

Managing the IC3000 with Field Network Director (FND)

The following steps show how to install and manage your device with FND.

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- Step 2: DHCP Options, on page 2
- Step 3: Understanding the Device Configuration Template, on page 3
- Step 4: NTP Configuration, on page 4
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Step 1: Installing FND

If this is your first time setting up the FND OVA infrastructure, go to Appendix for complete information.

Download the IoT Field Network Director software from this location:

https://software.cisco.com/download/home/286287993/type

Visit FND URL https://<IP address from step 4>/ and change the password for root user. Default username/password is root/root123

Note

Change the **ADMIN > SYSTEM MANAGEMENT > PROVISIONING SETTINGS > IOT FND URL** with the FND IP address as shown below. Otherwise, registration may fail.

Figure 1: Provisioning Settings

sioning Process	
IoT-FND URL:	https://172.27.127.11:9121
	Field Area Router uses this URL to register with IoT-FND after the tunnel is configured
Periodic Metrics URL:	https://172.27.127.11:9121
	Field Area Router uses this URL for reporting periodic metrics with IoT-FND

Step 2: DHCP Options

If the IC3000 gateway gets an IP address from the DHCP server, Option 43 is used to advertise the FND IP address and Option 42 is used to advertise the NTP server IP address via DHCP.

The management interface sends a DHCP option 60, also known as vendor-class-identifier, in its request. The device identification is sent as the string cisco-ic3000. Upon receiving the vendor-class-identifier, the DHCP server can take actions as required.

Example of DHCP Option 42 and 43

Configure the following on an IR8x9:

```
ip dhcp pool ic3000_pool2
network 172.27.88.0 255.255.255.128
dns-server 173.36.131.10
option 43 ascii 5A;K4;B2;I172.27.88.63;J9125
option 42 ip 171.70.168.183
default-router 172.27.88.1
lease 0 0 2
```

Please make note of Option 43 usage:

- If you have a DHCP server, use the "same" PNP discovery option string that we use for regular IOS routers Option 43 ascii "5A;K4;B2;I172.27.88.63;J9125" (IGMA will use port 9121 as default. IoT FND IP is 172.27.88.63)
- If you wish to use a different port provide the following configuration:

option 43 ascii "5A;K4;B2;I192.168.10.6;J9125;W9128"

On a regular Linux server running DHCP, use the following instructions:

```
cat /etc/dhcp/dhcpd.conf
subnet 10.10.100.0 netmask 255.255.255.0 {
    option routers 10.10.100.1;
    range 10.10.10.100 10.10.10.199;
    option domain-name-servers 10.10.100.1;
    option domain-name "test1.dom";
    option vendor-encapsulated-options "5A;K4;B2;I10.48.43.227;J9125";
    }
```

In the above example for option 43, the following describes the options:

• 5A;K4;B2;I172.27.88.63;J9125

- 5 DHCP type code 5
- A Active feature operation code
- ; Delimiter
- K4 HTTP transport protocol
- B2 PnP server /FND IP address type is IPv4
- J9125 port number

Option 42 Usage

The system time may not be synchronized when receiving the device from the factory. It is important to provide ntp server information to get the device clock to current time. This will avoid any issues when establishing a connection to FND and make sure the timestamp on data packets from apps are up to date.

On a regular Linux server running DHCP, use the following instructions:

```
cat /etc/ntp.conf
subnet 10.10.100.0 netmask 255.255.255.0 {
max-lease-time 604800;
default-lease-time 86400;
option ntp-servers 10.10.100.112;
}
```

Step 3: Understanding the Device Configuration Template

There is a default template within the FND for IC3000. It is located under **CONFIG >Device Configuration tab > default-IC3000 > Edit Configuration template**. See Step 6: Adding the IC3000 Gateway(s) to FND, on page 6.

Edit the interface configuration or add interface settings as required by your use case. Once edited, use the Push Configuration tab to push the new configuration to the active or registered devices.



Note

It is important to make sure the map is correctly configured. If valid entries do not exist, you will get an error message like the on shown in the following image. This error does not impact the operation of the device, you can still continue.

Figure 2: Map Error

ORK DIRECTOR	DASHBOARD DEVICES V OPERATIONS V CONFIG V ADMIN V APPS	root 🔍 🗸
CES		
Quick Views	C Show Filters	
	Map Inventory	_
	Zoom to Devices Grayscale Overlay Hone	0
	θ	
	Oops! Something went wrong.	
	This page clidn't load Google Maps correctly. See the JavaScript console for technical details.	
	ORK DIRECTOR	CRA DIFECTOR DEVICES OPERATIONS CONFIG ADM ADM APPS

Step 4: NTP Configuration

To push the NTP configuration via FND, perform the following:

Procedure

Step 1 Go to **FND GUI > Config > Device Configuration > Edit Configuration Template**.

