IDTECH®

Value through Innovation

ViVOstate®

Terminal Management System

ViVOstate TMS Quick Start Guide

Rev. 60

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Revision History

Version	Date	Notes	Author
50	09/19/2019	Initial version	CB
51	11/18/2019	Added password requirements	CB
52	01/14/2020	Style revisions	CB
53	02/14/2020	Updated TMS Agent section	CB
54	02/14/2020	Removed "Windows" from TMS Agent section	CB
55	02/28/2020	Added Firmware Update steps Added notes for firmware update file types, version availability, and update packages for readers with multiple CPUs	CB
56	03/22/2020	Added TMS Agent update steps (section 10.2) Corrected section 10.4: Notes About Updating Firmware, specifically the difference between demo and production units, their respective serial numbers, and the firmware updates each uses.	CB
57	03/27/2020	Added "Checking and Validating Firmware Versions via Raw Data" and "Troubleshooting Firmware Updates" sections.	CB
58	03/30/2020	Minor revision to text in firmware update chapters.	CB
59	04/27/2020	Added "TMS Agent Standby Mode" and "TMS Agent Configuration" sections.	CB
60	07/30/2020	Updated URLs throughout documentation.	CB

Table of Contents

1. Overview

Welcome to the ViVOstate Terminal Management System Quick Start Guide. The purpose of this guide is to provide users a concise set of instructions quickly onboarding with the ViVOstate Terminal Management System.

The ViVOstate Terminal Management System (TMS) enables customers to manage and control their ID TECH devices from any internet connected computer, phone or tablet. With ViVOstate TMS, users can monitor their entire estate of ID TECH devices for device activity, status, and many other parameters via the ViVOstate dashboard and exception alerts. Additionally, readers can be maintained via remote updates, saving unnecessary service calls and unplanned kiosk downtime.

Note: Because ViVOstate TMS is still in development, the contents of this guide may not reflect the current state of the ViVOstate TMS site or application.

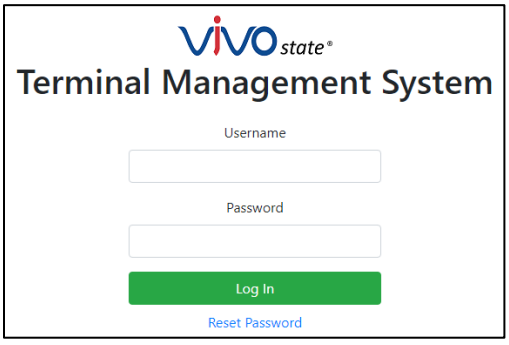
2. Obtaining a ViVOstate TMS Account

Contact your ID TECH representative to obtain a ViVOstate TMS account

3. Logging into ViVOstate TMS

To log into ViVOstate TMS:

1. Go to the ViVOstate Login page.
2. Enter your user credentials and password and click **Log in**.



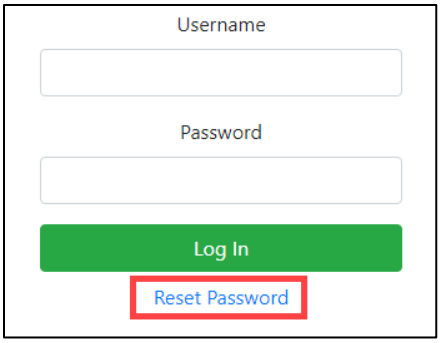
3.1. Resetting a Forgotten Password

Note that ViVOstate passwords must:

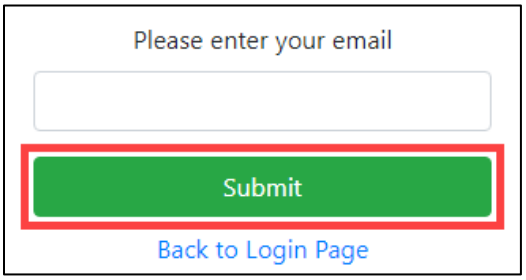
- Be at least 8 characters long
- Contain at least one upper case character
- Contain at least one lower case character
- Contain at least one numeric digit
- Contain at least one special character from the set (<space>!"#$%&'()*+,-./:;<=>?[]^_`{|}~)

To reset your password:

1. Go to the ViVOstate Login page and click **Reset Password**.



2. Enter your email and click **Submit**.

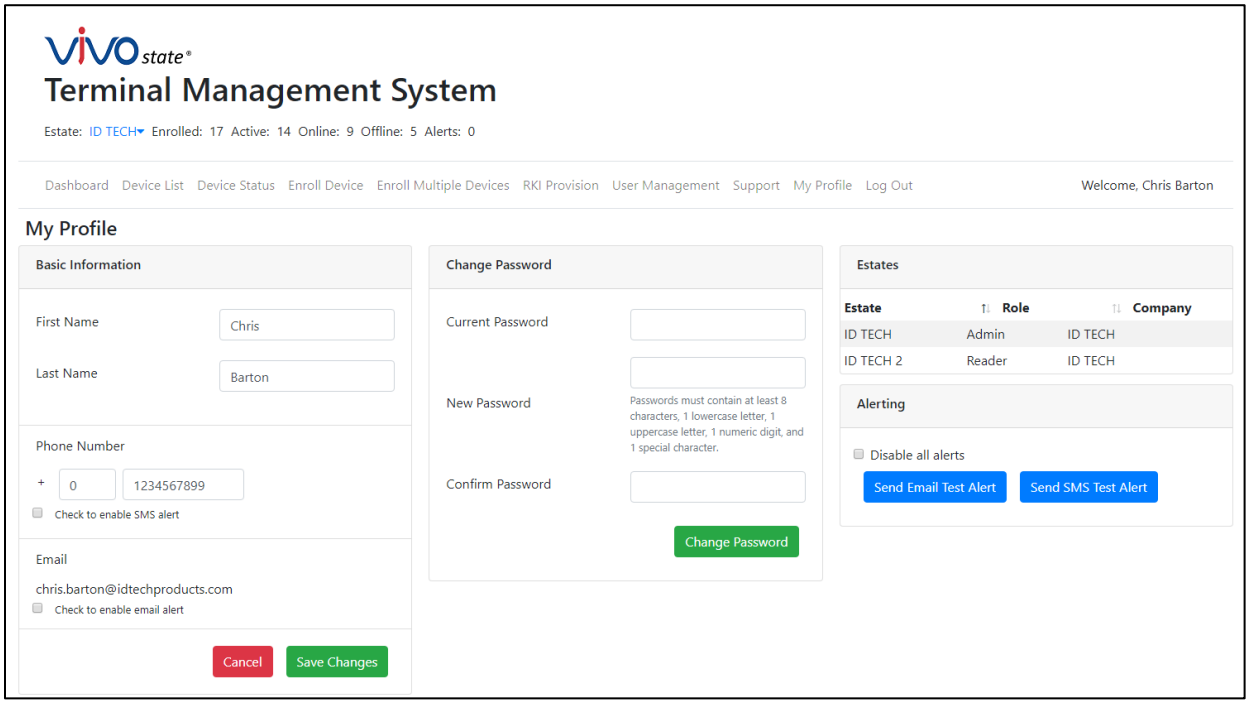


3. Check your email and follow the provided password reset instructions.

4. My Profile

The **My Profile** page provides access to the following settings:

- **Basic Information:** the user's first and last name.
- **Phone Number:** the user's phone number and option to receive SMS alerts.
- **Email:** the user's email and option to receive email alerts.
- **Change Password:** the option to change the user's password.
- **Estates:** the estates the user can access and their role within those estates.
- **Alerting:** test options for email and SMS alerts, plus the option to disable all alerts.



