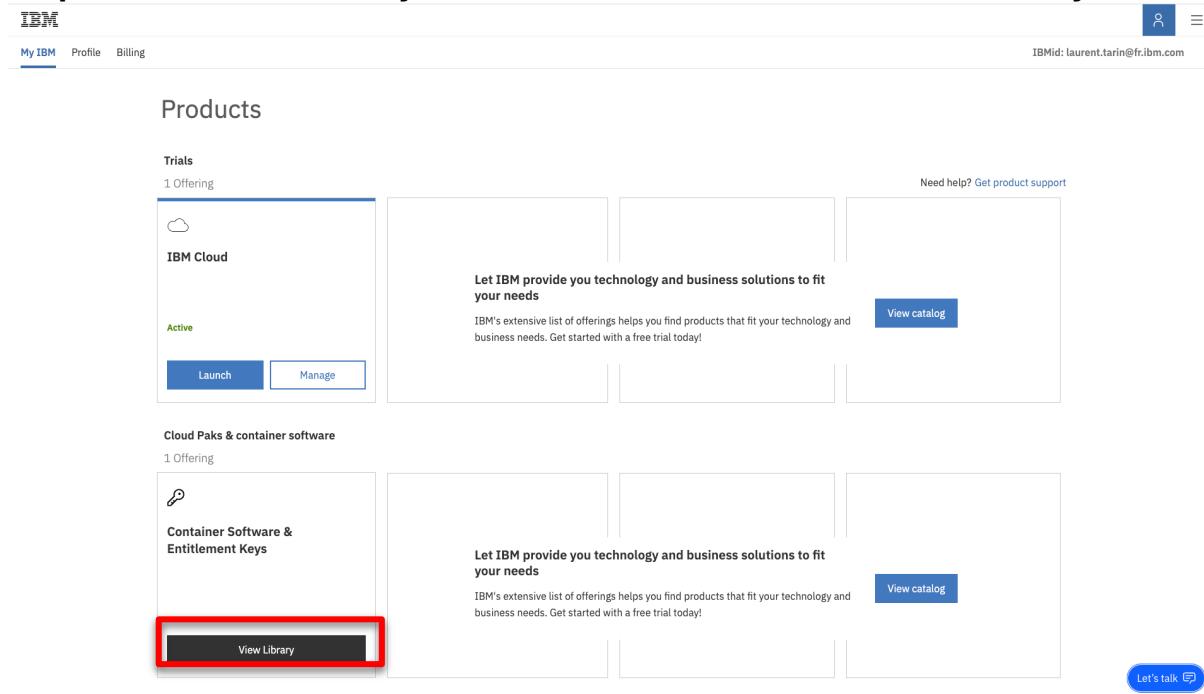
4- Get your IBM Software Entitlement key

The IBM Entitlement key describes what IBM software you are entitled to install and use. It is attached to your IBMid.

To access your IBM entitlement key:

Step 4.1: Log in <http://MyIBM.ibm.com> using your IBMid.

Step 4.2: Click **View Library** under **Container Software & Entitlement Keys**.



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Let's talk 

Step 4.3: Click **Add a new key** if you have not created an Entitlement key yet.

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

Entitlement keys (1)

Access your container software

Your entitlement key allows you to access all your container software in the IBM Entitled Registry. For a full list of container software you own, view your [container software library](#).

Active entitlement keys

Use any active entitlement key to log in to the image registry and retrieve any container software you own.

- You can have a maximum of (5) entitlement keys.
- Once a key is deleted, it's no longer valid.

Add new key +

Issue date: March 27, 2023

Actions: Edit | Delete | Copy

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5- Installing CP4BA on your image

5.1 - Access your VMWare image

You can start the CP4BA deployment on your VMWare image as soon as you receive the notification email “Your environment is ready” sent by IBM Technology Zone:

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

[EXTERNAL] Your environment is ready !

IBM Technology Zone <noreply@techzone.ibm.com>
To: Laurent Tarin

Today at 15:23

Your environment is now available. Please use the following information to access the environment.

Environment Name:
OpenShift Cluster (VMware on IBM Cloud) - IPI - Public

Reservation Details:
<https://techzone.ibm.com/my/reservations/ibmcloud-2/64369dbfe61a57001769db26>

Collection URL:
<https://techzone.ibm.com/collection/5fb3200cec8dd00017c57f20>

End Date :
2023-04-16 11:58:00 (UTC Time)

- API URL: <https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443>
- Bastion Password: [XXXXXXXXXX](#)
- Bastion RDP address: apps.ocp-270002541s-yds5.cloud.techzone.ibm.com:43389
- Bastion SSH connection: <ssh admin@apps.ocp-270002541s-yds5.cloud.techzone.ibm.com -p 40222>
- Bastion Username: [admin](#)

This email contains your **cluster URL** and your **Cluster Admin Username** and **Password**.

- Cluster Admin Username: [kubeadmin](#)
- Cluster Admin Password: [HamvF-qhFj](#)
- OCP Console: <https://console-openshift-console.apps.ocp-270002541s-yds5.cloud.techzone.ibm.com>

Step 5.1.1: Copy the **cluster URL** and **admin password** on your [Note](#) to have it handy.

Step 5.1.2: Click the **OCP Console URL** to access the console.

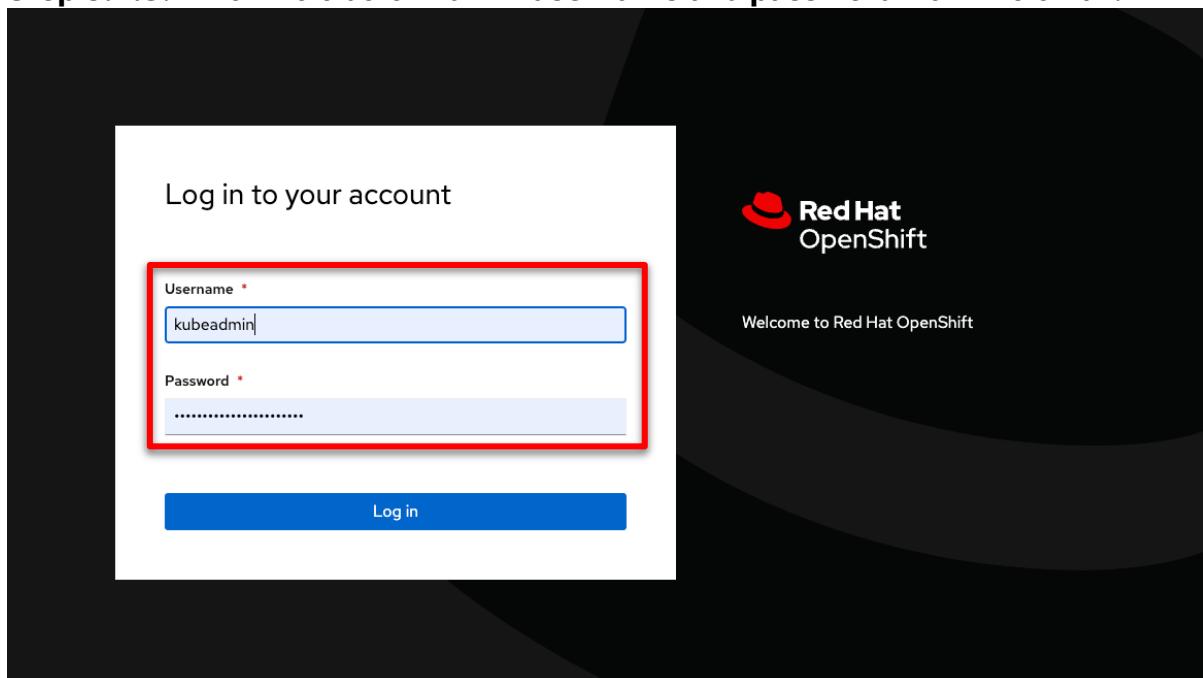
[EXTERNAL] Your environment is ready

IT IBM Technology Zone <noreply@techzone.ibm.com> Wednesday 12 April 2023 at 15:23

