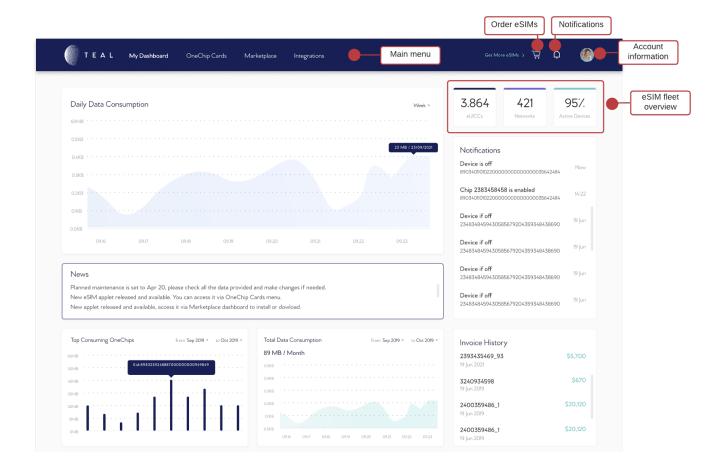
# Teal Portal User Guide

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## Dashboard

The dashboard provides information highlights of your OneChip fleet.

- Daily Data Consumption graph. Shows weekly or monthly data consumption for your entire OneChip fleet. Detailed consumption by MB for a specific date is revealed when hovering over the graph.
- Top Consuming OneChips bar graph. Shows the top 5 consuming OneChips for the selected time period. Detailed consumption by MB for a specific eID is revealed when hovering over the bars.
- Total Data Consumption graph. Shows the accumulated data consumption for the selected time period. Detailed consumption by MB for a specific date is revealed when hovering over the graph.
- News widget. Displays announcements relating to product releases and maintenance.
- Notifications widget. Shows the most recent notifications.
- Invoice history widget. Shows the most recent invoices.



# OneChip Orders

Teal's admin control center provides a convenient OneChip ordering feature that allows you to place an order as soon as you have a need.

The OneChip order information is located under the shopping cart in the upper right of the main menu bar.

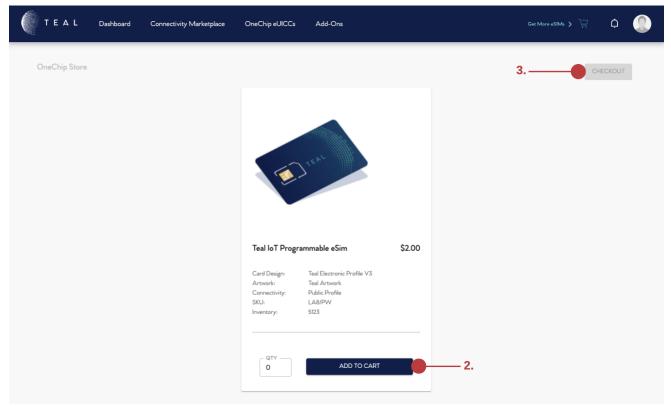


## Placing a OneChip order

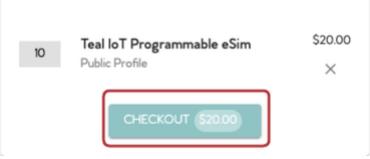
1. Select "Order OneChips" in the shopping cart menu. OneChip articles will appear in the OneChip store.



- 2. Select the quantity of the OneChip article you want and click "Add To Cart".
- 3. Proceed to "Checkout". Here you will be able to review your cart.

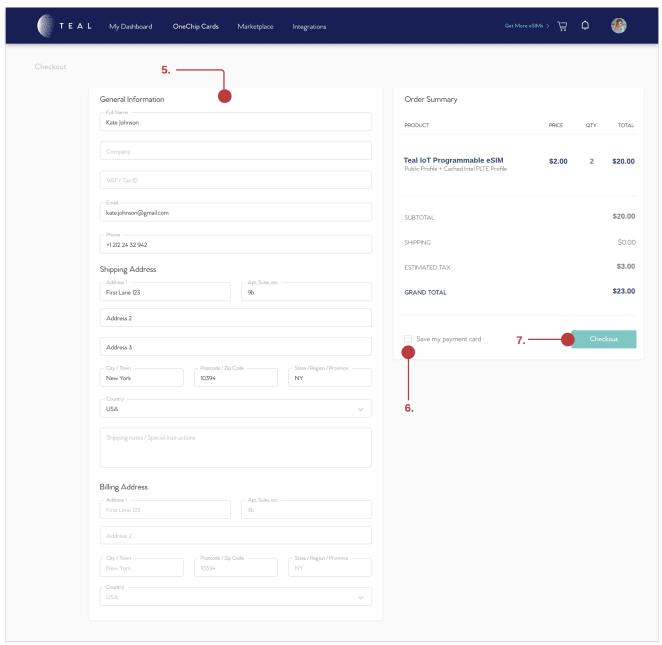


4. Click "Checkout" again to proceed to shipping details.



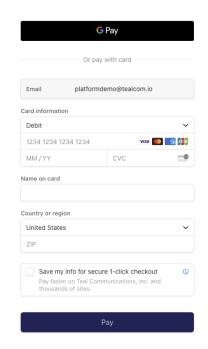
- 5. You must provide information about the person placing the order,
- and the shipping details. The billing address is pre-filled and corresponds to the address in the service agreement with Teal.

