



TURN IT UP

CISCO *Live!*



The bridge to possible

How to leverage Cisco IOx to host your application?

Microservices at the Networks Edge

Daniel Eckstein, TME / Solution Architect

DEVWKS-2934





Agenda

- Introduction
- What is IOx?
- What is a DevNet Sandbox?
- Let's prepare and install an application!
- Conclusion and Next Steps

Introduction



About our workshop

We will:

- Familiarize with Cisco IOx
- Get to know Cisco DevNet Sandboxes
- Prepare, install and operate your application to Iox

We will not:

- Use an automated control-plane for the installation
- Optimize the application or the application image

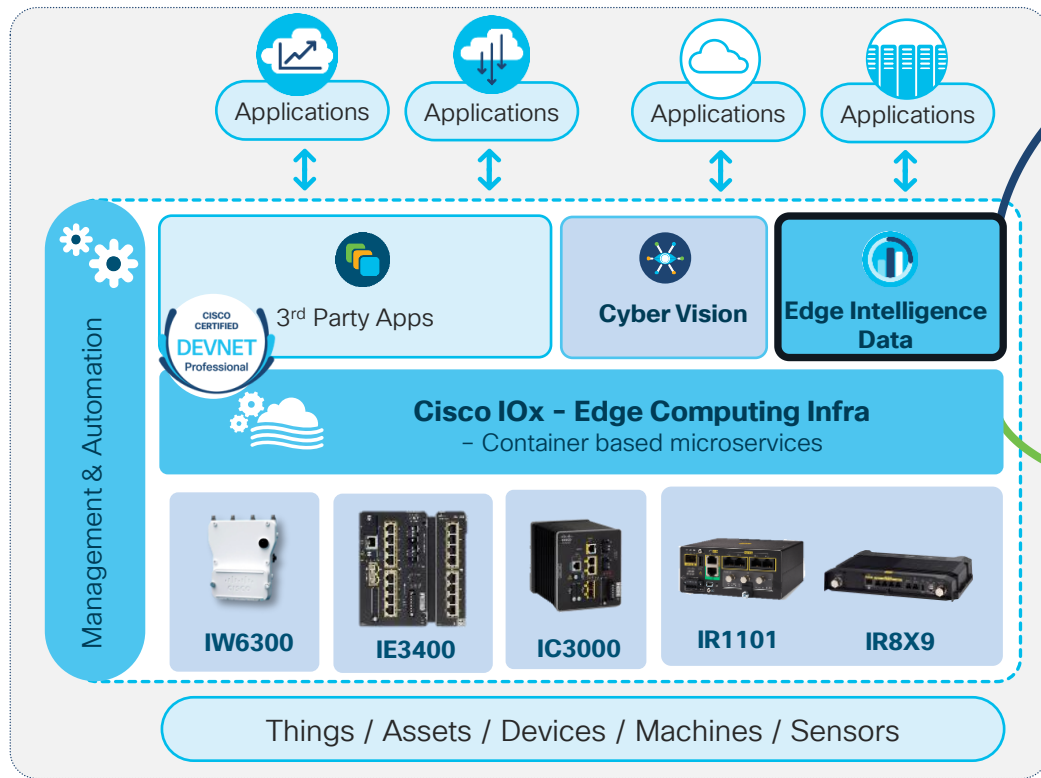
Please...

- If you have questions, don't hesitate to ask!
- Do not follow the guide blindly!

What is IOx?



Cisco IOx



{Buy}

Get Started Fast



Using Cisco Edge Intelligence for edge data processing is the fastest and easiest way to process and send data from the edge

{Or Build}

Your Own App



Using Cisco IOx compute infrastructure and development environment you can build your own Docker app that runs at the edge. You manage the lifecycle of your application and monitor its operation.

Cisco IOx – Summary

- Cisco IOx is short for “Cisco IOS + Linux”
- Cisco IOx allows you to host applications
- Cisco IOx provides access to subsystems and subtended devices
- Cisco IOx is being supported on many devices from the Cisco portfolio
- Applications can be created in VM-style or Docker-style
- Applications can be managed by CLI, IoT OD or Local-Manager
- See: <https://www.cisco.com/c/en/us/products/cloud-systems-management/iox/index.html>

What is a DevNet Sandbox?