To: Laurent Tarin

2023-04-16 11:58:00 (UTC Time)

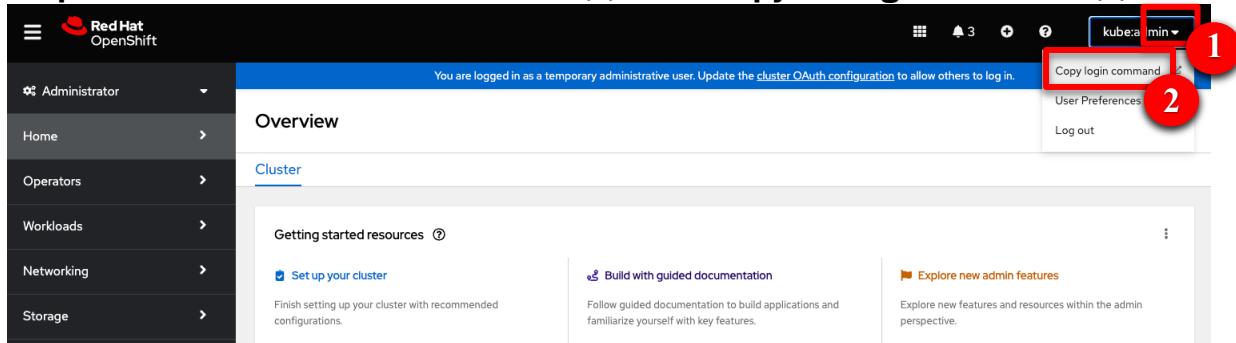
- API URL: <https://api.ocp-270002541s-vds5.cloud.techzone.ibm.com:6443>
- Bastion Password: wTf1C.....
- Bastion RDP address: <apps.ocp-270002541s-yds5.cloud.techzone.ibm.com>
- Bastion SSH connection: <ssh admin@apps.ocp-270002541s-yds5.cloud.techzone.ibm.com>
- Bastion Username: admin
- Cluster Admin Username: kubeadmin
- Cluster Admin Password: Hamy.....
- OCP Console: <https://console-openshift-console.apps.ocp-270002541s-yds5.cloud.techzone.ibm.com>
- Download kubeconfig: apiVersion: v1 clusters: - cluster: server: <https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443> LS0tLS1CRUdJTiBSU0EgUFJJVkJURSBLRVktLS0tLQpNSUIFb3dJQkFBS0N.....
- OCP Console: <https://console-openshift-console.apps.ocp-270002541s-yds5.cloud.techzone.ibm.com>
- OCP Version: 4.12

Step 5.1.3: Enter the cluster **Admin username** and **password** from the email.

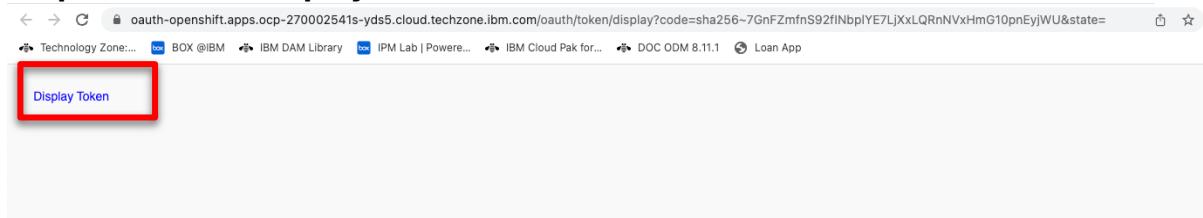
User guide

Installing Cloud Pak for Business Automation on an OpenShift VMware image

Step 5.1.4: Click the **kubeadmin** menu (1). Click **Copy the login command** (2).



Step 5.1.5: Click **Display Token**.



Step 5.1.6: Copy the **Log in with this token** command into your Note.

The screenshot shows the Red Hat OpenShift web interface. Under the 'Log in with this token' heading, there is a command: `oc login --token=sha256~KRvgqae0fbT2fVhxSY3QLce5qXRN084qCx2cv-nkn-4 --server=https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443`. This command is highlighted with a red box. Below the command, there is another command: `curl -H "Authorization: Bearer sha256~KRvgqae0fbT2fVhxSY3QLce5qXRN084qCx2cv-nkn-4" "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443/apis/user.openshift.io/v1/users/~"`.

5.2 - Execute the serve side requirements

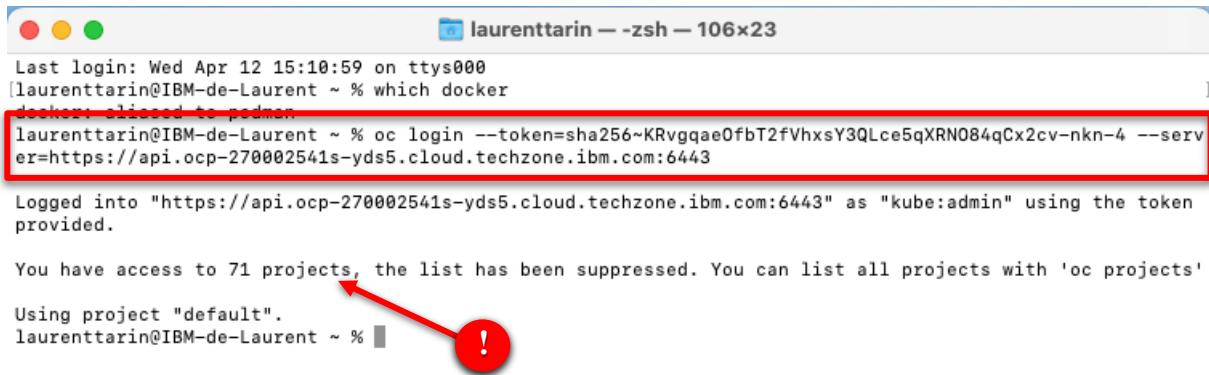
The server side detailed requirements are documented in the CP4BA documentation at https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=deployment-preparing-starter#task_bhn_x3h_gmb_server.

We have already performed many of these steps. Let's now create a namespace (project) in our cluster called 'cp4ba-starter'.

Step 5.2.1: Copy your OpenShift login command from your **Note** in your terminal window.