  6. Opt in to make it the default payment method for your monthly invoices.
- 7. Review the order summary and click "Checkout".



8. Choose your preferred payment method at check out, and complete the applicable payment form.



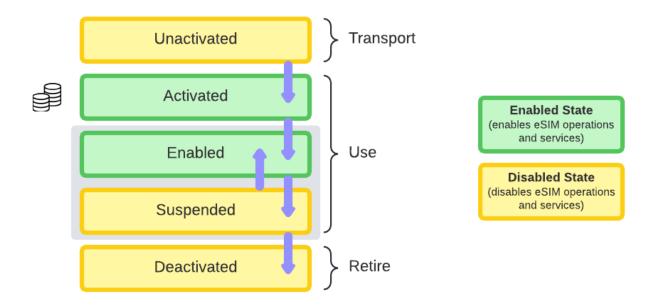


9. The payment details will be available in "Payments History" and the order information can be viewed in "Orders History" - both reachable from the order confirmation page and from the shopping cart menu.



# OneChip States

Every OneChip has a status that determines its ability to establish data connectivity on the network and affects whether the OneChip is billable. The diagram below shows the typical lifecycle for a OneChip. You can transition a OneChip from one state to another while subject to certain restrictions.



Data connectivity needs to be established in order to change a network plan successfully. This means a OneChip has to be Activated before it can download new credentials.

The following table describes typical connectivity and billing behavior for each OneChip state. In general, a OneChip is billable only after it has been *Activated*.

OneChip State	Description
Unactivated	The <i>Unactivated</i> state does not allow a OneChip to establish data connections. OneChips in the <i>Unactivated</i> state are generally <u>not considered billable</u> . OneChips in the <i>Unactivated</i> state can not register on a network. Typically, OneChips in <i>Unactivated state</i> have not been deployed yet.
Activated	An Activated OneChip can register on the network, establish data connections and is considered billable.
Enabled	An <i>Enabled</i> OneChip can establish data connections and <u>is</u> <u>considered billable</u> .
	OneChips are automatically Enabled after being Activated.
Suspended	The Suspended state does not allow a OneChip to establish data connections. Typically, Suspended OneChips have been deployed, but they are temporarily inactive.
	OneChips in the Suspended state are generally considered billable, and while there would not be any usage fees and platform fees, they will incur monthly network fees based on the installed network's policies.

#### Deactivated

The Deactivated state does not allow a OneChip to establish data connections. A OneChip in this state is generally not considered billable unless a commitment applies. Typically, a Deactivated OneChip is permanently inactive and will be removed from the network.



Deactivation returns credentials to the pool and it is permanent. A Deactivated OneChip can not be reactivated.

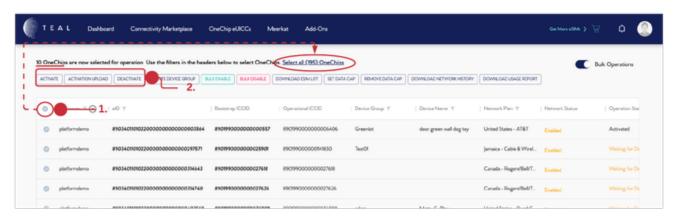
Note: It may take up to 6 hours until OneChip is fully Deactivat ed and disabled.

## Activate your OneChip

You can change the OneChip status from either the OneChip eUICC page using the bulk operations feature or the General Information page for an individual OneChip.

#### OneChip eUICC > Bulk Operations > Filter and select eIDs

- 1. Filter and select the eIDs that you want to change.
  - a. If you want your selection to span over several pages, make sure to select all eIDs by clicking the link provided above the OneChip eUICC table.
- 2. Click the Activate or Deactivate button at the top to change the state of the selected OneChips.



Deactivation of OneChips has to be done by our Support agents. To move forward with your request, please send an email to Support including a list of all eIDs you want to deactivate.

## OneChip eUICC > Bulk Operations > Activation Upload

- 1. Click Activate Upload to upload a CSV file including a list of eIDs you want to activate.
  - a. The CSV upload feature currently only supports activation.
- 2. Click Select File and select the CSV file on your computer.
  - a. Ensure the CSV file contains a header "eid" followed by eIDs listed in one column.



