Lab 3: Audit Organization's Security for Phishing Attacks

Lab Scenario

Social engineers exploit human behavior (manners, enthusiasm toward work, laziness, innocence, etc.) to gain access to the information resources of the target company. This information is difficult to be guarded against social engineering attacks, as the victim may not be aware that he or she has been deceived. The attacks performed are similar to those used to extract a company's valuable data. To guard against social engineering attacks, a company must evaluate the risk of different types of attacks, estimate the possible losses, and spread awareness among its employees.

As a professional ethical hacker or pen tester, you must perform phishing attacks in the organization to assess the awareness of its employees.

As an administrator or penetration tester, you may have implemented highly sophisticated and expensive technology solutions; however, all these techniques can be bypassed if the employees fall prey to simple social engineering scams. Thus, employees must be educated about the best practices for protecting the organization's systems and information.

In this lab, you will learn how to audit an organization's security for phishing attacks within the organization.

Lab Objectives

Audit organization's security for phishing attacks using OhPhish

Overview

In phishing attacks, attackers implement social engineering techniques to trick employees into revealing confidential information of their organization. They use social engineering to commit fraud, identity theft, industrial espionage, and so on. To guard against social engineering attacks, organizations must develop effective policies and procedures; however, merely developing them is not enough.

To be truly effective in combating social engineering attacks, an organization should do the following:

- Disseminate policies among its employees and provide proper education and training.
- Provide specialized training benefits to employees who are at a high risk of social engineering attacks.
- Obtain signatures of employees on a statement acknowledging that they understand the policies.
- Define the consequences of policy violations.

Task 1: Audit Organization's Security for Phishing Attacks using OhPhish

OhPhish is a web-based portal for testing employees' susceptibility to social engineering attacks. It is a phishing simulation tool that provides an organization with a platform to launch phishing simulation campaigns on its employees. The platform captures the responses and provides MIS reports and trends (on a real-time basis) that can be tracked according to the user, department, or designation.

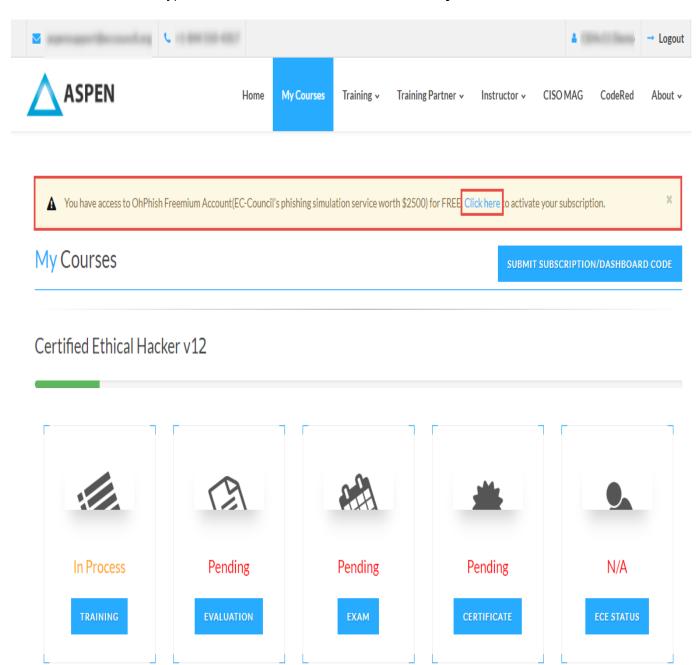
Here, we will audit the organization's security infrastructure for phishing attacks using OhPhish.

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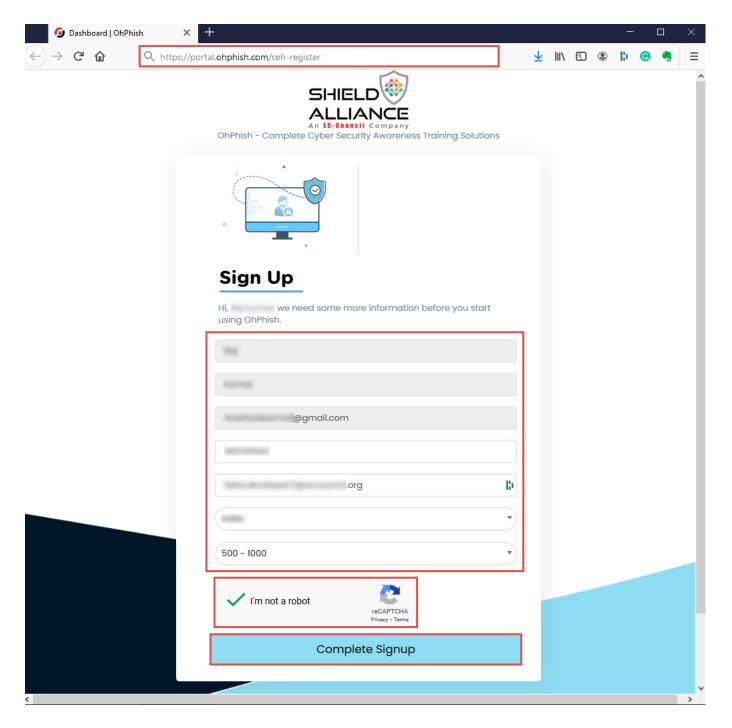
2.		Open any wel	o browser (here,	Mozilla Firefox	. Log in to your	ASPEN accoun	t and navigate
	to (Certified Ethic	al Hacker v11 ir	n the My Course	s section.		

If you do not have an ASPEN account or access to CEHv12 program on ASPEN, please write to **support@eccouncil.org** for an OhPhish account. Once your account is setup, you will receive an email from **aware@eccouncil.org** with an account activation link. Upon activation, continue from **STEP 12**.

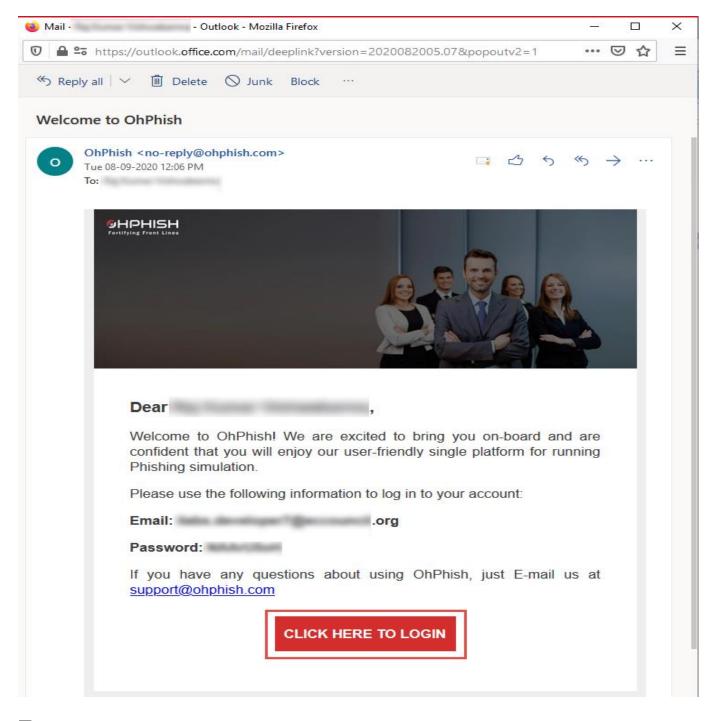
3. \square Click on **Click here** hyperlink in the **OhPhish** notification above **My Courses** section.



4. You will be redirected to the OhPhish **Sign Up** page. Enter the remaining personal details, check **I'm not a robot** checkbox and click **Complete Signup** button.

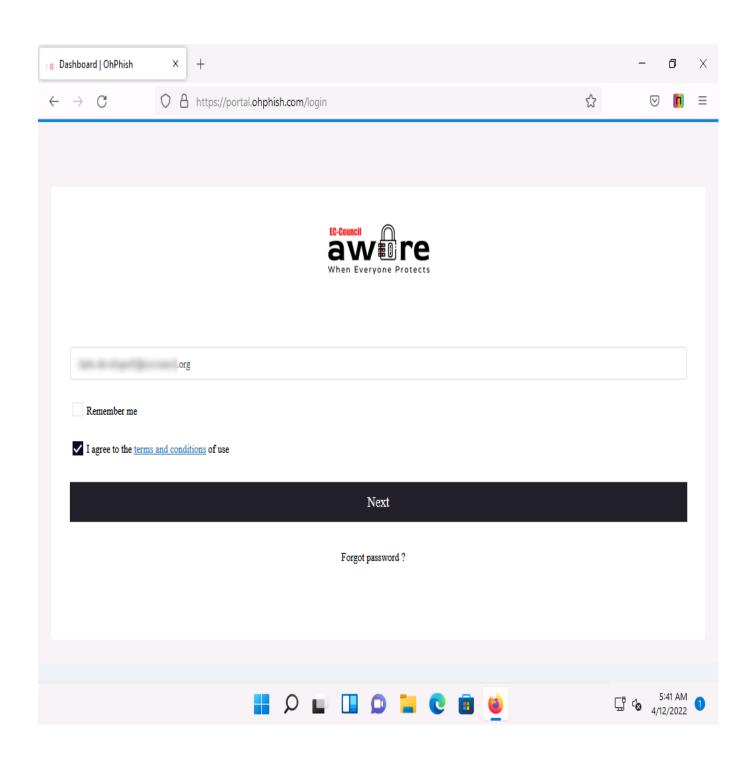


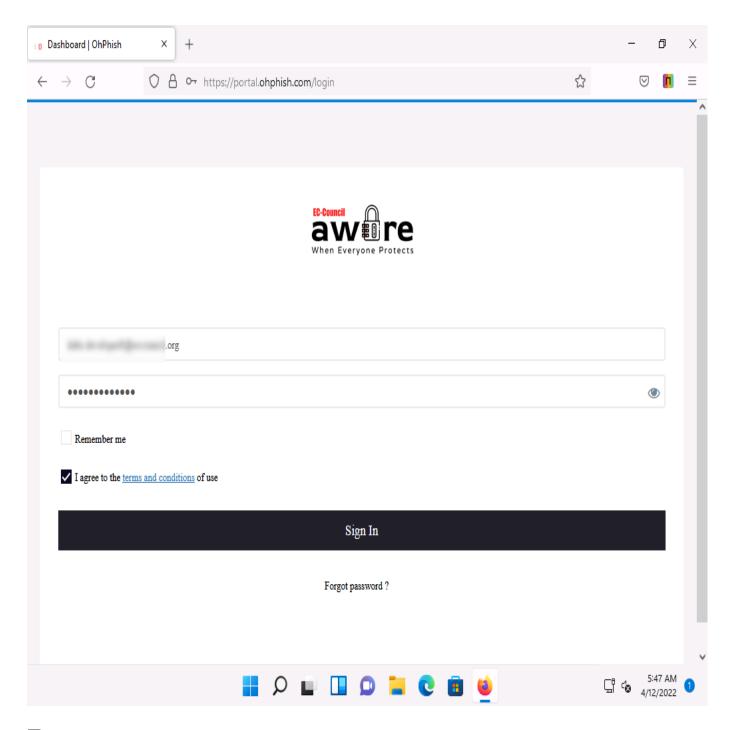
- 5. Account creation **Alert!** appears, click **OK**.
- 6. Now, open your email account given during registration process. Open an email from **OhPhish** and in the email, click **CLICK HERE TO LOGIN** button.