User guide

Installing Cloud Pak for Business Automation on an OpenShift VMware image

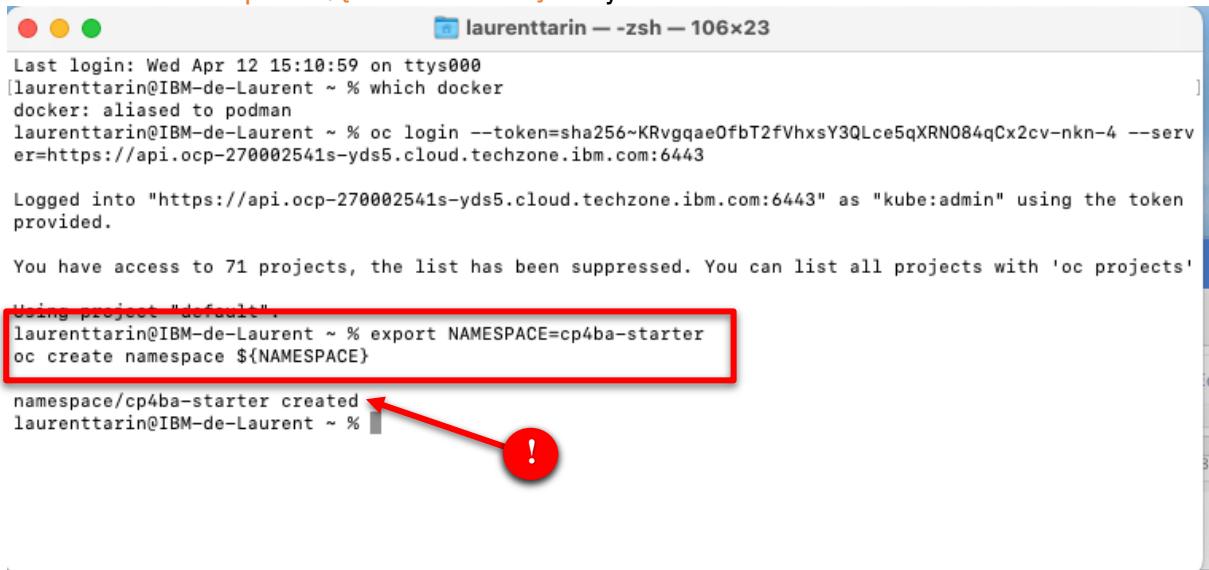


```
laurenttarin --zsh -- 106x23
Last login: Wed Apr 12 15:10:59 on ttys000
[laurenttarin@IBM-de-Laurent ~ % which docker
docker: aliased to podman
laurenttarin@IBM-de-Laurent ~ % oc login --token=sha256~KRvgqaeOfbT2fVhxSY3QLce5qXRN084qCx2cv-nkn-4 --server=https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443
Logged into "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443" as "kube:admin" using the token provided.

You have access to 71 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "default".
laurenttarin@IBM-de-Laurent ~ % !
```

Step 5.2.2: Type ‘`export NAMESPACE=cp4ba-starter`
`oc create namespace ${NAMESPACE}`’ in your Terminal.



```
laurenttarin --zsh -- 106x23
Last login: Wed Apr 12 15:10:59 on ttys000
[laurenttarin@IBM-de-Laurent ~ % which docker
docker: aliased to podman
laurenttarin@IBM-de-Laurent ~ % oc login --token=sha256~KRvgqaeOfbT2fVhxSY3QLce5qXRN084qCx2cv-nkn-4 --server=https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443
Logged into "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443" as "kube:admin" using the token provided.

You have access to 71 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "default".
laurenttarin@IBM-de-Laurent ~ % export NAMESPACE=cp4ba-starter
oc create namespace ${NAMESPACE}
namespace/cp4ba-starter created
laurenttarin@IBM-de-Laurent ~ % !
```

Step 5.2.3: In your local folder (ie `$HOME/CP4BA_22.0.2_files`), create a file called ‘`service-account-for-starter.yaml`’.

Step 5.2.4: With the editor of your choice, edit the file and copy/paste the following text :

```
apiVersion: v1
kind: ServiceAccount
metadata:
  name: ibm-cp4ba-anyuid
imagePullSecrets:
- name: "ibm-entitlement-key"
```

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

The `ibm-entitlement-key` is your entitlement key you copied in your [Note](#) in step 4.4.

```
! service-account-for-starter.yaml
apiVersion: v1
kind: ServiceAccount
metadata:
  name: ibm-cp4ba-anyuid
imagePullSecrets:
  - name: "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3Mi0iJJQk0gTWFya2V0cGxhY2UiLCJpYXQiOjE2Nzk5MjYxODIsImp0aSI6ImFiMGNjNmZjNr
```

Step 5.2.5: Save and close the file.

Step 5.2.6: Go in the folder containing your local yaml file in your terminal window (ie type `cd $HOME/CP4BA_22.0.2_files`).

Step 5.2.7: Type ‘`ls`’ to check the yaml file is there.

```
Last login: Wed Apr 12 15:10:59 on ttys000
laurenttarin@IBM-de-Laurent ~ % which docker
docker: aliased to podman
laurenttarin@IBM-de-Laurent ~ % oc login --token=sha256~KRvgqaeOfbT2fVhxSY3QLce5qXRN084qCx2cv-nkn-4 --server=https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443

Logged into "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443" as "kube:admin" using the token provided.

You have access to 71 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "default".
laurenttarin@IBM-de-Laurent ~ % export NAMESPACE=cp4ba-starter
oc create namespace ${NAMESPACE}

namespace/cp4ba-starter created
laurenttarin@IBM-de-Laurent ~ % cd Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % ls
ibm-cp-automation                               service-account-for-starter.yaml
ibm-cp-automation-4.1.3.tgz
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files %
```

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

Step 5.2.8: Type ‘`oc apply -f service-account-for-starter.yaml -n ${NAMESPACE}`’ in your terminal.

```
CP4BA_22.0.2_files --zsh -- 106x23
[laurenttarin@IBM-de-Laurent ~ % which docker
docker: aliased to podman
laurenttarin@IBM-de-Laurent ~ % oc login --token=sha256~KRvgqaeOfbT2fVhxsY3QLce5qXRN084qCx2cv-nkn-4 --server=https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443

Logged into "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443" as "kube:admin" using the token provided.

You have access to 71 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "default".
laurenttarin@IBM-de-Laurent ~ % export NAMESPACE=cp4ba-starter
oc create namespace ${NAMESPACE}

namespace/cp4ba-starter created
[laurenttarin@IBM-de-Laurent ~ % cd Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % LS
ibm-cp-automation          service-account-for-starter.yaml
ibm-cp-automation-4.1.3.tgz
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % oc apply -f service-account-for-starter.yaml -n ${NAMESPACE}
!CE)
serviceaccount/ibm-cp4ba-anyuid created
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % !
```

Step 5.2.9: Type ‘`oc adm policy add-scc-to-user anyuid \ -z ibm-cp4ba-anyuid -n ${NAMESPACE}`’ in your terminal.

```
CP4BA_22.0.2_files --zsh -- 106x23
[laurenttarin@IBM-de-Laurent ~ % https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443
3
Logged into "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443" as "kube:admin" using the token provided
1
You have access to 71 projects, the list has been suppressed. You can list all projects with 'oc projects'

Using project "default".
laurenttarin@IBM-de-Laurent ~ % export NAMESPACE=cp4ba-starter
oc create namespace ${NAMESPACE}

namespace/cp4ba-starter created
[laurenttarin@IBM-de-Laurent ~ % cd Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % LS
ibm-cp-automation          service-account-for-starter.yaml
ibm-cp-automation-4.1.3.tgz
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % oc apply -f service-account-for-starter.yaml -n ${NAMESPACE}
!CE)
serviceaccount/ibm-cp4ba-anyuid created
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % oc adm policy add-scc-to-user anyuid \
2
[-z ibm-cp4ba-anyuid -n ${NAMESPACE}
clusterrole.rbac.authorization.k8s.io/system:openshift:scc:anyuid added: "ibm-cp4ba-anyuid"
laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % !
```