Cisco DevNet

- DevNet supports Developers with various resources



- DevNet covers all areas of Cisco Business



Cisco DevNet - Sandbox

The screenshot displays the Cisco DevNet Sandbox Labs interface. The top navigation bar includes the Cisco DevNet logo, "SANDBOX LABS", "RESERVATIONS", and user information "DAECKSTE" and "DEVNET". A search bar is located on the left. The main content area is titled "IoT (14)" and shows a grid of 10 sandbox labs, each with a green card, a version number, a title, a description, and a "RESERVE" button. The labs are arranged in two rows of five. The right sidebar shows a category filter for "IoT" and a list of "ALL CATEGORIES" including Networking, Collaboration, IoT, Data Center, Cloud, Security, and Open Source. A status indicator at the bottom right shows "1 Currently reserved by me".

DEVNET SANDBOX LABS RESERVATIONS DAECKSTE DEVNET

Search Sandbox Labs

Sandbox Labs

Reservations
0 New, 1 Total

FILTER BY:

- My Sandbox Labs
- Active (1)
- Sandbox Lab Status
 - Available
 - Unavailable
 - View only

IoT (14) Back to Sandbox Lab Catalog TYPE All

IoT (14)

Version 1.0		Version 3.0	Version 1.0	Version 1.0
Cisco Partner Solution: Aleantia Aleantia Plug&Play gateway for codeless IoT integration with Cisco IOT and GMM RESERVE	Cisco Control Center Cisco Control Center - Multi-Operator SaaS Framework RESERVE	Cyber Vision Cyber Vision 3.0 Get insights from the Industrial IoT RESERVE	Edge Intelligence IoT Operations Dashboard Edge Intelligence - IoT Operation... Extract Data from Edge to Cloud RESERVE	Cisco Partner Solution: Eximprod Eximprod IoT Energy Utility Solution with Eximprod RESERVE
Version 1.0		Version 1.11	Version 1.7	Version 1.11
Field Network Director Field Network Director Manage a multi-service network and security infrastructure for IoT applications RESERVE	IE3400 - Industrial Networking & Edge Compute IE3400 - Industrial Networking and Edge Compute RESERVE	IOx CICD Pipeline IOx CICD Pipeline 1.11 Continuous Integration and Delivery Pipeline for Cisco IOx RESERVE	IOx CI/CD Pipeline IOx CICD Pipeline 1.7 Continuous Integration and Delivery Pipeline for Cisco IOx RESERVE	IOx Latest IOx v1.11 Cisco's IoT Edge Compute Platform RESERVE

1 Currently reserved by me

IoT

ALL CATEGORIES

- Networking
- Collaboration
- IoT
- Data Center
- Cloud
- Security
- Open Source

<https://devnetsandbox.cisco.com>

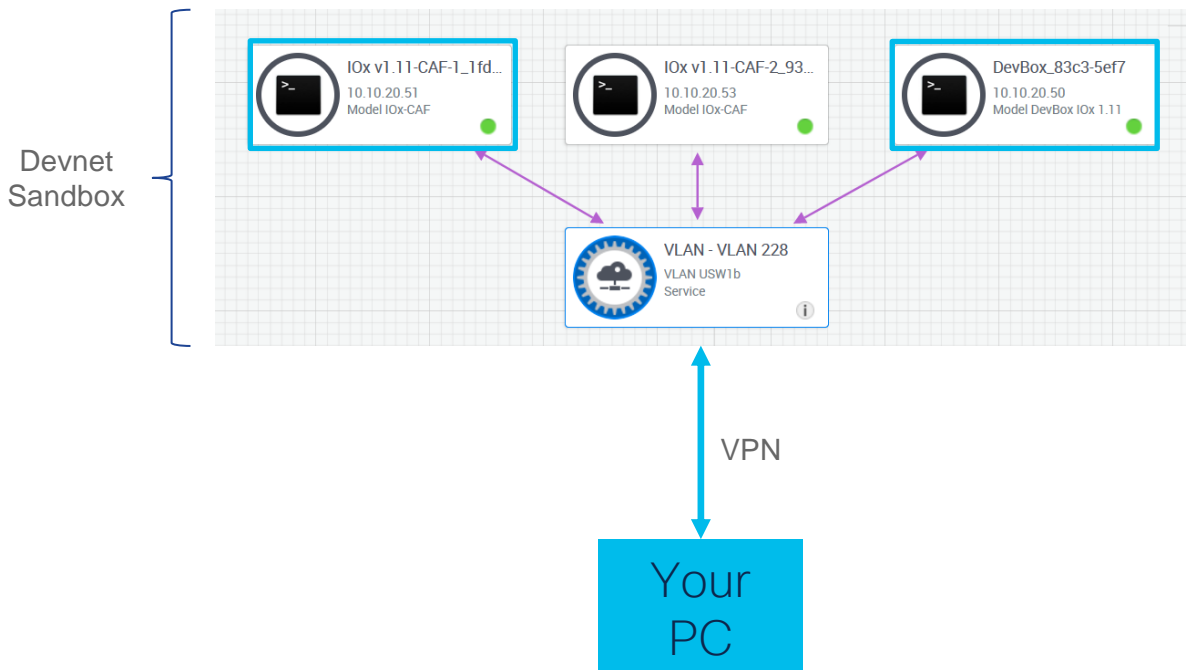
Let's prepare and
install an application!