3. Click Continue to start processing the file.

#### OneChip eUICC > Info > General Information

1. Click the Activate button in the bottom of the Network Info widget to activate the OneChip.



# **Network Plans**

Every Teal OneChip is cloud enabled and fully programmable. That means it works with any of the 2000+ networks today, and any new networks or technologies added tomorrow.

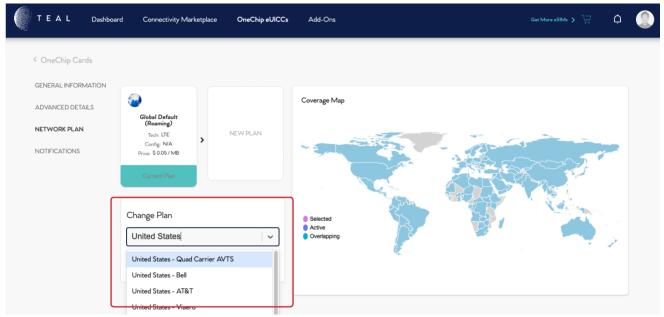
## Change network plan

Your OneChip will be preconfigured with a bootstrap profile: the Global Default (Roaming) plan. The The Global Default (Roaming) plan reassures connectivity wherever the location may be. Connectivity is needed to be able to change to a local plan and for the OneChip to download new operator credentials for that local plan.

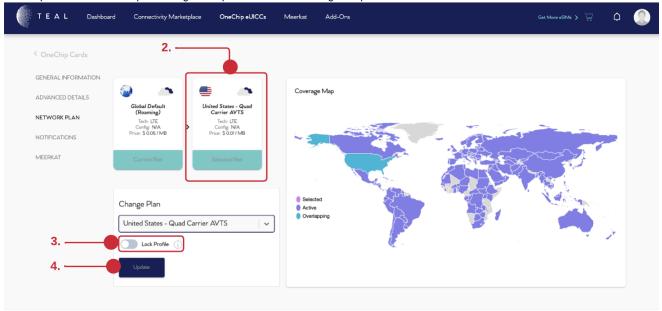
#### Single Plan Change

OneChip eUICCs > OneChip list > i (for information) > Network Plan > Change Plan

1. Use the roll down list to find the plan of your choice. You may type in the country or operator name to narrow down your search for available plans.



- 2. Select the plan of your choice. The selected plan will now show up in the "New Plan" widget.
- 3. Leave the Lock Profile button switched off to be able to recover the backup profile if the device leaves the intended coverage zone or encounters a network service outage. Read more about profile locking here.
- 4. Click "Update" to initiate the plan change. The process of downloading the operator credentials to the device will now start.

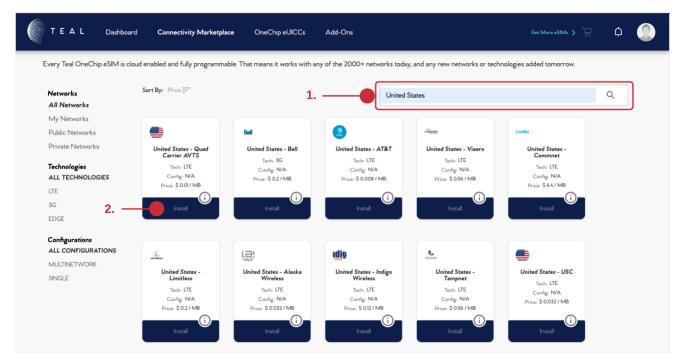


## **Bulk Plan Change**

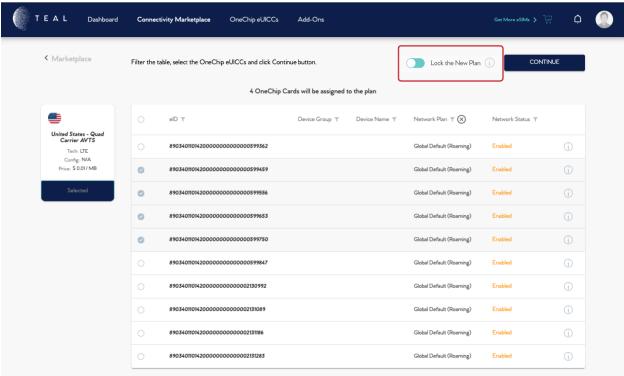
Plan change can also be done in bulk if several OneChips should be changed to the same plan.