- **Step 2** Select **both** the NTP Server Configuration and the NTP Configuration checkbox.
 - a) Optional: Select the NTP Auth Configuration checkbox if the NTP server has been configured with authentication. Add the Key ID and corresponding SHA1 key as the password. Refer to Figure 3: Add NTP Authentication, on page 4. Note: NTP Authentication is only offered for NTP servers that support SHA1.
 - b) Optional: Select the Auto Get checkbox under NTP Configuration to delete the NTP configuration that has been manually pushed onto the device from FND

Figure 3: Add NTP Authentication

altali, int state fello network director config v admin v apps	root 🔍 🗸
CONFIG 5 DEVICE CONFIGURATION	
Assign Devices to Group (Change Device Properties) default-ic3000	
Groups	
Configuration Groups 4 Group Members Edit Configuration Template Plath Configuration Group Poperties	
Current Configuration revision #10 - Last Saved on 2019-06-10 16/52	
Debuk-60000 (2) Perfolio Matrice Management Profile Mark 2 enforce Mark 2 enforce Mark 2 enforce	
And San Managament Perint Concentration Concentration	
Kry ID Type Password Kry ID Type Password	

- **Step 3** Add the NTP server entry. Click the + symbol under NTP Server Configuration. Refer to Figure 4: Add NTP Configuration, on page 5.
 - a) To prioritize a certain NTP server for clock synchronization, click the **Preferred** checkbox

b) If NTP authentication is to be configured, add the Key ID set in the NTP Auth Configuration as the Auth ID.

Figure 4: Add NTP Configuration

cisco FIELD NETW	ORK DIRECTOR					CONFIG 🛩 🛛 A		ot 🔍 🗸
CONFIG > DEVICE CON	FIGURATION							
Assign Devices to Group	Change Device Properties	default-ic3000						
Groups								
Configuration Groups	+	Group Members Edit Configuration Template	Push Configuration Group Properties					
🔻 👗 GATEWAY		Current Configuration revision #10 - Last Saved on Select Configurations	1 2019-08-19 16:52					
Default-Ic3000 (2]	Periodic Metrics Management Profile	A Heart Beat Management Profile 0					
 Default-5000 (r) Temp (1) 		Fredelic Marigement Profile Vire Contentiate Vire Test Setting Vire Test Setting Vire Setting Vire Setting Vire Setting Vire Setting Vire Setting Vire Setting	Interval: 60 IDo: Directentials 0 Do: Directentials 0 Do: Directentials 0 IDo: Directentials 0 IDo: Directentials 0 IDo: Directentials 0 ID: Directentials 0	Name' •	IOx Password:	Use property 'KXU	JserPassword' •	
			Auto Get:					

Step 4Push NTP configuration by going to Push Configuration > Select Operation Scroll down > PushGATEWAY Configuration > Start. Refer to Figure 5: Push NTP Configuration, on page 5.

Figure 5: Push NTP Configuration

CISCO FIELD NETWORK DIRECTOR		DAS	HBOARD DEVICES -	OPERATIONS -	CONFIG -	ADMIN 🗸	APPS	root 🔍 🗸
CONFIG > DEVICE CONFIGURATION								
Assign Devices to Group Change Device Properties	default-ic3000							
Groups								
Configuration Groups +	Group Members Edit Configuration Template	Push Configuration Group Pro	perties					
T 👗 GATEWAY	Push GATEWAY Configuration * Start Select Operation Start	us: Finished						
Default-Ic3000 (2)	Push GATEWAY Configuration with temp	late revision 10						
Temp (1)	Completed Devices: 2/2 Erro	r Devices: 0/2						
	Device Status							
							Disp	laying 1 - 2 🕅 🔍 Page 1 🛛 🕨 🔂
	Name Push Status	IP Address	Error Message		Error Details			
	IC3000-2C2F-K9+FCH2307Y031 SUCCESS	172.27.166.117						
	IC3000-2C2F-K9+FOC2233V2LZ SUCCESS	172.27.166.113						



Step 5: DNS Configuration

To push DNS configuration via FND perform the following steps, referring to Figure 6: Add DNS Configuration, on page 6 for guidance.

