

Instruction sets, Tachyon Exchange and custom roles - tutorial

Summary

How to load Instruction Definitions into Tachyon and then create, populate and delete Instruction sets.

In this tutorial

Every Instruction loaded into Tachyon has an implicit risk when applied to a network, some Instructions carry more risk than others.

One way of mitigating the risks could be to define Instruction sets that organize the Instructions according to their perceived risk. You could then define varying levels of access to the Instruction sets according to their associated risk.

For example the **quarantine** Instructions, available on the Tachyon Exchange, are for use in high-impact emergency scenarios, the way that these instructions work carries a fair degree of risk whereby devices are isolated from the network - which is appropriate for emergency use, however you may not want those Instructions to be generally available. To implement this you could create a **High Security** Instruction set to contain those Instructions, as well as any others you feel have a similar risk, and then lock down access to the Instruction set to suitable roles in the organization.

In this tutorial we will demonstrate:

- [Creating an Instruction set](#)
- [Downloading a product pack from the Tachyon Exchange](#)
- [Uploading a product pack to Tachyon, and adding the Instructions to an Instruction set](#)
- [Creating a custom role](#)
- [Adding a custom role to a Tachyon user or group](#)

The screenshot shows the Tachyon web interface for managing instruction sets. The browser address bar indicates the URL: <https://tachyon.acme.local/Tachyon/App/#/platform/instructions/instruction-sets>. The interface features a dark sidebar on the left with navigation options: Settings, Configuration, Monitoring, Permissions, Instructions, and Instruction sets. The main content area is titled 'Instruction sets' and includes a search bar and a table of instruction sets. The table has columns for Type, Instruction name, Set name, Version, Upload date, and Licen... (License). Two instruction sets are listed:

Type	Instruction name	Set name	Version	Upload date	Licen...
<input type="checkbox"/>	Tachyon Platform verification stage 1	Unassigned	6.0	24/06/2019, 14:57	✓
<input type="checkbox"/>	Tachyon Platform verification stage 2 (all platforms)	Unassigned	6.2	24/06/2019, 14:57	✓

On the right side of the table, there are buttons for 'Add new set', 'Move', 'Delete', and 'Download'. The bottom of the interface shows a pagination control with '1' selected and 'Jump to...' dropdown, and a status bar indicating '1-2 of 2' items and '12 24 48' columns.

The tutorial

Here we'll show an example where we create an empty Instruction set called **High Security**, we'll download the **Quarantine Windows Device** product pack from the Tachyon Exchange, load that product pack into Tachyon, filter on the text **quarantine** and then move the quarantine Instructions into the **High Security** Instruction set. Finally we set a custom role for the **High Security** Instruction set and grant permissions to the **SystemsAdministrators** AD group

Creating an Instruction set

First we'll create the **High Security** Instruction set:

1. Navigate to the **SettingsInstructionsInstruction sets** page.
2. Click the **Add new set** button.
3. In the **Add new instruction set** popup, enter a suitable name for the Instruction set. In our example the name is **High Security**.
4. We will also add a custom icon, in JPG or PNG format, that will be used when displaying the instruction:
 - a. Click the **Choose File** button.
 - b. In the **Open** dialog, locate and select the JPG or PNG file you want to use.
 - c. Click **Open** to load the file into Tachyon.
 - d. The file location and a preview of the file will be displayed in the popup.
5. Click the **Add** button.

Downloading a product pack from the Tachyon Exchange

The Instruction sets page has a direct link to the Tachyon Exchange, here we will use that to quickly download the **Quarantine Windows Device** product pack.

1. On the **Instruction sets** page click on the **Tachyon Exchange** link in the header.
2. A new tab displaying the Tachyon Exchange will open in the browser.
3. To download product packs you need to log in using your 1E Support Portal credentials. Click the **Login** link.
4. Enter your support login email and password when prompted and then click **Log in**.
5. In the **Search...** field type the word **quarantine** and press return.
6. A link to the **Quarantine Windows Device** page will be shown in the search results. Click on the link.
7. Click on the **Checkout** button.
8. Here you can see that the **Quarantine Windows Device** product pack is free of charge.
9. Scroll to the bottom of the page and click on the **Free Download** button.
10. You will then be presented with a link to the download. Click on **1E-Exchange-QuarantineDevice3.1** link.
11. The file will then be downloaded in your browser.