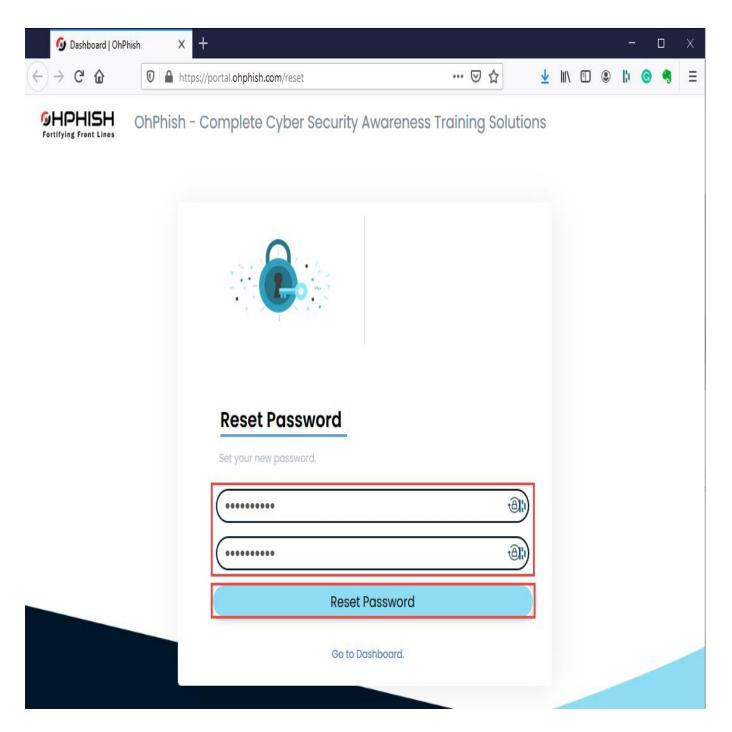
7. **EC-Council Aware** page appears, in the **Username** field enter your email address and click **Next**. In the next page, enter your password in the **Password** field and click **Sign In**.

If Save login for ohphish.com? notification appears, click Don't Save.

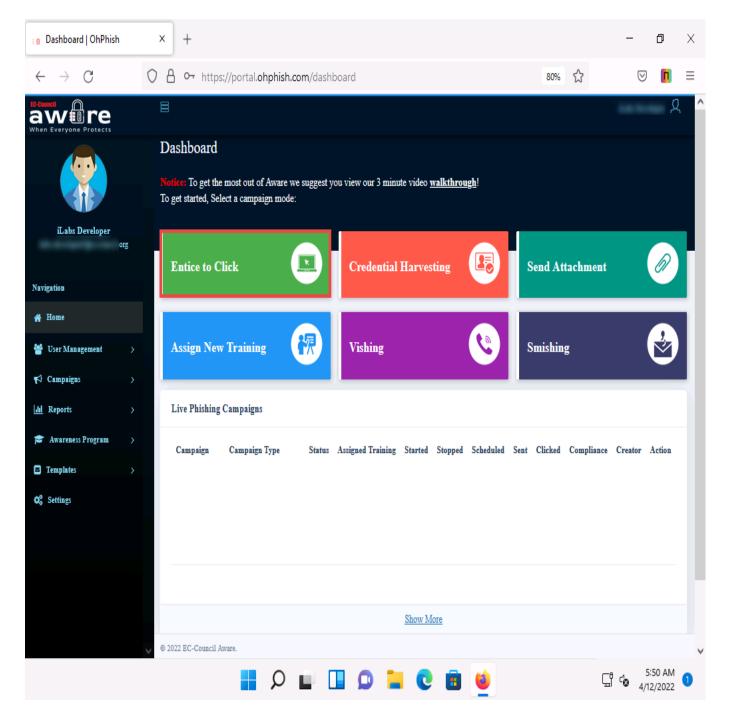




8. You will be redirected to **Reset Password** page, enter the new password in both the fields and click **Reset Password** button to reset the password.



- 9. Tour account password is changed successfully.
- 10. Now, you can login to your OhPhish account either by clicking on the **LOGIN TO OHPHISH PORTAL** button in your **ASPEN** account under **My Courses** section or you can navigate to the OhPhish website (https://portal.ohphish.com/login) and login using your credentials.
- 11. Once you login to your OhPhish account you will be redirected to the OhPhish **Dashboard**.
- 12. In the OhPhish **Dashboard**, click on the **Entice to Click** option.



13. The **Create New Email Phishing Campaign** form appears.

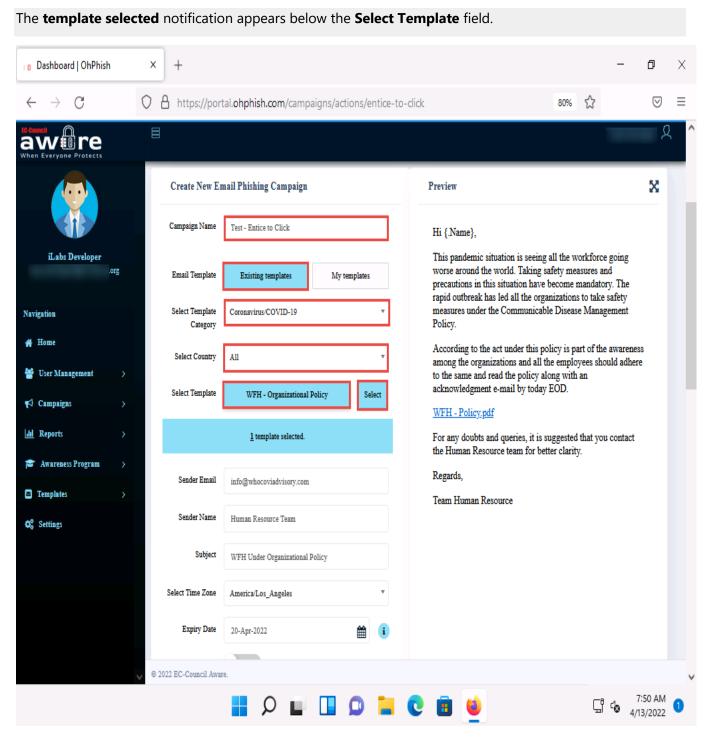
If the **OhPhish Helpdesk** notification appears in the right corner of the dashboard, close it.

Almost Done pop-up appears, click DISCARD CHANGES.

14. In the Campaign Name field, enter any name (here, Test - Entice to Click). In the Select Template Category field, select Coronavirus/COVID-19 from the drop-down list.

Ensure that the Existing Template is selected in the Email Template option.

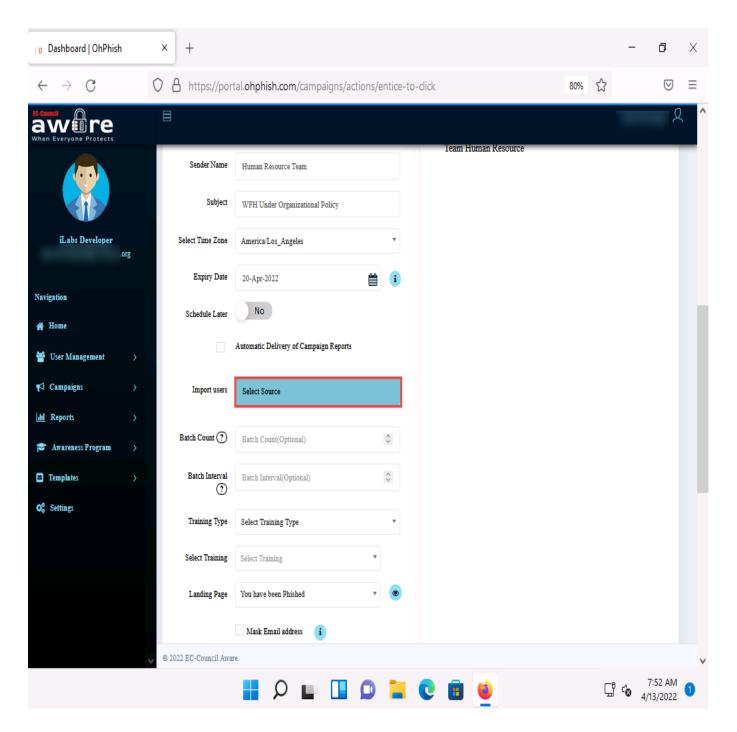
- 15. In the **Select Country** field, leave the default option selected (**All**).
- 16. In the **Select Template** field, click the **Select Template** button and select **Work From Home: COVID-19** from the drop-down list.
- 17. Click the **Select** button in the **Select Template** field to select the template.