Procedure

- **Step 1** Go to **FND GUI > Config > Device Configuration > Edit Configuration Template**.
- **Step 2** Select the DNS configuration checkbox.
- **Step 3** Add DNS search, domain, or server entries.

- a) Optional: Select the Auto Get checkbox within the DNS Configuration tab to delete the DNS configuration that has been manually pushed onto the device from FND.
- Step 4 Push the DNS configuration by navigating to Push Configuration > Select Operation Scroll down > Push GATEWAY Configuration > Start.

Figure 6: Add DNS Configuration

cisco Field NETWORK DIRECTOR		DASHBOARD	DEVICES -	OPERATIONS ~	CONFIG 🗸	ADMIN 🗸 🕠	APPS	noot 🔍 🗸
CONFIG > DEVICE CONFIGURATION								
Assign Devices to Group Change Device Properties	default-ic3000							
Groups								
Configuration Groups +	Group Members Edit Configuration Template	Push Configuration Group Properties						
T 👗 GATEWAY	Current Configuration revision #10 - Last Saved on 201 Select Configurations	9-08-19 16:52 Periodic Metrics Management Profile ()						
Default-Ic3000 (2)	Periodic Metrics Management Profile	iterval: 300						
Reg T(r)	Inst Configuration Inst Autogramment Prefits Inst Configuration Inst Configuration Public Settings Bits Configuration TP Auto Configuration TP Configuration Inst Configu	Nart Bast Margement Profile	ame' *	IOx Password: DNS Domain: DNS Server 2: DNS Search:	Use property 'I cisco.com 172.27.88.104 example.com c	OxUserPassword		

Step 6: Adding the IC3000 Gateway(s) to FND

Follow these steps to add your device to FND.

Procedure

Step 1 Prepare a spreadsheet with the list of devices to add. This must be completed before adding devices to avoid additional steps. The default template is in .csv format, and can be downloaded from the FND - import Inventory -> Add device tab.

Your spreadsheet will need the fields as shown in the following example:

Example:

eid	deviceType	lat	lng	IOxUserName
IOxUserPassword				
IC3000-2C2F-K9+FOC2227Y2ZC	IC3000	37.414639	-121.936836	sampleadmin
IC3000password				

Note The eid is a combination of the PlatformID+HardwareID. The platform id for the IC3000 is always IC3000-2C2F-K9 and the HardwareID or Serial number is unique for each platform. The serial number can be read from the label on the box, or if you have access to the console of the device run the **show version** command and the hardware id /serial number will be displayed.

- **Note** The latitude (lat) and Longitude (lng) entries in the spreadsheet will need to represent actual values, complete with decimal notation. For latitude, a positive number represents North and a negative number represents South. For longitude, a positive number represents East and a negative number represents West. Failure to specify an actual value will result in an error being displayed from Google Maps.
- **Note** The following password rules for the IOxUserPassword must be adhered to:

Minimum length = 6 Must not be based upon a dictionary word Must not be a combination of dictionary words Must not be composed of common string patterns like "qwerty", "asdfgh" etc... Must not be a combination of common string patterns and dictionary words Currently not supporting Unicode

To download a sample spreadsheet go to FND -> Inventory -> Add devices. Then click IC3000.

Step 2 Get the Serial number and Model number and use system as the ioxusername and admin as the password. The serial number is located on the device label and is something like "FOC2227Y304". The serial number can also be found through the show version command output:

Example:

```
ic3k>show version
```

```
Version: 1.2.1
Platform ID: IC3000-2C2F-K9
Hardware ID: FOC2227Y304
ic3k>
```

Step 3 Click DEVICES > FIELD DEVICES > Inventory > Add Devices. Browse to the location of your excel spreadsheet and click Add. See Figure 7: Add Devices, on page 7.

Figure 7: Add Devices



Note The IC3000 belongs under the gateway category when adding devices.

Step 7: IC3000 Registration

After you add devices to the IoT FND (FND) Network Management application, wait for a few minutes for the IC3000 devices to learn the option 43 settings from the DHCP server, and then register with FND. Once the IC3000 gets an ip address from DHCP server, the option 43 issues an FND IP address for the device to register to FND.

Note

Make sure the DHCP server settings are set properly with FND IP in option 43 string.

Once the device is registered you should see the registration events listed for each IC3000 unit as shown in the example on Figure 8: Device Registration, on page 8.

