

FALL SEM 2021 -22
CLOUD COMPUTING
DIGITAL ASSESSMENT – 2

TEAMMATES:

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19BCS0012 – NITHISH.G

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QUESTION:

Identify one service provider and describe about the services in detail.

- **Service provider description and product description (Student1)**

SERVICE PROVIDER DESCRIPTION

ABOUT ZOHO CREATOR:

Zoho Creator is a cloud software to create custom applications on your own without any prior coding experience or IT expertise. Zoho Creator's drag-and-drop interface enables you to create custom business applications in days rather than weeks. You can collect data, automate business processes or workflows, analyze the data in reports, and collaborate with your application users.

Zoho Creator lets you concentrate on automating your business process without worrying about maintenance, hosting, and scalability. With our native mobile apps, you can access real-time data from anywhere, anytime and on any device.

The Zoho Creator user interface supports two different roles.

- ❖ **Application Creator or Application Owner** - An individual who creates the application to meet his/her needs(**Example:** Project Manager who needs to keep track of the projects, creates '**Project Tracker**' application).
- ❖ **Users** - Individuals who access the application. Your application users can be your team members, customers, executives, employees, vendors, and partners.

PRODUCT DESCRIPTION

PaaS

PaaS is a cloud offering that provides infrastructure for development and deployment of applications. It provides the middleware, development tools, and artificial intelligence to create powerful applications. Like Infrastructure as a Service (IaaS), which saves you from buying and managing your own servers and data-center components, most PaaS services are bundled together with storage and network infrastructure.

Why PaaS?

The ever-rising demand for PaaS can be attributed to automation. With PaaS, developers no longer have to configure the application environment manually. This gives them the liberty to create their app without spending hours building the framework, and sinking money into software licenses and hardware.

PaaS can be broadly divided into multiple types, xPaaS, where the x represents the service being offered. A few of them are:

- ❖ Application - aPaaSIntegration – iPaaS
- ❖ Database - dbPaaS
- ❖ API management - apimPaaS

- ❖ Communications - cPaaS

- ❖ Functions – fPaaS

Here we going to discuss one of the Platform as a service called
Application Platform as a service

- ❖ aPaaS is by far the most prominent type and is synonymous with rapid application development (RAD). Although similar to Infrastructure as a Service (IaaS), it comes with extra icing—operating systems, analytics, and tools for development. It opens the door for the application lifecycle to be completed without any other technical requirements, as the underlying infrastructure is already taken care off.

- ❖ Zoho Creator is a low-code application development platform that helps you deliver web and mobile applications at the speed of your business. It's Zoho's version of aPaaS—an intuitive and secure environment for building applications from scratch, plus a wide variety of third-party integrations. The only prerequisite is to log in.

- ❖ aPaaS is by far the most prominent type and is synonymous with rapid application development (RAD). Although similar to Infrastructure as a Service (IaaS), it

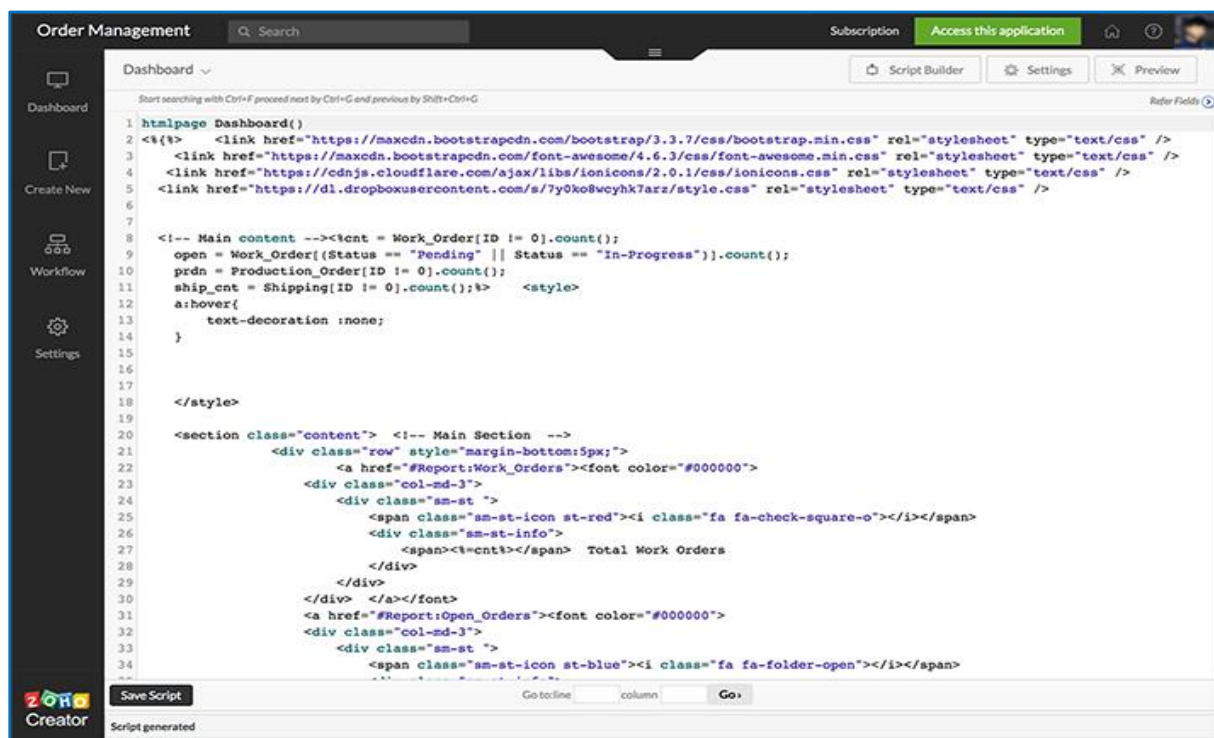
comes with extra icing—operating systems, analytics, and tools for development. It opens the door for the application lifecycle to be completed without any other technical requirements, as the underlying infrastructure is already taken care off.

An sample scenario of Zoho creator vs HTML Page Builder

CREATE PAGES:

Pages are the customized HTML views that can be designed using a combination of HTML and application data. You can make great dashboards and Custom views, presenting dynamic Reports based on the user selected criteria.