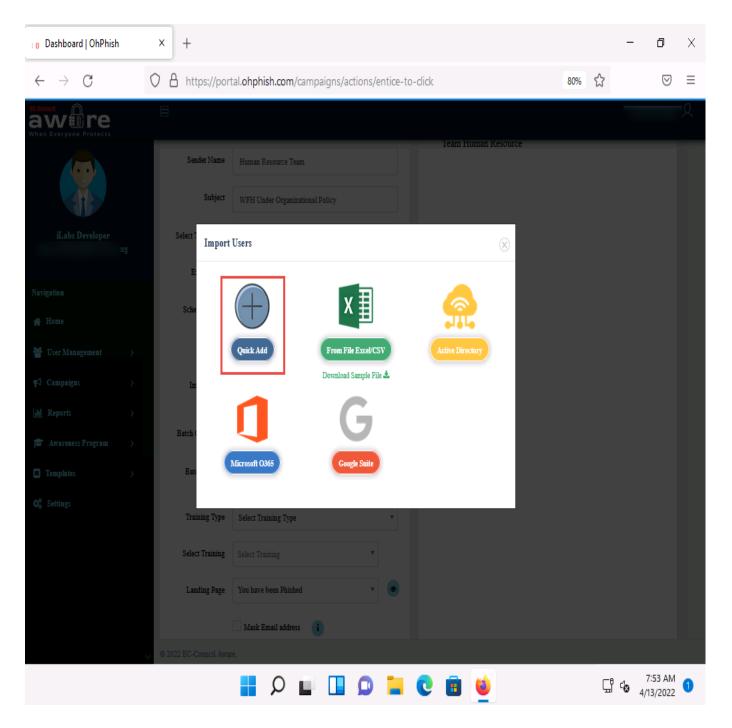
18. Leave fields such as **Sender Email**, **Sender Name**, **Subject**, **Select Time Zone**, **Expiry Date**, and **Schedule Later** set to their default values, as shown in the screenshot.

You can change the above-mentioned options if you want to.

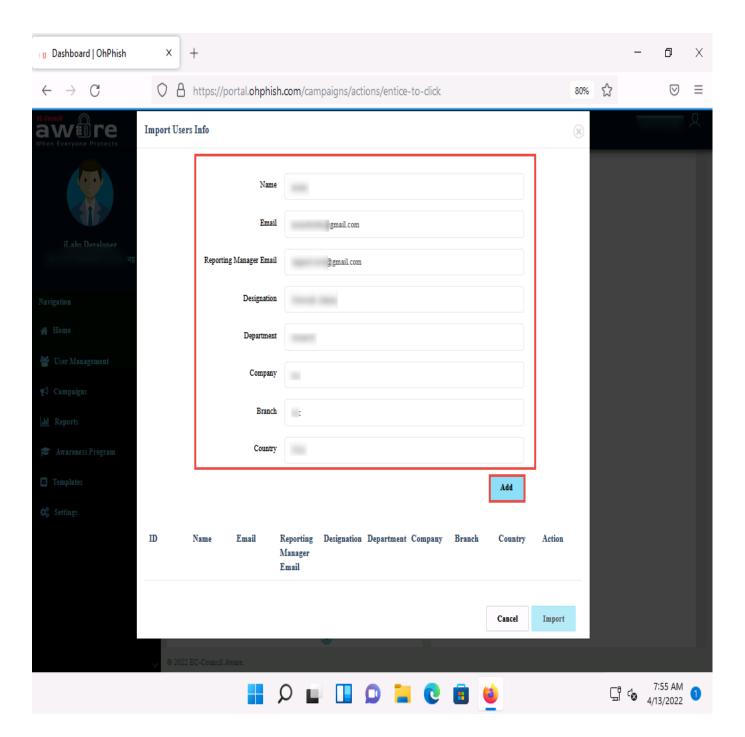
19. In the **Import users** field, click **Select Source**.



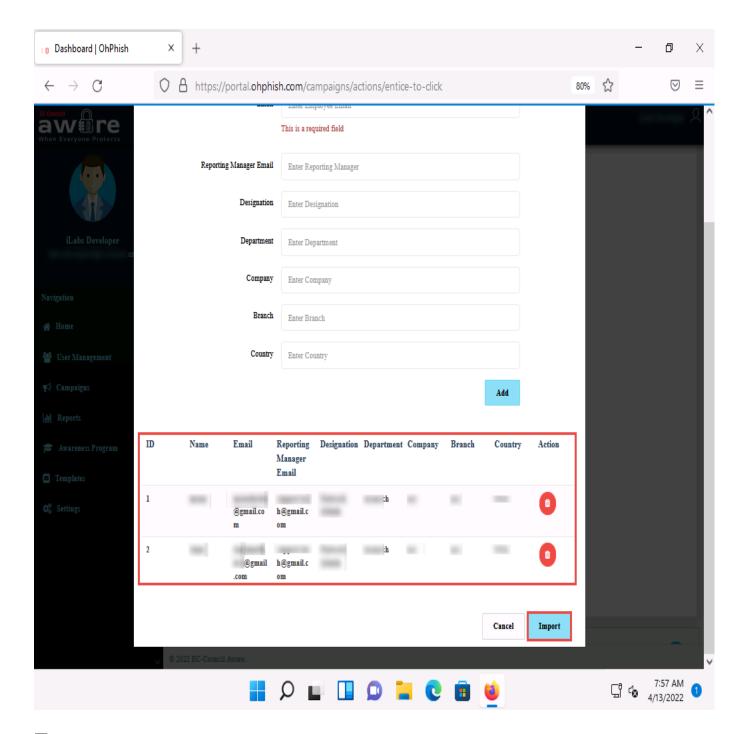
20. Import Users pop-up appears, click to select Quick Add option from the list of options.



21. The **Import Users Info** pop-up appears; enter the details of the employee and click **Add**.



- 22. \square Similarly, you can add the details of multiple users. Here, we added two users.
- 23. \square After adding the users' details, click **Import**.

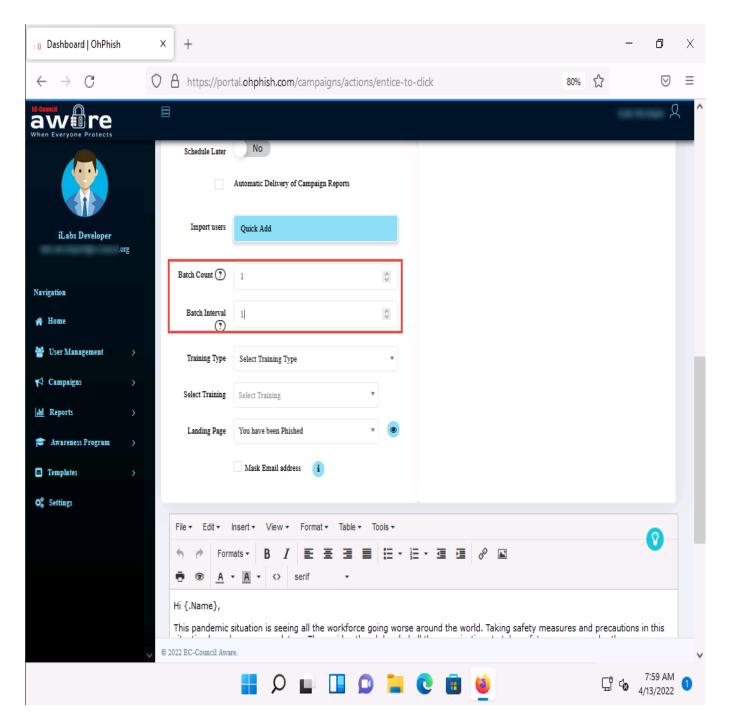


24. In the **Batch Count** and **Batch Interval** fields, set the values to **1**.

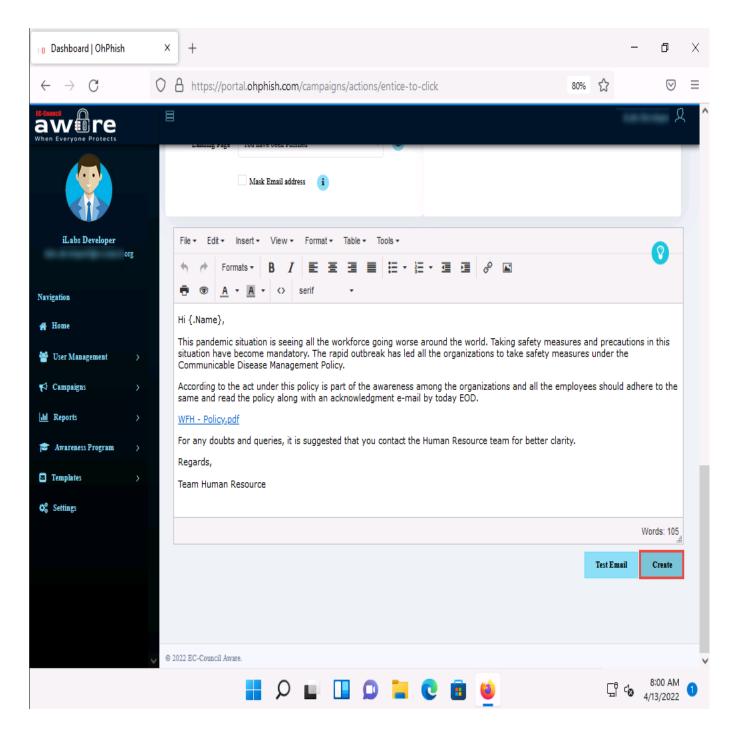
Batch Count: indicates how many you want to send emails to at one time; **Batch Interval**: indicates at what interval (in minutes) you want to send emails to a batch of users.

The values of Batch Count and Batch Interval might differ depending on the number of users you are sending phishing emails to.

25. \square Leave the **Landing Page** field set to its default value.