4.1. Changing Profile Information

To change profile information:

1. Go to the **My Profile** page.
2. Enter or toggle the desired changes.
3. Click **Save Changes**.
4. Click **Yes** in the Confirm dialog that appears.

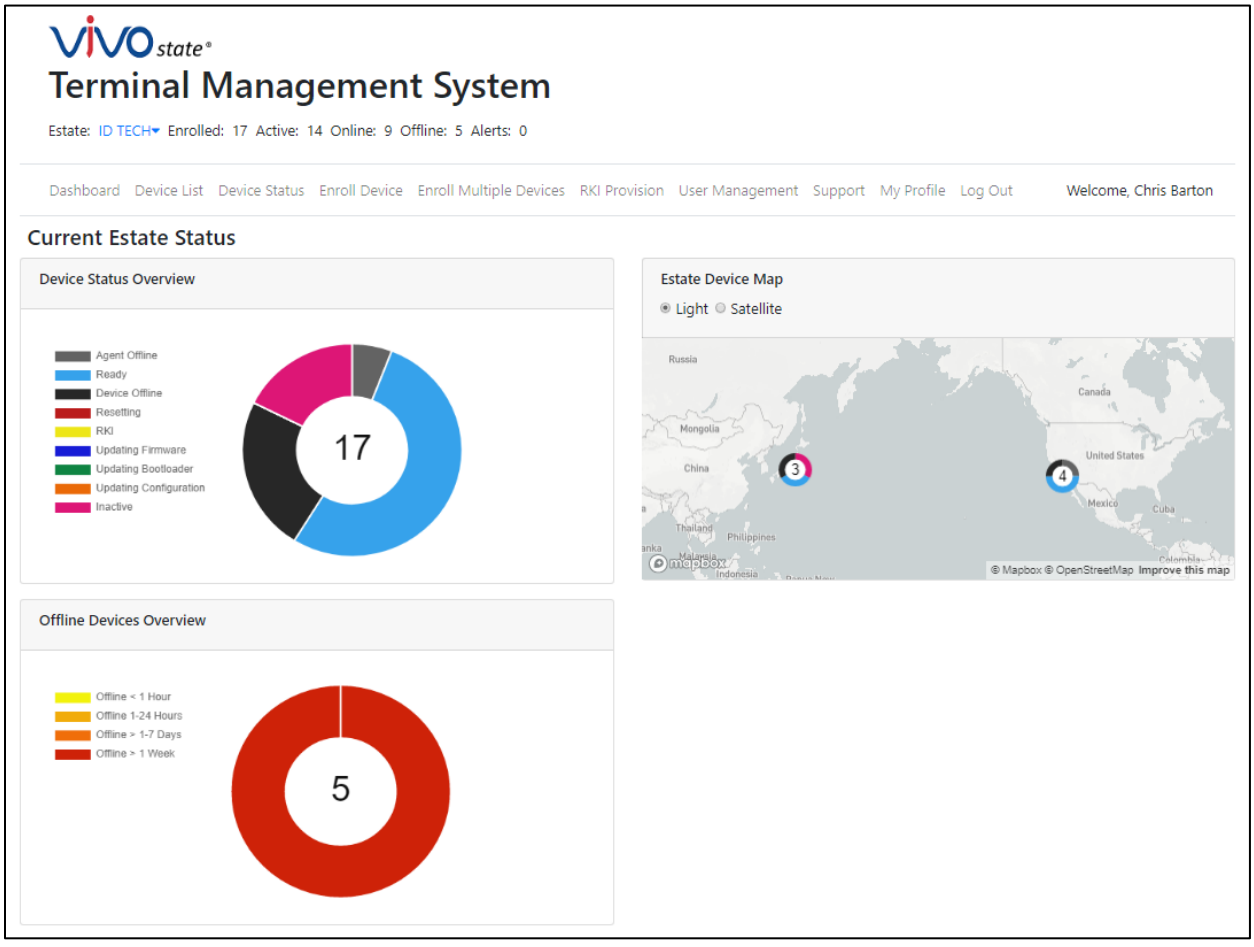
5. Estates

An estate is the collection of terminals and readers that make up a sales ecosystem. In ViVOstate TMS, estate owners can determine the criteria for their estates—types of readers, geographic area, or retail locations, for example.

Estate owners can also determine the user roles for each estate. ViVOstate TMS users can be either administrators or readers. Each estate's set of user permissions is independently configured; a user can be an administrator in one estate but limited to reader permissions in another.

6. ViVOstate TMS Dashboard

The **Dashboard** page provides a snapshot of the user's estates.



1. **Estate:** the currently displayed estate, including the enrolled, active, online, and offline devices, plus any alerts.
2. **Device Status Overview:** an overview graph displaying the number of and status for currently online estate devices.

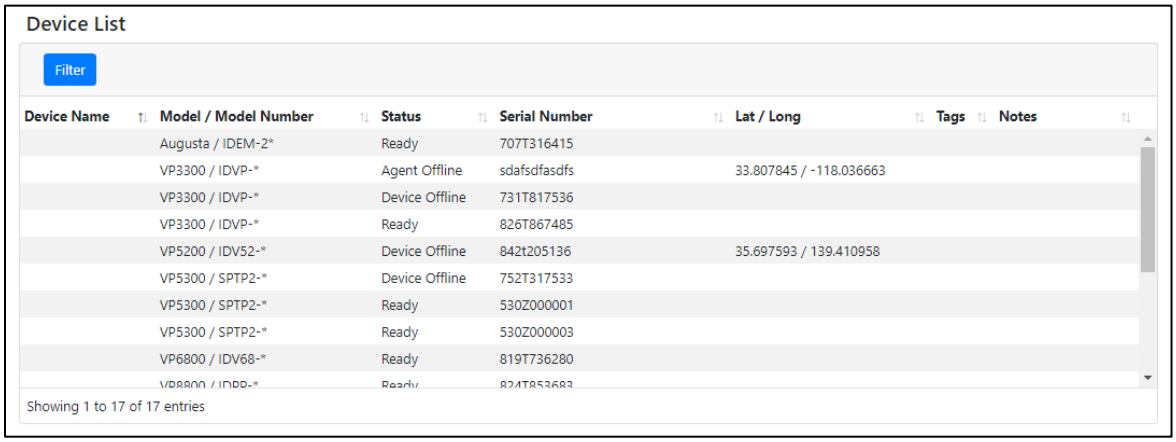
3. **Offline Devices Overview:** an overview graph of the number of offline devices and the length of time they have been offline.
4. **Estate Map:** a geographical map of estate devices and an overview graph for online devices in each location.

