

Instruction sets page

Summary

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

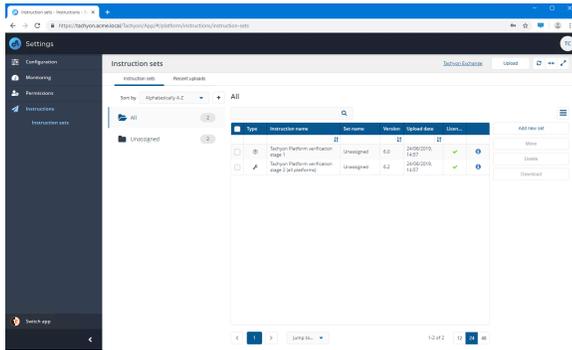
The **Instruction sets** page enables Instruction set administrators to add, remove and modify the product packs used by Tachyon.

This page can be viewed by users with any of the following roles:

- Global Administrators
- Instruction Set Administrators
- Security Administrators

You can perform the following tasks:

- [Adding Instruction Definitions into Tachyon](#)
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Instruction sets

Tachyon functionality is based around [Instructions](#), until these are added to the system you will not be able to ask questions or perform actions. 1E provides instructions in zip files called Product Packs. A collection of Product Packs necessary for for zip files available in the **Tachyon Platform** zip (available on the [1E Support Portal](#)) and from the Tachyon Exchange (tachyonexchange.1e.com). Each Product Pack contains a related collection of Instruction Definitions. Product Packs and Instruction Definitions can be added to Tachyon by **Instruction Set Administrators**.

When added into Tachyon, Instructions are immediately allocated to the built-in **Unassigned** Instruction set. Instruction sets provide a way of determining the permissions for the Instructions they contain, but the **Unassigned** Instruction set is only intended as a staging area for newly loaded Instructions - and Instructions in this set cannot be used directly. An Instruction can only belong to a single Instruction set, so after loading it into Tachyon, and before it can be used, it must be moved to another Instruction set - one created by an **Instruction Set Administrator**.

Instruction sets created by **Instruction Set Administrators** can be used as the basis for custom roles created by **Permissions Administrators**. These custom roles determine the permissions for the Instruction sets and all the Instructions they contain. This enables the **Permissions Administrators** to complete the assignment of specific Instruction set roles to users and determine which Instructions they can action, approve, question or view.



Custom roles cannot be defined for the **Unassigned** set and none of the global roles in Tachyon have permissions on the **Unassigned** set. So at least one Instruction set must be added and populated before you can begin to use Tachyon Instructions.

Adding Instruction Definitions into Tachyon

Instructions can be added to Tachyon from the Instruction sets page in Settings.

Drag-and-drop



If you have previously used Tachyon 3.3 please note that drag-and-drop is currently not supported from Tachyon v4.0.

Uploading Product Packs

In Tachyon 4.1 you upload product packs into the Settings application using the system file open dialog. To do this:

1. Navigate to the **SettingsInstructionsInstruction sets** page.
2. Click the **Upload** button on the header for the page.
3. In the **Open** dialog locate and select the file(s) you want.
4. Click the **Open** button.
5. At this point all the Instructions from the selected Product Packs or Instruction Definition files will be uploaded into Tachyon and added to the default **Unassigned** Instruction set.

Creating Instruction sets

Instruction sets can be created in the following ways:

Creating an Instruction set from selected Instructions

To add an Instruction set from selected Instructions (as shown in the animation opposite):

1. Navigate to the **SettingsInstructionsInstruction sets** page.
2. Select the Instructions you want to move to the new set by checking the checkbox at the left-hand end of the instruction's row.
3. Click the **Add New set** button.
4. In the **Add new instruction set** popup, enter a suitable name for the Instruction set.
5. You can optionally 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.
6. Ensure that the **Include //selected instructions** checkbox is checked
7. Click the **Add** button

When familiarizing yourself with the new instructions contained in a Product Pack it can be convenient to create a matching Instruction set to hold all its instructions. You can then set permissions for all the instructions contained in the Product Pack in one go. Later on you can then add other Instruction sets and move the Instructions in order to refine the permissions for each instruction.

Creating an empty Instruction set

To add an empty Instruction set where you can subsequently move Instructions:

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.
4. You can optionally 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.