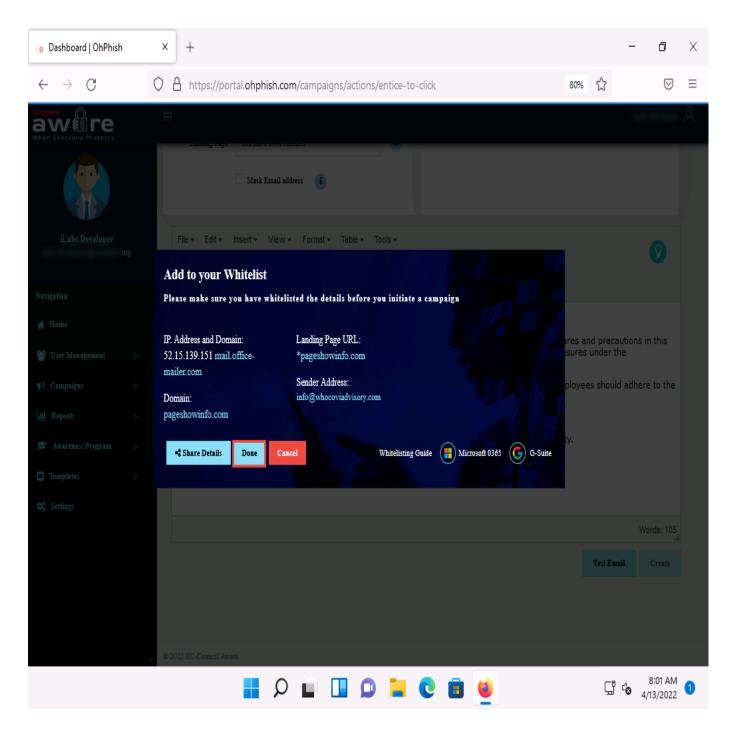


26. Now, scroll down to the end of the page and click **Create** to create the phishing campaign.

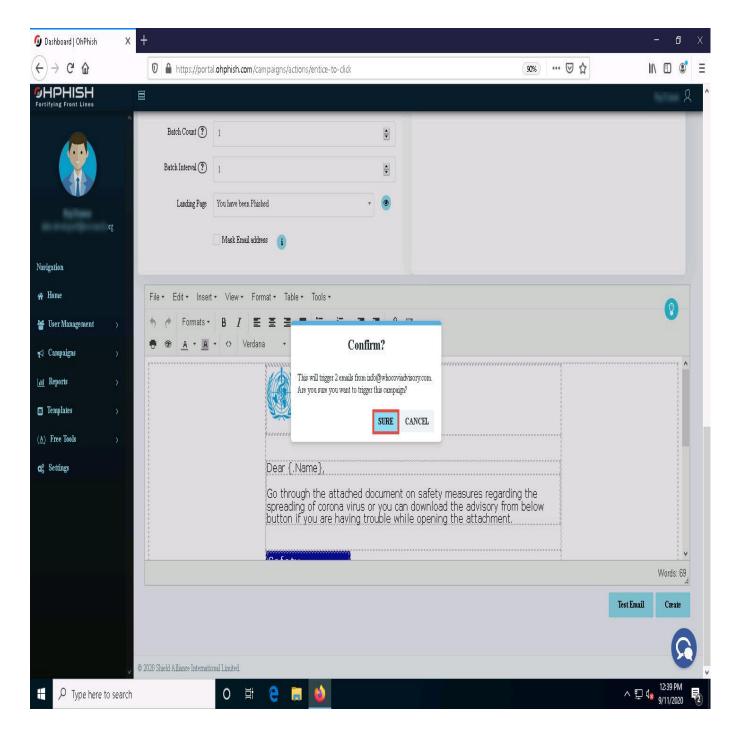


27. Add to your Whitelist pop-up appears, click **Done**.

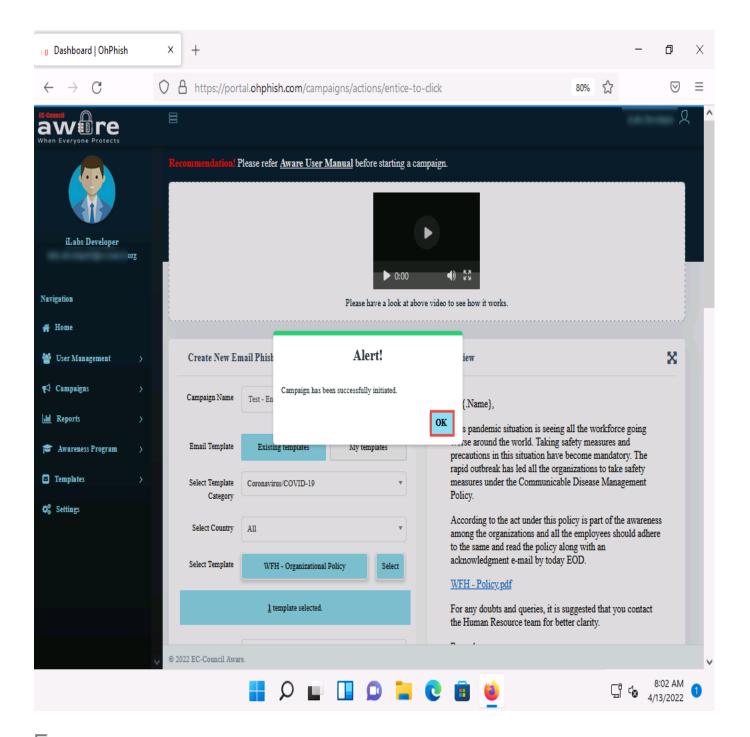
You must ensure that messages received from specific IP addresses do not get marked as spam. Do this by adding the addresses to an email whitelist in your Google Admin console. To do that, you can refer the whitelisting guide available for Microsoft O365 and G-Suite user accounts.



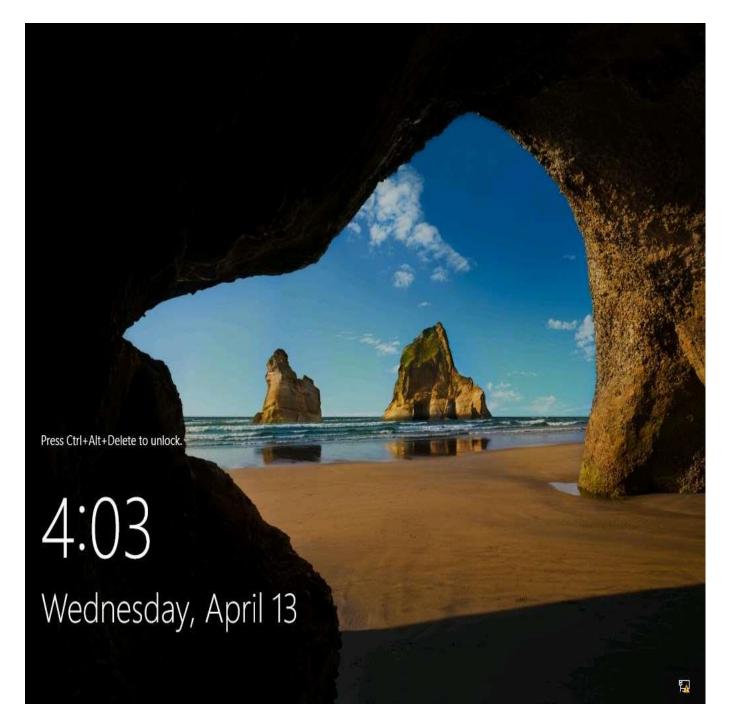
28. The **Confirm?** pop-up appears; click **SURE**.



- 29. A count down timer appears and phishing campaign initiates in ten seconds.
- 30. \square The **Alert!** pop-up appears, indicating successful initiation of a phishing campaign; click **OK**.

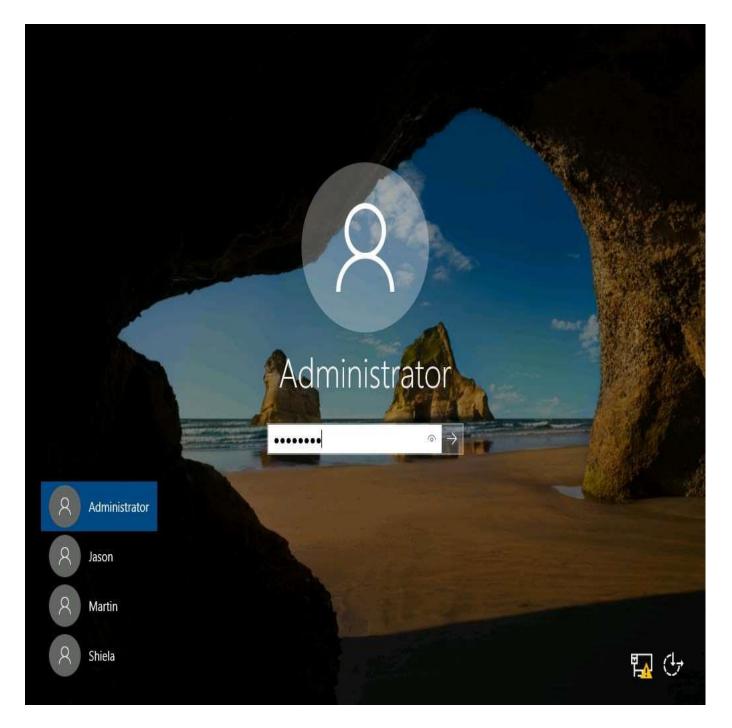


31. Now, we must open the phishing email as a victim (here, an employee of the organization). To do so, click Windows Server 2019 to switch to the **Windows Server 2019** machine.



32. Click on Ctrl+Alt+Delete to activate it, by default, **Administrator** profile is selected click Pa\$\$w0rd to enter password in to the machine and press **Enter** to login.

Networks screen appears, click **Yes** to allow your PC to be discoverable by other PCs and devices on the network.