7. Device Pages

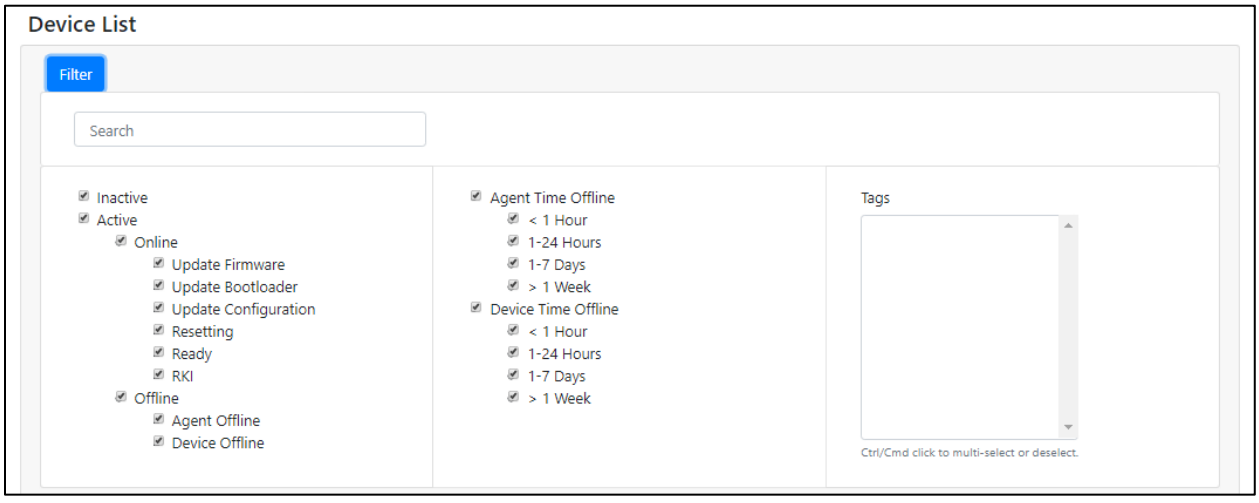
ViVOstate TMS provides several pages that provide device details and management options.

7.1. Device List

The **Device** List page displays the currently selected estate's devices, including their name, model and model number, status, serial number, location, tags, and any notes.

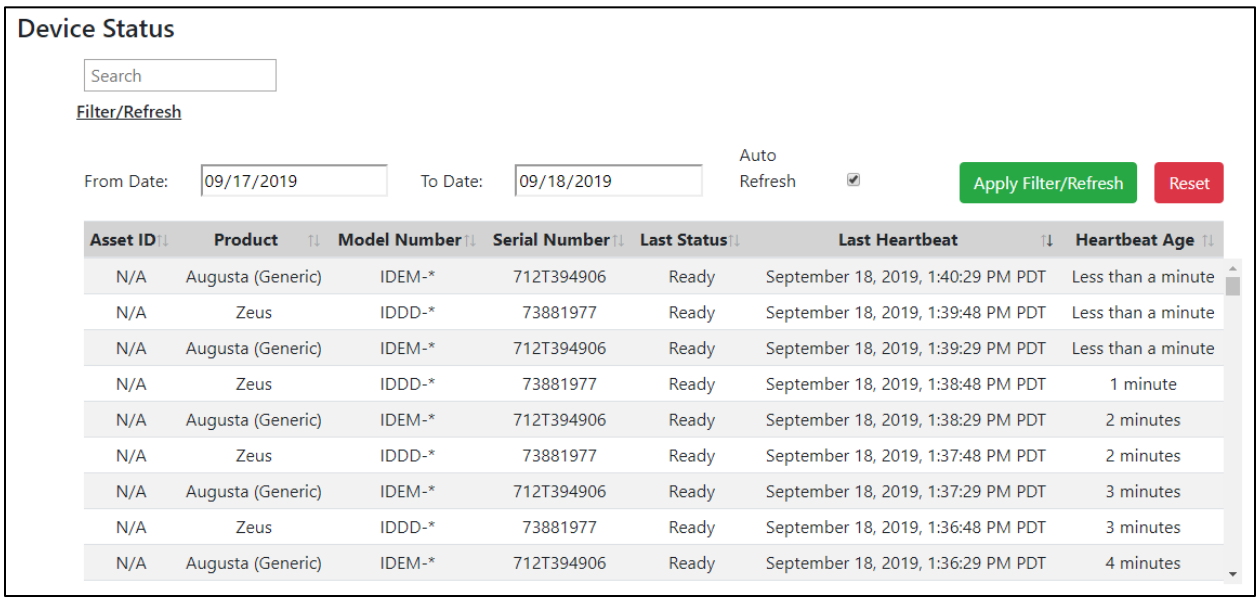


The device list can also be filtered by clicking the **Filter** button, which provides a variety of options for filtering both active and inactive devices.



7.2. Device Status

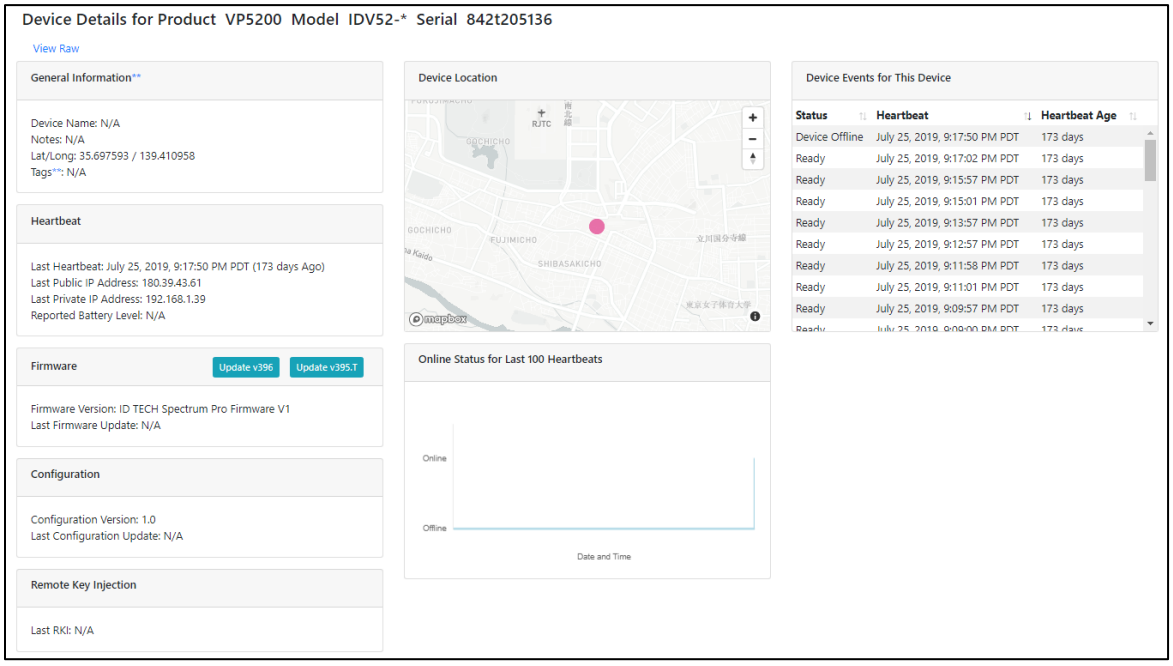
The **Device Status** page displays devices and various statuses, including heartbeat, serial number, and model information, filterable by date.