IIIIII IOT IIICO FIELD NETWORK	K DIRECTOR		DASHBOA	RD DEVIC	ES - OPERATIONS -	CONFIG -	ADMIN 🗸	APPS	root root	۹.
VICES > FIELD DEVICES	5									
Browse Devices	Quick Views	<- Back IC3000-2C2	F-K9+FOC2213Y47R	the second second						
C All FAN Devices		Device Info Events C	Config Properties Assets App	iOx						
👗 GATEWAY (2)						Displ	aying 1 - 11 of	11 ∥4 4 Page 1 of 1	▶ H 50 💌 😋	Ŀ
IC3000 (2)		Time	Event Name	Severity	Message					
Status		2018-08-14 10:35:26:826	Up	INFO	Device is up					
? Unheard (1)		2018-08-14 09:56:51:210	Down	MAJOR	Device is down					
💙 Up (1)		2018-08-14 09:26:06:109	Registration Success	INFO	Registration of Device succ	essful.				
		2018-08-14 09:26:06:015	Registration Request	INFO	Registration request from D	evice.				
		2018-08-13 22:41:06:875	Registration Success	INFO	Registration of Device succ	essful.				
		2018-08-13 22:41:06:778	Registration Request	INFO	Registration request from D	evice.				
		2018-08-12 11:04:15:879	Registration Success	INFO	Registration of Device succ	essful.				
		2018-08-12 11:04:15:743	Registration Request	INFO	Registration request from D	evice.				
		2018-08-12 10:55:26:668	Registration Success	INFO	Registration of Device succ	essful.				
		2018-08-12 10:55:26:477	Registration Request	INFO	Registration request from D	evice.				
		2018-08-12 10:51:13:508	Registration Success	INFO	Registration of Device succ	essful.				

Figure 8: Device Registration

The refresh metric should work and should be able to refresh the device related details.

Step 8: Uploading the Firmware to FND

In order to upgrade the firmware of the IC3000, you must download the required firmware from Cisco.com to upload the firmware to FND.

Select **CONFIG > Firmware Update > Images**. A list of the IC3000 images is presented. Click + - and upload the required image. See Figure 9: Firmware Upload, on page 9.

Figure 9: Firmware Upload

cisco FIELD NETWORK DIRECTOR							ADMIN 🛩		
CONFIG > FIRMWARE UPDATE									
Groups Images	Firmware Images						Displayir	ig 1 - 3 of 3 🖂 🗏 Page 1	1 of 1 🕨 🕅 50 💌 🕃
♥ FIRMWARE IMAGES +	Name		Version	Hardware ID	Vendor Hardware ID	Kernel Version	Size	Active Download?	
T 📥 GATEWAY	IC3000-K9-1.7.0-0.9.6	13.SPA	1.7.0-0.9.63	Not specified			98.3 MB	No	Delete
LORAWAN	IC3000-K9-1.7.0-0.9.6	4.SPA	1.7.0-0.9.64	Not specified			98.3 MB	No	Delete
	IC3000- Add Firmw	vare Image to: iotgate	way				×	No	Deleto
	File:	Select a file from loca	I directory	dd File		Browse			

Step 9: Upgrading Firmware with FND

Once Step 5: DNS Configuration, on page 5 is complete, you may now upgrade the firmware against the registered Units that require the update.

Select CONFIG > Firmware update > Select the device group > Upload Image

Once the Image upload is complete, select the **Install Image** tab and proceed with upgrading the firmware.

Figure 10: Firmware Update

cisco FIELD NETWORK DIRECTOR					CONFIG 🛩			roat 🔍 🗸
Groups Images	Upload Image Install Image Selected Firmware Image:	Cancel IC3000+K9+0.10.372.SPA (IC30						
Firmware Groups +	Current Action: Current Status:	Install Image Finished						
T 👗 GATEWAY	Written/Devices: Error/Devices:							
Default-Ic3000 (1)	Change Firmware Group						Displaying 1 - 1	Page 1 P Pl 50 2
Prep_for_start_session (1)	1 Items selected (Max 1000)	Upload Image to: temp			ж			
🍋 Temp (1)	Stat Name 🔺	Select Type:	LORAWAN		¥	Error Messag	0	Error Details
	✓ Ø IC3000-2C2 K9+FOC223	Select an Image: Install IOx Node from this	LORAWAN IC3000					
		bundle: Install patch:	mbw					
		Clean LoRaWAN application data on install ?:						
		Install WPAN firmware from this bundle:						
			Upload Imag	Þ				

Step 10: Deploying IOx Applications via FND

To deploy an IOx application perform the following:

Procedure

Step 1 From the Main page select **APP > Import Apps** and select the required application to install.