Preparing and installing an application!

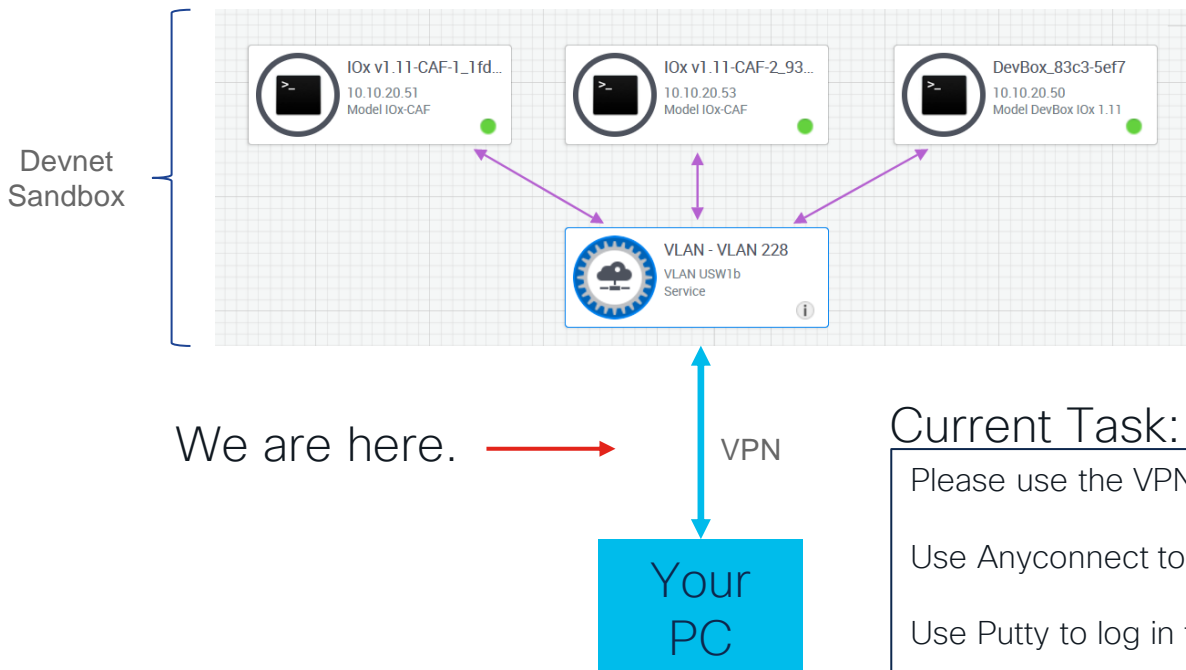
- The overall Setup
- Access your Sandbox
- Create your docker image
- Save your docker image
- Install your docker image to your IOx
- Access your running applicatoin