## Connectivity Marketplace > Install

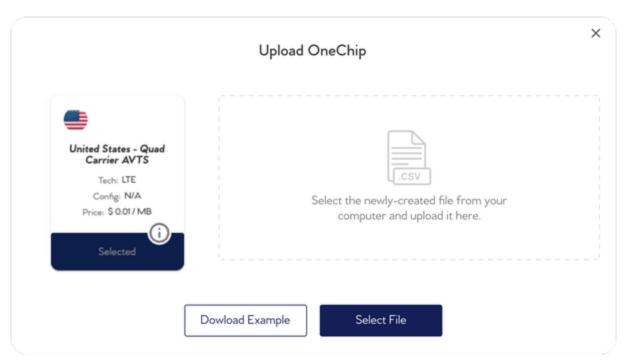
- 1. Find the plan of your choice by typing country or operator name in the search field, or use the filters provided on the left hand side of the page.
- 2. Click "Install" on the plan you want to download to your OneChips.



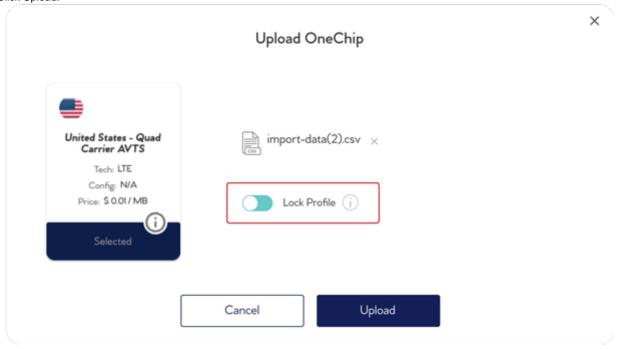
- 3. Choose method for selecting OneChip cards.
  - a. Select OneChip cards manually using filters.
    - i. Leave the Lock Profile button switched off to be able to recover the backup profile if the device leaves the intended coverage zone or encounters a network service outage. Read more about profile locking here.



- b. Upload a CSV file containing the selected OneChips.
  - i. Download the example CSV file which has the required format.



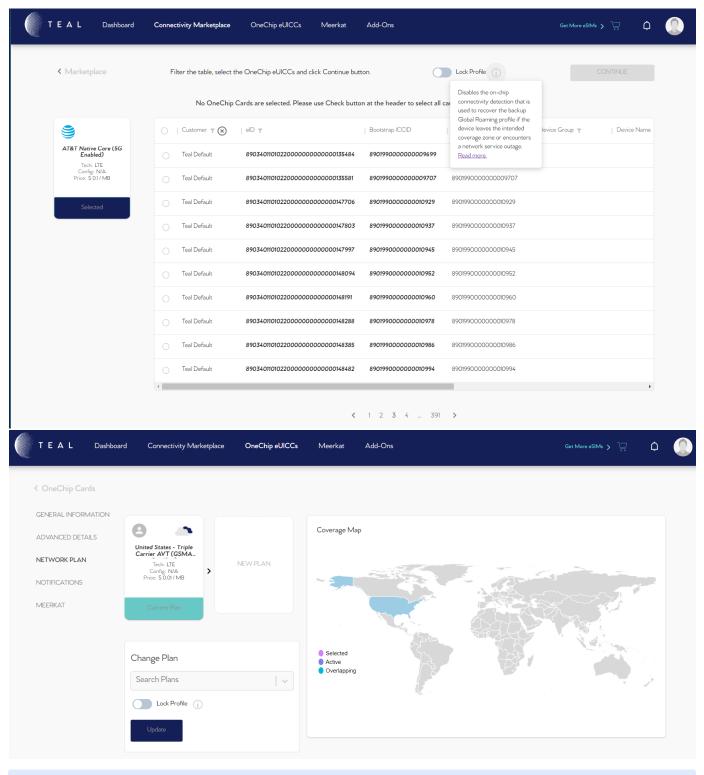
- ii. Create your own CSV file with the eIDs you want to apply the plan change to according to the example CSV file.
- iii. Select the file location on your computer.
- iv. Leave the Lock Profile button switched off to be able to recover the backup profile if the device leaves the intended coverage zone or encounters a network service outage. Read more about profile locking here.
- v. Click Upload.



## **Profile Locking**

Profile locking is a setting when executing a plan change. Profile locking overrides the on-chip connectivity detection that would be able to recover the backup profile if the device leaves the intended coverage zone of the operational profile being locked or encounters a network service outage.

The Lock Profile switch is off by default. In order to lock the new profile that will be downloaded, the Lock Profile switch has to be switched on before the plan change is executed.



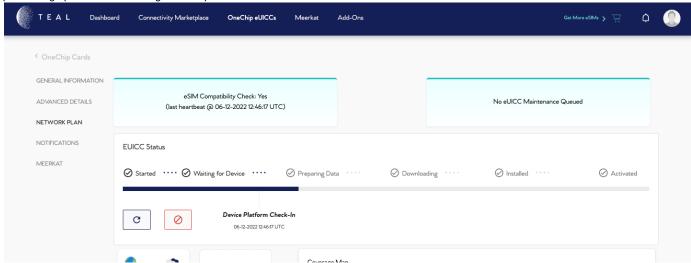
- Profile locking is only recommended for:
  - Low Power Devices that power cycle the modem in such a way that the OneChip may incorrectly detect a service outage when
    instead the antennas are just disconnected on purpose, or network status is set to "limited" on purpose, such as a persistent
    registration without IP address.
  - Private LTE Devices where coverage is inherently challenging.
  - Devices using Meerkat services where IP addresses do not transfer between profiles and/or a backup IP address can not be setup for the device.