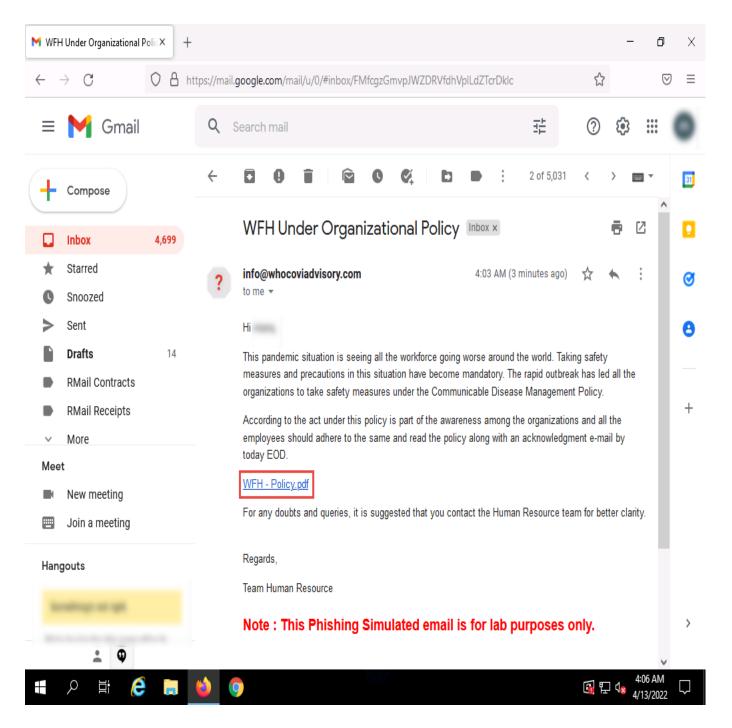


- 33. Open any web browser (here, **Mozilla Firefox**) and then open the email client provided while creating the phishing campaign (here, **Gmail**).
- 34. After you login to your **Gmail** account, search for an email with the subject **WFH Under Organizational Policy** in the **Inbox**.

Depending on the security implementations of your organization, for example, if proper spam filters are enabled, this phishing email will end up in the **Spam** folder.

If the email is not present in the **Inbox** folder, then check your **Spam** folder.

35. \square Click on the **WFH - Policy.pdf** link in the email.



- 36. A Warning phishing suspected page appears, as shown in the screenshot.
- 37. You can further click report an incorrect warning link to whitelist the link.



You can continue to https://wno.pagesnowinto.com/api/campaign?e=U981da8523786a74394cc4Uaffe21597fd4c8bb98 c=6256adc845da4d0c3da7d9aa at your own risk.

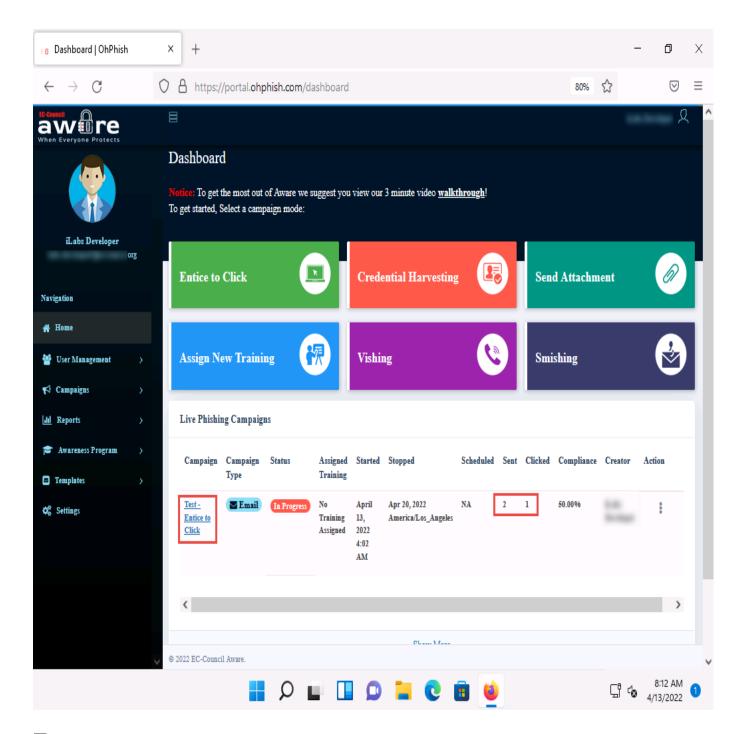
If you believe that this site is not actually a phishing site, you can report an incorrect warning.

Advisory provided by Google

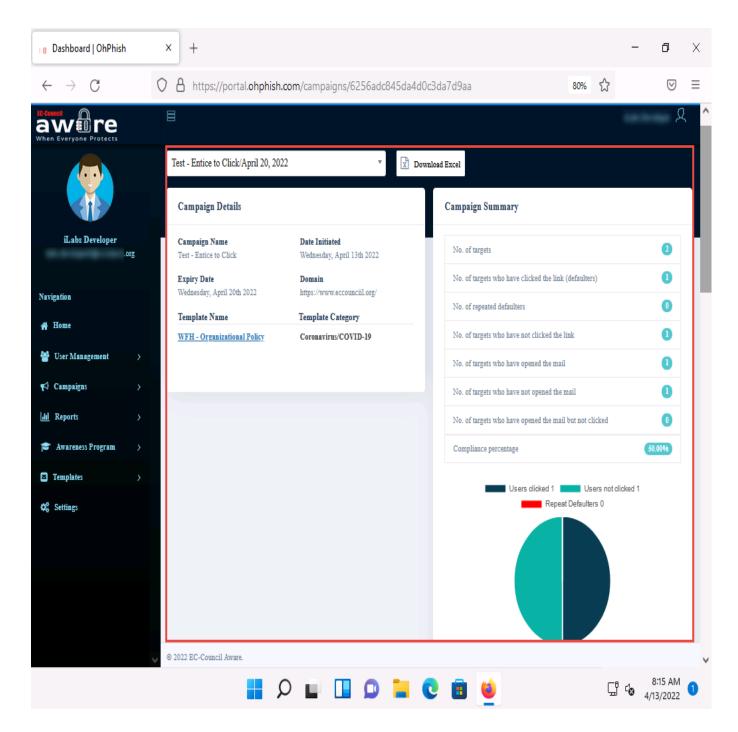


40. Click on the **Test – Entice to Click** campaign present on the **OhPhish Dashboard**. You can observe that one person has clicked the link.

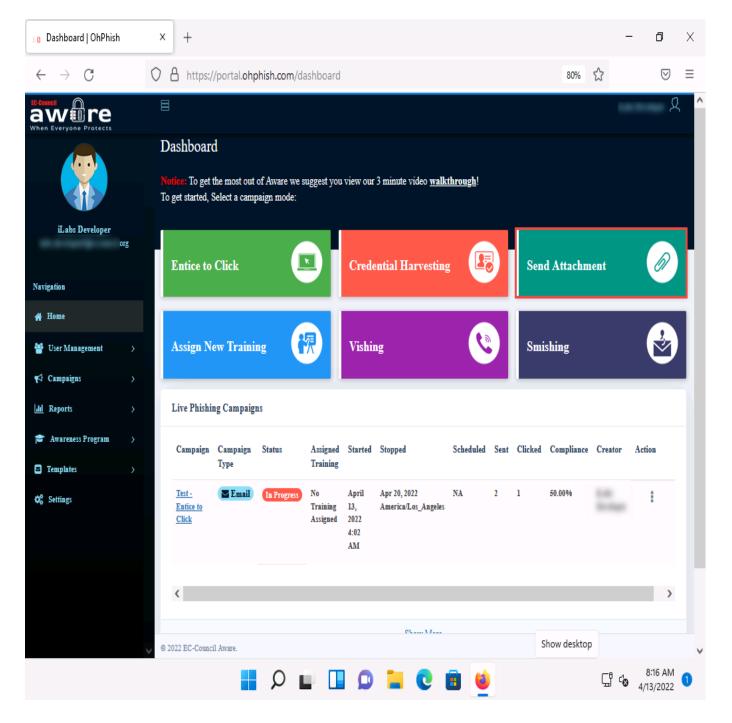
Refresh the Ohphish dashboard page, if the clicked value is still 0.



- 41. The Campaign Detailed Report page appears, displaying the Campaign Details and Campaign Summary sections.
- 42. In the Campaign Summary section, you can observe that the values of No. of targets who have clicked the link (defaulters) and No. of Targets who have opened the mail are both 1 (here, we have opened only one email account).



- 43. Now, click **Home** in the left pane to navigate back to the OhPhish **Dashboard**.
- 44. In the OhPhish **Dashboard**, click on the **Send Attachment** option.



45. The **Create New Email Phishing Campaign** form appears.

Almost Done pop-up appears, click DISCARD CHANGES.

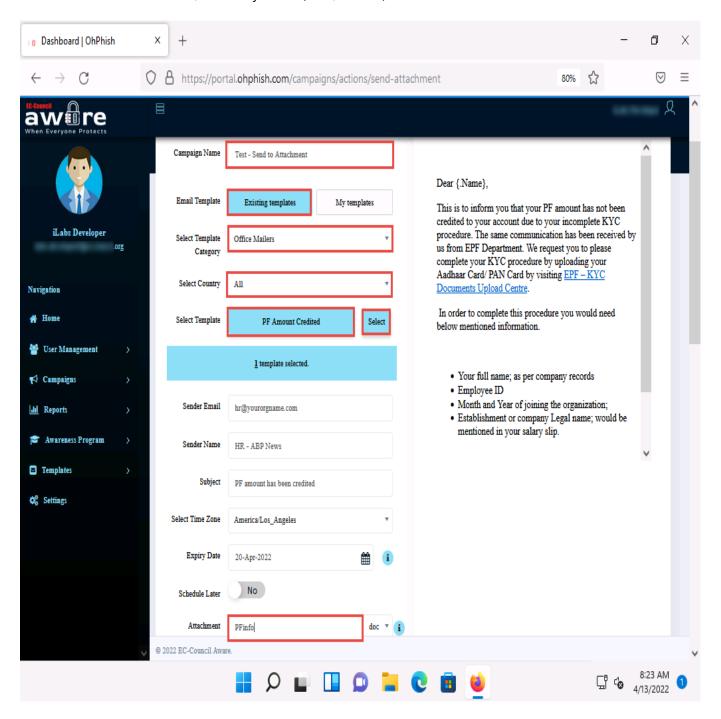
46. In the Campaign Name field, enter any name (here, Test – Send to Attachment). In the Select Template Category field, select Office Mailers from the drop-down list.

Ensure that the Existing templates button is selected in the Email Template field.