Asset ID	Product	Model Number	Serial Number	Last Status	Last Heartbeat	Heartbeat Age
N/A	Augusta (Generic)	IDEM-*	712T394906	Ready	September 18, 2019, 1:40:29 PM PDT	Less than a minute
N/A	Zeus	IDDD-*	73881977	Ready	September 18, 2019, 1:39:48 PM PDT	Less than a minute
N/A	Augusta (Generic)	IDEM-*	712T394906	Ready	September 18, 2019, 1:39:29 PM PDT	Less than a minute
N/A	Zeus	IDDD-*	73881977	Ready	September 18, 2019, 1:38:48 PM PDT	1 minute
N/A	Augusta (Generic)	IDEM-*	712T394906	Ready	September 18, 2019, 1:38:29 PM PDT	2 minutes
N/A	Zeus	IDDD-*	73881977	Ready	September 18, 2019, 1:37:48 PM PDT	2 minutes
N/A	Augusta (Generic)	IDEM-*	712T394906	Ready	September 18, 2019, 1:37:29 PM PDT	3 minutes
N/A	Zeus	IDDD-*	73881977	Ready	September 18, 2019, 1:36:48 PM PDT	3 minutes
N/A	Augusta (Generic)	IDEM-*	712T394906	Ready	September 18, 2019, 1:36:29 PM PDT	4 minutes

7.3. Device Details

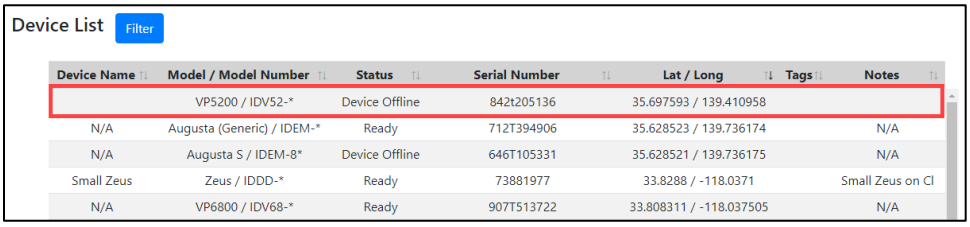
The **Device Details** page displays the device's general, heartbeat, firmware, configuration, location, and other information, as well as a history of recent device events.



7.3.1. Viewing Device Details

To view the details for a device:

1. Go to either the **Device Status** or **Device Details** page.
2. Click on the desired device to view its status page.



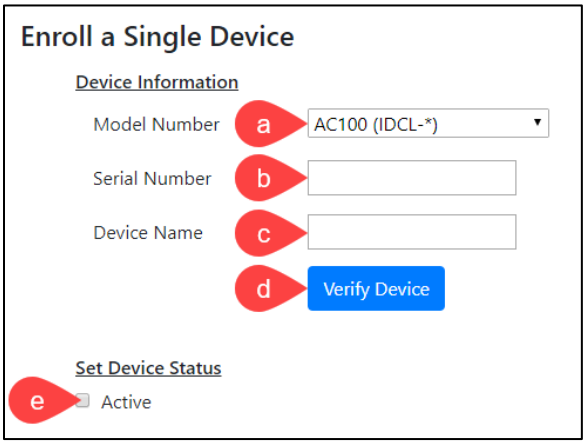
7.4. Enroll Device

Users can enroll devices in estates via two pages: **Enroll Device** and **Enroll Multiple Devices**.

7.4.1. Enrolling a Single Device

Follow these steps to enroll a single device:

1. Go to the **Enroll Device** page.
2. Enter the following information:

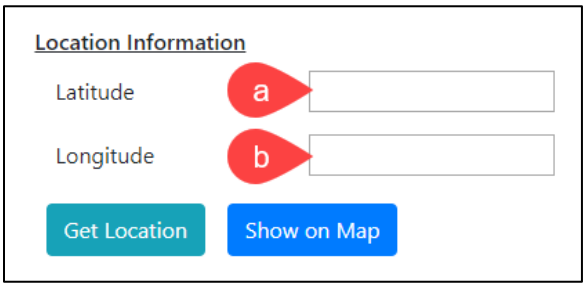


   a. The device model number.
   b. The device serial number.
   c. A name for the device.
   d. Click **Verify Device** to verify the information is valid.
   e. Optionally, check Active to set the device's status as active.

3. Next, enter location information for the device.

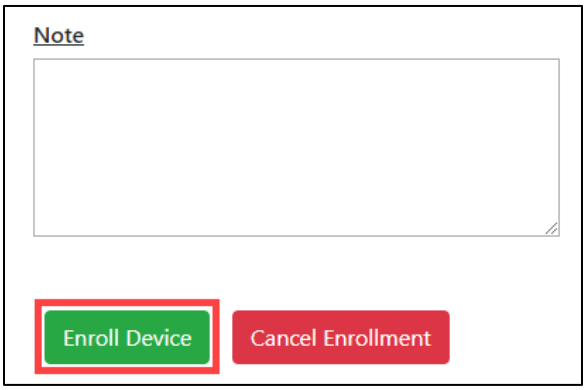
   Note: Location information are static by default and do not automatically update unless a

device has tracking features. You can edit device location later, if needed.



a. The device's installation latitude.
b. The device's installation longitude.

Optionally, click **Get Location** to find your current location or Show on Map to see a map display of location information you've entered.