Step 5.2.10: Type ‘`htpasswd -c -B -b users.htpasswd [username] [password]`’ to create a new non admin user called username (ex: non-admin-user1) with the password (ex: abcd1234\$).

```
[laurenttarin@IBM-de-Laurent ~ % htpasswd -c -B -b users.htpasswd non-admin-user1 abcd1234$
Adding password for user non-admin-user1
laurenttarin@IBM-de-Laurent ~ % !
```

Step 5.2.11: Type ‘`htpasswd -b -v users.htpasswd [username] [password]`’ to verify it has worked.

```
[laurenttarin@IBM-de-Laurent ~ % htpasswd -b -v users.htpasswd non-admin-user1 abcd1234$
Password for user non-admin-user1 correct
laurenttarin@IBM-de-Laurent ~ % !
```

Step 5.2.12: Type ‘`oc create secret generic htpass-secret --from-file=htpasswd=./users.htpasswd -n openshift-config`’ to create the secret in OpenShift.

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
[laurenttarin@IBM-de-Laurent ~ % oc create secret generic htpass-secret --from-file=htpasswd=./users.htpasswd -n openshift-config  
secret/htpass-secret created  
laurenttarin@IBM-de-Laurent ~ % ]
```



Step 5.2.13: Type the following to create a config file with the htpasswd identity provider settings:

```
'cat <<EOF | kubectl apply -f -  
apiVersion: config.openshift.io/v1  
kind: OAuth  
metadata:  
  name: cluster  
spec:  
  identityProviders:  
    - name: admins_htpasswd_provider  
      mappingMethod: claim  
      type: HTPasswd  
      htpasswd:  
        fileData:  
          name: htpass-secret  
EOF'
```

```
[laurenttarin@IBM-de-Laurent ~ % cat <<EOF | kubectl apply -f -  
apiVersion: config.openshift.io/v1  
kind: OAuth  
metadata:  
  name: cluster  
spec:  
  identityProviders:  
    - name: admins_htpasswd_provider  
      mappingMethod: claim  
      type: HTPasswd  
      htpasswd:  
        fileData:  
          name: htpass-secret  
EOF  
Warning: resource oauths/cluster is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.  
oauth.config.openshift.io/cluster configured  
laurenttarin@IBM-de-Laurent ~ % ]
```

```
laurenttarin@IBM-de-Laurent ~ % cat <<EOF | kubectl apply -f -  
apiVersion: config.openshift.io/v1  
kind: OAuth  
metadata:  
  name: cluster  
spec:  
  identityProviders:  
    - name: admins_htpasswd_provider  
      mappingMethod: claim  
      type: HTPasswd  
      htpasswd:  
        fileData:  
          name: htpass-secret  
EOF  
Warning: resource oauths/cluster is missing the kubectl.kubernetes.io/last-applied-configuration annotation which is required by kubectl apply. kubectl apply should only be used on resources created declaratively by either kubectl create --save-config or kubectl apply. The missing annotation will be patched automatically.  
oauth.config.openshift.io/cluster configured  
laurenttarin@IBM-de-Laurent ~ % ]
```

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

Step 5.2.14: After a few minutes, type ‘`oc logout`’ and ‘`oc login -u non-admin-user1 -p abcd1234$`’ using the new user credential to verify that it has worked.

```
laurenttarin@IBM-de-Laurent ~ % oc logout
[oc login -u non-admin-user1 -p abcd1234$]
Logged "kube:admin" on "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443"
Login successful.
```

You don't have any projects. You can try to create a new project, by running

```
oc new-project <projectname>
```

```
laurenttarin@IBM-de-Laurent ~ %
```

NOTE: You should now be able to see the user in your OpenShift Console / User Management / Users menu on the LHS.

The screenshot shows the Red Hat OpenShift User Management interface. On the left, there is a navigation sidebar with various options like Home, Operators, Workloads, Networking, Storage, Builds, Observe, Compute, User Management (which is expanded to show Users, Groups, ServiceAccounts, Roles, and RoleBindings), and Administration. The main content area is titled 'Users' and displays a table with one row. The row contains a user icon, the name 'non-admin-user1', an empty 'Full name' field, and an 'Identities' field showing 'admins_htpasswd_provider:non-admin-user1'. A red box surrounds the 'User Management' dropdown, and another red box surrounds the 'Users' link within it. A red arrow points from the 'User Management' box to the 'Users' link. A red circle with an exclamation mark is placed over the 'Users' link.

5.3 - Execute the cluster configuration script

In this section you are going to run a script to setup the cluster. This section corresponds to this part of the CP4BA documentation:

<https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=scripts-option-2a-setting-up-cluster-admin-script>

Step 5.3.1: Make sure you are logged in your cluster from your Terminal window (using the login command you copied into your **Note**).

Step 5.3.2: Type ‘`oc project cp4ba-starter`’ to move in the starter project.

```
laurenttarin@IBM-de-Laurent scripts ~ % oc project cp4ba-starter
Now using project "cp4ba-starter" on server "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443".
laurenttarin@IBM-de-Laurent scripts %
```

Step 5.3.3: Type ‘`cd $HOME/<your install dir>/ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/cert-kubernetes/scripts/`’

to go in the folder containing the scripts.

```
[laurenttarin@IBM-de-Laurent CP4BA_22.0.2_files % cd ./ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/cert-kube]
rnetes/scripts/
laurenttarin@IBM-de-Laurent scripts %
```

Step 5.3.4: Type ‘ls’ to check that your scripts are there.

```
[laurenttarin@IBM-de-Laurent scripts % ls
ADP
baw-std
cp4a-clusteradmin-setup.sh
cp4a-deployment.sh
cp4a-post-install.sh
laurenttarin@IBM-de-Laurent scripts %
cp4a-prerequisites.sh
deleteOperator.sh
deployOperator.sh
helper
jdbc
loadPrereqImages.sh
update_subscription.sh
upgradeOperator.sh
```

Step 5.3.5: Type ‘./cp4a-clusteradmin-setup.s’ to execute the cluster configuration script.

Step 5.3.6: Type ‘2’ and hit [RETURN].

```
Select the cloud platform to deploy:
1) RedHat OpenShift Kubernetes Service (ROKS) - Public Cloud
2) Openshift Container Platform (OCP) - Private Cloud
3) Other (Certified Kubernetes Cloud Platform / CNCF)
Enter a valid option [1 to 3]:
```

Step 5.3.7: Type ‘1’ and hit [RETURN].

```
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]:
```

Step 5.3.8: Type ‘No’ and hit [RETURN].

```
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Do you want CP4BA Operator support 'All Namespaces'? (Yes/No, default: No) No
```

Step 5.3.9: Type ‘cp4ba-starter’ and hit [RETURN].