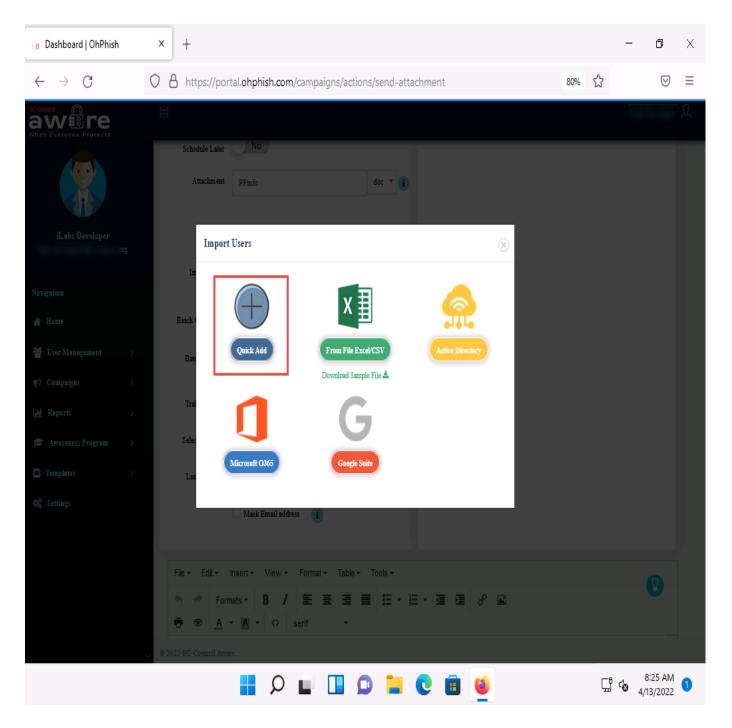
- 47. \square In the **Select Country** field, leave the default option selected (**All**).
- 48. In the **Select Template** field, select the **PF Amount Credited** option from the drop-down list and then click the **Select** button.
- 49. Leave fields such as **Sender Email**, **Sender Name**, **Subject**, **Select Time Zone**, **Expiry Date**, and **Schedule Later** set to their default values, as shown in the screenshot.

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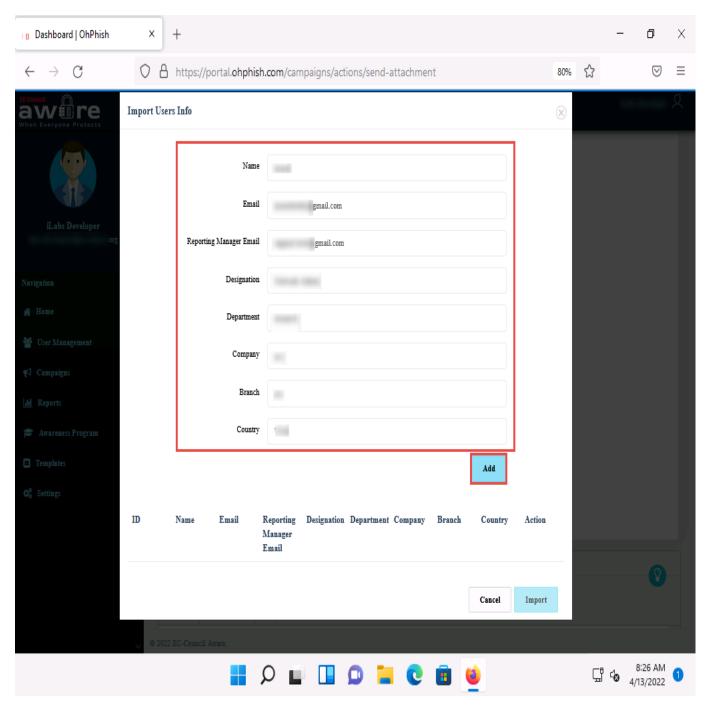
50. In the **Attachment** field, enter any name (here, **PFinfo**).



- 51. Click **Select Source** button under **Import users** field.
- 52. Import Users pop-up appears, click to select the Quick Add option from the list of options.



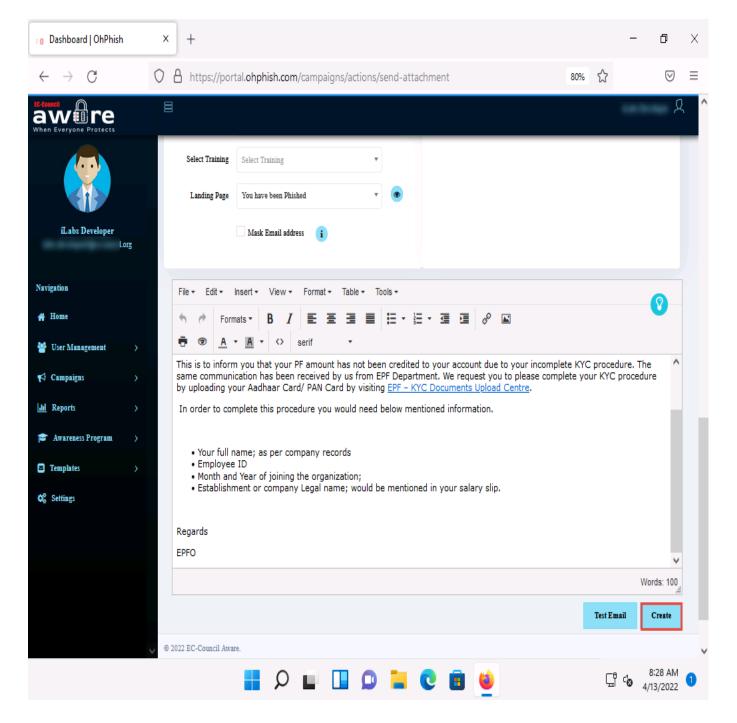
53. The **Import Users Info** pop-up appears; enter the details of the employee and click **Add**.



- 54. \square Similarly, you can add the details of multiple users. Here, we added two users.
- 55. After adding the users' details, click **Import**.
- 56. \square In the **Batch Count** and **Batch Interval** fields, set the values to **1**.

The values of Batch Count and Batch Interval might differ depending on the number of users you are sending phishing emails to.

- 57. Leave the **Landing Page** field set to its default value.
- 58. Scroll down to the end of the page and click **Create** to create the phishing campaign.



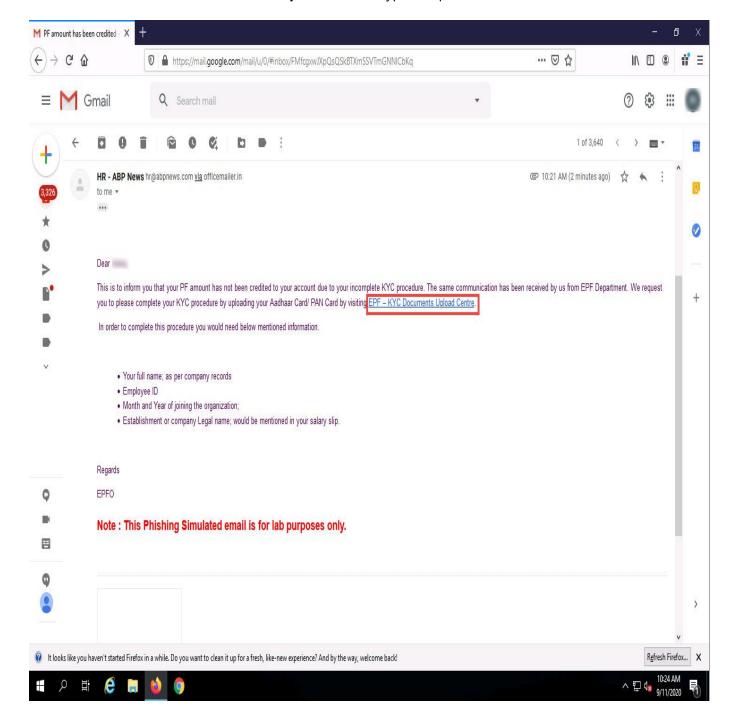
59. Add to your Whitelist pop-up appears, click **Done**.

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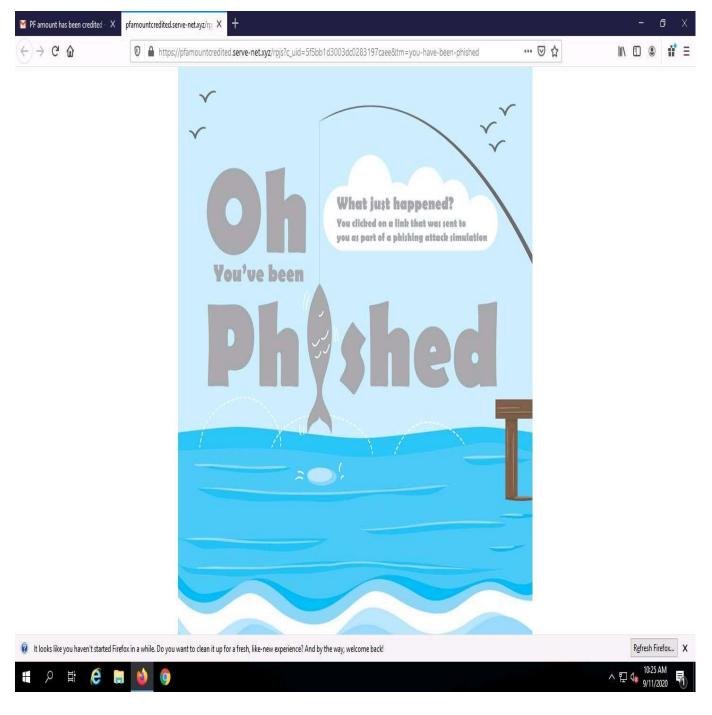
- 60. The **Confirm?** pop-up appears; click **SURE**.
- 61. A count down timer appears and phishing campaign initiates in ten seconds.
- 62. The **Alert!** pop-up appears, indicating successful initiation of a phishing campaign; click **OK**.
- 63. Now, click Windows Server 2019 to switch to the **Windows Server 2019** machine.

If you are logged out of the **Windows Server 2019** machine, click Ctrl+Alt+Delete, then login into **Administrator** user profile using **Pa\$\$w0rd** as password.