The overall Setup



1. Get Access
2. Create a Docker image
3. Deploy your image
4. Start your application

Access your Sandbox



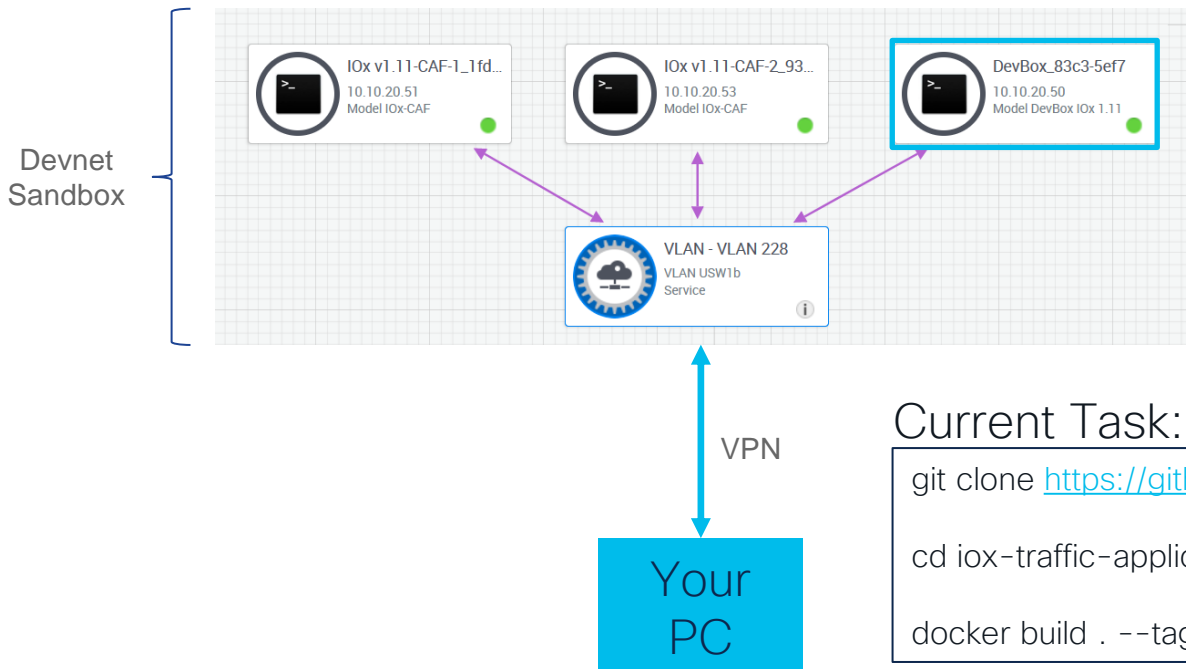
Current Task:

Please use the VPN credentials provided at your desk.

Use Anyconnect to open a VPN connection to your sandbox.

Use Putty to log in to **10.10.20.50** using **developer/C1sco12345**

Create your Docker Image

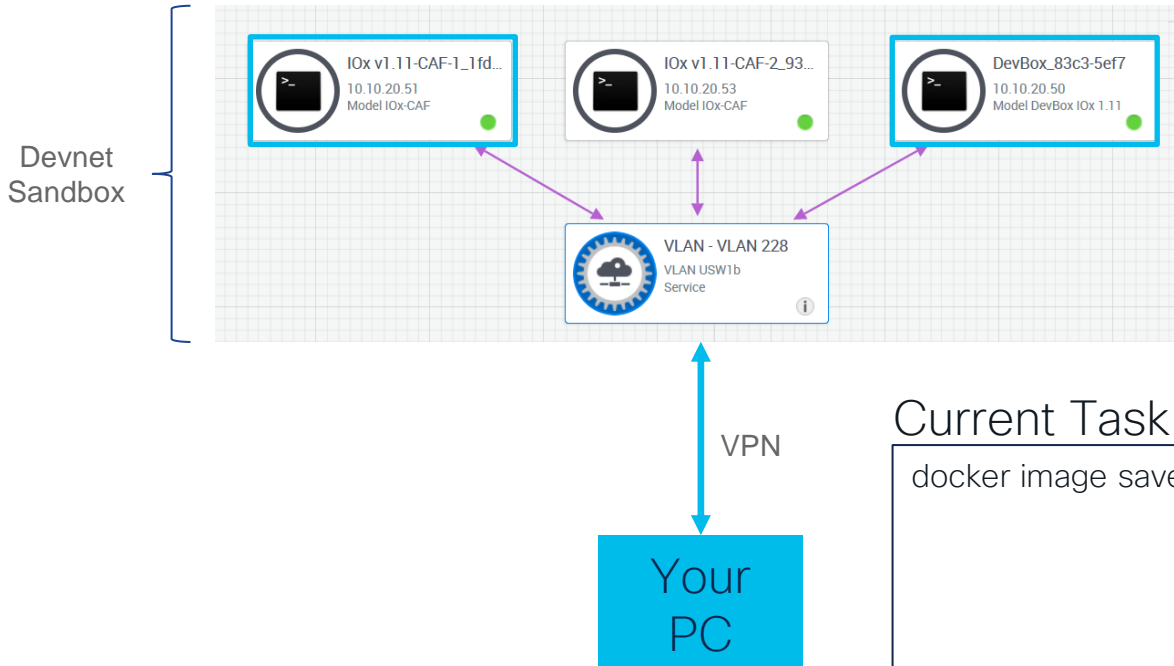


← We are here.