Uploading a product pack to Tachyon, and adding the Instructions to an Instruction set

In our example we've copied the downloaded product pack file to a local directory called **Exchange Product Packs**:

1. On the **Instruction sets** page click on the **Upload** button.
2. In the **Open** dialog navigate to the **Exchange Product Packs** folder.
3. Select the **1E-Exchange-QuarantineDevice3.1.zip** product pack and click **Open**.
4. In the filter edit field above the Instructions table type the text **quarantine** to find the instructions that contain that text.
5. Select the three matching instructions in one go by clicking on the checkbox at the top of the table.
6. Click the **Move** button.
7. In the **Move instructions** popup
 - a. Select the **High Security** Instruction set from the **Destination set** list of available Instruction sets
 - b. Click **Move** button
8. The matching quarantine instructions will then be moved to the **High Security** Instruction set

The product pack has been downloaded from the Tachyon Exchange and uploaded into Tachyon and the Instructions have been moved to the **High Security** Instruction set. The next step, to complete the tutorial, is to set the permissions for the new Instruction set.

Creating custom roles for Instruction Sets

So far we've only dealt with the process for defining access to the built-in Tachyon system roles. These roles generally provide access across all Instruction Sets. The advantage to this approach is that the number of AD groups required to define permissions to Tachyon is relatively small. However, this approach does not take advantage of the ability to create and manage Instruction Sets where permissions can be configured for the specifically chosen instructions in the set.

To deal with Instruction Sets, Tachyon lets you create custom roles that can determine permissions for one or more sets. To add a custom role you will need to have previously created one or more Instruction Sets.

Creating a custom role

To illustrate the process we will use an example where a **SystemAdministrators** AD group in our environment will be given specific permissions to run actions and questions from the **High Security** Instruction Set.

1. Navigate to **SettingsPermissionsRoles**.
2. Click on the **Add** button.
3. In the **Add role** popup type a **Name** and **Description** for the new custom role. In our example these will be **High Security** and **Users with this role will be able to run instructions in the High Security Instruction set** respectively.
4. Click **Add**.
5. Click on the new role name link to see the role details page. In our example the role name link is **High Security**.
6. On the **Permissions** tab click the **Add** button.
7. In the **Add permission** popup select **Instruction set** from the **Type** list.
8. In the newly displayed **Name** field select the name of the Instruction set you want to permission for the role. In our example this is **High Security**.
9. Now check the **Actioner** and **Questioner** checkboxes, as these are the permissions we want to set for the **High Security** Instruction set.
10. Click the **Add** button once all the settings have been made in the **Add permission** popup.
11. Before it can be effective, at least one management group **must** be added to the new role. The management group(s) determine which devices can be targeted by the Instructions in the Instruction set.
 - a. Select the **Management groups** tab on the role details page.
 - b. Click the **Add** button.
 - c. In the **Add management group** popup select the management group. In our example this is set to the built-in **All Devices** management group.
 - d. Click **Add** to add the management group.
 - e. Repeat these steps for any other management groups that you want to add to the role.

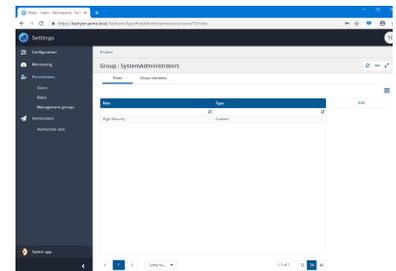
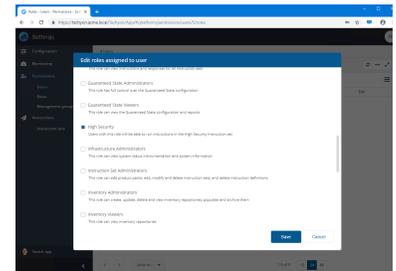
We have now created our new custom role.

Adding a custom role to a Tachyon user or group

Having defined the custom role we can now apply the role to a Tachyon user. To take on this new role we've added a new Tachyon user for the AD **SystemAdministrators** group.

1. Click on the user's name link on the **Users** page to display the details for the user.
2. On the **Roles** tab click the **Edit** button to display the **Edit roles assigned to user** popup.
3. Scroll down until you can see your new role. In our case the new role is called **High Security**, as shown in the picture opposite.
4. Click on the **Save** button to apply the role to the user.

In our example the **SystemAdministrators** user now has the **High Security** custom role, as shown in the picture opposite. Now any member of the corresponding **SystemAdministrators** AD group will have the ability to run actions from the **High Security** Instruction Set.



The tutorial is now complete. Here we've shown how to:

- Create a new Instruction set
- Download a Product Pack from the Tachyon Exchange
- Upload the Product Pack into Tachyon and add the Instructions to the Instruction set
- Create a custom role for the Instruction set
- Assign the role to a Tachyon user.