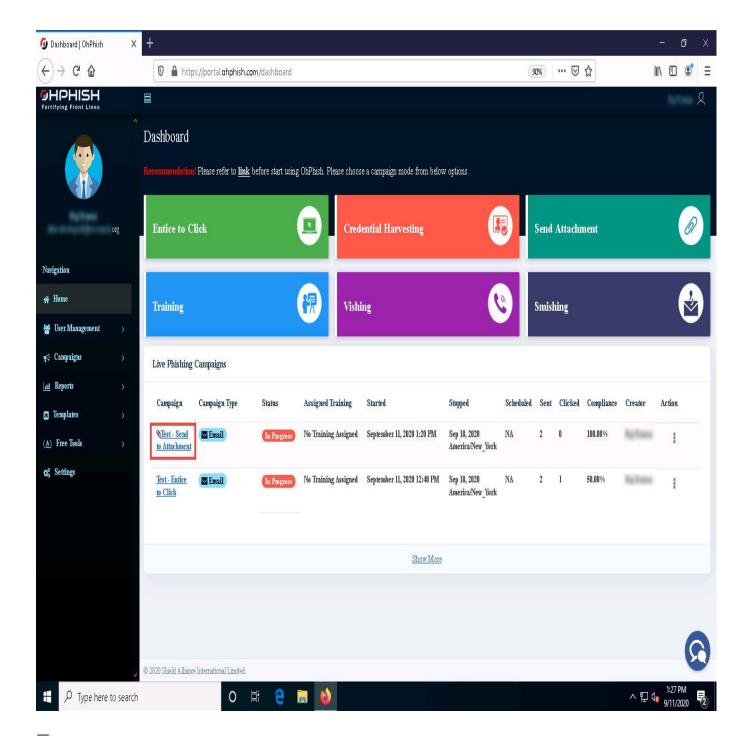
- 64. In the **Gmail** account opened previously, navigate to the **Inbox** folder.
- 65. You will find an email from **HR ABP News**, as shown in the screenshot.
- 66. Click on the **EPF KYC Documents Upload Centre** hyperlink present in the email.



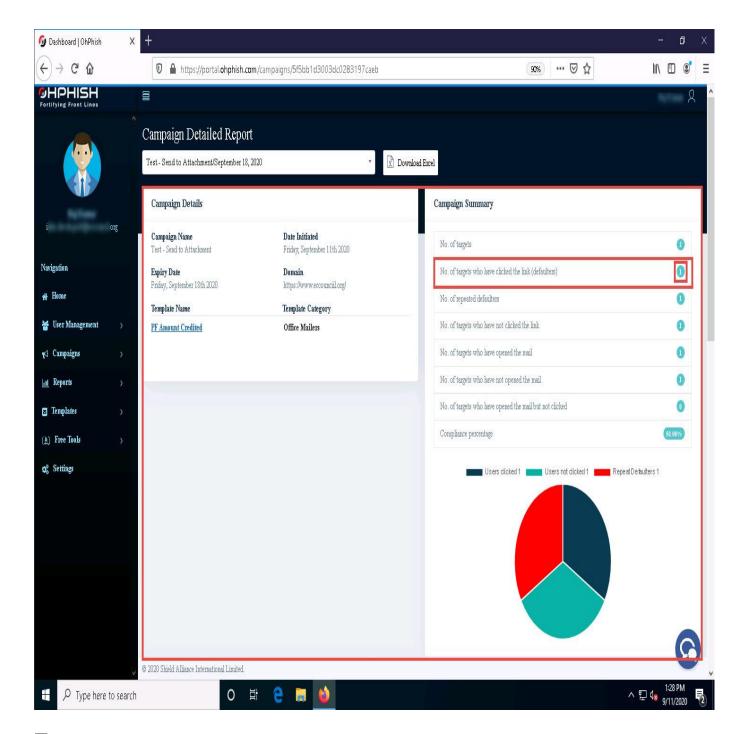
- 67. If a **Suspicious** link pop-up appears, click **Proceed**.
- 68. Tou will be re-directed to the **Oh You've been Phished** landing page, as shown in the screenshot.



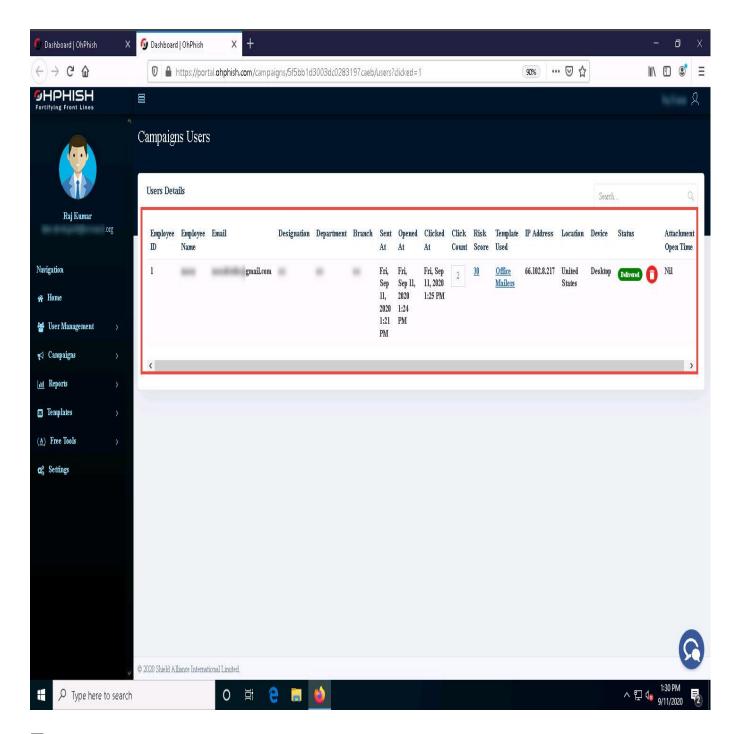
- 69. Now, click Windows 11 to switch back to the **Windows 11** machine.
- 70. Click on the **Test Send to Attachment** campaign present on the **OhPhish Dashboard**.



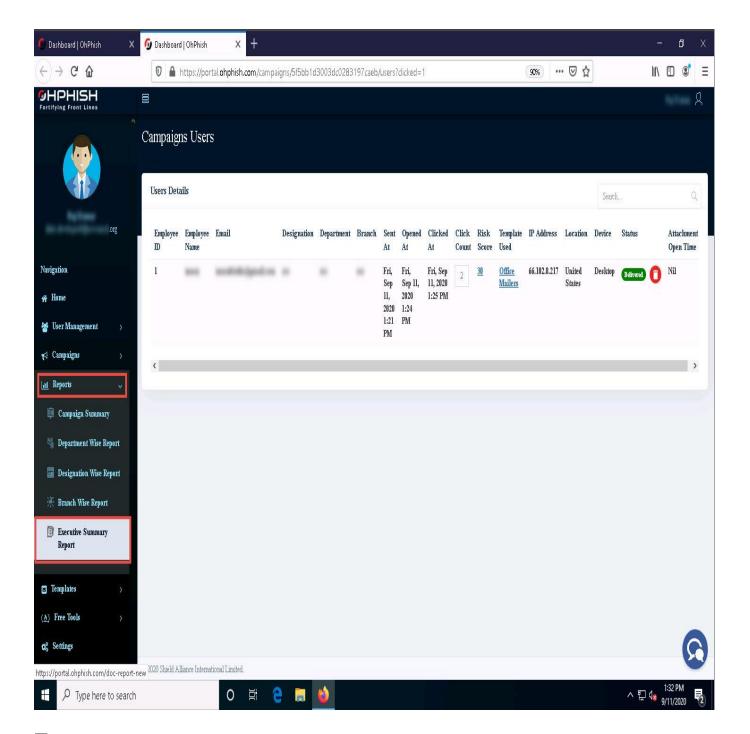
- 71. The Campaign Detailed Report page appears, displaying the Campaign Details and Campaign Summary sections.
- 72. In the **Campaign Summary** section, you can observe that the value of **No. of targets who have clicked the link (defaulters)** is **1**. Click on **1** icon to see the defaulter.



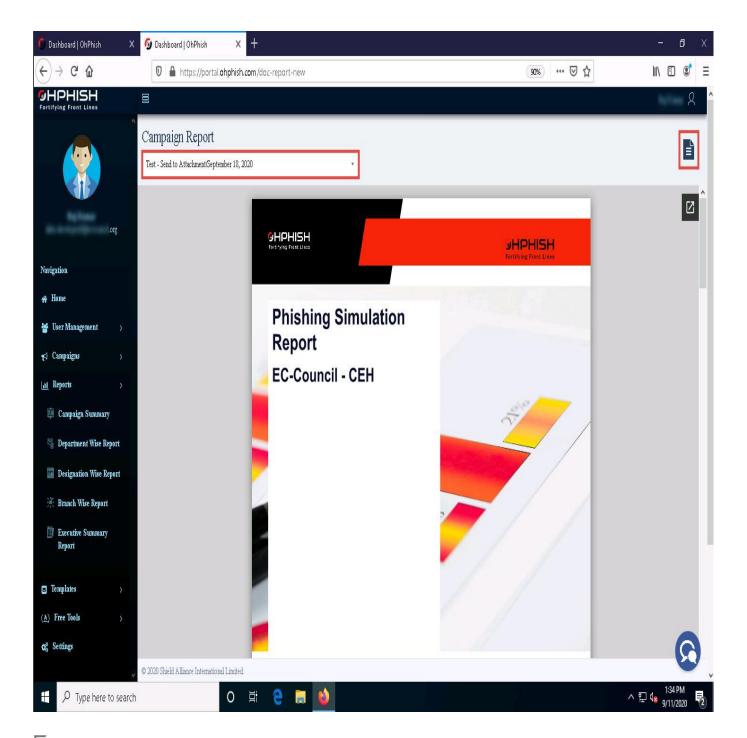
73. The **Campaigns Users** page appears, displaying the details of the defaulter, such as **Risk Score**, **Credentials**, **IP Address**, **Location**, etc., as shown in the screenshot.