4. If desired, enter a note for the device, then click **Enroll Device**.
5. 

7.4.2. Enrolling Multiple Devices

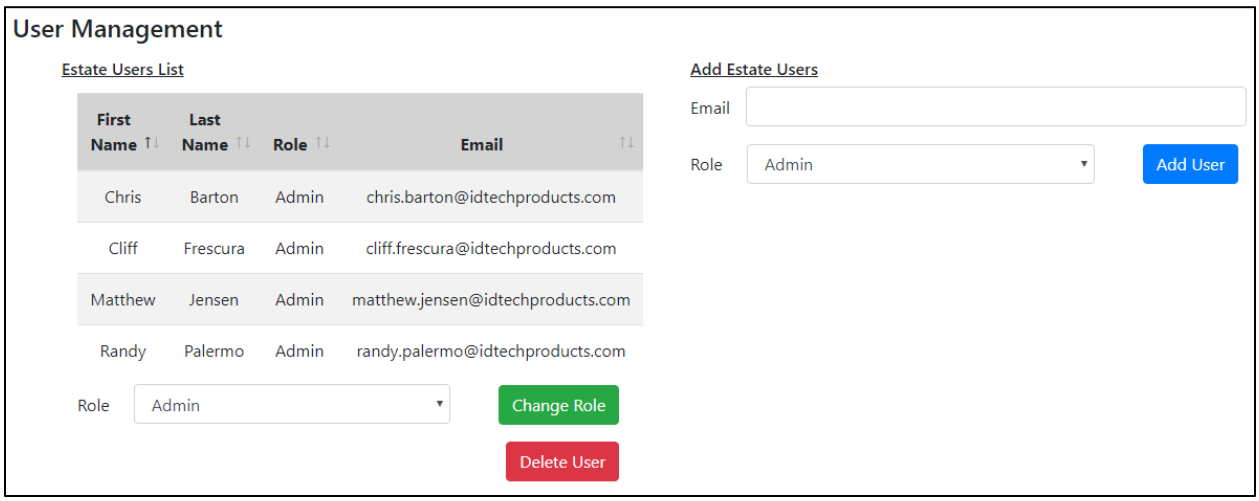
Enrolling multiple devices is currently in development.

8. RKI Provision

The **RKI Provision** page is currently in development.

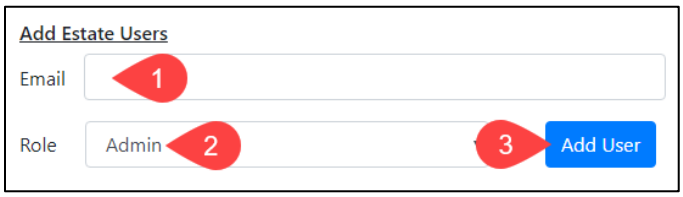
9. User Management

The **User Management** page provides options for adding and managing estate users.



9.1. Adding Estate Users

To add an estate user:

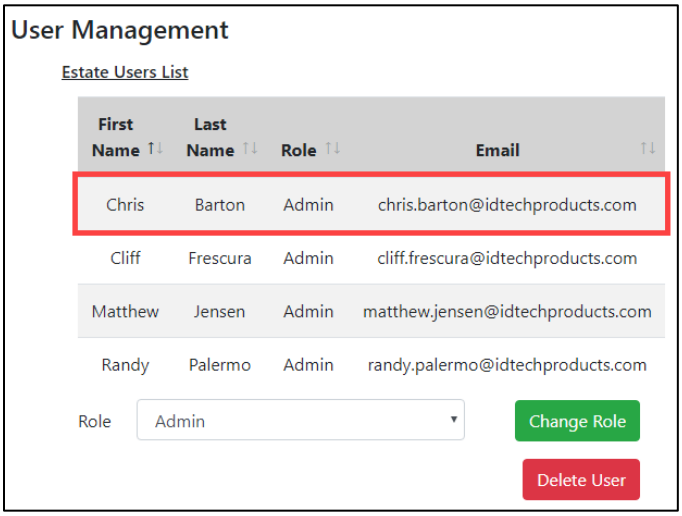


1. Go to the **User Management** page.
2. Enter the new user's email and select their role (**Admin** or **Reader**).
3. Click **Add User**.

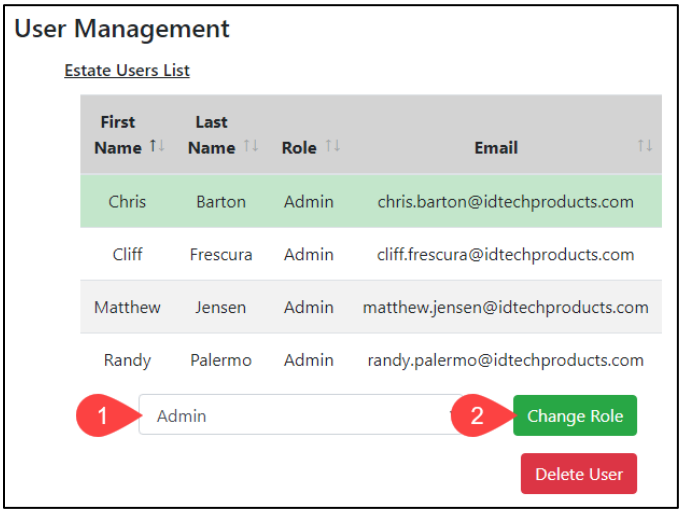
9.2. Managing Estate Users

To change an estate user's role or delete them:

1. Select the desired user.



2. To change their role, click the **Role** drop-down menu and select the desired role.
3. Click **Change Role**.



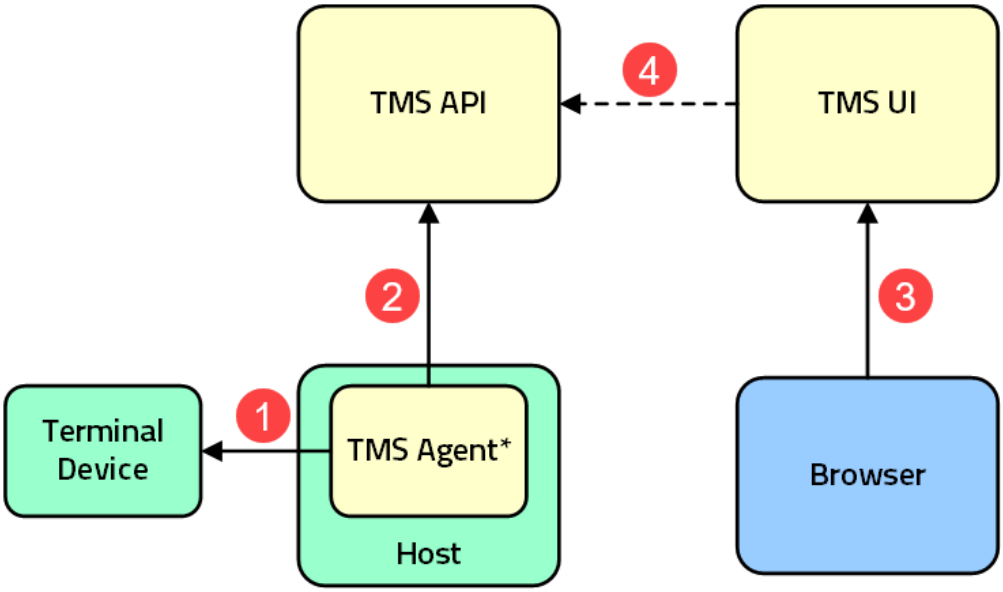
4. To delete the selected user, click **Delete User**.

10. ViVOstate TMS Agent

The ID TECH Terminal Management System Agent is a software agent application that resides on a host device. The TMS Agent acts on behalf of the user to monitor the terminal device and, when requested, make firmware updates to the reader. At no point does a user directly interact with the TMS Agent. Instead, users trigger firmware updates via the Device Details page and the TMS API performs any actions required.

Additionally, the TMS Agent is self-updating and does not require user interaction to stay up to date.