```
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Do you want CP4BA Operator support 'All Namespaces'? (Yes/No, default: No) No

Where do you want to deploy Cloud Pak for Business Automation?
Enter the name for a new project or an existing project (namespace): cp4ba-starter
```

Step 5.3.10: Type ‘1’ and hit [RETURN].

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
scripts — cp4a-clusteradmin-setup.sh — 124x36
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Do you want CP4BA Operator support 'All Namespaces'? (Yes/No, default: No) No

Where do you want to deploy Cloud Pak for Business Automation?
Enter the name for a new project or an existing project (namespace): cp4ba-starter

The Cloud Pak for Business Automation Operator (Pod, CSV, Subscription) not found in cluster
Continue....

Project "cp4ba-starter" already exists! Continue...

Here are the existing users on this cluster:
1) Cluster Admin
2) non-admin-user1
Enter an existing username in your cluster, valid option [1 to 2], non-admin is suggested: 1
```

Step 5.3.11: Type ‘Yes’ and hit [RETURN].

```
scripts — cp4a-clusteradmin-setup.sh — 132x44
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Do you want CP4BA Operator support 'All Namespaces'? (Yes/No, default: No) No

Where do you want to deploy Cloud Pak for Business Automation?
Enter the name for a new project or an existing project (namespace): cp4ba-starter

The Cloud Pak for Business Automation Operator (Pod, CSV, Subscription) not found in cluster
Continue....

Project "cp4ba-starter" already exists! Continue...

Here are the existing users on this cluster:
1) Cluster Admin
2) non-admin-user1
Enter an existing username in your cluster, valid option [1 to 2], non-admin is suggested: 1
ATTENTION: When you run cp4a-deployment.sh script, please use cluster admin user.

Follow the instructions on how to get your Entitlement Key:
https://www.ibm.com/support/knowledgecenter/en/SSYHZ8\_22.0.2/com.ibm.dba.install/op\_topics/tsk\_images\_entitled.html

Do you have a Cloud Pak for Business Automation Entitlement Registry key? (Yes/No, default: No):
```

Step 5.3.12: Copy and paste the IBM Software entitlement key you copied in your Note and hit [RETURN].

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
This script prepares the OLM for the deployment of some Cloud Pak for Business Automation capabilities

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Do you want CP4BA Operator support 'All Namespaces'? (Yes/No, default: No) No

Where do you want to deploy Cloud Pak for Business Automation?
Enter the name for a new project or an existing project (namespace): cp4ba-starter

The Cloud Pak for Business Automation Operator (Pod, CSV, Subscription) not found in cluster
Continue.....

Project "cp4ba-starter" already exists! Continue...

Here are the existing users on this cluster:
1) Cluster Admin
2) non-admin-user1
Enter an existing username in your cluster, valid option [1 to 2], non-admin is suggested: 1
ATTENTION: When you run cp4a-deployment.sh script, please use cluster admin user.

Follow the instructions on how to get your Entitlement Key:
https://www.ibm.com/support/knowledgecenter/en/SSYHZB\_22.0.2/com.ibm.dba.install/op\_topics/tsk\_images\_enterp\_entitled.html

Do you have a Cloud Pak for Business Automation Entitlement Registry key (Yes/No, default: No): Yes
Enter your Entitlement Registry key: 
```

Step 5.3.13: Wait for the script to finish, which should take approximately 15 minutes. You can monitor the Operator install from the OpenShift console/Operators/Installed operators:

Name	Namespace	Managed Namespaces	Status	Last updated	Provided APIs
IBM Automation Foundation Core	NS cp4ba-starter	NS cp4ba-starter	Installing Up to date	13 Apr 2023, 11:21	Automation UIConfig Cartridge
IBM Automation Foundation Insights Engine	NS cp4ba-starter	NS cp4ba-starter	Installing Up to date	13 Apr 2023, 11:21	InsightsEngine
IBM Automation Foundation	NS cp4ba-starter	NS cp4ba-starter	Installing Up to date	13 Apr 2023, 11:21	AutomationBase CartridgeRequirement
IBM Cloud Pak foundational services	NS cp4ba-starter	NS cp4ba-starter	Succeeded Up to date	13 Apr 2023, 11:21	CommonService

The cluster configuration is done when all operators are in the ‘succeeded status’:

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

The screenshot shows the Red Hat OpenShift web interface. On the left, there's a sidebar with navigation links like Home, Operators, Workloads, and Networking. The main area is titled 'Project: All Projects' and lists several operators installed in the 'cp4ba-starter' namespace. One operator, 'Automation UIConfig Cartridge', is highlighted with a red box and a red exclamation mark. The status for this operator is 'Succeeded Up to date'. Other operators listed include 'IBM Automation Foundation Core', 'IBM Automation Foundation Insights Engine', 'IBM Automation Foundation', 'IBM Cert Manager', 'IBM Cloud Pak foundational services', and 'IBM CP4BA FileNet Content Manager'. Each operator entry includes its version, provider (IBM), and last update time.

```
scripts -- zsh -- 132x44
Waiting for CP4BA operator pod initialization
CP4BA operator is running...
ibm-cp4a-operator-7df5b8b675-s2qnz           1/1  Running   0          8m11s

Waiting for CP4BA Content operator pod initialization
CP4BA Content operator is running...
ibm-content-operator-86f46547b6-44lpw         1/1  Running   0          8m15s

! Label the default namespace to allow network policies to open traffic to the ingress controller using a namespaceSelector...namespace/default labeled
Done

Storage classes are needed to run the deployment script. For the Starter deployment scenario, you may use one (1) storage class. For a Production deployment, the deployment script will ask for three (3) storage classes to meet the slow, medium, and fast storage for the configuration of CP4BA components. If you don't have three (3) storage classes, you can use the same one for slow, medium, or fast. Note that you can get the existing storage class(es) in the environment by running the following command: oc get storageclass. Take note of the storage classes that you want to use for deployment.
NAME                PROVISIONER          RECLAIMPOLICY    VOLUMEBINDINGMODE   ALLOWVOLUMEEXPANSION
AGE
ocs-storagecluster-ceph-rbd  openshift-storage.rbd.csi.ceph.com  Delete        Immediate          true
20h
ocs-storagecluster-ceph-rgw  openshift-storage.ceph.rook.io/bucket  Delete        Immediate          false
20h
ocs-storagecluster-cephfs   openshift-storage.cephfs.csi.ceph.com Delete        Immediate          true
20h
openshift-storage.noobaa.io  openshift-storage.noobaa.io/obc      Delete        Immediate          false
20h
thin (default)              kubernetes.io/vsphere-volume          Delete        Immediate          false
20h
thin-csi                   csi.vsphere.vmware.com                 Delete        WaitForFirstConsumer  true
20h
laurenttarin@IBM-de-Laurent scripts %
```

5.4 - Execute the deployment script

It is now time to install the CP4BA capabilities using the deployment script. At this stage we are in this part of the CP4BA documentation:

<https://www.ibm.com/docs/en/cloud-paks/cp-biz->

<automation/22.0.2?topic=scripts-installing-capabilities-by-running-deployment-script>

Step 5.4.1: Make sure you are logged in your cluster using the oc login command copied from your OpenShift environment.

Step 5.4.2: Type ‘`oc project cp4ba-starter`’ to go to the right project.