OneChip eUICCs > OneChip list > i (for information) > Network Plan

or

#### OneChip eUICCs > OneChip list > i (for information) > Advanced Details

Once plan change has been executed, the operation status will appear on the Network Plan page. The status can also be viewed on the Advanced Details page. The plan change operation status is shown in a stepper diagram that highlights each step of the way, from starting the plan change process to activating the new plan.



The plan change process follows six steps:

Step	Description
Starting	Start of plan change operation.
Preparing Data	Network credentials for the selected plan are being prepared for download.
Downloading	Network credentials are being downloaded to the OneChip.
Installed	Network credentials for the selected plan have been installed on the OneChip and is attempting to activate on the local network.
Activated	OneChip has unlocked the local network with the downloaded credentials. The plan has been activated and updated to 'current'. Consumption will be billed at the current plan rate.

#### **Restart and Terminate Plan Change**

If plan change fails, you may want to restart the plan change operation. Plan change can be restarted by clicking the Restart button at the bottom left in the stepper diagram.



If plan change gets stuck because of issues on the local network side or on the device side, it may not always be depicted in the stepper diagram simply because OneChip is not able to communicate back to the platform. If you suspect that to happen, you may want to terminate the plan change process and start all over by searching for a different plan to change to. Plan change can be terminated by clicking the Terminate button next to the Restart button at the bottom left in the stepper diagram.



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CAUTION. We recommend consulting Support before you terminate a plan change. Terminating a plan change may not always be the best solution to your problem and could - if not used the right way - cause additional problems.

# Reporting

Teal's admin control center provides an account overview and reporting capabilities to support your day to day operations.

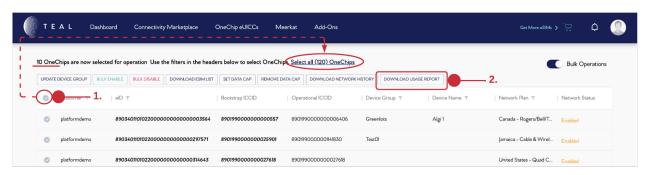
## Usage Report

The usage report provides an overview of usage per eID and per network plan for any given time period. The report contains the following information:

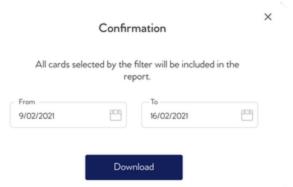
- eID
- Client Name
- Client Uuid
- Period Start
- Period End
- Device Group Name
- Device Name
- Plan Name
- Plan Uuid
- Total Usage (bytes)

## OneChip eUICCs > Bulk Operations mode > Filter and select eIDs

- 1. Filter and select the eIDs that you want to download the usage report for.
  - a. If you want your selection to span over several pages, make sure to select <u>all</u> eIDs by clicking the link provided above the OneChip eUICC table.
- 2. Click "Download Usage Report".



3. Select the date range for which you want to download the usage report.



4. Click "Download" to start downloading the report. The progress bar will complete when the report has been prepared and the browser will start downloading the file automatically.

# What is Meerkat?

Meerkat is a virtual private gateway that can be used to route data intelligently and securely between devices and other networks and applications.

Public static IPs

Meerkat can provision publicly reachable static IPv4 and IPv6 endpoints that correlate with the carrier addresses and stay with your device as it changes networks.

VPN and private static IPs

IPsec tunnels are pre-configured between Teal carrier partners and our Meerkat Gateway. A VPN is defined between Meerkat Gateway and your application.

Our VPN tunnel routes all of your application data direct from the carriers's PGW to your internal application. The direct-to-doorstep functionality is easy as typing the meerkat.teal APN in your device settings, and is ideal for sensitive government, health, or financial data.

# How to enable Meerkat on your account

Meerkat can be ordered from the Add-Ons page. When selecting Meerkat Private Gateway you will be presented with two services; public static IP and VPN Gateway.

- Public static IP assignments are charged with a fixed monthly fee per active IP. You will get instant access to the Meerkat self-service page upon ordering, where you will be able to assign static public IPs to your devices.
- VPN Gateway with private static IP assignment is charged with a one-time setup fee. You will have to complete the checkout process to start using the service. Once payment is completed, you will get instant access to the Meerkat self-service page where you will be able to assign private static IPs to your devices. You will have to set up a VPN connection before you can access these devices within the Teal network, using APN meerkat.teal. Upon completing the order, you will be contacted by a Teal representative to begin work on the VPN setup and configuration. (Please contact support@tealcommunications.com if you have not yet been contacted by a representative).



