

DATE

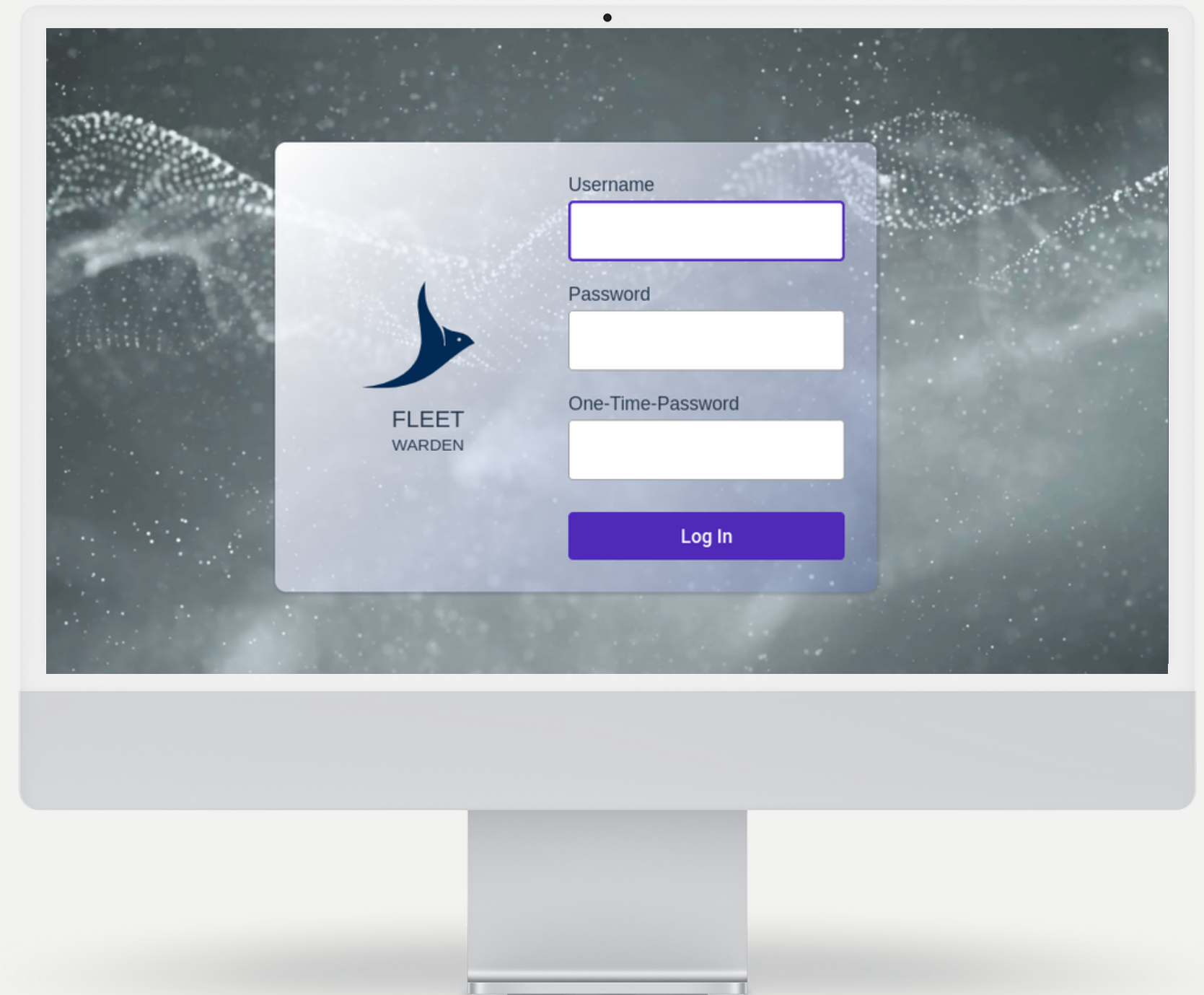
06.10.2022

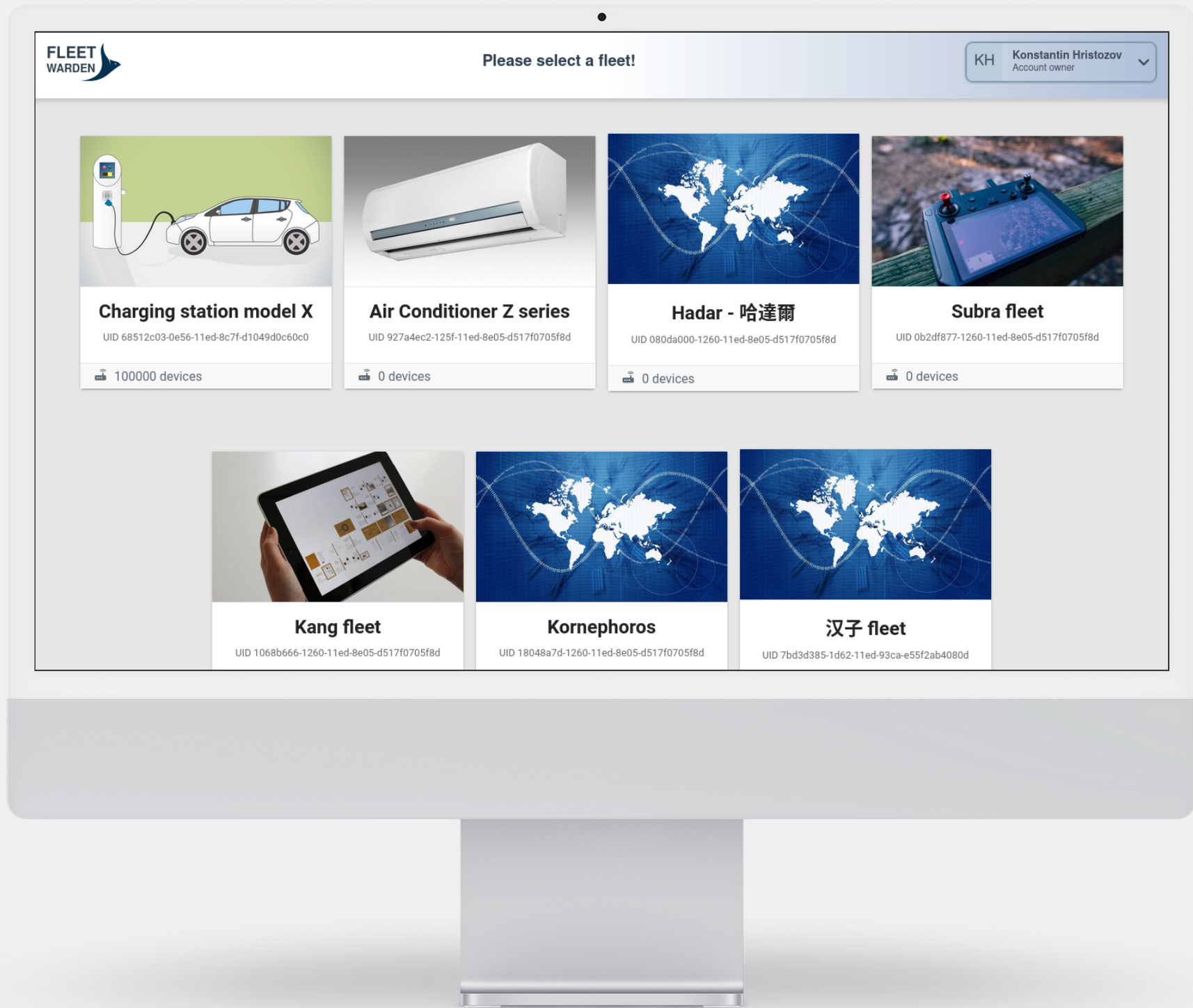
# How to manage large device fleets

The intelligent way of rolling out software updates with Fleet Warden

URL

[www.fleetwarden.de](http://www.fleetwarden.de)





START WITH A

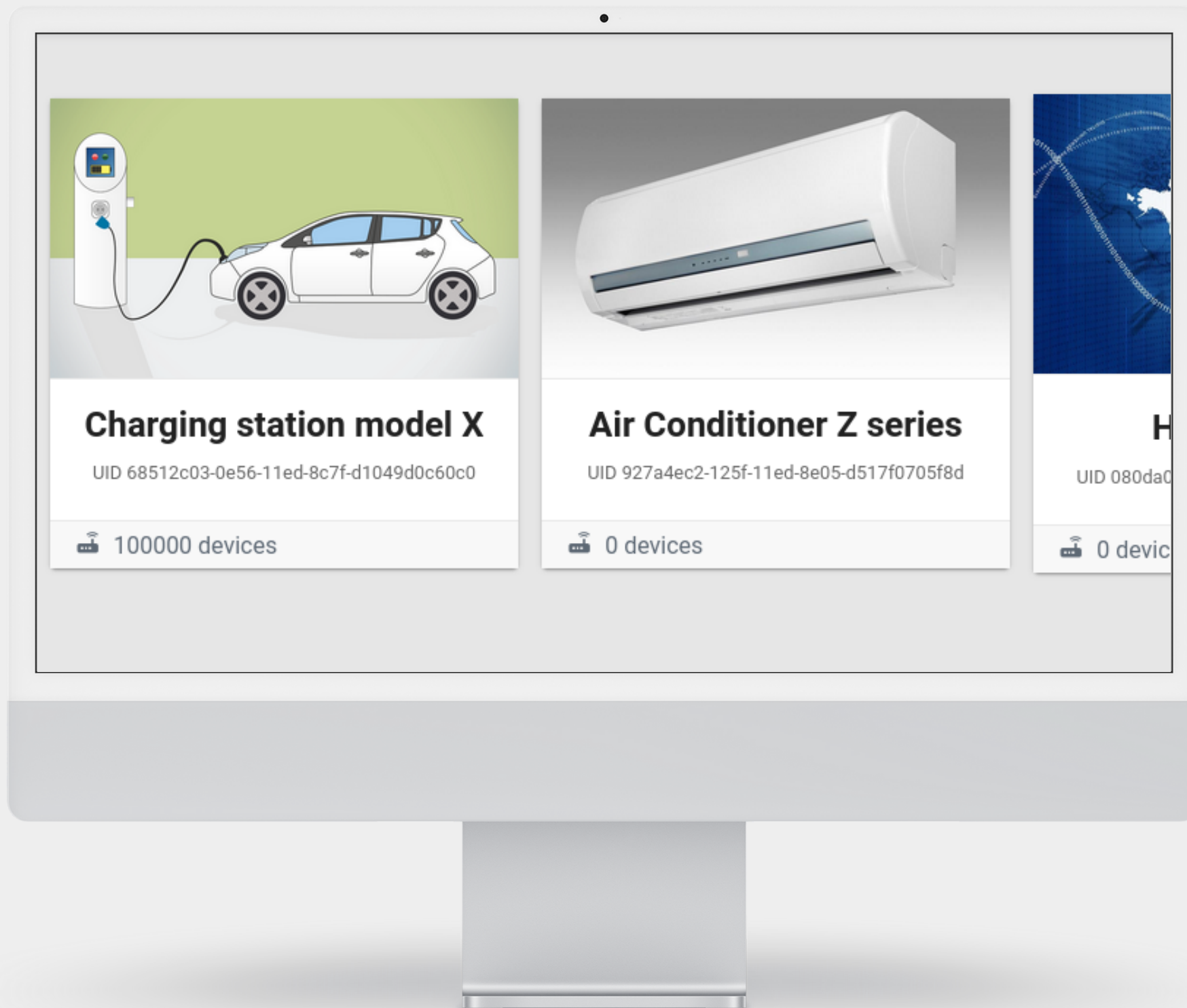
# Fleet

## WORKFLOW FLEET

# All devices are organized in fleets

**You can spawn a fleet over a product, a product variant, a customer, a single model of a product or basically something that you want to manage separately. Every fleet encapsulates its own subset of devices, software bundles, deployment plans, regions, groups and user privileges.**

Only administrators can create fleets. They can manually import devices into fleets or manually remove devices from a fleet. One device can be part only of one single fleet.