```
[laurenttarin@IBM-de-Laurent scripts % oc project cp4ba-starter  
Already on project "cp4ba-starter" on server "https://api.ocp-270002541s-yds5.cloud.techzone.ibm.com:6443".  
laurenttarin@IBM-de-Laurent scripts % ]
```

Step 5.4.3: Type ‘`./cp4a-deployment.sh`’ to run the deployment script.

Step 5.4.4: Hit [RETURN].

```
● ● ● scripts — cp4a-deployment.sh — 132x44  
IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:  
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li\_formnum=L-ASAY-CJ9F4D  
Press any key to continue
```

Step 5.4.5: Type ‘`Yes`’ and hit [RETURN].

```
● ● ● scripts — cp4a-deployment.sh — 132x44  
IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:  
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li\_formnum=L-ASAY-CJ9F4D  
Press any key to continue  
Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes
```

Step 5.4.6: Type ‘`No`’ and hit [RETURN].

```
● ● ● scripts — cp4a-deployment.sh — 132x44  
IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:  
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li\_formnum=L-ASAY-CJ9F4D  
Press any key to continue  
Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes  
Did you deploy Content CR (CRD: contents.icp4a.ibm.com) in current cluster? (Yes/No, default: No): No
```

Step 5.4.7: Type ‘`1`’ and hit [RETURN].

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
scripts — cp4a-deployment.sh — 132x44
IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li_formnum=L-ASAY-CJ9F4D

Press any key to continue

Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes

Did you deploy Content CR (CRD: contents.icp4a.ibm.com) in current cluster? (Yes/No, default: No): No
Continuing...

Starting to Install the Cloud Pak for Business Automation Operator...

Is this a new installation or an existing installation?
1) New
2) Existing
Enter a valid option [1 to 2]: 1
```

Step 5.4.8: Type ‘1’ and hit [RETURN].

```
scripts — cp4a-deployment.sh — 132x44
IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li_formnum=L-ASAY-CJ9F4D

Press any key to continue

Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes

Did you deploy Content CR (CRD: contents.icp4a.ibm.com) in current cluster? (Yes/No, default: No): No
Continuing...

Starting to Install the Cloud Pak for Business Automation Operator...

Is this a new installation or an existing installation?
1) New
2) Existing
Enter a valid option [1 to 2]: 1

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1
```

Step 5.4.9: Type ‘2’ and hit [RETURN].

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
scripts — cp4a-deployment.sh — 132x44

IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li_formnum=L-ASAY-CJ9F4D

Press any key to continue

Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes

Did you deploy Content CR (CRD: contents.icp4a.ibm.com) in current cluster? (Yes/No, default: No): No
Continuing...

Starting to Install the Cloud Pak for Business Automation Operator...

Is this a new installation or an existing installation?
1) New
2) Existing
Enter a valid option [1 to 2]: 1

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

Select the cloud platform to deploy:
1) Redhat OpenShift Kubernetes Service (ROKS) - Public Cloud
2) Openshift Container Platform (OCP) - Private Cloud
Enter a valid option [1 to 2]: 2
```

Step 5.4.10: Type ‘cp4ba-starter’ and hit [RETURN].

```
scripts — cp4a-deployment.sh — 132x44

IMPORTANT: Review the IBM Cloud Pak for Business Automation license information here:
http://www14.software.ibm.com/cgi-bin/weblap/lap.pl?li_formnum=L-ASAY-CJ9F4D

Press any key to continue

Do you accept the IBM Cloud Pak for Business Automation license (Yes/No, default: No): Yes

Did you deploy Content CR (CRD: contents.icp4a.ibm.com) in current cluster? (Yes/No, default: No): No
Continuing...

Starting to Install the Cloud Pak for Business Automation Operator...

Is this a new installation or an existing installation?
1) New
2) Existing
Enter a valid option [1 to 2]: 1

What type of deployment is being performed?
1) Starter
2) Production
Enter a valid option [1 to 2]: 1

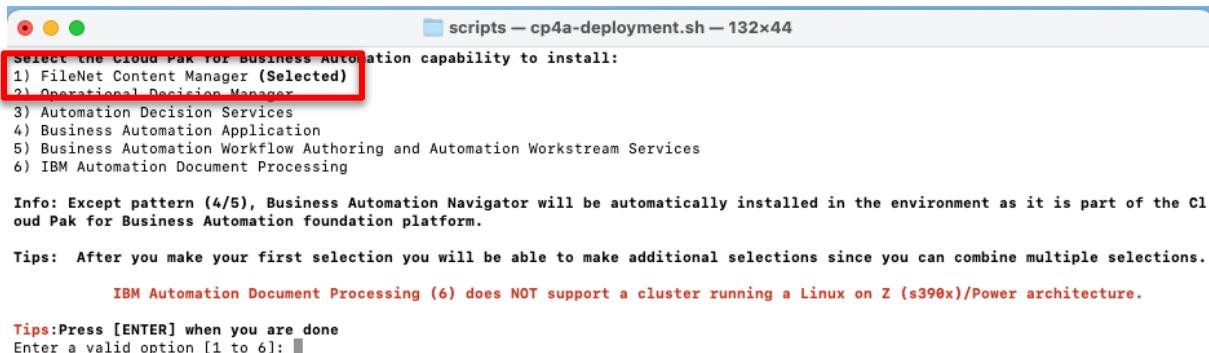
Select the cloud platform to deploy:
1) Redhat OpenShift Kubernetes Service (ROKS) - Public Cloud
2) Openshift Container Platform (OCP) - Private Cloud
Enter a valid option [1 to 2]: 2