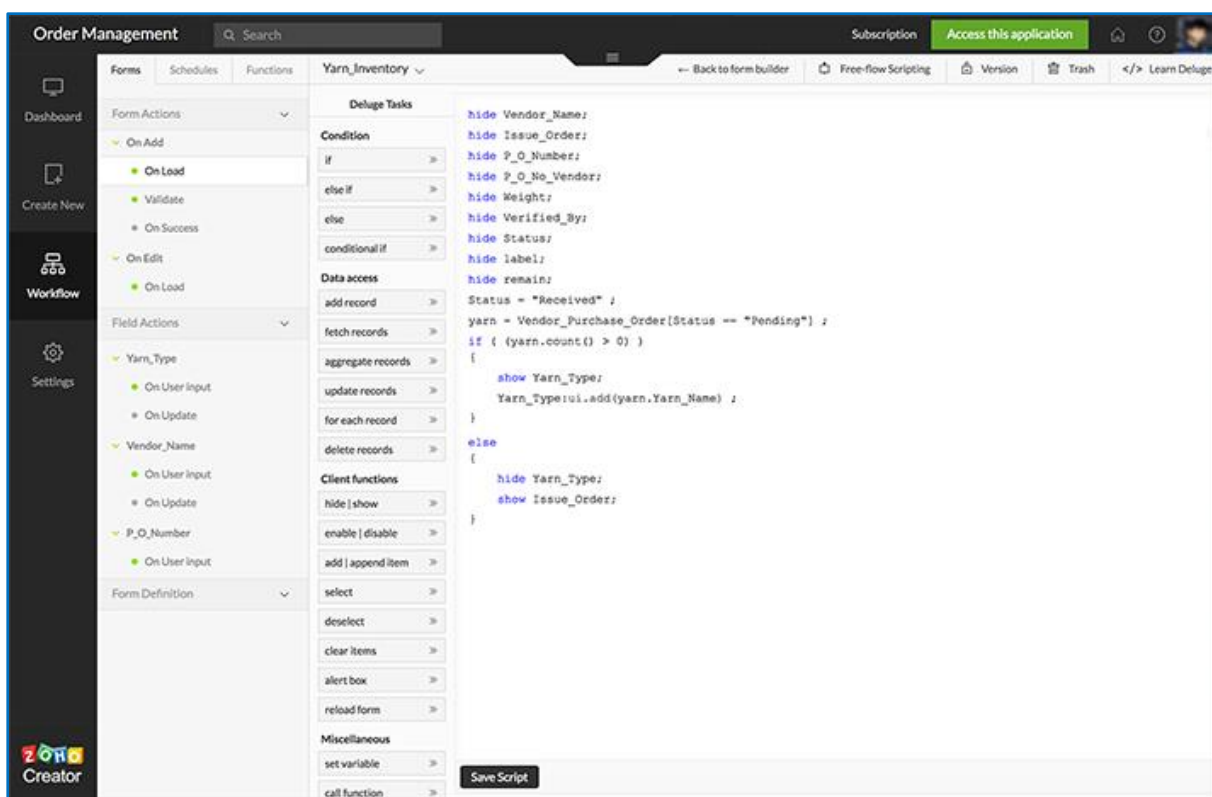
HTML PAGE - BUILDER:



ADD WORKFLOW

You can add business workflows, automated tasks and custom actions to your Forms and Reports to make your application more powerful and robust. The script builder provides a drag-and-drop user interface for defining the workflows and tasks quickly, without any errors.

DRAG AND DROP SCRIPT BUILDER



ACCESS THE APPLICATION

By default, an application created in Zoho Creator is private. The Share feature lets you share your application with your users. Shared users can access the Forms, Reports, and Pages in your application based on the access permissions provided by you.

FORM:

- ✓ Access mode of the Purchase Order Form

The screenshot shows the 'Add Purchase Order (Vendor)' form within the 'Order Management' application. The form includes the following fields:

- Purchase Order No. *
- Yarn *
- Vendor *
- Quantity (in grams) *
- Deadline

At the bottom of the form are two buttons: 'Submit' (green) and 'Reset' (grey).

Report

- ✓ Data displayed in a list Report format while accessing the application

The screenshot displays the 'Purchase Orders' report in the 'Order Management' application. The report is a table with the following columns: Purchase Order No., Expected By, Yarn, Quantity (in grams), Status, and Received. The data is filtered by 'ABC Corp'.

<input type="checkbox"/>	Purchase Order No. ⌵	Expected By ⌵	Yarn ⌵	Quantity (in grams) ⌵	Status ⌵	Received ⌵
<input type="checkbox"/>	ABC Corp					
<input type="checkbox"/>	PO - 223	14-Dec-2016	Yarn - 232	9364	Pending	Received
<input type="checkbox"/>	PO - 331	21-Dec-2016	Yarn - 333	9747	Received	Received
<input type="checkbox"/>	PO - 212	10-Nov-2016	Yarn - 333	7648	Received	Received
<input type="checkbox"/>	PO - 333	06-Nov-2016	Yarn - 132	8328	Received	Received
<input type="checkbox"/>	PO - 332	02-Dec-2016	Yarn - 123	5788	Received	Received
<input type="checkbox"/>	PO - 133	07-Feb-2017	Yarn - 331	5982	Received	Received
<input type="checkbox"/>	PO - 323	20-Feb-2017	Yarn - 123	9903	Received	Received
<input type="checkbox"/>	PO - 122	06-Nov-2016	Yarn - 313	7502	Received	Received
<input type="checkbox"/>	PO - 211	16-Nov-2016	Yarn - 333	7379	Received	Received
<input type="checkbox"/>	PO - 321	01-Feb-2017	Yarn - 223	5844	Received	Received
<input type="checkbox"/>	PO - 113	11-Feb-2017	Yarn - 321	5936	Pending	Received
<input type="checkbox"/>	PO - 010	28-Sep-2016	Yarn - 313	10000	Received	Received
<input type="checkbox"/>	PO - 001	27-Sep-2016	Yarn 2	10000	Received	Received

- Steps to deploy applications (Student2)

This will help you in successfully installing Zoho Creator on your Windows and Linux machines.

System requirements

Hardware	Minimum	Recommended
Processor	1 GHz Dual core processor, x64 bit processor	2.4 GHz or faster, Quad core processor, x64 bit processor
RAM	8 GB*	16 GB*
Disk space	50 GB*	100 GB*

* Based on the number of users, apps, reports, workflows, and file storage, additional space might be needed.

Recommended web browsers

Zoho Creator can be accessed using any of the following web browsers:

- Internet Explorer version 11 or above (For IE 9 & IE 10 settings should be changed on the customer end to enable TLS1.2)
- Google Chrome version 30 or above
- Mozilla Firefox 27 or above
- Safari 7 or above

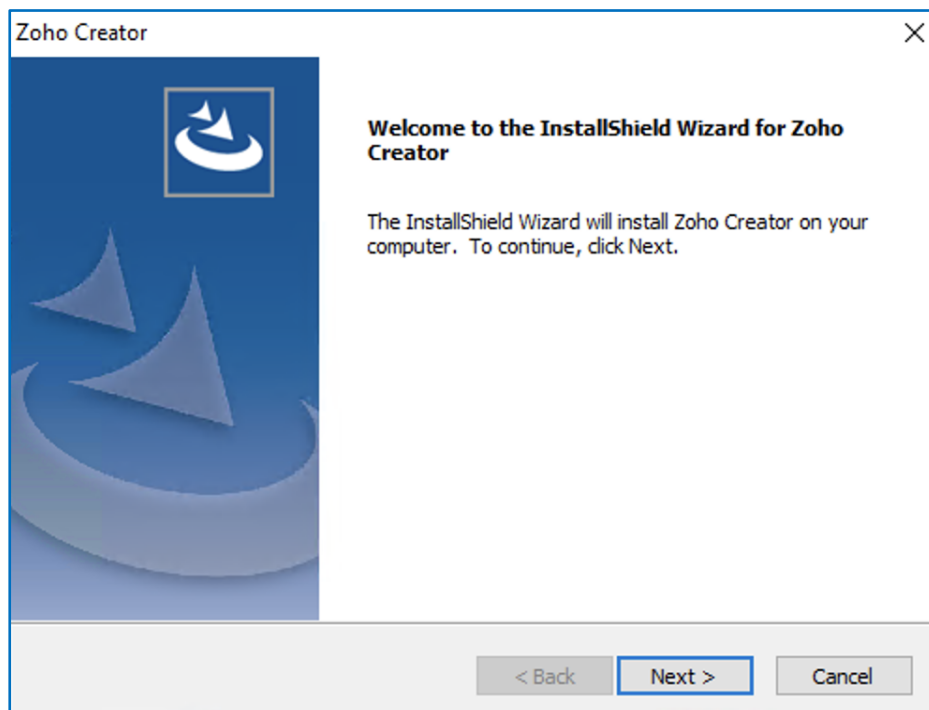
Supported DBMS

- PostgreSQL - bundled by default within Zoho Creator's Windows and Linux installables