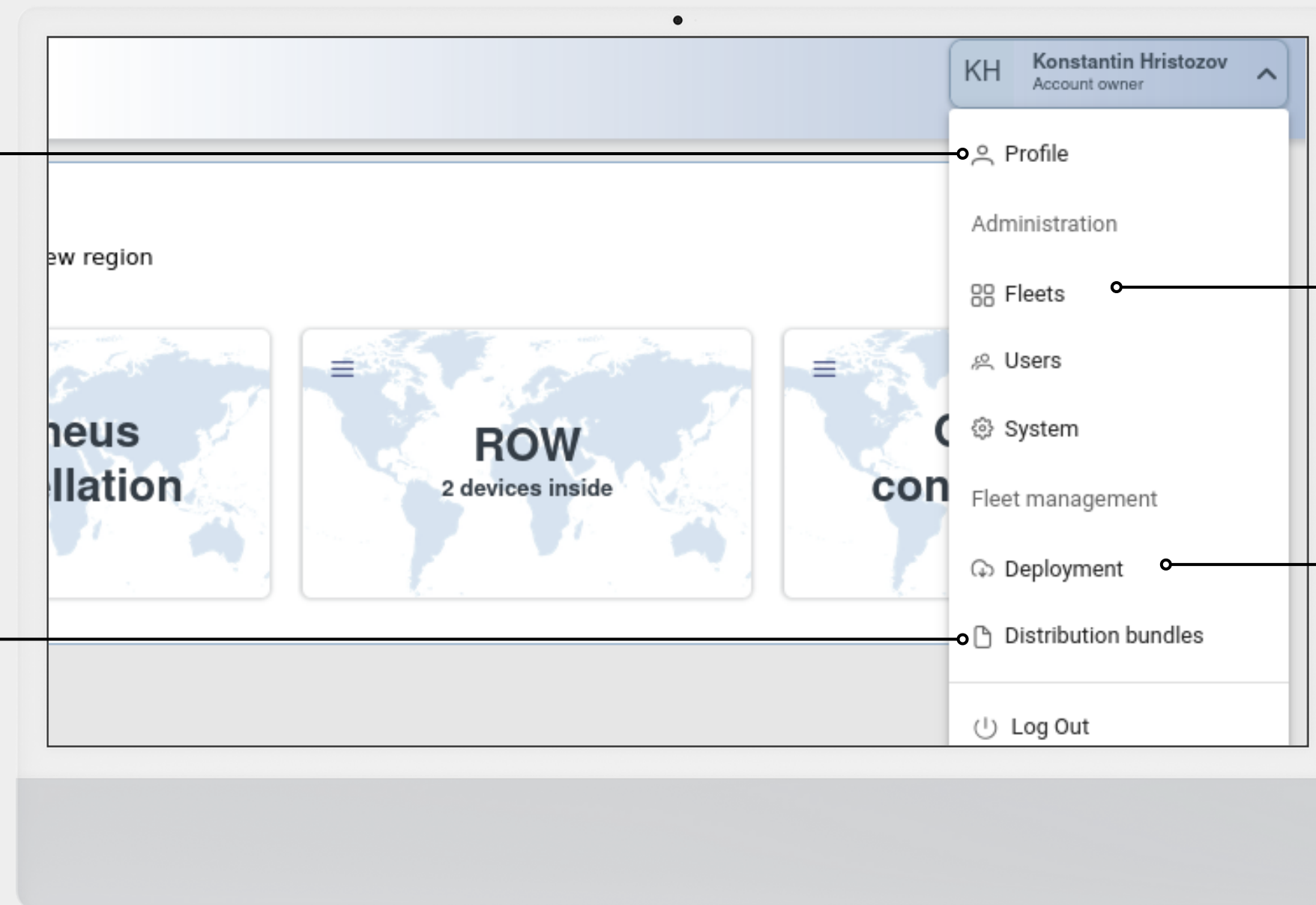
# Navigating the menu

## Profile

Personalized experience for every single user

## Bundles view

Specifically designed for developers to internally deliver distributable bundles of software releases