Where do you want to deploy Cloud Pak for Business Automation?
Enter the name for an existing project (namespace): cp4ba-starter
```

Step 5.4.11: Type ‘1’ and hit [RETURN] to select FileNet Content Manager.

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Installing Cloud Pak for Business Automation on an OpenShift VMware image



Select the Cloud Pak for Business Automation capability to install:

- 1) FileNet Content Manager (Selected)
- 2) Operational Decision Manager
- 3) Automation Decision Services
- 4) Business Automation Application
- 5) Business Automation Workflow Authoring and Automation Workstream Services
- 6) IBM Automation Document Processing

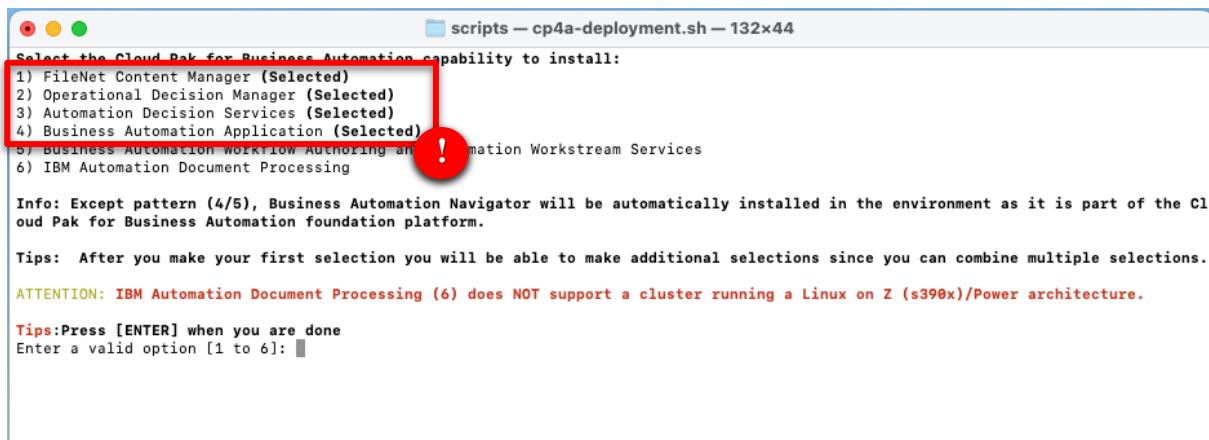
Info: Except pattern (4/5), Business Automation Navigator will be automatically installed in the environment as it is part of the Cloud Pak for Business Automation foundation platform.

Tips: After you make your first selection you will be able to make additional selections since you can combine multiple selections.

IBM Automation Document Processing (6) does NOT support a cluster running a Linux on Z (s390x)/Power architecture.

Tips:Press [ENTER] when you are done
Enter a valid option [1 to 6]:

Step 5.4.12: Repeat the previous step selecting 2↔, 3↔, 4↔ until you get to this selection:



Select the Cloud Pak for Business Automation capability to install:

- 1) FileNet Content Manager (Selected)
- 2) Operational Decision Manager (Selected)
- 3) Automation Decision Services (Selected)
- 4) Business Automation Application (Selected)
- 5) Business Automation Workflow Authoring and Automation Workstream Services
- 6) IBM Automation Document Processing

Info: Except pattern (4/5), Business Automation Navigator will be automatically installed in the environment as it is part of the Cloud Pak for Business Automation foundation platform.

Tips: After you make your first selection you will be able to make additional selections since you can combine multiple selections.

ATTENTION: IBM Automation Document Processing (6) does NOT support a cluster running a Linux on Z (s390x)/Power architecture.

Tips:Press [ENTER] when you are done
Enter a valid option [1 to 6]:

Step 5.4.13: Hit [RETURN].

Step 5.4.14: In the same way, select options 1↔, 2↔, 6↔ to select the following items:



Pattern "FileNet Content Manager": Select optional components:

- 1) Content Search Services (Selected)
- 2) Content Management Interoperability Services (Selected)
- 3) IBM Enterprise Records
- 4) IBM Content Collector for SAP
- 5) Business Automation Insights
- 6) Task Manager (Selected)

ATTENTION: IBM Content Collector for SAP (4) does NOT support a cluster running a Linux on Power architecture.

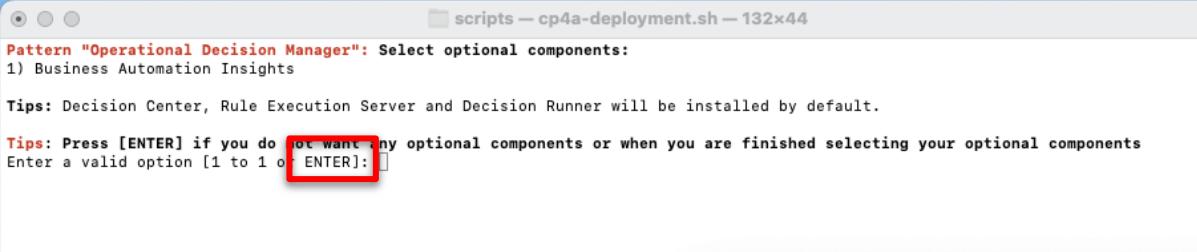
Tips: Press [ENTER] when you are done
Enter a valid option [1 to 6 or ENTER]:

Step 5.4.15: Hit [RETURN] to validate.

Step 5.4.16: Hit [RETURN] again.

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

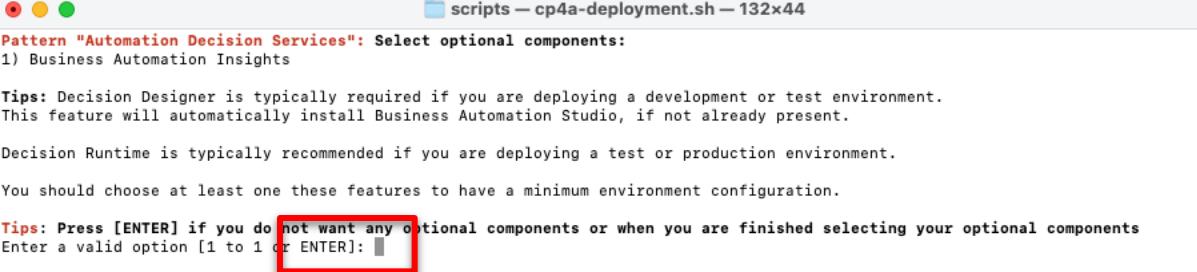


```
scripts -- cp4a-deployment.sh - 132x44
Pattern "Operational Decision Manager": Select optional components:
1) Business Automation Insights

Tips: Decision Center, Rule Execution Server and Decision Runner will be installed by default.

Tips: Press [ENTER] if you do not want any optional components or when you are finished selecting your optional components
Enter a valid option [1 to 1 or ENTER]:
```

Step 5.4.17: Hit [RETURN] again.



```
scripts -- cp4a-deployment.sh - 132x44
Pattern "Automation Decision Services": Select optional components:
1) Business Automation Insights

Tips: Decision Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Decision Runtime is typically recommended if you are deploying a test or production environment.

You should choose at least one these features to have a minimum environment configuration.

Tips: Press [ENTER] if you do not want any optional components or when you are finished selecting your optional components
Enter a valid option [1 to 1 or ENTER]:
```

Step 5.4.18: Type '1' and hit [RETURN].



```
scripts -- cp4a-deployment.sh - 132x44
Pattern "Business Automation Application": Select optional components:
1) IBM Content Navigator (Selected)

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] if you do not want any optional components or when you are finished selecting your optional components
Enter a valid option [1 to 1 or ENTER]: 1
```

Step 5.4.19: Hit [RETURN] to validate.



```
scripts -- cp4a-deployment.sh - 132x44
Pattern "Business Automation Application": Select optional components:
1) IBM Content Navigator (Selected) !

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] if you are done
Enter a valid option [1 to 1 or ENTER]:
```

Step 5.4.20: Copy and paste 'ocs-storagecluster-cephfs' and hit [RETURN].

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
scripts — cp4a-deployment.sh — 132x44
Pattern "Business Automation Application": Select optional components:
1) IBM Content Navigator (Selected)

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] when you are done
Enter a valid option [1 to 1 or ENTER]: 

To provision the persistent volumes and volume claims, enter the file storage classname(RWX): ocs-storagecluster-cephfs
```

Step 5.4.21: Copy and paste ‘ocs-storagecluster-ceph-rbd’ and hit [RETURN].

```
scripts — cp4a-deployment.sh — 132x44
Pattern "Business Automation Application": Select optional components:
1) IBM Content Navigator (Selected)

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] when you are done
Enter a valid option [1 to 1 or ENTER]: 

To provision the persistent volumes and volume claims, enter the file storage classname(RWX): ocs-storagecluster-cephfs
To provision the persistent volumes and volume claims, enter the block storage classname(RWO): ocs-storagecluster-ceph-rbd
```

Step 5.4.22: Type ‘Yes’ and hit [RETURN].

```
scripts — cp4a-deployment.sh — 132x44
Pattern "Business Automation Application": Select optional components:
1) IBM Content Navigator (Selected)

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] when you are done
Enter a valid option [1 to 1 or ENTER]: 

To provision the persistent volumes and volume claims, enter the file storage classname(RWX): ocs-storagecluster-cephfs
To provision the persistent volumes and volume claims, enter the block storage classname(RWO): ocs-storagecluster-ceph-rbd

*****
Summary of input
*****
1. Cloud Pak capability to deploy:
 * FileNet Content Manager
 * Operational Decision Manager
 * Automation Decision Services
 * Business Automation Application
2. Optional components to deploy:
 * Content Management Interoperability Services
 * Content Search Services
 * IBM Content Navigator
 * Task Manager
3. File storage classname(RWX): ocs-storagecluster-cephfs
4. Block storage classname(RWO): ocs-storagecluster-ceph-rbd
*****
```

Verify that the information above is correct.
To proceed with the deployment, enter "Yes".
To make changes, enter "No" (default: No): Yes

Step 5.4.23: The script is now deploying the CP4BA selected capabilities. It will take from **4 to 6 hours** before all the capabilities are ready on your cluster.