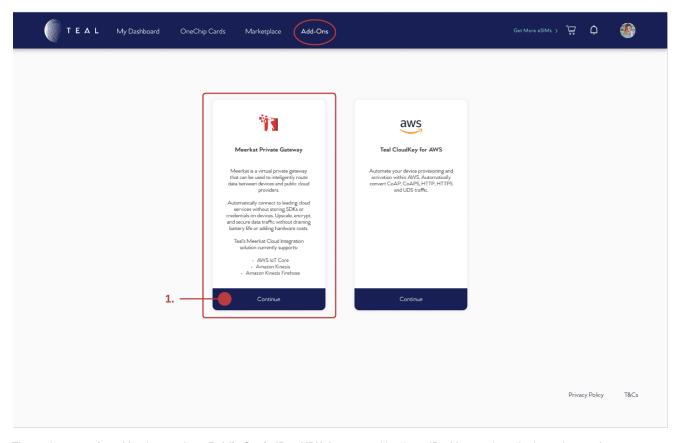
#### Special Considerations Before Operating a Meerkat

Meerkat binds your IMSI with a Public Static or Private Static IP address upon assignment. This means that should you lose connectivity and make use of Teal's Global Roaming redundancy; your device may change IP's. To prevent this, we recommend locking profiles to ensure they stay bound to the proper IP.

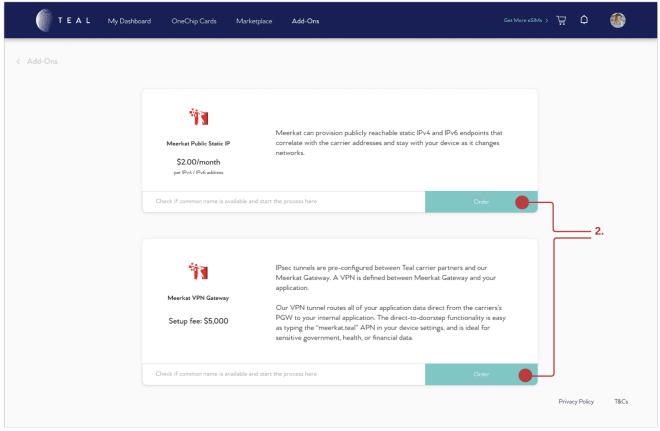
Enable Meerkat Self Serve

You can order both services on the Add-Ons page.

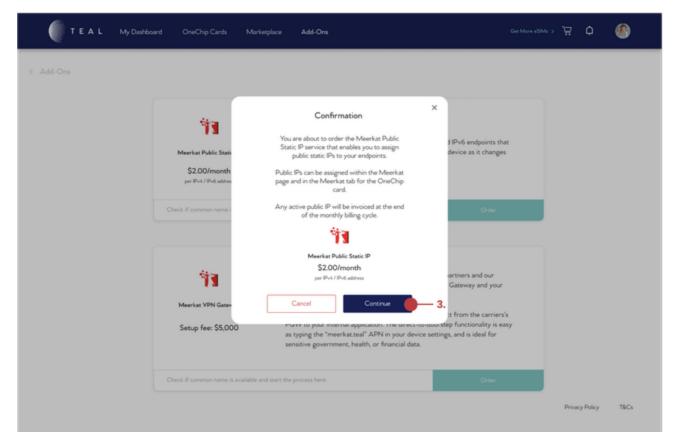
1. Select Meerkat Private Gateway on the Add-Ons page.



2. Then select one of two Meerkat services: **Public Static IP** or **VPN Gateway** with private IPs. You can have both services at the same time, but will have to order them individually.