10.1. TMS Agent Data Flow



***Note:** the TMS Agent runs in the background on the Host; users do not interact with the TMS Agent.

The diagram above describes the following events:

1. The TMS Agent retrieves terminal device information.
2. The TMS Agent sends a terminal device "heartbeat" to the TMS API server.
3. Independently, on the TMS website, a user requests a page of heartbeats from the TMS UI server.
4. The TMS UI server retrieves heartbeat data from the API server

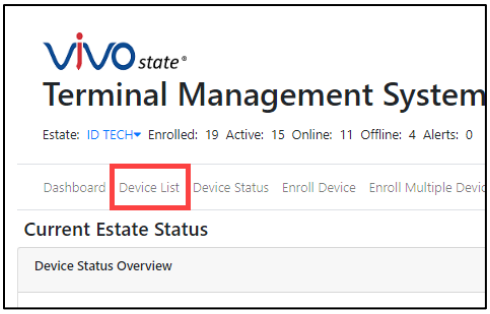
Similarly, the TMS Agent handles any necessary terminal device firmware updates without a user ever directly interacting with it; the user makes all requests via the TMS website.

10.2. Updating the TMS Agent Application on a Device

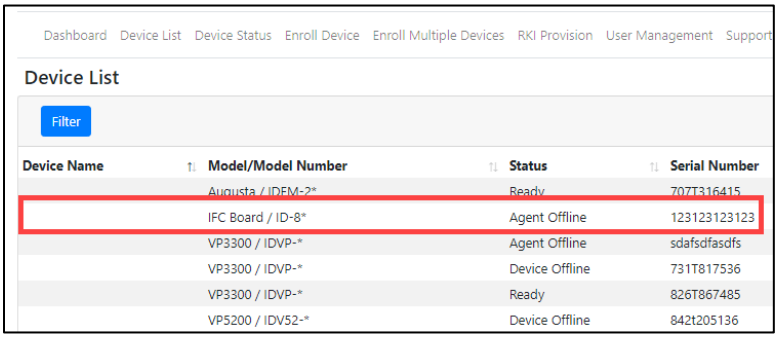
Follow the steps below to update the TMS Agent application on a device.

Note: The default time between heartbeats is 15 minutes; a TMS Agent update should complete within that timeframe.

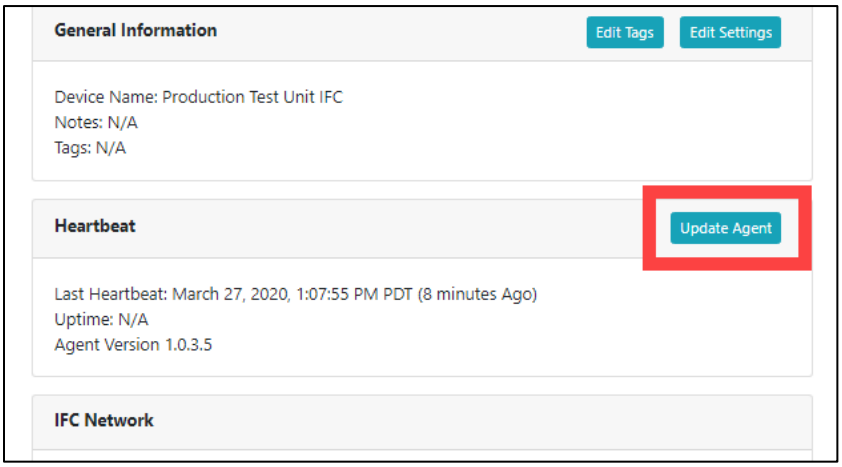
1. Log into the TMS website.
2. Click the **Device List** tab.



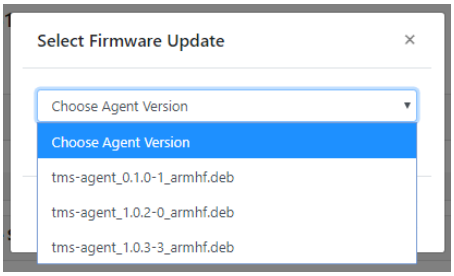
3. Click the desired device to update.



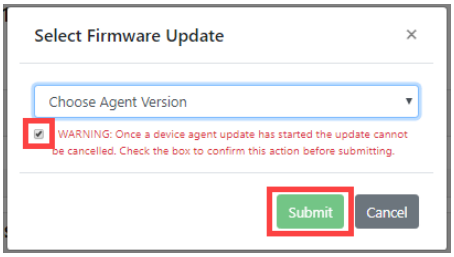
4. Click the **Update Agent** button in the **Heartbeat** panel.



5. Use the drop-down menu to select a TMS Agent version for the update.

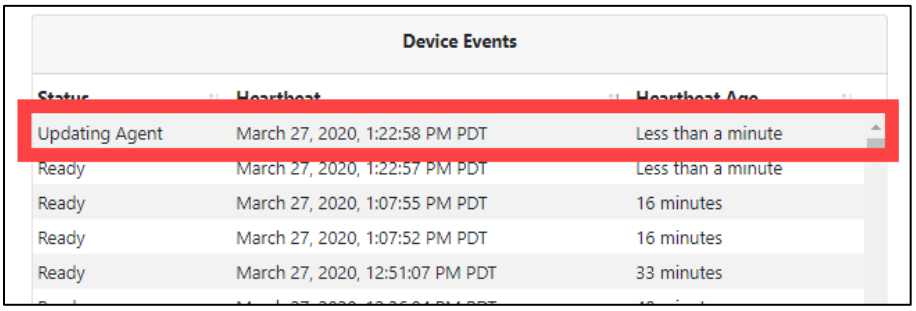


6. Check the box under the drop-down to confirm that you wish to update to the new version of TMS Agent and click Submit.

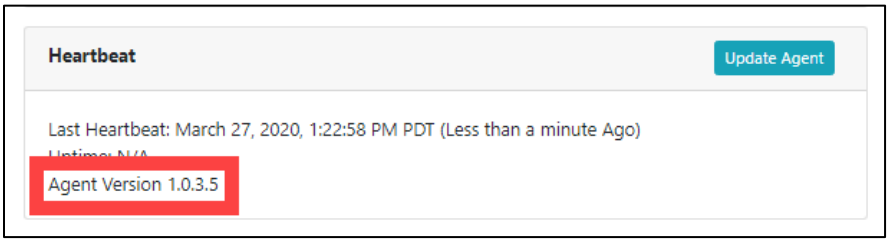


7. The TMS website displays a dialog that request is received.

8. Wait for the next heartbeat to update the agent (heartbeats are sent at 15-minute intervals), then reload the page.
9. Look at the **Device Events** section to confirm the target device sent the **Updating Agent** status.