User guide

Installing Cloud Pak for Business Automation on an OpenShift VMware image

```
● ● ●
scripts — zsh — 132x44

Tips: Application Designer is typically required if you are deploying a development or test environment.
This feature will automatically install Business Automation Studio, if not already present.

Make your selection or press enter to proceed.

Tips: Press [ENTER] when you are done
Enter a valid option [1 to 1 or ENTER]:

To provision the persistent volumes and volume claims, enter the file storage classname(RWX): ocs-storagecluster-cephfs
To provision the persistent volumes and volume claims, enter the block storage classname(RWO): ocs-storagecluster-ceph-rbd

*****
Summary of input
*****
1. Cloud Pak capability to deploy:
 * FileNet Content Manager
 * Operational Decision Manager
 * Automation Decision Services
 * Business Automation Application
2. Optional components to deploy:
 * Content Management Interoperability Services
 * Content Search Services
 * IBM Content Navigator
 * Task Manager
3. File storage classname(RWX): ocs-storagecluster-cephfs
4. Block storage classname(RWO): ocs-storagecluster-ceph-rbd
*****


Verify that the information above is correct.
To proceed with the deployment, enter "Yes".
To make changes, enter "No" (default: No): Yes

Installing the selected Cloud Pak capability...
icp4acluster.icp4a.ibm.com/icp4adeploy created
Done
The custom resource file used is: "/Users/laurenttarin/Technical_stuff/CP4BA_setup/CP4BA_22.0.2_files/ibm-cp-automation/inventory/cp4aOperatorSdk/files/deploy/crs/cert-kubernetes/scripts/generated-cr/ibm_cp4a_cr_final.yaml"

To monitor the deployment status, follow the Operator logs.
For details, refer to the troubleshooting section in Knowledge Center here:
https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=automation-troubleshooting
laurenttarin@IBM-de-Laurent scripts %
```

6- Validate your correct deployment

After a few hours, your Cloud Pak for Business Automation deployment should be ready.

The setup is completed when the cp4ba access information config map is created, with all the URL and credentials to log in the various installed components.

Step 6.1: Log into your OpenShift console using the credentials provided in the ‘environment ready email’.

Step 6.2: Expand the **Workloads** (1), then click **ConfigMaps** (2).

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Installing Cloud Pak for Business Automation on an OpenShift VMware image

The screenshot shows the Red Hat OpenShift web interface. The left sidebar is titled 'Administrator' and has a 'Workloads' dropdown menu. The 'ConfigMaps' option is highlighted with a red box and a red circle containing the number '1'. Below it, the 'ConfigMaps' section is also highlighted with a red box and a red circle containing the number '2'. The main content area is titled 'Overview' and includes sections for 'Getting started resources', 'Cluster', 'Status', and 'Activity'.

Step 6.3: Expand the projects menu (1) and click cp4ba-starter (2).

The screenshot shows the Red Hat OpenShift web interface. The left sidebar is titled 'Administrator' and has a 'ConfigMaps' option selected. The 'ConfigMaps' section is highlighted with a red box and a red circle containing the number '1'. In the main content area, a list of projects is shown, with 'cp4ba-starter' highlighted with a red box and a red circle containing the number '2'. Other projects listed include 'cs-control', 'open-cluster-management-agent', 'open-cluster-management-agent-addon', 'turbo', and several others with complex names.

Step 6.4: Type 'access' (1). Check that **icp4adeploy-cp4ba-access-info** (2) config map is visible.

User guide

Installing Cloud Pak for Business Automation on an OpenShift VMware image

The screenshot shows the Red Hat OpenShift web interface. On the left, a sidebar menu includes options like Home, Operators, Workloads (Pods, Deployments, DeploymentConfigs, StatefulSets, Secrets), ConfigMaps (selected), and CronJobs. The main content area is titled 'ConfigMaps' under the project 'cp4ba-starter'. A search bar at the top has 'access' typed into it. Below the search bar, a table lists two ConfigMaps: 'icp4adeploy-cp4ba-access-info' (size 10, created 13 Apr 2023, 16:23) and 'icp4adeploy-odm-certificates-checksum' (size 1, created 13 Apr 2023, 13:06). A red box highlights the search bar, and a red arrow points from the search term to the first row. A red circle with a white exclamation mark is placed over the second row.

NOTE: If the file is not listed, wait a little bit more for the CP4BA deployment to be completed.

Step 6.5: Click icp4adeploy-cp4ba-access-info.

The screenshot shows the Red Hat OpenShift web interface. The sidebar and project selection are identical to the previous screenshot. The main content area shows the same 'ConfigMaps' table. The row for 'icp4adeploy-cp4ba-access-info' is now highlighted with a red box. A red arrow points from the 'icp4adeploy-cp4ba-access-info' entry in the table to the row itself.

Step 6.6: Scroll down (1) and check that all that the ADS access info is there.

User guide

Installing Cloud Pak for Business Automation on an OpenShift VMware image

The screenshot shows the Red Hat OpenShift web interface. On the left, a sidebar menu is open under 'Workloads' with 'ConfigMaps' selected. In the main area, a 'Data' section for a ConfigMap named 'ADS-runtime-access-info' is displayed. The 'username' field contains the value 'drs'. A red arrow points to this field. A red box highlights the entire configuration section. A red circle with the number '1' is in the bottom right corner.

Once ADS is installed, your CP4BA setup is completed.

You can now proceed with the demonstration setup instructions following the ‘Prepare instructions’ tab.

Related documentation

Podman documentation

IBMer Only: <https://w3.ibm.com/w3publisher/docker-desktop/podman>
Partners: <https://podman-desktop.io/>

Cloud Pak for Business Automation set-up documentation:

The previous instructions are based on the following product documentation chapters:

Preparing for a starter deployment	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=deployment-preparing-starter
Option 2: Installing a starter deployment by running scripts	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=icmpsdp-option-2-installing-starter-deployment-by-running-scripts
Option 2a: Setting up the cluster with the admin script	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=scripts-option-2a-setting-up-cluster-admin-script
Installing the capabilities by running the deployment script	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=scripts-installing-capabilities-by-running-deployment-script
Validating your starter deployment	https://www.ibm.com/docs/en/cloud-paks/cp-biz-automation/22.0.2?topic=scripts-validating-your-starter-deployment