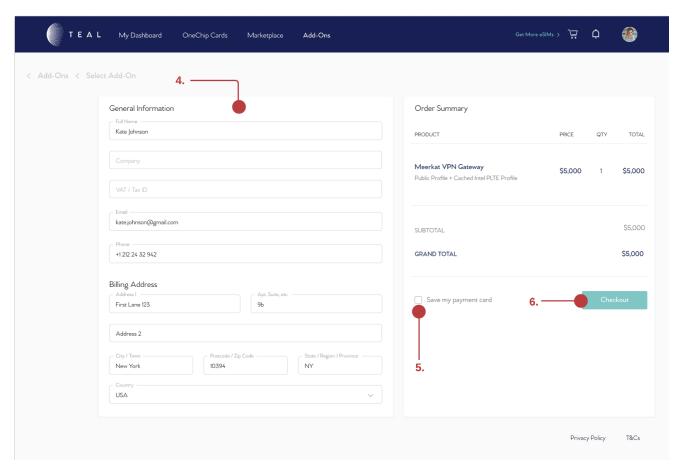


3. Confirm your order.

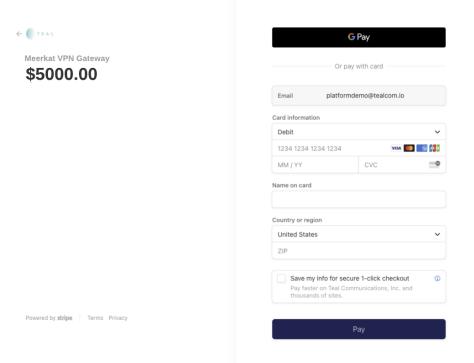


(If ordering Public Static IP, please proceed to step 7.)

- 4. Now provide information about the person placing the order and the shipping details. The billing address will be pre-filled and corresponds to the address in the service agreement with Teal.
  - a. Opt in to make it the default payment method for your monthly invoices.
  - b. Review the order summary and click "Checkout".



5. Choose your preferred payment method at check out, and complete the applicable payment form.



- 6. Upon successful payment, you will be redirected to the order confirmation page.
- 7. Once order is completed (along with payment if you ordered Meerkat VPN Gateway), you will get instant access to the Meerkat self-service page where you will be able to assign static IPs to your devices.

For private IP address assignments, you will have to set up a VPN connection before you can access your devices within the Teal network, using APN meerkat.teal. Upon completing the order, you will be contacted by a Teal representative to begin work on the VPN setup and configuration. (Please contact support@tealcommunications.com if you have not yet been contacted by a representative).

The payment details will be available in "Payments History" and the order information can be viewed in "Orders History" - both reachable from the order confirmation page and from the shopping cart menu icon.



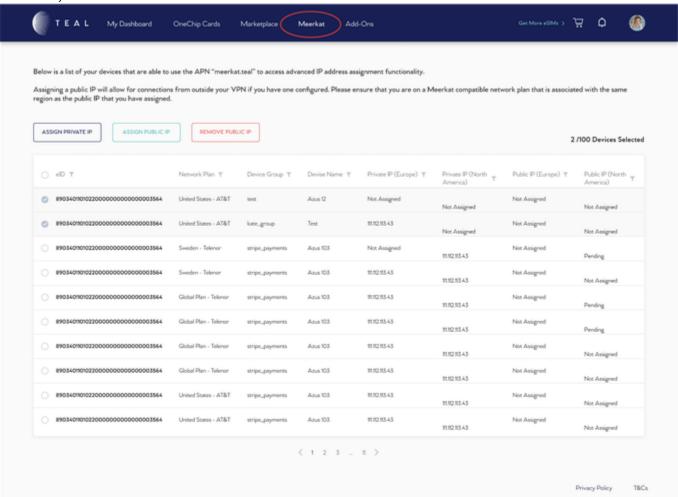
# Start assigning IPs to your devices

## Region-based assignment

Since Teal enables network localization, data traffic breaks out in the region where your device operates. To maintain localization, Meerkat servers exist in every region so you can assign a local IP to your device for the region it operates in. When assigning a public static IP, you must therefore select the region you want to assign to.

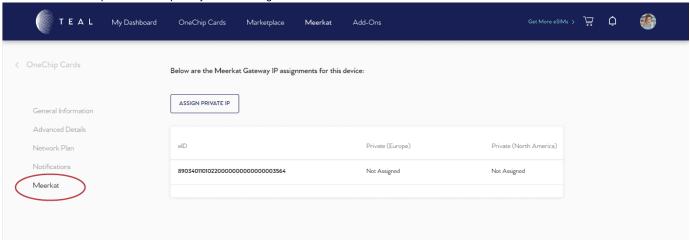
#### Meerkat > Select eIDs

The Meerkat page, that is navigated to from the top menu bar, provides an overview of all of your devices. You can use the filters to select only the eIDs that you want to view and take action on.



#### OneChip eUICCs > Info > Meerkat

The Meerkat tab in the OnceChip information view provides an overview over the assigned IPs for a specific OneChip. From here you can assign IP addresses to the specific OneChip that you are looking at.

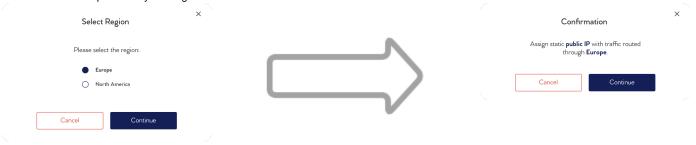


## Assign public static IP

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🛕 You must assign the IP to the region where the device is deployed (or will be deployed) and use data.