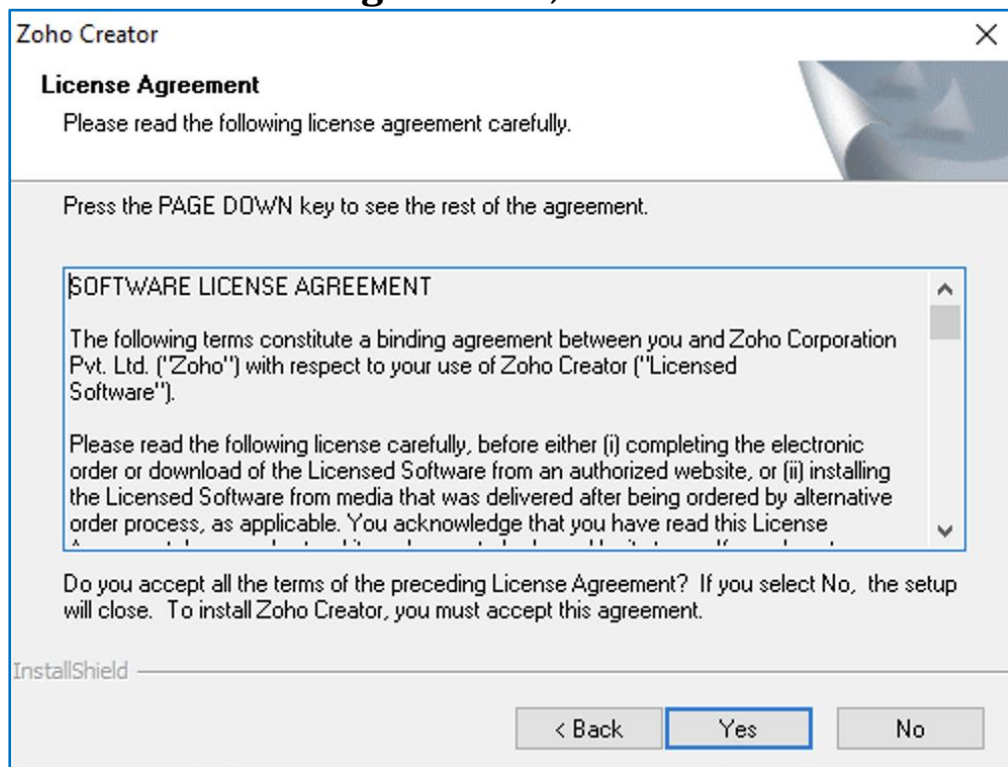
Install Zoho Creator on Windows

Supported OS: Windows 10 and above, 64-bit

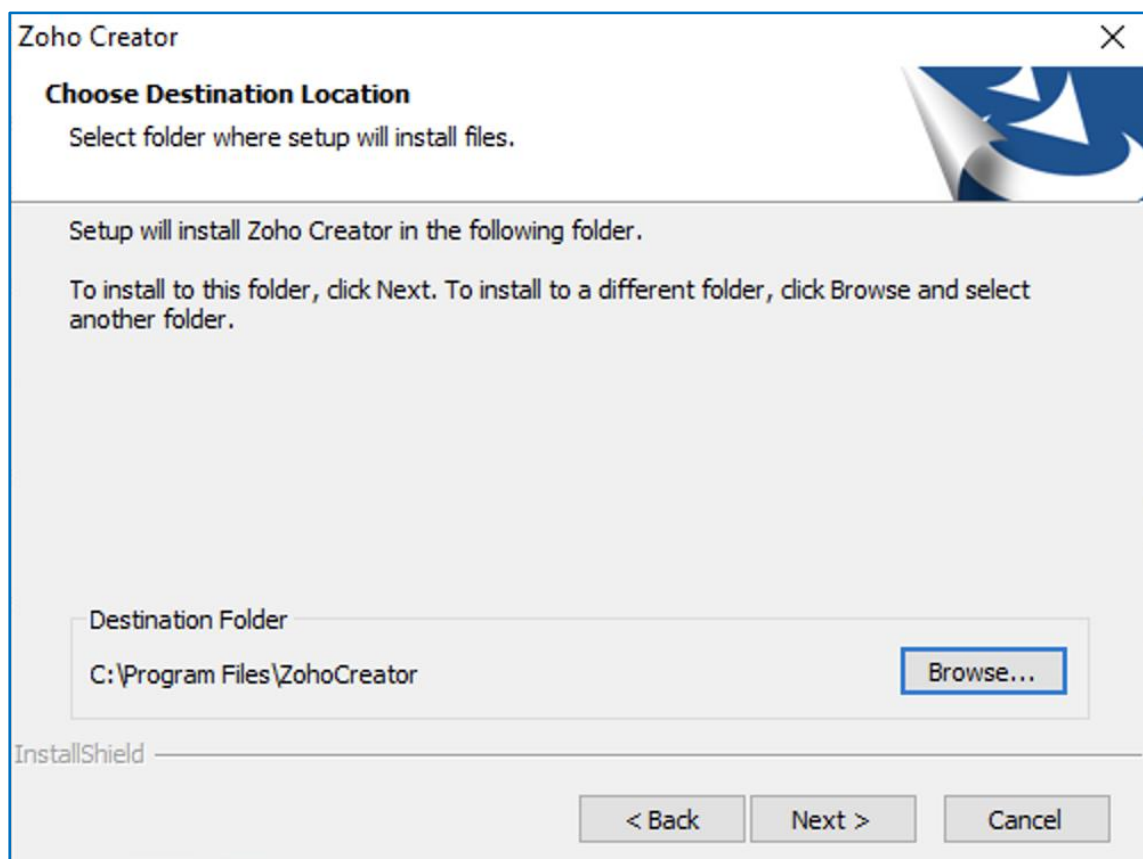
- Download the required installable for Windows.
- Double click the downloaded file. Click **Next** in the InstallShield Wizard for Zoho Creator:



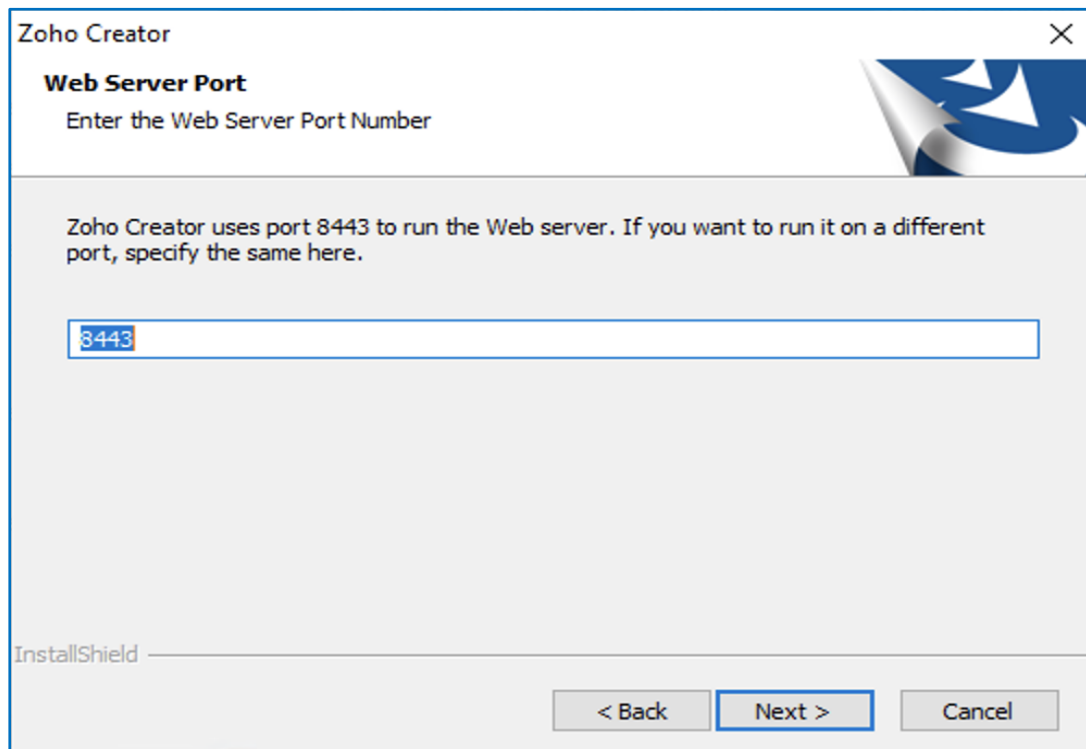
- Read the **License Agreement**, then click **Yes**:



- Set the **Destination Folder**, then click **Next**:

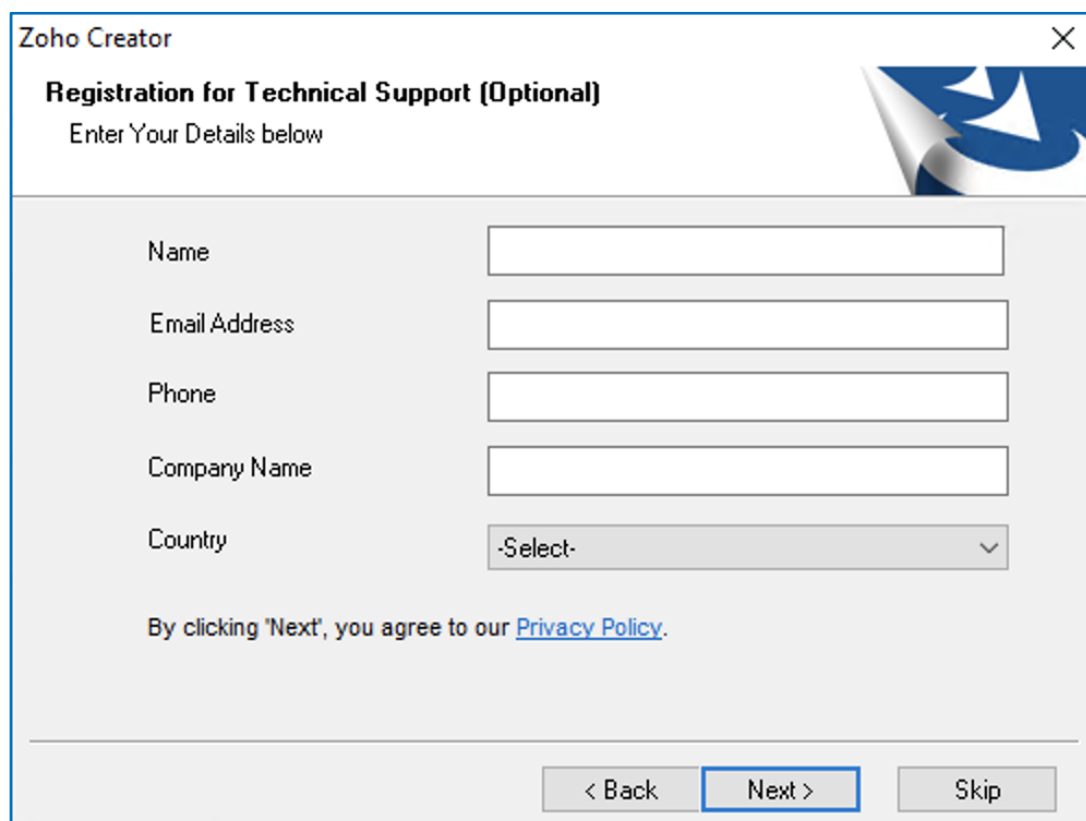


- Set the **Web Server Port**, then click **Next**. It'll be set as **8443** by default.



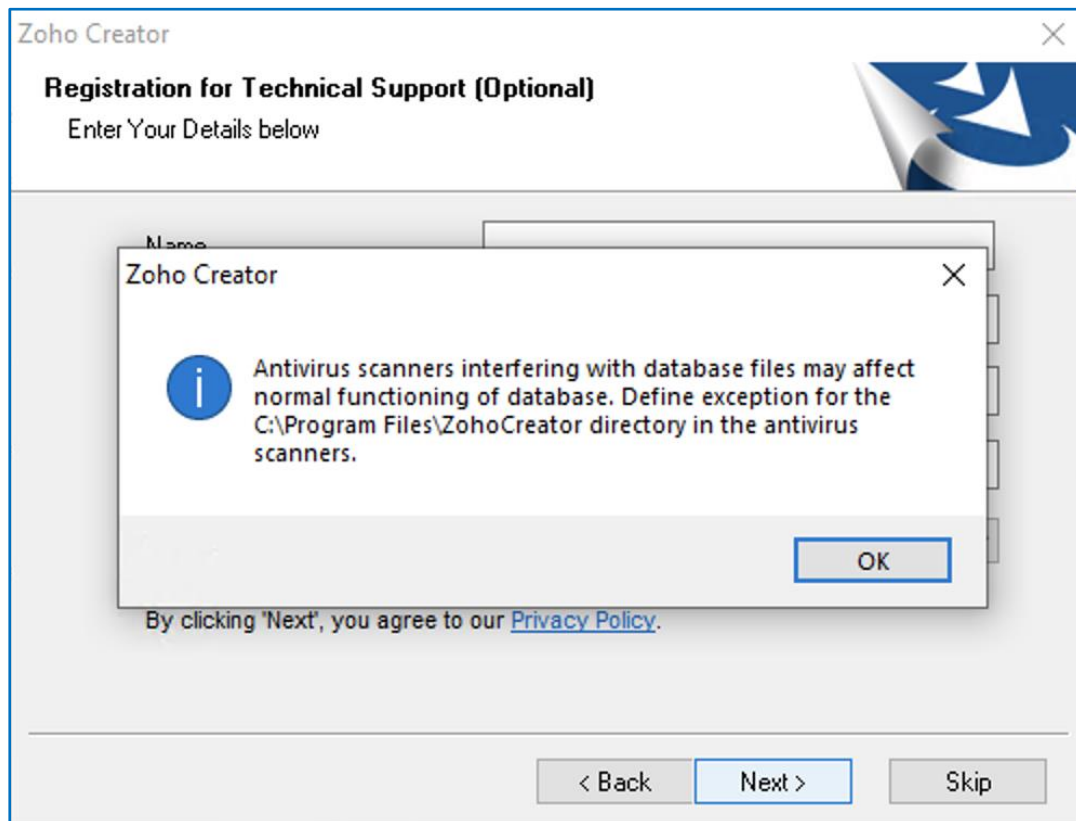
The screenshot shows a window titled "Zoho Creator" with a close button (X) in the top right corner. Below the title bar, there is a blue and white Zoho logo. The main heading is "Web Server Port" in bold, followed by the instruction "Enter the Web Server Port Number". A text box contains the number "8443". Below this, a paragraph states: "Zoho Creator uses port 8443 to run the Web server. If you want to run it on a different port, specify the same here." At the bottom left, the text "InstallShield" is visible. At the bottom right, there are three buttons: "< Back", "Next >" (which is highlighted with a blue border), and "Cancel".