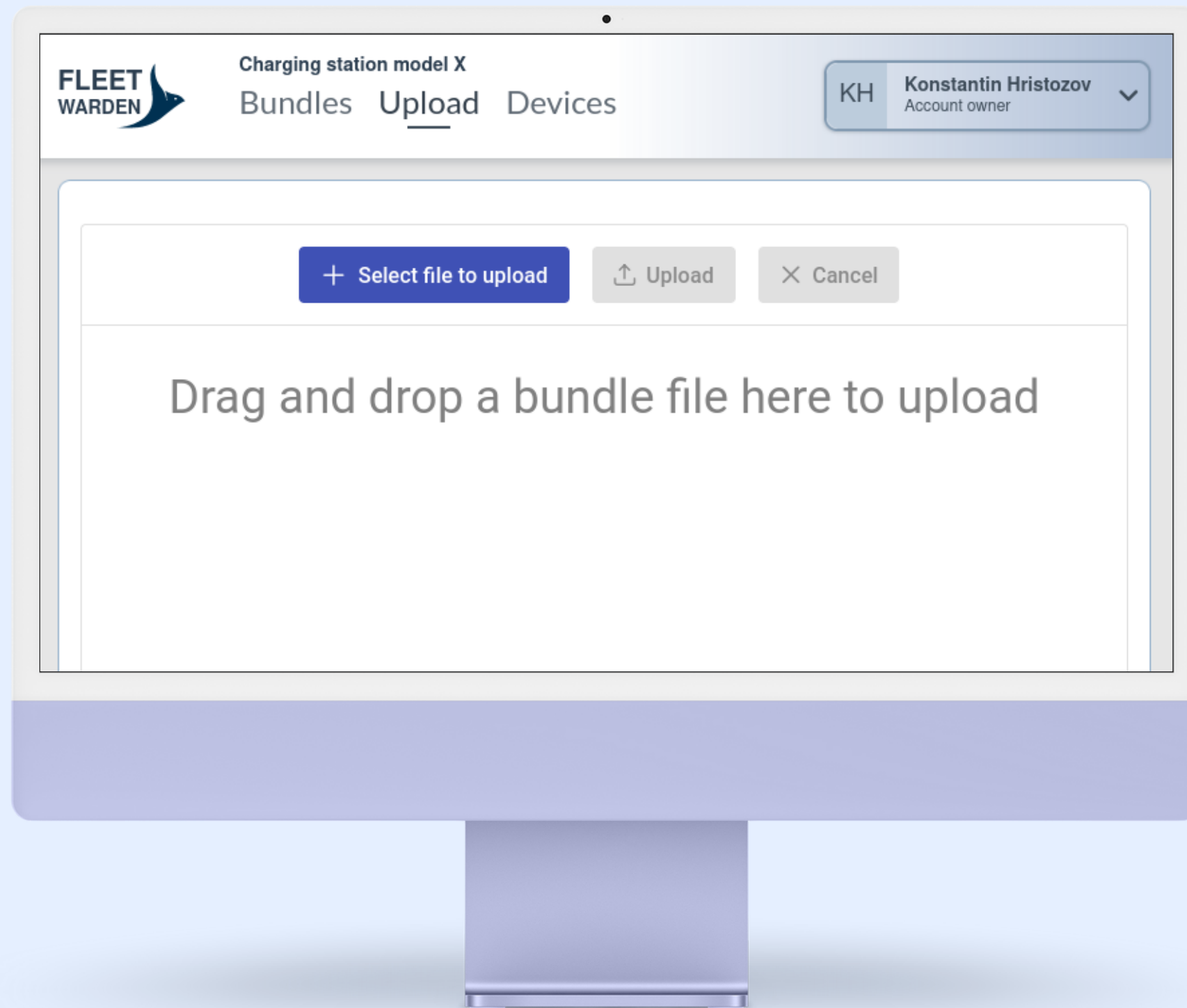
## Administration

Admins can add, remove and alter fleets and users along with changing some setting.

## Deployment view

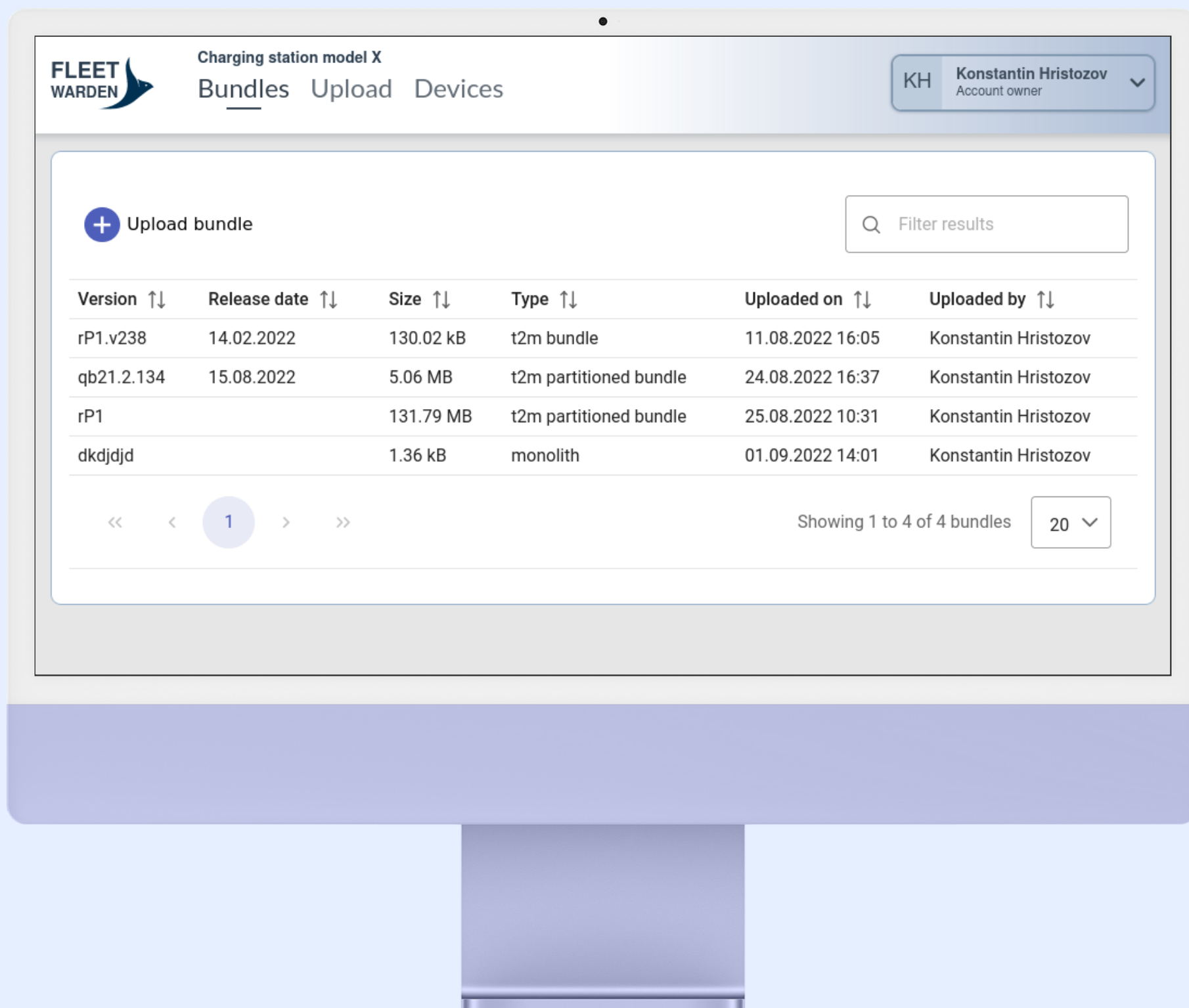
Specifically designed for sales users to decide when and how to deliver new software to customers.