Figure 11: Application Upload

cisco FIELD NETWORK DIRECTOR		DASHBOARD DEVICES V OPERATIONS V CONFIG V ADMIN V APPS	v@ bor
APP MANAGEMENT	mongo		
 MONGO (0) LATEST (0) DGL (3) 	М	Version latest Version App Version CPU. App Type: DOCKER Memory Resource Profile: cttage	U
, UBUNTUNGINX (3)		Import New App X	Edit App 🌶
, POSTGRES (3)	Docker Run Options: Description: Release Notes:	Upload an application package created via the IOx SDK. Package File: Select	
, EPALICIK (I)			
, MTOONNECT14 (3) , ALPINE (3)		Import	

Once imported, you will find the list of applications imported in the left column.

a) To upload an application from your local machine that has been packaged using IOx client, use the IOx Package option as shown in Figure 12: Import New App (IOx Package Option), on page 10

Figure 12: Import New App (IOx Package Option)

Import New App	×
IOx Package OVA Docker	
Opload an application package created via the IOX SDK.	
Package File: Select	
Imp	ort

b) To upload an OVA VM application use the OVA option as shown in Figure 13: Import New App (OVA Option), on page 11.

Import New App	×
IOx Package OVA Docker	
 Upload an OVA file. 	
App Name:	
App Version:	
OVA File: Select	
Impor	t

- c) To upload a native docker app from the docker hub/registry or from your local machine use the Docker option as shown in Figure 14: Import New App (Docker Option), on page 11.
- **Note** To upload a native docker application using the docker hub option just pass the docker image name exactly as shown from the docker hub.

Figure 14: Import New App (Docker Option)

Import New App	×
IOx Package OVA Docker	
Opload a saved docker image Or specify image and its registry details.	
Source: O My Computer O Docker registry	
✓ Use docker hub	
Image name or ID: mongo Image tag: (Optional)	
	port

Step 2 Select the application that needs to be installed and click **Install**.

Note You can now import multiple versions of the same application (IoT FND 4.5 and greater).

Figure 15: Application Install

cisco FIELD NETWORK DIRECTOR			DASHBOARD	DEVICES ¥ 0	PERATIONS ~	CONFIG 🗸	ADMIN 🛩 🔺	PPS		٩.
APP MANAGEMENT	mongo									
MONGO (S)		Version latest *	Install Change App	Version					U	
untest (s) + DSL (s)	Μ	CPU: Memory:			App Typ Resourc	e: DOCKER e Profile: c1.lar	De .			
, UBUNTUNGINK (3)		Disk:			Author:				Edit App 🆋	
, Prihong	Docker Run Options:									
POSTGRES () POSTF1 ()	Description: Release Notes:									

Step 3Select the Devices > Add Selected Devices. With your device present, click NextFigure 16: Add Devices

cisco FIELD NETWORK DIRECTOR		DASHBOARD	DEVICES 🗸	OPERATIONS -	CONFIG 🛩 ADMIN 🗸	APPS			root (
APP MANAGEMENT						_			
Import App	Filter Devices						mongo	> Filter Devices	
 MONGO (0) 	You can add more devices from table belo	w. Install app Version latest *				Searc	h Hostname, IP Ado	iress	
LATEST (0)							Show : All	lags	
DSL (3)	Host Name	IP Address	Tags		In	italied Apps			
UBUNTUNGINK (3)	C3000-2C2F-K9+F0C2233V	2LZ 172.27.166.113	iperf1 MTC:	onnect1 dsi efm_ic3	k MTConnect1	ostgres pyth	on alpine dsl M	TCsim iperf1	
PYTHON (3)	C3000-2C2F-K9+FCH2307Y	172.27.166.119	iperf1 MTC:	onnect1 dsl efm.jc3	k MTConnect1	iostgres ubu	tuNginx MTConnect	14 python i.	
POSTGRES (3)	C3000-2C2F-K9+FCH2307Y	131 172.27.166.117	iperf1 MTC:	onnect1 dsl efm_ic3	k MTConnect1	ostgres alpir	e dsl ubuntuNgin	efm_ic3k	
IPERF1 (3)	1 1 1 5 Titems	per page						1 - 3 of 3 item	15
ERM_IC3K (3)	Add Selected Devices								
MTCSIM (3)									
MTCONNECT14 (3)	Selected Devices: 0					Searc	h Hostname, IP Ado	Iress	
ALPINE (3)	Host Name	IP Address	Tags		Health		Last Heard	Action	
	H H O H S items	per page					N	lo items to displa	e.
								Nex	at >