- (Optional) Enter your details for contacting Zoho's technical support:

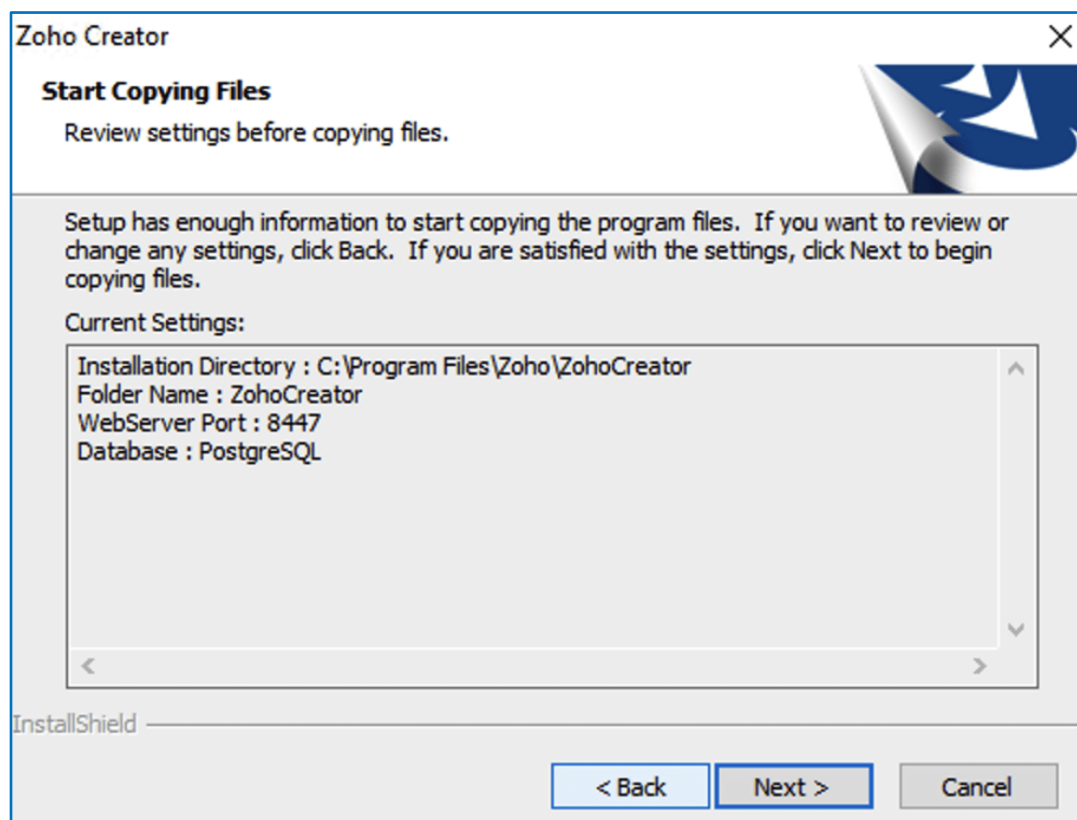


The screenshot shows a window titled "Zoho Creator" with a close button (X) in the top right corner. Below the title bar, there is a blue and white Zoho logo. The main heading is "Registration for Technical Support (Optional)" in bold, followed by the instruction "Enter Your Details below". The form contains five input fields: "Name", "Email Address", "Phone", "Company Name", and "Country". The "Country" field is a dropdown menu with "-Select-" and a downward arrow. Below the input fields, a line of text reads: "By clicking 'Next', you agree to our [Privacy Policy](#)." At the bottom right, there are three buttons: "< Back", "Next >" (which is highlighted with a blue border), and "Skip".

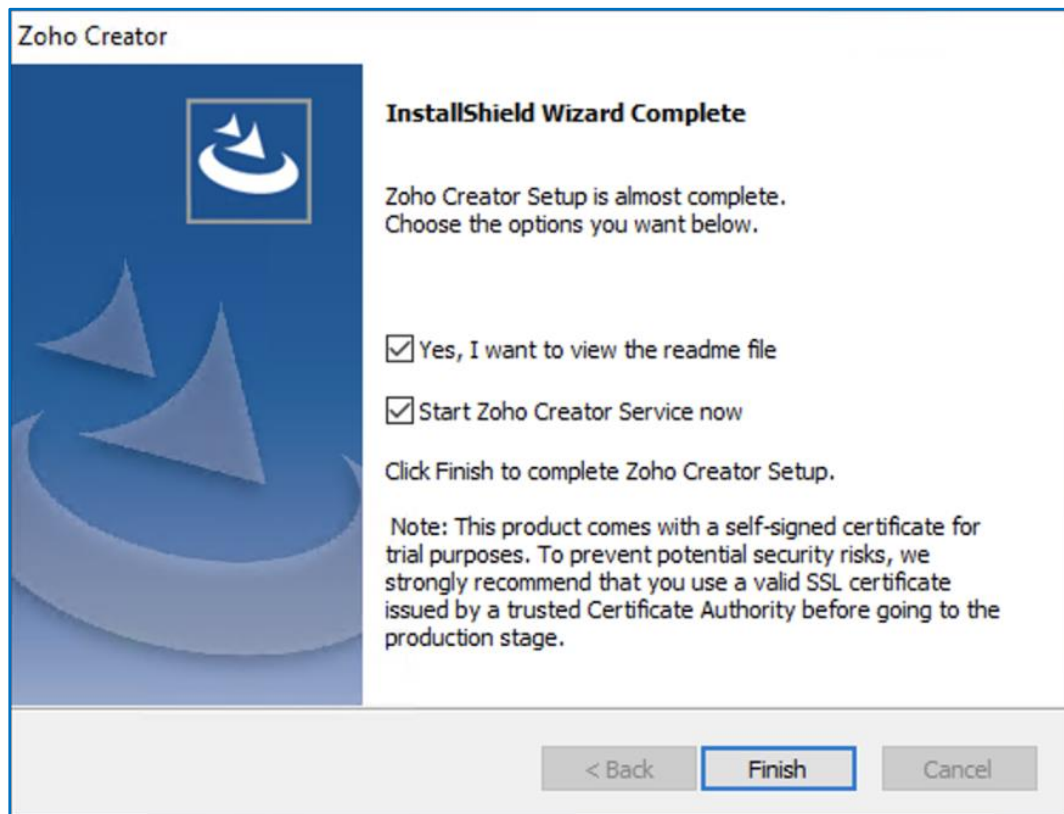
- You'll be prompted to define exceptions for the ZohoCreator directory from the antivirus scanners:



- Review the setup information then click **Next**:



- Click **Finish**:

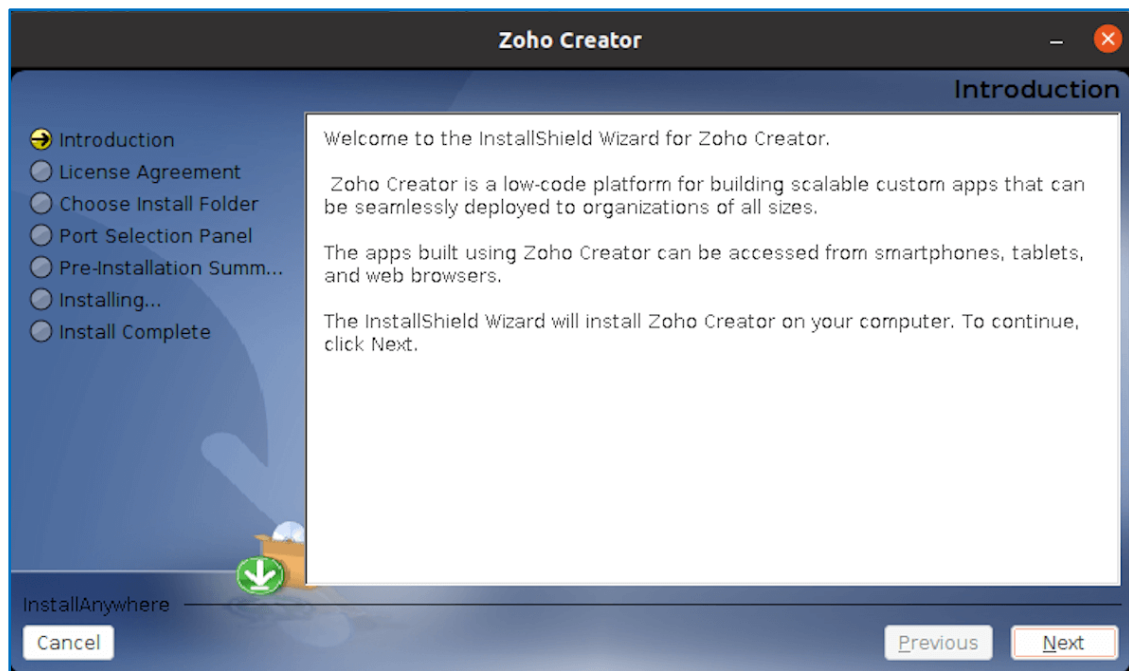


- Once the service has successfully started, the Creator login page will open in a browser window where you can login using the default username/password combination of **admin/admin**. These credentials must be changed after your first login.
- Alternatively, you can start the Creator server by following the above steps in Windows OS

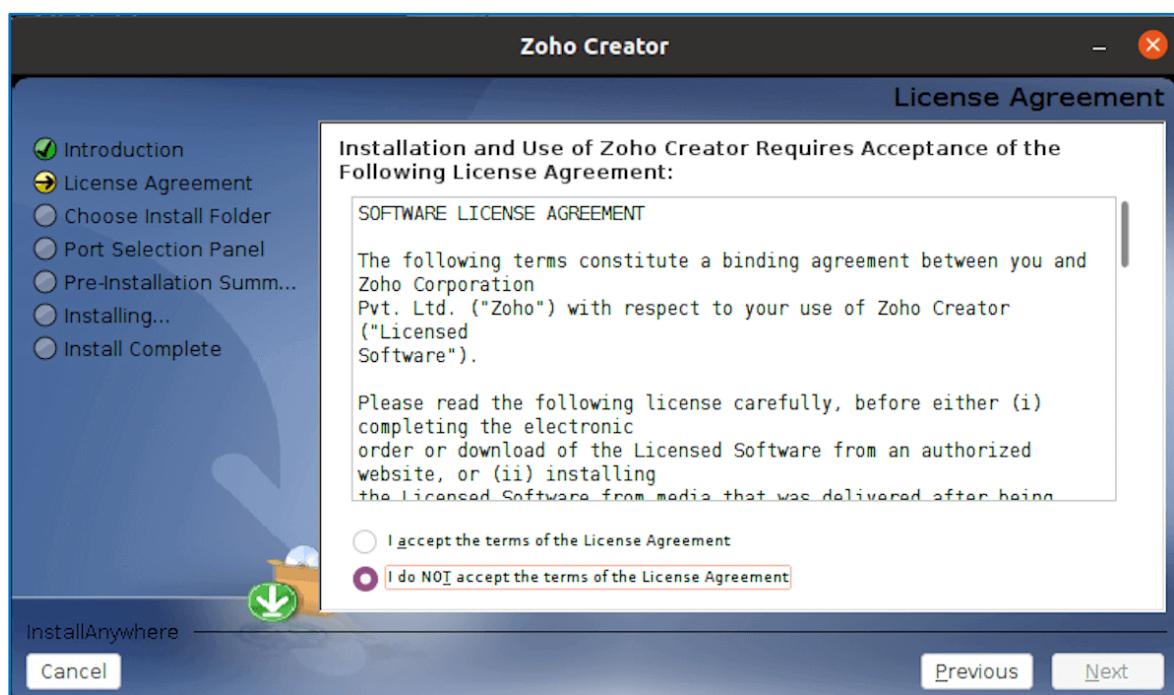
Install Zoho Creator on Linux via GUI

Recommended OS: CentOS, Ubuntu

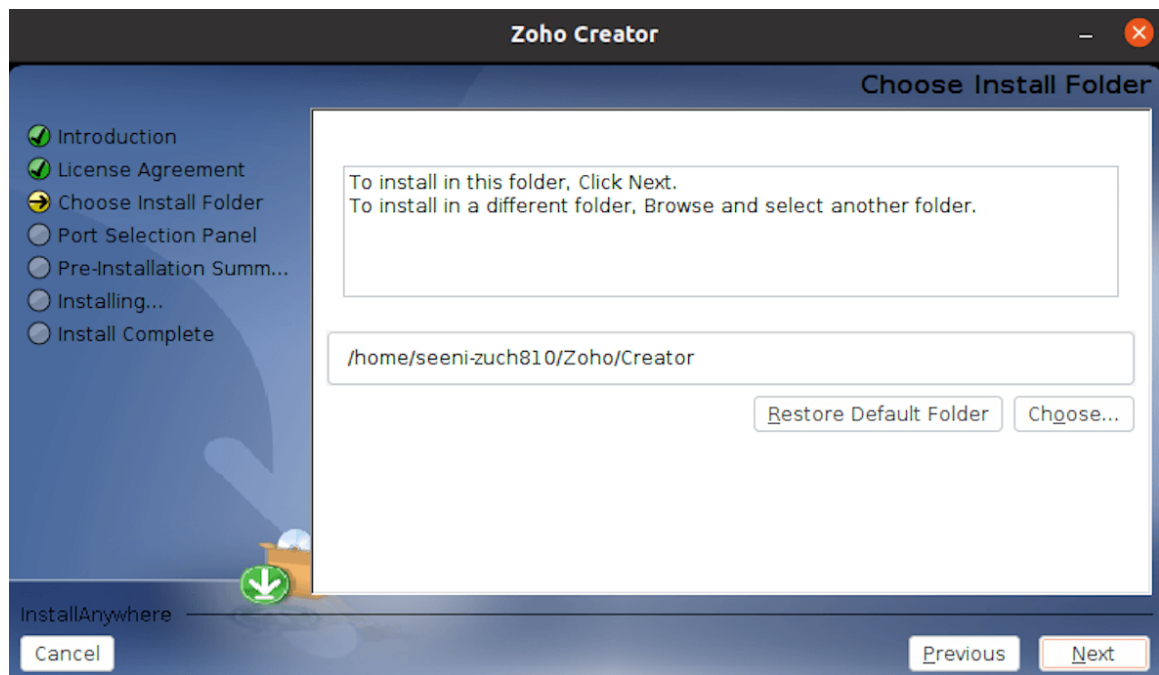
1. Download the required installable for Linux.
2. Double click the downloaded file. Click **Next** in the InstallShield Wizard for Zoho Creator:



3. Accept the terms of the **License Agreement**, then click **Next**:



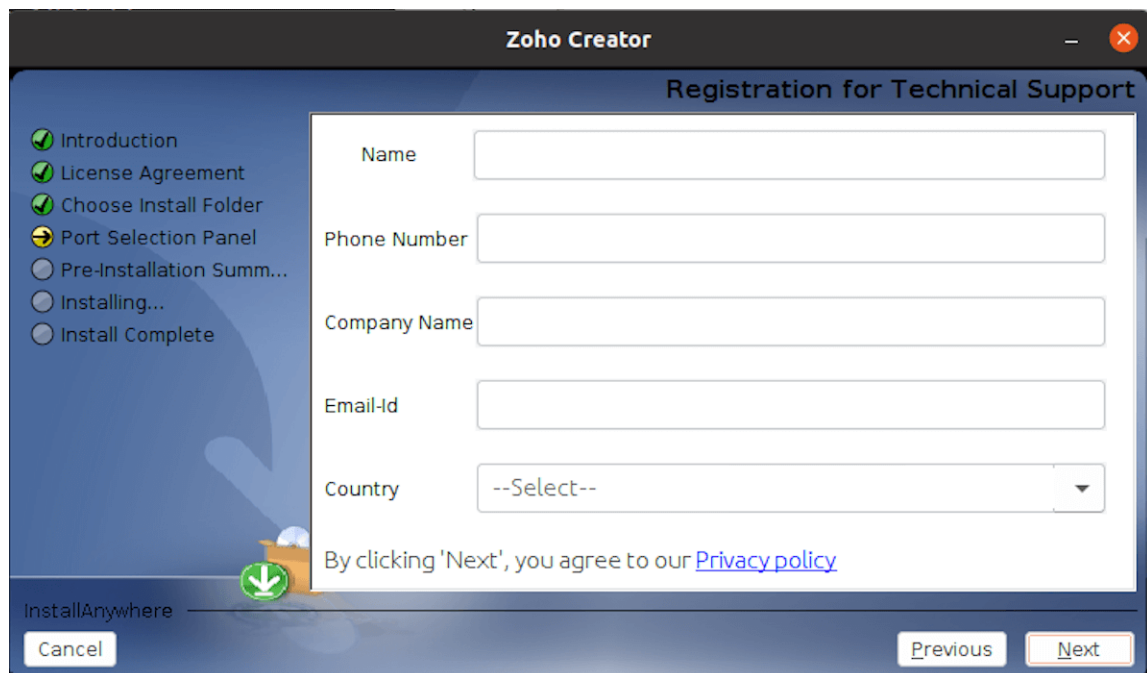
4. Set the **Installation Folder**, then click **Next**:



5. Set the **Web Server Port**, then click **Next**. It'll be set as **8443** by default.

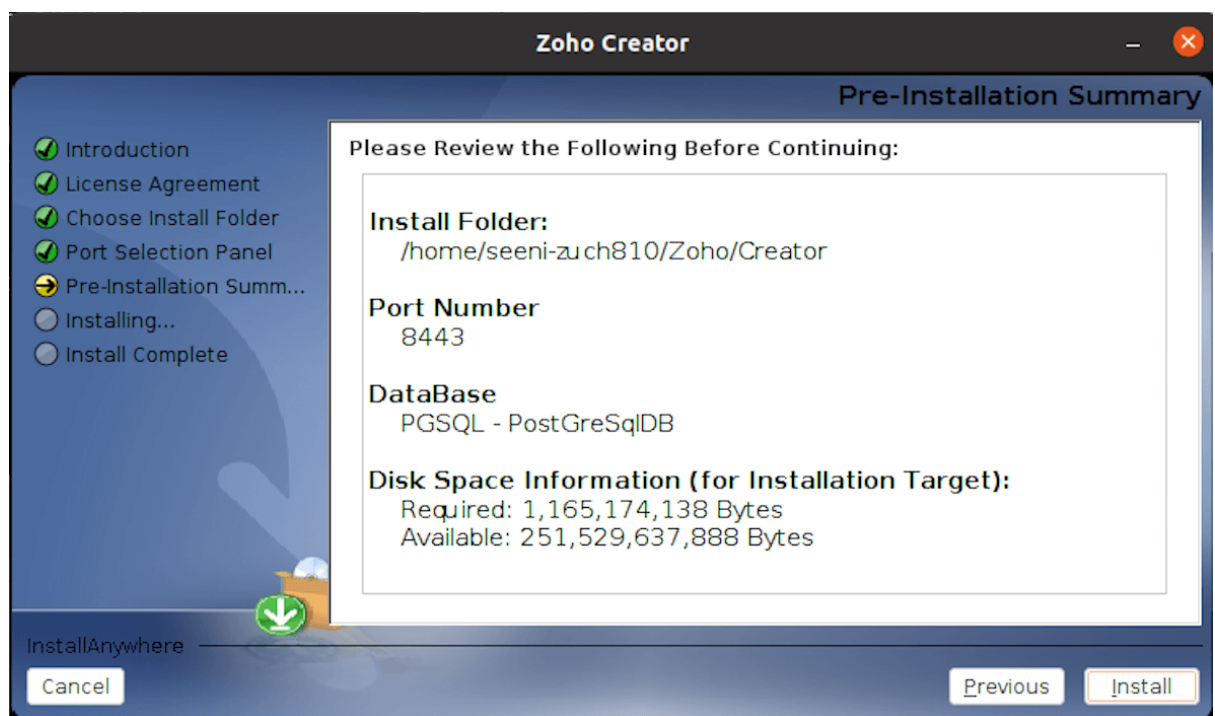


6. (Optional) Enter your details for contacting Zoho's technical support, then click **Next**:



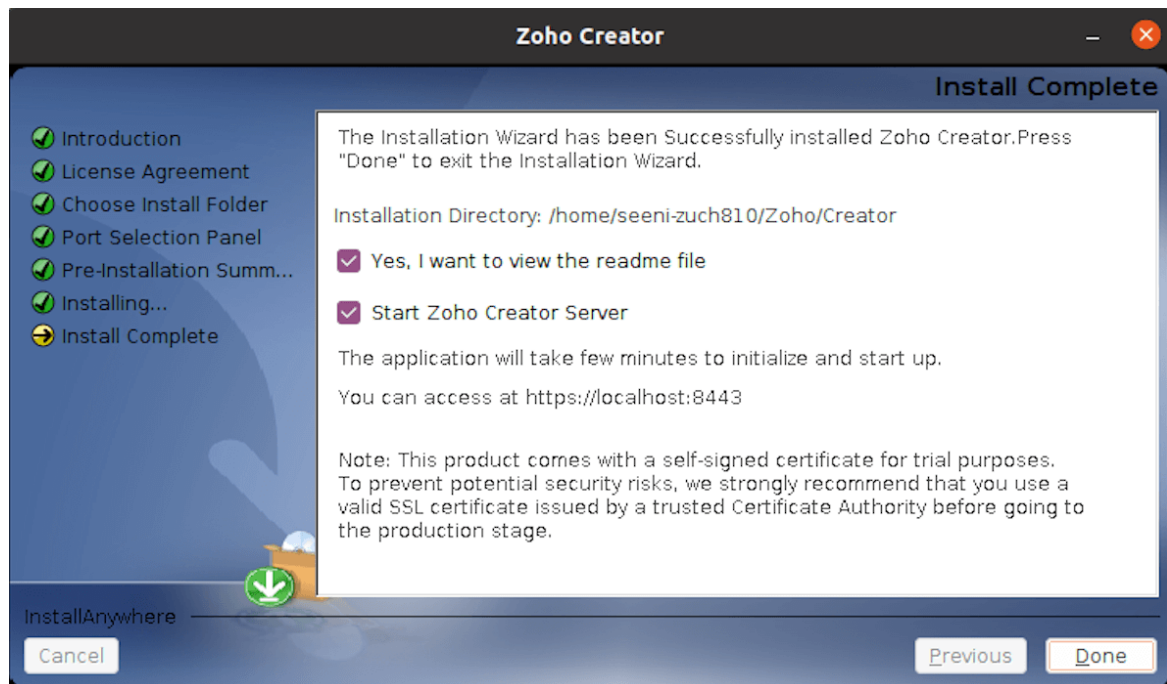
The screenshot shows the 'Zoho Creator' window with the 'Registration for Technical Support' tab active. On the left, a progress bar shows the following steps: Introduction (checked), License Agreement (checked), Choose Install Folder (checked), Port Selection Panel (checked), Pre-Installation Summary (selected), Installing... (unchecked), and Install Complete (unchecked). The main area contains input fields for Name, Phone Number, Company Name, Email-Id, and a Country dropdown menu. A checkbox for 'InstallAnywhere' is checked. At the bottom, there are 'Cancel', 'Previous', and 'Next' buttons. A note at the bottom states: 'By clicking 'Next', you agree to our [Privacy policy](#)'.