DELIVER SOFTWARE IN

# Bundles



## WORKFLOW BUNDLE

# Bundles contain partition images

**A software release is the outcome of a software development process. The artifacts of the release are mainly partition images, documents and content. The artifacts relevant for an update are packed together with a manifest into a distribution bundle.**

Bundles are delivered to a fleet by a responsible user. This is usually a project manager, a developer or an external software supplier company. Bundles contain signatures and hardware compatibility information to ensure that the software is genuine and can run on the device that want to update to it.

# Inside bundles

## Version, Size, Hash

See the most important details first. They ensure data integrity and differentiate bundles

## Modifiable metadata

Signatures, comments and hardware compatibility can be adjusted anytime

**Bundle qb21.2.134** Uploaded on 24.08.2022 16:37

Version	Size	Type	UID
qb21.2.134	5.06 MB	t2m partitioned bundle	4d9b699f-23ba-11ed-943c-e764421cc792

SHA256 hash: 7d45c8fd36277c20437fa437e4fa9ac36408390fb9dd22eccc6e2c9e07f04e6  
Uploaded by: Konstantin Hristozov

[Download bundle](#)

Release date: 15.08.2022

Supported HW versions (use comma or return to separate items): B1, B1.1, B3

Signature: 3928098230482340892347

Comment: A bundle of json files

[Save](#)

### Partitions in bundle qb21.2.134

**rootfs**  
Version: 25 Image type: 0 Size: 5.05 MB  
Sha256: 2080b4ea2f66ec69d271da5d87d5ec171c1ffded09dc5771aaa991440d614  
Signature: 8932039480239480aac239842ee34966

**kernel**  
Version: 836 Image type: 0 Size: 4.11 MB  
Sha256: 82850ea6dd7e4f5865c3fa492048a5801cc3f1559002867de2368db04468361e  
Signature: 9902384029384a30a289292997762903573FF

### Statistics

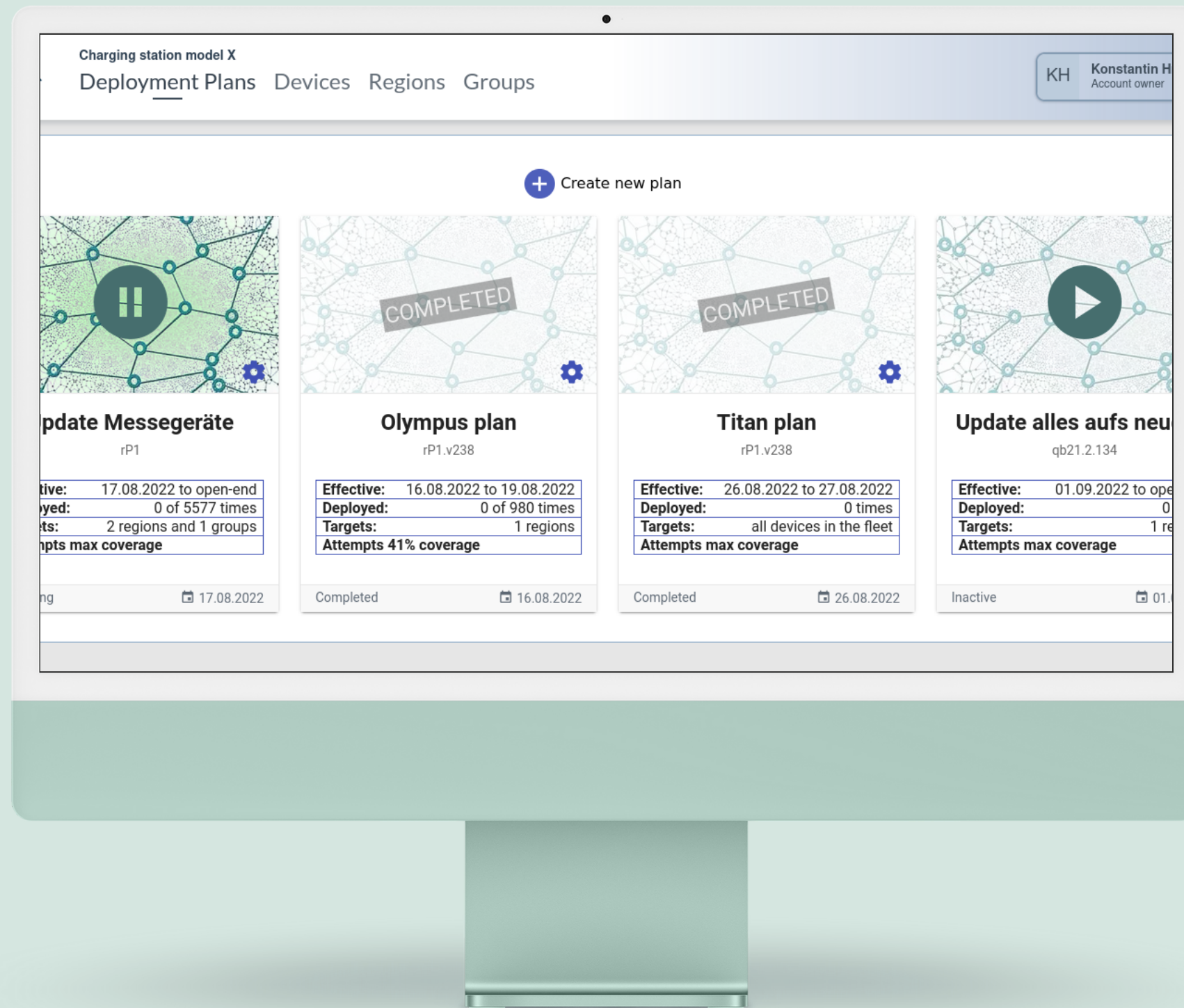
Included in 1 deployment plants  
This bundle has not been installed on any device yet

## Partitions in bundle

See what's inside. Once the bundle is uploaded, you can review the metadata of the partitions