Current Task:

```
git clone https://github.com/deckstein/iox-traffic-application  
cd iox-traffic-application  
docker build . --tag iox-app:latest
```

Save your Docker Image



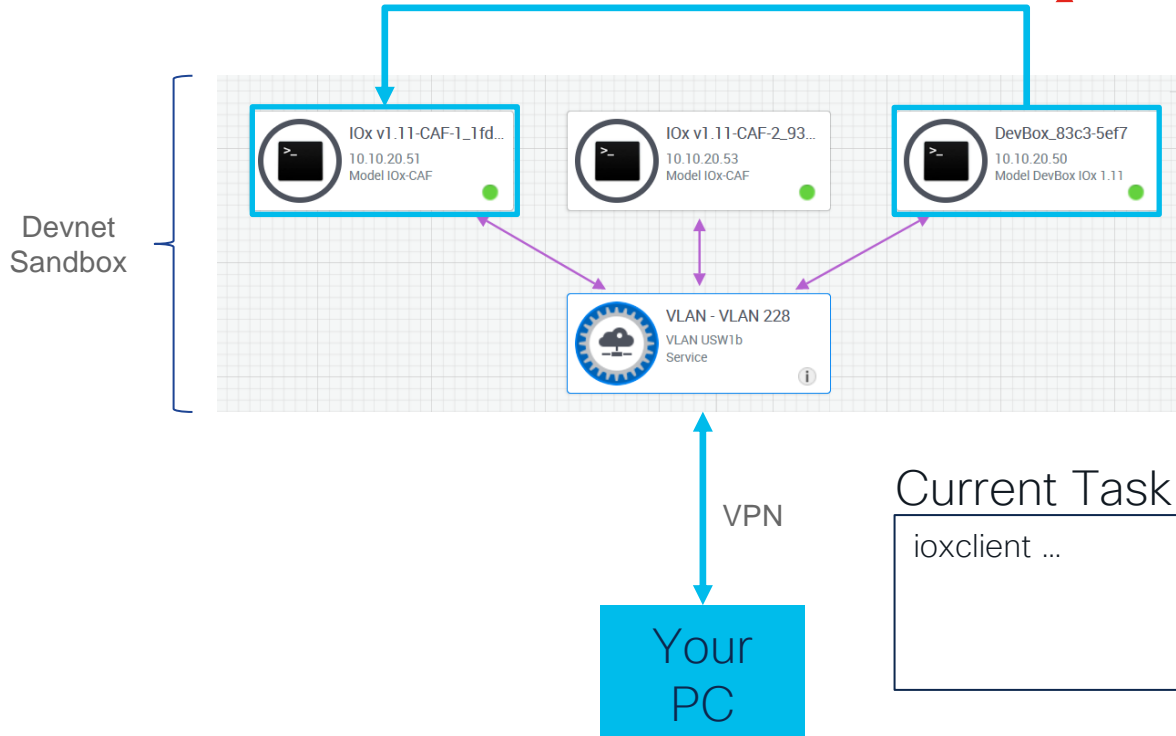
← We are here.

Current Task:

```
docker image save iox-app:latest -o iox-app.tar
```

Deploy your Docker Image

We are here.



Current Task:

ioxclient ...

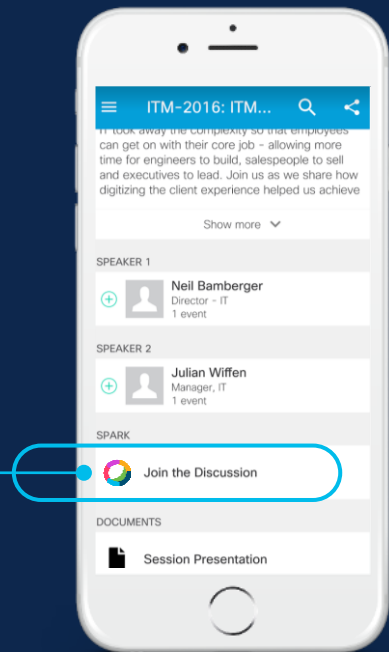
Cisco Webex

Questions?

Use Cisco Webex to chat with the speaker after the session

How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex or go directly to the team space
- 4 Enter messages/questions in the team space



ciscolive.ciscoevents.com/ciscolivebot/INSERT_SESSION_ID

Continue your education



Demos in the
Cisco Showcase



Walk-In Labs



Meet the Engineer
1:1 meetings



Related sessions

Complete your online Session Survey



- Please complete a minimum of 4 session surveys and the overall conference survey (starting Thursday) to help us with the future planning of Cisco Live
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog on ciscolive.com/emear
- Cisco Live sessions will be available for viewing on demand after the event at ciscolive.com



The bridge to possible

Thank you

CISCO *Live!*





TURN IT UP

CISCO *Live!*