7. Review the installation summary, then click **Install**:



The screenshot shows the 'Zoho Creator' window with the 'Pre-Installation Summary' tab active. The progress bar on the left is the same as in the previous window, with 'Pre-Installation Summary' selected. The main area displays the following information: 'Please Review the Following Before Continuing:', 'Install Folder: /home/seeni-zuch810/Zoho/Creator', 'Port Number: 8443', 'DataBase: PGSQL - PostGreSqlDB', and 'Disk Space Information (for Installation Target): Required: 1,165,174,138 Bytes, Available: 251,529,637,888 Bytes'. At the bottom, there are 'Cancel', 'Previous', and 'Install' buttons.

8. Click **Done**:



9. Once the service has successfully started, the Creator login page will open in a browser window where you can login using the default username/password combination of **admin/admin**. These credentials must be changed after your first login.

10. Alternatively, you can start the Creator server by following the above steps in LINUX via GUI

Install Zoho Creator on Linux via console

Recommended OS: CentOS, Ubuntu

1. Download the required [installable for Linux](#).
2. Update the installation file's permission using the following command:

```
chmod a+x ZohoCreator_64bit.bin
```

3. Execute the installation file using the following command:

```
./ZohoCreator_64bit.bin -i console
```

4. Carefully read and accept the **license agreement**.

15. Rebranding:

You may rebrand the Licensed Software by removing Zoho logo and copyright

PRESS <ENTER> TO CONTINUE:

notice

from the graphical user interface of the Licensed Software ("GUI") and displaying your

logo in the GUI. However, you shall not display any copyright notice in the GUI and shall

display the "powered by Zoho??? Logo provided by Zoho in the right hand corner

of the GUI. You shall comply with the Re-branding Guidelines (if any) available in the website.

DO YOU ACCEPT THE TERMS OF THIS LICENSE AGREEMENT? (Y/N): y

5. Set the **installation folder**, then confirm it. You may either proceed with the default folder or enter the absolute path of the required folder.

Note: The chosen folder must be empty.

Choose Install Folder

To install in the default folder , Click Next. To install in a different folder , Enter the path of the folder

Default Install Folder: /home/test/Zoho/Creator

ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT

: /home/test/Downloads/Creator_Onpremise

INSTALL FOLDER IS: /home/test/Downloads/Creator_Onpremise

IS THIS CORRECT? (Y/N): Y|

6. Set the **web server port**, then confirm it. You may either proceed with the default port (8443) or enter the required port. Please ensure that the port you set is not used by any

other application.

Port Selection panel

Zoho Creator uses the below port to run the Web server. To run it on a different port, please change it here.

WebServer: (Default: 8443): 8444

7. Review the installation summary, then press **Enter** to continue (and exit the installer).

Pre-Installation Summary

Please Review the Following Before Continuing:

Install Folder:

/home/test/Zoho/Creator

Port Number

"8444"

Database

PGSQL – PostGreSqlDB

Disk Space Information (for Installation Target):

Required: 1.1 GigaBytes

Available: 37.78 GigaBytes

PRESS <ENTER> TO CONTINUE:

8. Upon successful installation, you'll see the host where you can access Zoho Creator. Also, you'll see prompts to start the server and to view the readme file after the installation is completed.
9. After choosing to start the server, the Creator login page will open in a browser window where you can login using the default username/password combination of **admin/admin**. These credentials must be changed after your first login.

10. Alternatively, you can start the Creator server by using the commands in above document.

Zoho Account Setup for on-premise

Creator on-premise bundles with it Zoho's Identity and Access Management (IAM) capabilities that provide you with maximum opportunities to manage and control access privileges of your users.

While your on-premise build is initiated, by default a super admin user will be assigned with credentials (admin/admin). These credentials should be modified after your first login. The super admin handles user management, which includes adding users, creating user groups, creating permissions for the users with access levels, and more.

- [Access Zoho Accounts page](#)
- [Generate Auth token](#)

Access Zoho Accounts page

[To access the Zoho Accounts page, enter the URL in the format as below.](#)

[**https://host_name:port_number/iam**](#)

You will be able to configure the following for your Zoho account to ensure a secure authentication process:

- **Sign-in Modes:** You can configure sign-in to Zoho Accounts using SSO. [Learn more](#)
- **Manage your account:** Manage your profile, enhance security, define your preferences, and configure privacy settings.

- Profile: From here, you can edit your profile details, add a new email address, and change your primary email address.

Note: *Mobile number-based additions or changes cannot be performed here.*

- Security: In addition to securing your Zoho account via passwords and multi-factor authentication, there are a slew of measures you can follow to ramp up your account security. To change your account password, refer to [this](#) page.
- Settings - You can manage your preferred date format and privacy settings under the *Preferences* section (newsletter subscription is not supported).

Note: *Authorized websites and Linked Accounts are not supported in On-Premise accounts.*

- **Multi-Factor Authentication:** This enables you to create a robust authentication process.
 - Time-based OTP: TOTP Authenticators are mobile applications that use time-based one-time password (TOTP) to verify you during multi-factor authentication.
 - Yubikey: YubiKey is a physical security key used for authentication purposes. They help secure computers, networks, websites, and online profiles, without requiring software installation or a battery. Zoho uses U2F-based YubiKeys for multi-factor authentication.
 - Trusted browsers: You can trust a browser you are using to sign in to your Zoho Account. Once you trust a browser, we won't request your second factor verification when you sign in for the next 180 days.
 - Backup verification codes: Backup verification codes are a set of 12 digit codes that you can use if you lose your MFA device or have trouble signing in. Each code can be used only once and you need to generate a new set of codes once you have used them all.
 - Disable Multi-Factor Authentication

- Advantages and challenges (Student3)

ADVANTAGES:

- ❖ Build apps that scale with your business' requirements. Job profiling, interface changes, service requests—Zoho Creator takes care of it all.
- ❖ Every app built on Zoho Creator runs natively on the web, and on iOS and Android devices.
- ❖ Drag-and-drop features enable you to build apps from scratch without writing any code.
- ❖ Deluge, Zoho's online scripting language, has an interactive editor that transforms user-friendly script into UI actions.
- ❖ Reusable code for development—with code snippets and autofill—cuts down on development time.
- ❖ Integrations with other Zoho and third-party applications put all your priorities within reach.

CHALLENGES:

- ❖ Programmatic manipulations of large databases often run into usage limits for Deluge Statements
- ❖ Sometimes the android app faces some problems displaying email, and it keeps loading.
- ❖ The Zoho team is constantly updating the platform capabilities: this may cause instability in current applications
- ❖ It's often hard to identify where some code is generating a bug.