## Usage statistics

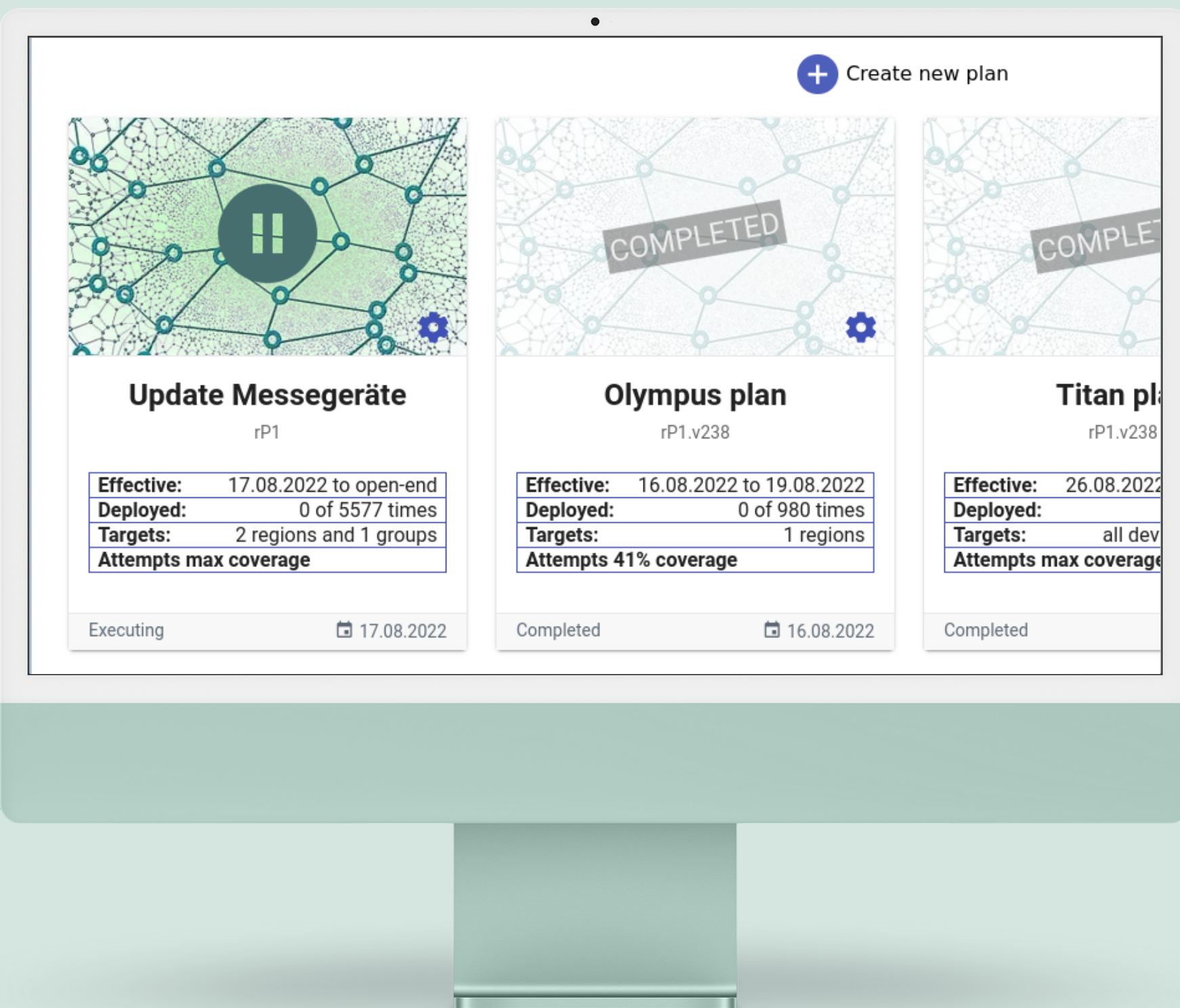
See how many devices have the software installed and if it is planned for deployment



USE PLANS TO

# Deploy





## DEPLOYMENT PLANS WORKFLOW

# Deployment plans roll out updates

The strategy to provide software bundles to devices is defined through deployment plans. You define which devices to update by organizing them in regions and groups. You choose when to start and when to stop distributing a bundle to the devices.

Multiple plans can run at the same time. Every plan can be started and stopped manually. Every single time a device updates itself and checks-in with the cloud with its new software version, the bundle's coverage changes. This coverage can also be used as a criteria to stop a deployment plan from further distributing updates.

# Inside deployment plans

## The basics

Select a bundle to distribute, choose a start date and you are ready to roll

## Update specific devices

You can refine the devices to receive the updates by selecting multiple regions and groups

The screenshot shows a configuration interface for a deployment plan. It is divided into several sections:

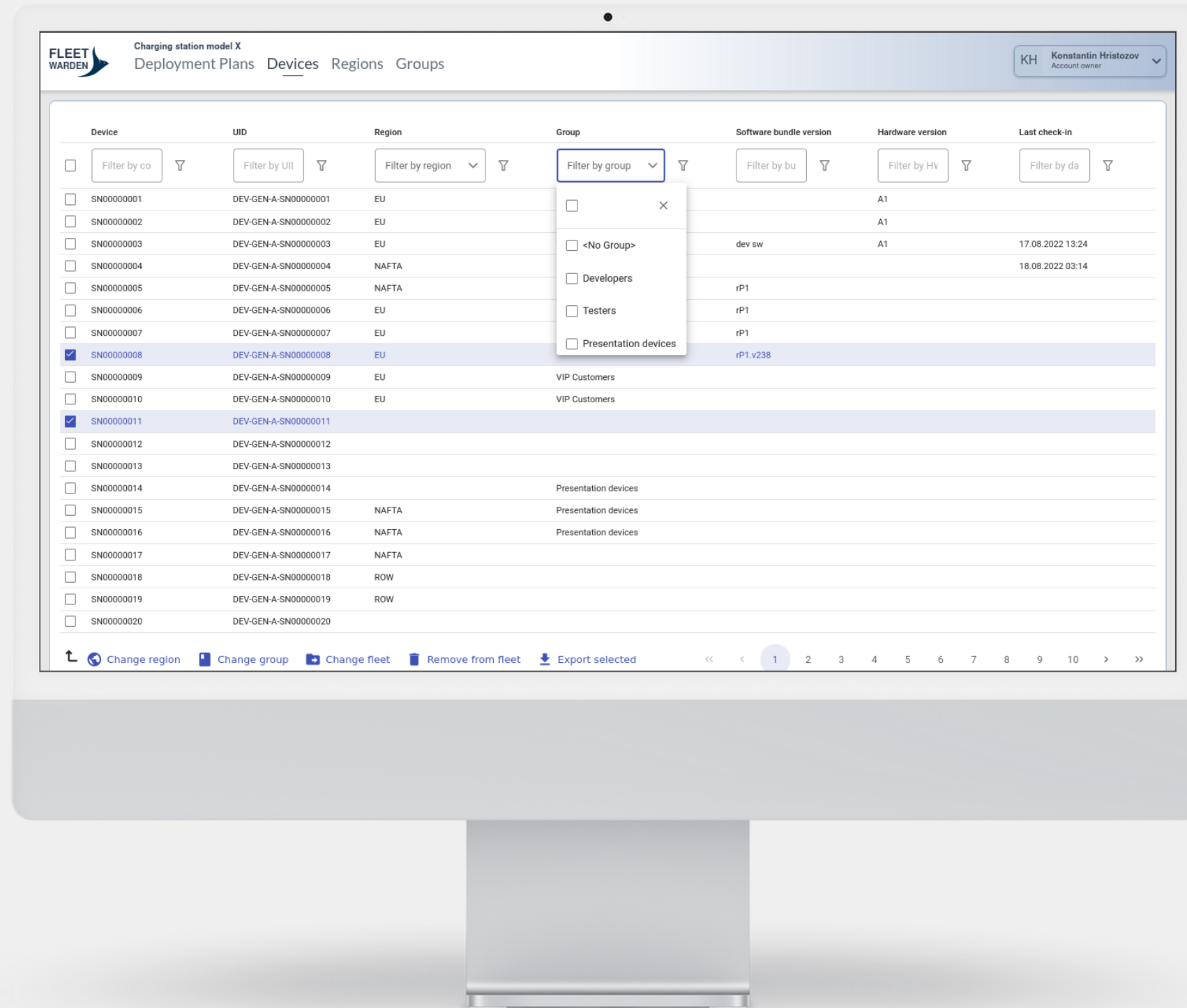
- Label:** A text input field containing "Update Messegeräte".
- Effective from:** A date picker field showing "17.08.2022".
- Distribution bundle:** A dropdown menu with "rP1" selected.
- Target devices to update:** A section with a description: "By default the deployment plan will affect all devices in your fleet. You can target a subset of devices by selecting specific regions or groups". It contains two dropdown menus:
  - Target specific regions (13 devices):** A dropdown menu with "EU, NAFTA" selected.
  - Target specific groups (5 devices):** A dropdown menu with "Presentation devices" selected.
- Completion criteria:** A section with the text "The deployment plan is effective until any of the following completion criteria is met". It contains three fields:
  - Date reached:** An empty date picker field.
  - Reached number of updated devices:** A text input field containing "5577".
  - Reached coverage (as a percentage of fleet's devices):** An empty percentage input field.
- Estimated deployment on 641 devices:** A text label above a blue "Save changes" button.

## How many updates is enough?

Define when to stop distributing a bundle

## How many updates to expect?

Get an estimation on how many devices will update to the bundle



FIND AND MANAGE

# Devices

Device	UID	Region	Group	Software bur
<input type="checkbox"/> SN00000001	DEV-GEN-A-SN00000001	EU		
<input type="checkbox"/> SN00000002	DEV-GEN-A-SN00000002	EU		
<input type="checkbox"/> SN00000003	DEV-GEN-A-SN00000003	EU		dev sw
<input type="checkbox"/> SN00000004	DEV-GEN-A-SN00000004	NAFTA		
<input type="checkbox"/> SN00000005	DEV-GEN-A-SN00000005	NAFTA		rP1
<input type="checkbox"/> SN00000006	DEV-GEN-A-SN00000006	EU		rP1
<input type="checkbox"/> SN00000007	DEV-GEN-A-SN00000007	EU		rP1
<input checked="" type="checkbox"/> SN00000008	DEV-GEN-A-SN00000008	EU		rP1.v238
<input type="checkbox"/> SN00000009	DEV-GEN-A-SN00000009	EU	VIP Customers	
<input type="checkbox"/> SN00000010	DEV-GEN-A-SN00000010	EU	VIP Customers	
<input checked="" type="checkbox"/> SN00000011	DEV-GEN-A-SN00000011			
<input type="checkbox"/> SN00000012	DEV-GEN-A-SN00000012			
<input type="checkbox"/> SN00000013	DEV-GEN-A-SN00000013			
<input type="checkbox"/> SN00000014	DEV-GEN-A-SN00000014		Presentation devices	
<input type="checkbox"/> SN00000015	DEV-GEN-A-SN00000015	NAFTA	Presentation devices	
<input type="checkbox"/> SN00000016	DEV-GEN-A-SN00000016	NAFTA	Presentation devices	

## DEVICES WORKFLOW

# OEMs provide the devices to the cloud

Fleet warden can manage large amounts of devices provided every device has a unique identity. The identity of a device is stored inside the device's certificate, which is created during manufacturing. After the OEM reports the identities of the newly produced devices to the cloud, they get visible in Fleet Warden.

Fleet warden provides means to filter and search devices by any field. An export functionality allows every device management operation to be done in Excel.