Select the appropriate actions and tabs and provide details as required. See Figure 17: Selected Device Action Tabs, on page 12

Figure 17: Selected Device Action Tabs

cisco FIELD NETWORK DIRECTOR		DASHBOARD	DEVICES - OPERATIONS - CONFIG -	ADMIN - APPS	root (
Import App	Installation Summary			mongo mongo > instalation Summurj	0
 MONGO (0) 	Selected Devices: 3			Start app after installation < Back Done, Let's	Go
LATEST ()	Selected Devices				
UBUNTUNGINK (3)	Tag Selected Devices as : mongo			View Incompatible Devices	
PYTHON (3)	Host Name	IP Address	Tags	Health Last Heard	
POSTGRES (3)	IC3000-2C2F-K9+FCH2307Y031	172.27.166.117	iperf1 MTConnect1 dsl efm_ic3k M	🖸 💟 just now	
PERF1 (3)	IC3000-2C2F-K9+F0C2233V2LZ	172.27.166.113	iperf1 MTConnect1 dsl efm_ic3k M	🖸 💟 just now	
ERM_JC9K (3)	IC3000-2C2F-K9+FCH2307Y02H	172.27.166.119	iperf1 MTConnect1 dsl efm_ic3k M	O D just now	
MTCSIM (3)				1 - 3 of 3 items	
MTCONNECT14 (3)	Configure Networking				
ALPINE (3)	Network Status				
	O Advanced Settings			0	
				< Back Done Let's	Go

Step 4 Then click **Done, Let's Go**. The Installation progress window appears. See Figure 18: Installation Progress, on page 13.

Figure 18: Installation Progress

cisco FIELD NETWORK DIRECTOR			DASHBOARD	DEVICES -	OPERATIONS - C	CONFIG 👻 ADMIN 🗸	APPS	root root
PP MANAGEMENT								
Import App	mongo							
MONGO (0)		arcion latert	Install Change App Version			Status of	n Devices 🛪	
LATEST (0)		eratori inteat	Change App Version					
DSL (3)		U: mory:	App Typ Resourc	e: DOCKER e Profile: c1.large				Installing
UBUNTUNGINK (3)	Dis	de -	Author:		Edit App 🖋 Mor	re v		
PYTHON (3)								
POSTGRES (3)	Installed mongo on the second seco	0 out of 3 Devices						
PERF1 (3)	About 48 remaining			0%				
EFM_JC3K (3)								View top 5 slowest devices
MTCSIM (3)						O Device I	Detail	
VTCONNECT14 (3)						Host Nam	- IC3000-2C2E-k	9+FCH2307V02H
ALPINE (3)						Starting Ap	,	
						66%		
	Selected Completed	In-Process Eailed				Search	Device	
	Abort							

If installation is successful, you should be able to see the installed count increasing. See Figure 19: Installation Successful, on page 13.

Figure 19: Installation Successful

cisco FIELD NETWORK DIRECTOR									APPS	root O
APP MANAGEMENT										
Import App	mongo									
 MONGO (3) 		Version Intest	loctall C	hanna Ann Varsian			U	Status or	Devices 🕇	
LATEST (3)		version artest	install	nange App version						
+ DSL(3)	Μ	CPU: Memory:		App Type Resource	DOCKER Profile: c1.large					 Running
, UBUNTUNGINX (3)		Disk:		Author:		Edit App 🖋	More ~			
, PYTHON (3)	In	stallation Successful on			Actions Fa	led on		Versions	on Devices 🗸	
, POSTGRES (3)		3			0					
• PERF1 (3)		Devices			Devic	15				Iatest
+ EFM_IC3K (3)		Edit Configuration			Retry N	ow				
+ MTCSIM (3)						Davies Filters			Course Hantana	10 Address
, MTCONNECT14 (3)						Jevice Filters			Search Hostnami	e, IP Address
+ ALPINE (3)	Host Name	Ip Address		Host Health	Last Heard		App Status		Error Summary	
	IC3000-2C2F- K9+FCH2307Y02H	172.27.166	.119	00	just now		RUNNING			
	IC3000-2C2F- K9+FCH2307Y031	172.27.166	.117	00	just now		RUNNING			
	IC3000-2C2F- K9+F0C2233V2LZ	172.27.166	.113	00	just now		RUNNING			