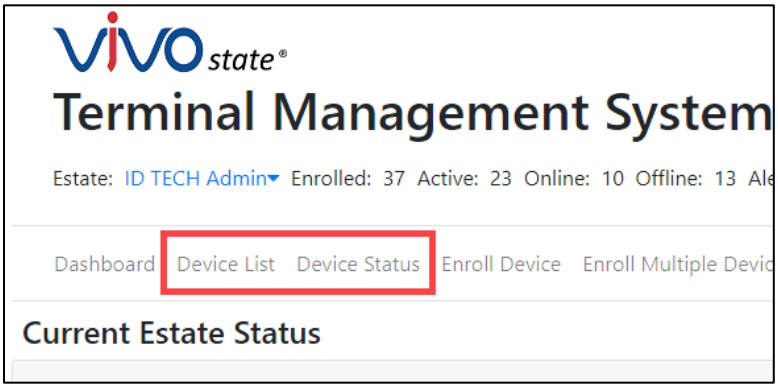
10. When the target device starts sending heartbeats again, reload the page.
11. Confirm that the target device has the correct version of TMS Agent in the **Heartbeat** panel.



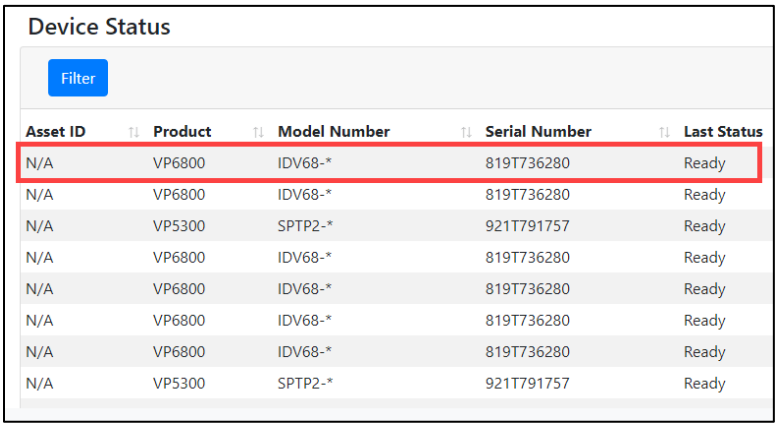
10.3. Updating Device Firmware via the ViVOState TMS Website

Follow the steps below to update device firmware on the TMS Website:

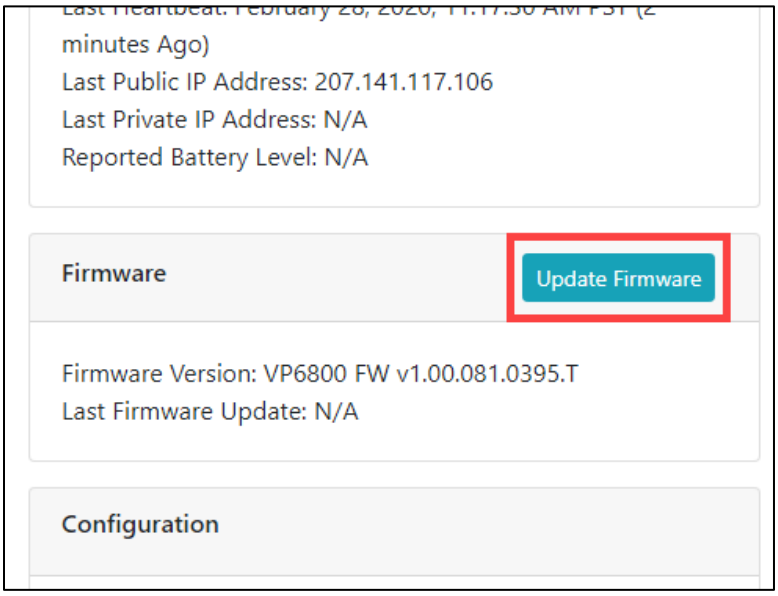
1. Log in to the TMS Website
2. Click **Device List** or **Device Status** to see a list of the estate's devices.



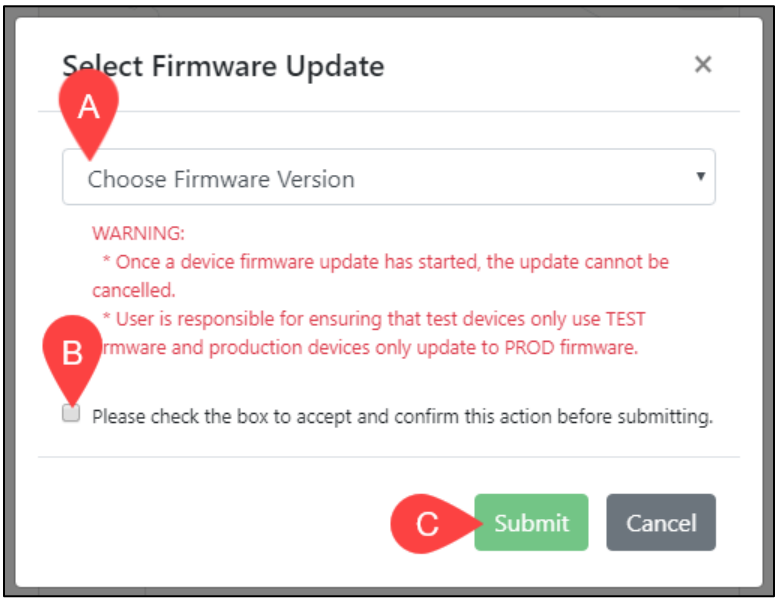
3. Click the desired device to go to its **Device Details** page.



4. Scroll down to the **Firmware** field and click **Update Firmware** to display the update dialog.

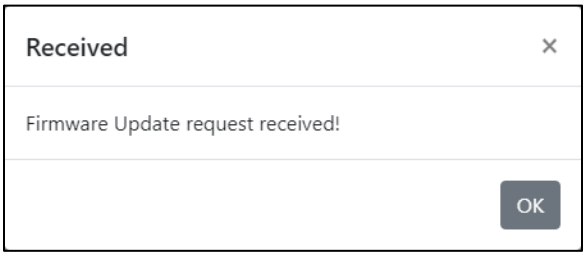


5. In the update dialog:

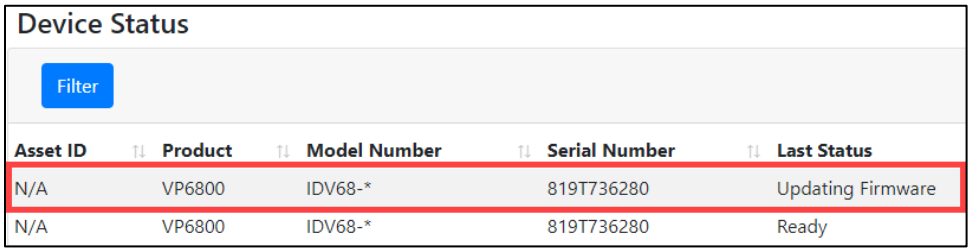


   a. Select a firmware version in the dropdown menu.
   b. Check the box to accept and confirm the action.
   c. Click **Submit**.