# Managing devices

## Extended filtering

Filter with plaintext queries and wildcards

The screenshot shows a web interface for managing devices. At the top, there are several filter buttons: 'Filter by co', 'Filter by UII', 'Filter by region', 'Filter by group', 'Filter by bu', 'Filter by HV', and 'Filter by da'. Below these is a table with columns: Device, UID, Region, Group, Software bundle version, Hardware version, and Last check-in. A 'Filter by group' dropdown menu is open, showing options: '<No Group>', 'Developers', 'Testers', and 'Presentation devices'. At the bottom of the table, there are bulk action buttons: 'Change region', 'Change group', 'Change fleet', 'Remove from fleet', and 'Export selected'. A pagination bar at the bottom right shows 'Showing 1 to 20 of 100000 devices' and a dropdown for '20' items per page.

Device	UID	Region	Group	Software bundle version	Hardware version	Last check-in
<input type="checkbox"/>	SN00000001	DEV-GEN-A-SN00000001	EU		A1	
<input type="checkbox"/>	SN00000002	DEV-GEN-A-SN00000002	EU		A1	
<input type="checkbox"/>	SN00000003	DEV-GEN-A-SN00000003	EU	dev sw	A1	17.08.2022 13:24
<input type="checkbox"/>	SN00000004	DEV-GEN-A-SN00000004	NAFTA			18.08.2022 03:14
<input type="checkbox"/>	SN00000005	DEV-GEN-A-SN00000005	NAFTA	rP1		
<input type="checkbox"/>	SN00000006	DEV-GEN-A-SN00000006	EU	rP1		
<input type="checkbox"/>	SN00000007	DEV-GEN-A-SN00000007	EU	rP1		
<input checked="" type="checkbox"/>	SN00000008	DEV-GEN-A-SN00000008	EU	rP1_v238		
<input type="checkbox"/>	SN00000009	DEV-GEN-A-SN00000009	VIP Customers			
<input type="checkbox"/>	SN00000010	DEV-GEN-A-SN00000010	VIP Customers			
<input checked="" type="checkbox"/>	SN00000011	DEV-GEN-A-SN00000011				
<input type="checkbox"/>	SN00000012	DEV-GEN-A-SN00000012				
<input type="checkbox"/>	SN00000013	DEV-GEN-A-SN00000013				
<input type="checkbox"/>	SN00000014	DEV-GEN-A-SN00000014	Presentation devices			
<input type="checkbox"/>	SN00000015	DEV-GEN-A-SN00000015	NAFTA	Presentation devices		
<input type="checkbox"/>	SN00000016	DEV-GEN-A-SN00000016	NAFTA	Presentation devices		
<input type="checkbox"/>	SN00000017	DEV-GEN-A-SN00000017	NAFTA			
<input type="checkbox"/>	SN00000018	DEV-GEN-A-SN00000018	ROW			
<input type="checkbox"/>	SN00000019	DEV-GEN-A-SN00000019	ROW			
<input type="checkbox"/>	SN00000020	DEV-GEN-A-SN00000020				

## Easy filters

Predefined fields have a simple drop-down filter

## Bulk operations

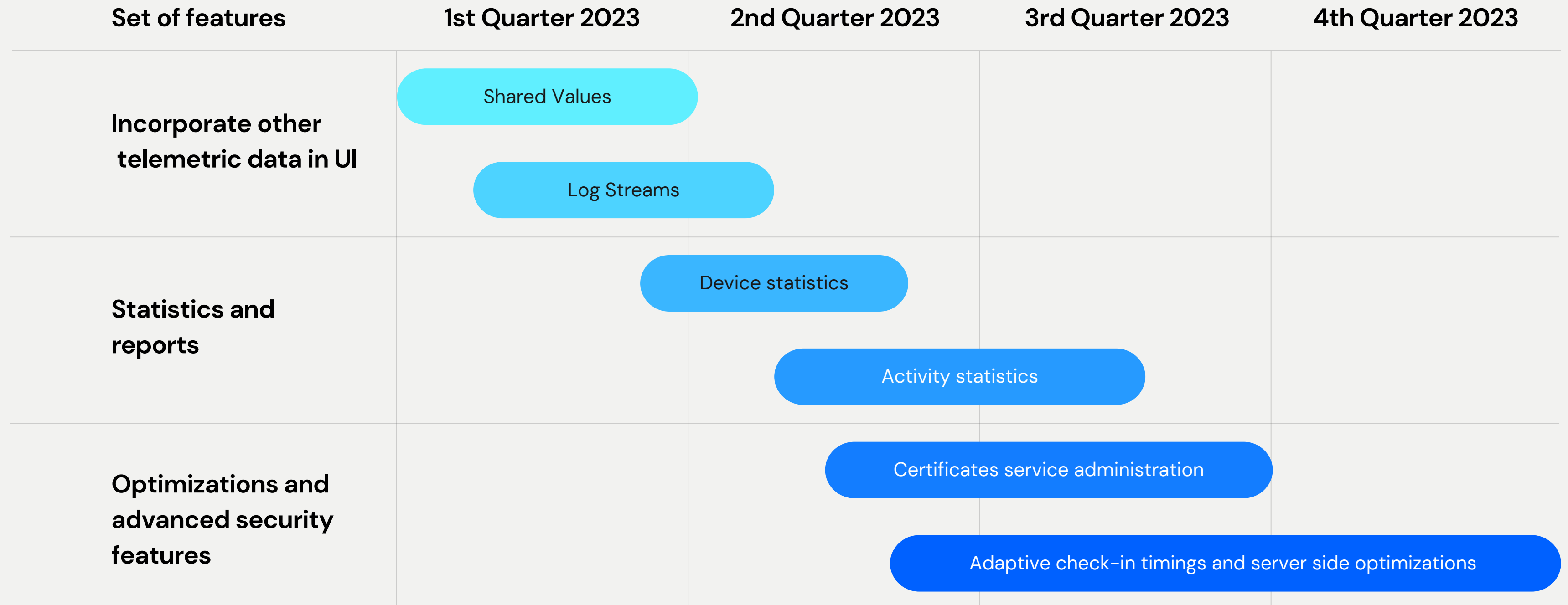
Change regions and groups of multiple devices at once. Excel lovers can export devices as CSV file

## High performance

You won't notice a performance difference between one and one million devices

COMING SOON

# Fleet Warden Features Timeline



# Thank You

Contact us to learn more

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