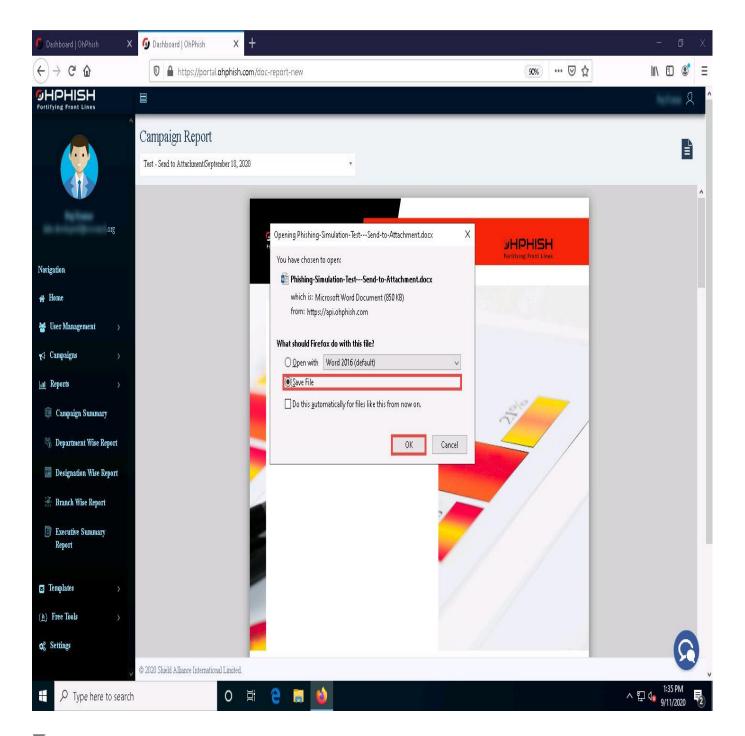
74. Now, click to expand the **Reports** section in the left pane and select the **Executive Summary Report** option.



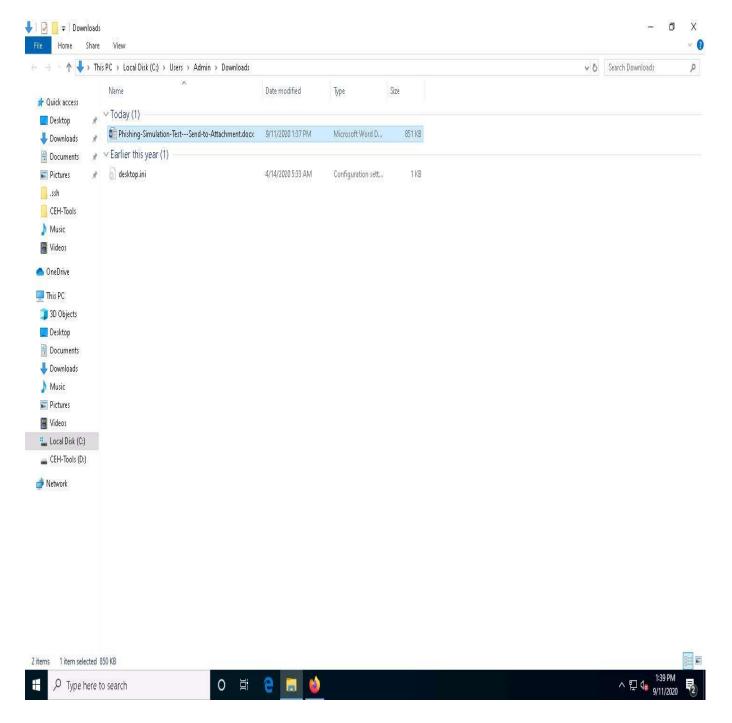
75. The **Campaign Report** page appears; select any phishing campaign from the drop-down list (here, **Test** – **Send to Attachment**) and click on the **Export** icon to export the report.



76. The **Opening Phishing-Simulation-Test** window appears; select the **Save File** radio button and click **OK**.



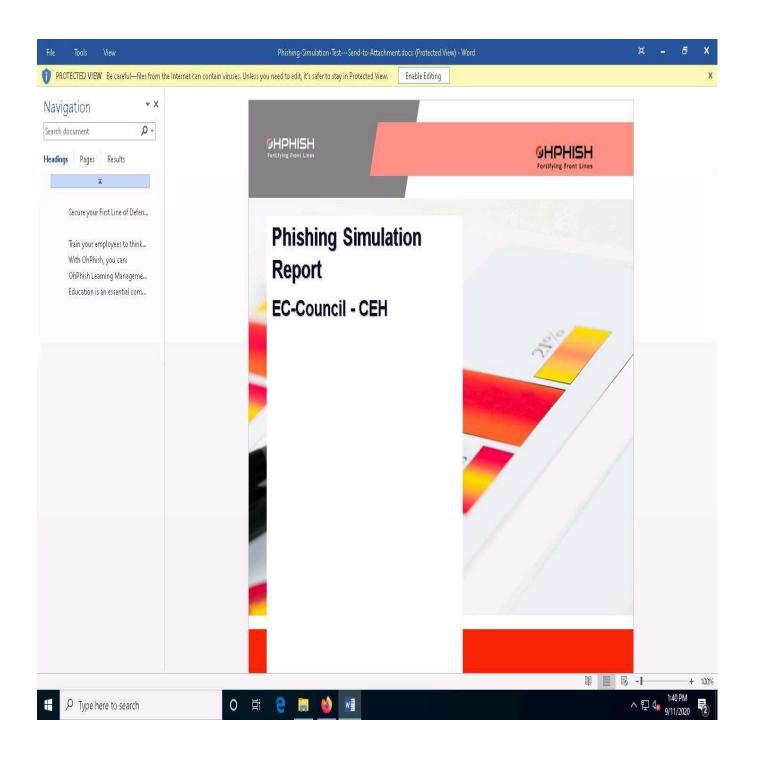
77. The file is downloaded to the default location (here, **Downloads**). Navigate to the download location and double-click the **Phishing-Simulation-Test---Send-Attachment** file to open it.

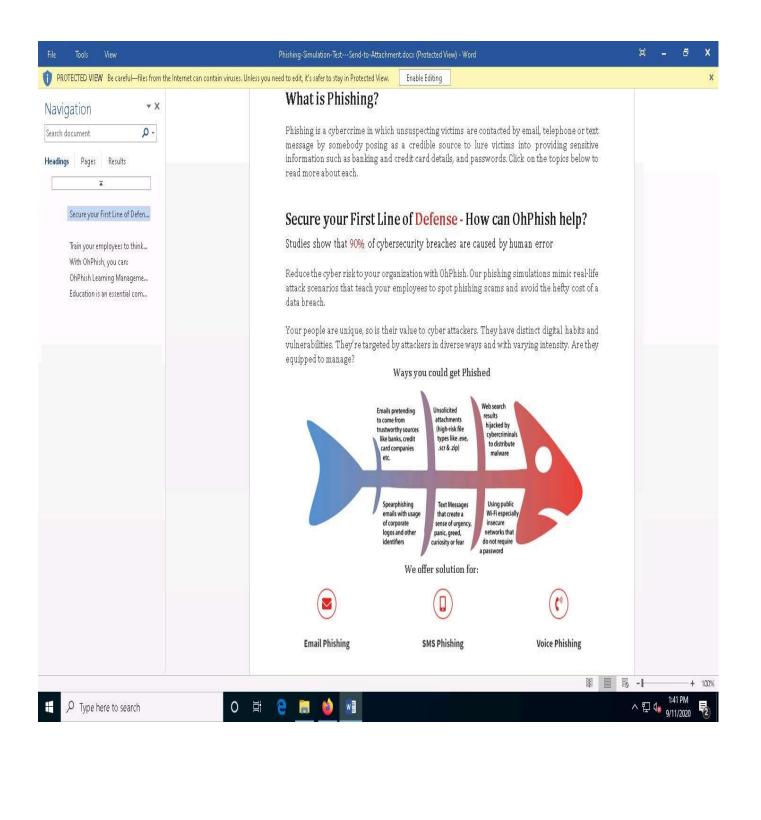


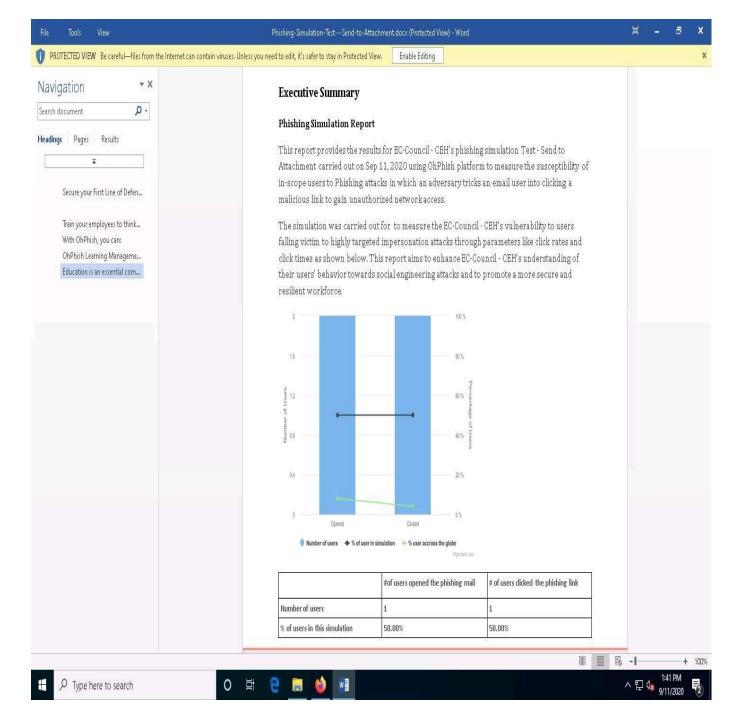
78. The executive phishing report appears in the document, as shown in the screenshot.

If Microsoft Word pop-up appears, click OK. In the second Microsoft Word pop-up, click Yes.

You can also explore other report options such as **Department Wise Report**, **Designation Wise Report**, and **Branch Wise Report**.







- 79. If you have an upgraded OhPhish account you can also explore other phishing methods such as **Credential Harvesting**, **Training**, **Vishing** and **Smishing**.
- 80. This concludes the demonstration of auditing an organization's security for phishing attacks using OhPhish.
- 81. \Box Close all the open windows and document all the acquired information.