- 1. Select the OneChips you want to assign IPs to.
  - a. On the Meerkat page you may use the filters to sort and filter in specific attributes to narrow down the list of possible selections.
  - b. On the Meerkat tab in the OnceChip information view you will only assign IPs to the specific OneChip you are looking at.
- 2. Click "Assign Public IP".
- 3. Select the region for which you want to assign the IP(s) and click "Continue". You must assign the IP to the region where the device is deployed (or will be deployed) and using data.
- 4. Confirm the operation by clicking Continue.



If you are getting a public dynamic NATed IP instead of a public static IP, you have likely either connected on a network plan intended for a different region than where your device is being used, or assigned the public static IP to a different region than where your device is deployed.

The assigned public IP addresses will appear in the column representing the applicable region. When the IP is being assigned, the status will change to "Pending" until the IP assignment completes and the IP address is displayed.

Teal will automatically assign a private IP for every public IP. The private IPs will only be visible on the portal if you have the Meerkat VPN Gateway service enabled.

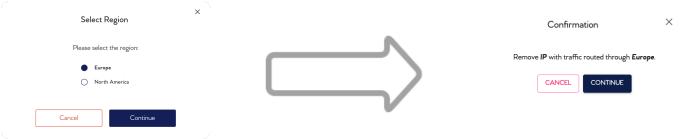
If a public static IP is assigned to an eID that already has a private static IP assigned, the private static IP will change.

If trying to assign an IP to an eID that already has an IP assigned to it, the existing IP will remain and not be overwritten.

# Remove public static IP

Assigned public static IPs can be removed. Since you may have IPs assigned in more than one region, you must first confirm the region for which you want to remove the IP address.

- Since IP assignment selects the first available IP from a pool of IP addresses, a device that has an IP removed and then re-assigned, may not receive the same IP address again.
- 1. Select the OneChips you want to remove IP from.
  - a. On the Meerkat page you may use the filters to sort and filter in specific attributes to narrow down the list of possible selections.
  - b. On the Meerkat tab in the OnceChip information view you can remove IPs from the one specific OneChip that you are looking at.
- 2. Click "Remove IP".
- 3. Select the region for which you want to remove the IP(s) and click "Continue".
- 4. Confirm the operation by clicking "Continue".

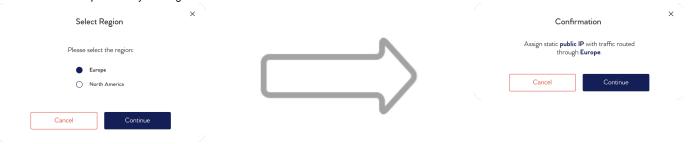


1 While removing a public static IP is an instant operation, the removed IP will still have incurred a charge for the current billing period.

#### Assign private static IP

A You must assign the IP to the region where the device is deployed (or will be deployed) and use data.

- 1. Select the OneChips you want to assign IPs to.
  - a. On the Meerkat page you may use the filters to sort and filter in specific attributes to narrow down the list of possible selections.
  - b. On the Meerkat tab in the OnceChip information view you can assign IPs to the one specific OneChip you are looking at.
- 2. Click "Assign Private IP".
- 3. Select the region for which you want to assign the IP(s) and click "Continue". You must assign the IP to the region where the device is deployed (or will be deployed) and using data.
- 4. Confirm the operation by clicking "Continue".



If you are not able to reach your device or transmit data, you have likely either connected on a network plan intended for a different region than where your device is being used, or assigned the private static IP to a different region than where your device is deployed.

The assigned private IP addresses will appear in the column representing the applicable region. When the IP is being assigned, the status will change to "Pending" until the IP assignment completes and the IP address is displayed.

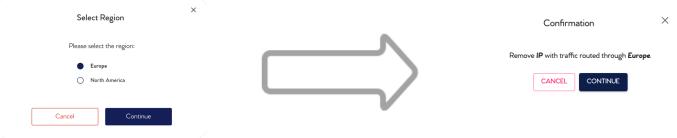
🔋 If trying to assign an IP to an eID that already has an IP assigned to it, the existing IP will remain and not be overwritten.

#### Remove private static IP

Assigned private static IPs can be removed. Since you may have IPs assigned in more than one region, you must first confirm the region for which you want to remove the IP address.

Since IP assignment selects the first available IP from a pool of IP addresses, a device that has an IP removed and then re-assigned, may not receive the same IP address again.

- 1. Select the OneChips you want to remove IP from.
  - a. On the Meerkat page you may use the filters to sort and filter in specific attributes to narrow down the list of possible selections.
  - b. On the Meerkat tab in the OnceChip information view you can remove IPs from the one specific OneChip that you are looking at.
- 2. Click "Remove IP".
- 3. Select the region for which you want to remove the IP(s) and click "Continue".
- 4. Confirm the operation by clicking "Continue".



In the case a device has both a private static IP and a public static IP, both IPs will be removed.