Moving Instructions to Instruction sets

The following steps are used to move instructions between Instruction sets:

Move one or more selected Instructions:

1. Select the source Instruction set you want to move the Instruction(s) from, or select **All**, from the list of Instruction sets, and locate the Instruction(s) you want to move.
2. Check the checkbox at the start of each Instruction item in the Instructions table for each Instruction you want to move.
3. When the selection has been made click the **Move** button.
4. In the **Move instructions** popup subsequently displayed:
 - a. Select the desired destination Instruction set from the **Destination instruction set** dropdown list.
 - b. Click **Move** when the set has been selected.

Deleting Instructions sets and Instructions

Instruction sets are relatively simple to add, populate and delete, making the re-organization of Instruction permissions easy to do.

When deleting you get to choose whether you just want to delete the Instruction set or to also remove the Instructions in the Set from Tachyon:

- If you choose to delete just the Instruction set, any Instructions it contained will be returned to the **Unassigned** Set, effectively making them unavailable until they are assigned to another Instruction set.
- If you choose to delete both the Instruction set and all the Instructions it contains, those Instructions will be unavailable to Tachyon until they are loaded back into the system and assigned to another Instruction set.

Before deleting you need to be aware:

- Instructions in the Instruction set you want to delete may currently be running. Deleting an Instruction set will invalidate any role-based permissions from that point onwards, though any instructions that are in flight will not change.
- Any Custom Roles that were previously configured for the deleted Instruction set will still remain but will be disconnected from the deleted Instruction set.

Deleting an Instruction set

The following steps can be used to delete an Instruction set:

1. Navigate to the **SettingsInstructionsInstruction sets** page.
2. Locate the Instruction set you want to delete in the Instruction sets list.
3. Hover the mouse over the Instruction set name, a tooltip with three vertical dots will appear. Click on this to display a menu.
4. Select **Delete**.
5. In the **Delete instruction set** popup subsequently displayed you have the choice as to whether you want to just delete the Instruction set or delete the Instruction definitions it contains too. To delete both you check the **Delete both instruction set and instructions inside set** checkbox.
6. Once you've made your choice click the **Yes, delete instruction set** button to proceed with the deletion.
7. If you chose to just delete the Instruction set, as shown in our example, the Instructions previously held in the Instruction set go back to the **Unassigned** Instruction set.
8. If you chose to delete the Instruction set and instructions all the instructions contained in the set are removed from Tachyon.

Deleting one or more selected Instructions from Tachyon

The following steps can be used to delete one or more selected Instructions:

1. Navigate to the **SettingsInstructionsInstruction sets** page.
2. In the Instructions table, select the Instruction set containing the Instruction(s) you want to delete, or select **All**.
3. Select the checkbox at the left-hand end of the Instruction's row in the Instructions table for each one you want to delete.
4. Click on **Delete** button in the button panel on the right.
5. In the **Confirm delete** dialog subsequently displayed click **Delete** to continue and remove the selected Instruction(s) from Tachyon or **Cancel** to cancel the operation.

Updating Instructions

Updating an Instruction is really simple, you just load the newer version into Tachyon and it will be updated in place, keeping any currently set Instruction set intact.

The animation opposite shows an update for the Tachyon verification steps, here the verification instructions from Tachyon 3.3 are updated to the latest versions from the Tachyon 4.0 release. The stage 1 Instruction changes version from 4 to 5.0 and the stage 2 Instruction changes from 4.1 to 4.2.

Statistics for the upload operation can be viewed by clicking on the dropzone. In our example we can see that there was one successful upload and this resulted in one of the Instructions being updated.

Upgrading and updating Instructions

Tachyon Instructions are designed as far as possible to be backwards compatible, but as a general rule we recommend that you update your Tachyon product packs to the latest version so that you can gain the benefit of newer features.

When upgrading you should be able to safely continue to use your existing Instructions. We recommend that newer versions of Instructions are verified in a test environment to ensure that they still behave as expected before updating in your production environment.

Your Tachyon license should retain any code signing certificates you may have registered. This means your custom instructions should continue to be licensed as normal following an upgrade of Tachyon. You may want to check the [Writing Tachyon Instructions](#) in the Tachyon SDK pages to check for any changes to the Tachyon SCALE language.

An extended example

 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.

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. This example also ties in with a permissions example that sets a custom role for the **High Security** Instruction set and grants permissions to the **SystemsAdministrators** AD group, for more details please refer to [Configuring Access Rights - Tutorial: Creating custom roles for Instruction Sets](#).

Creating the High Security 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 the product pack to Tachyon, filtering and then moving the quarantine Instructions to the High Security 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. To continue this example by adding a custom role for this Instruction set go to [Configuring Access Rights - Tutorial: Creating custom roles for Instruction Sets](#).