6. The TMS website displays a dialog that it received the firmware update request.



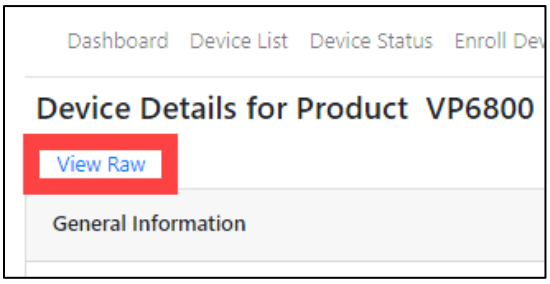
During the update, the target device's status displays as **Updating Firmware**; when the update completes the status displays as **Ready**.



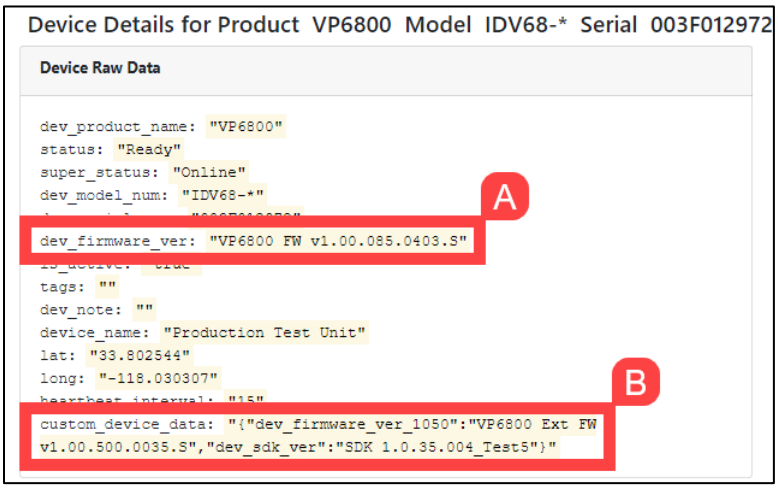
10.4. Checking and Validating Firmware Versions via Raw Data

Follow the steps below to check and validate firmware versions via raw data.

1. On the **Device Details** page, click **View Raw** under the device name.



2. The page displays raw data for the device, including
   a. **dev_firmware_ver**: the current firmware version for the K81 processor.
   b. **custom_device_data > dev_firmware_ver_1050**: the current firmware version for the RT1050 processor.



10.5. Notes About Updating Firmware

Be mindful of the following when updating device firmware:

- Firmware updates are limited to the versions listed in the **Firmware Update** dialog.
- Be sure to use the correct firmware update—production versus test—for the target device:
  - Production units have model numbers that end in a number (for example, IDV68-11111) and use firmware updates labeled PROD.
  - Demo units have a model number ending with D (for example, IDV68-11111D) and use firmware updates labeled **TEST.**
- Firmware updates for devices with multiple CPUs are available only as packages and the firmware for both CPUs must be updated at the same time.

10.6. Troubleshooting Firmware Updates

If a firmware update fails, follow these steps to ensure further update attempts succeed:

1. Verify that the firmware update version is correct for the device. Do so by comparing the currently installed version to the version number in the update menu.
2. Make sure the firmware update matches the device type—production versus demo:
    a. Production units have model numbers that end in a number (for example, IDV68-11111) and use firmware updates labeled PROD.
    b. Demo units have a model number ending with D (for example, IDV68-11111D) and use firmware updates labeled TEST.
3. Retry the update. The firmware updater is designed to be robust and handle any interruption. Users can simply retry the firmware update process if it failed the first time.

10.7. TMS Agent Standby Mode

In Standby Mode, TMS Agent does not connect to the target VP6800 (or other device) before every heartbeat. Instead, TMS Agent gathers heartbeat data on startup and writes it to **data.json**, stored locally on the connected Interface Controller Board device. Before every heartbeat TMS Agent gets heartbeat data from **data.json** instead of the VP6800.

10.7.1. data.json Overview

TMS Agent creates a **data.json** file and saves that file in the IFC Board's root directory to store the VP6800's current data. TMS Agent uses this file to send accurate VP6800 heartbeat data without having to connect to the device each time. TMS Agent only uses **data.json** when in Standby Mode.

Note: Although users can create their own **data.json** file, ID TECH recommends using the **data.json** file that TMS Agent auto-generates. Using incorrect values in the JSON can majorly affect how and what data TMS Agent sends to the TMS Server.

10.7.2. data.json Example

The following example describes the possible **data.json** fields and values. Note that the file may not always contain all fields and values listed below.


```
{
      "ifc_serial":"004T451437",
      "idt_serial":"003F012972",
      "firmware_ver":"VP6800 FW v1.00.085.0403.S",
      "firmware_ver_1050":"VP6800 Ext FW v1.00.500.0035.S\u0001",
      "agent_event":"Heartbeat",
      "agent_status":"Ready",
      "device_event":"Heartbeat",
      "device_status":"Ready"
}
```


Field	Value
ifc_serial	The serial number on the IFC board
idt_serial	The serial number on the VP6800
firmware_ver	The current firmware version on the K81 chip
firmware_ver_1050	The current firmware version on the RT1050 chip
agent_event	The current event type being sent for agent heartbeats
agent_status	The current status for the agent
device_event	The current event type being sent for VP6800 heartbeats
device_status	The current status for the VP6800
agent_version	The current version of the TMS Agent

10.7.3. Troubleshooting Standby Mode

If the IFC Board unit cannot access **data.json**, it prints the following line out to the console:
There is no 'data.json' file or it has been corrupted. Please run agent in non-standby mode so the file can be created and all appropriate data inputted into it or delete the existing one and restart the TMS Agent.

When this happens, delete the **data.json** file and restart TMS Agent.

10.8. TMS Agent Configuration

Device administrators can use the **config.json** file to perform basic TMS Agent configuration.

10.8.1. config.json Overview

The **config.json** file resides on an IFC Board device and handles TMS Agent configuration. IFC Boards do not require a config file to run in default configuration. Device administrators must create **config.json** manually in the following directory: **/etc/tms_agent/config.json**.

10.8.2. config.json Example

The following example describes the possible **config.json** fields and values.

```
{
      "DEV": 1,
      "IFC": 1,
      "endpoint_url": "https://api.vivostate.io/event"
}
```

DEV	If **0**, TMS Agent connects to the production server; if **1**, TMS Agent connects to the test server (**0** by default).
IFC	If **0**, TMS Agent does not send IFC heartbeats; if **1**, TMS Agent sends IFC heartbeats (**1** by default).
endpoint_url	The specific URL used to send heartbeats to the TMS Server. This field overrides the **DEV** field when used (unused by default).

10.8.3. config.json Troubleshooting

TMS Agent does not require config.json to run, and as such does not send an error message when it is incorrectly implemented; TMS Agent simply runs in the default configuration. If TMS Agent is running in default configuration and not the configuration defined in c**onfig.json**, follow these steps:

1. Delete **config.json** from the IFC Board device.
2. Create a new config.json in the **/etc/tms_agent/config.json** directory.
3. Restart TMS Agent.

11. Requesting Support

Find Tech Support resources at the ID TECH Tech Support home page or send an email describing any issues to support@idtechproducts.com (emailing this address automatically generates a support ticket).

Further in-browser support features are currently in development.