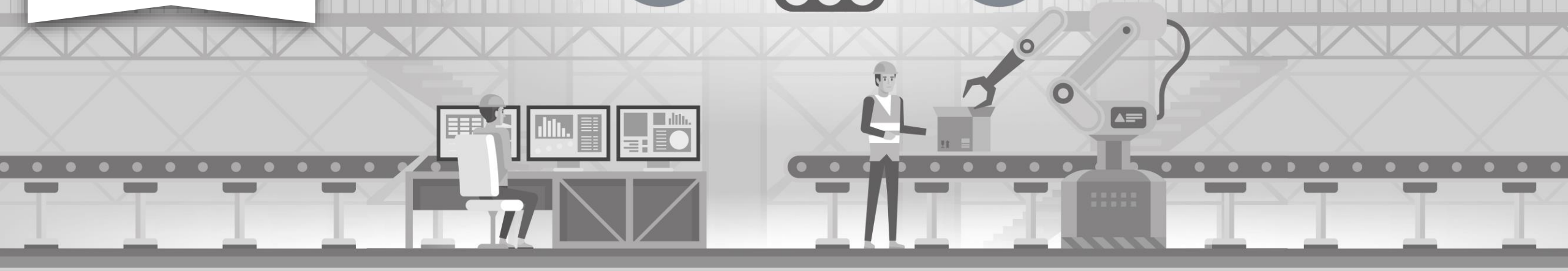




IIP-Ecosphere

Next Level Ecosphere for
Intelligent Industrial Production



Platform Installation Guide

Gefördert durch:



Bundesministerium
für Wirtschaft
und Klimaschutz

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IIP-Ecosphere Platform Documentation



Installation steps Linux (1)

- **Please note that you should run the commands in root.**
- Update all of your packages for Linux
 - `sudo apt-get update`
- Install unzip
 - `sudo apt install unzip -y`
- If **Java JDK 13** is not installed, then install **Java JDK 13**
 - `sudo apt install openjdk-13-jdk-headless -y`
- If **Maven 3.6.3** is not installed, then install **Maven 3.6.3**
 - `sudo apt install maven -y`

Installation steps Linux (2)

- If **Docker Engine v20.10.7** is not installed, then install **Docker Engine v20.10.7**, may be needed
 - `sudo apt-get update -y`
 - `sudo apt-get install \`
`ca-certificates \`
`curl \`
`gnupg \`
`lsb-release -y`



Installation steps Linux (3)

- If **Docker Engine v20.10.7** is not installed, then install **Docker Engine v20.10.7**, may be needed
 - `sudo mkdir -p /etc/apt/keyrings`
 - `curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg`
 - `echo \`
 `"deb [arch=$(dpkg --print-architecture) signed-`
 `by=/etc/apt/keyrings/docker.gpg] https://download.docker.com/linux/ubuntu`
 `\`
 `$(lsb_release -cs) stable" | sudo tee`
 `/etc/apt/sources.list.d/docker.list > /dev/null`



Installation steps Linux (4)

- If **Docker Engine v20.10.7** is not installed, then install **Docker Engine v20.10.7**, may be needed
 - `sudo apt-get update -y`
 - `sudo apt-get install docker-ce=5:20.10.7~3-0~ubuntu-focal
docker-ce-cli=5:20.10.7~3-0~ubuntu-focal containerd.io
docker-compose-plugin -y`



Installation steps Linux (5)

- If **Python v3.9** is not installed, then install **Python v3.9**
 - `sudo apt update -y`
 - `sudo apt install software-properties-common -y`
 - `sudo echo | add-apt-repository ppa:deadsnakes/ppa`
 - `sudo apt update -y`
 - `sudo apt install python3.9 -y`



Installation steps Linux (6)

- Create an empty folder and it (for example “Install”)
 - `mkdir Install`
 - `cd Install`
- Download Install-Package and unpack it
 - `wget https://jenkins-2.sse.uni-hildesheim.de/view/IIP-Ecosphere/job/IIP_Install/lastSuccessfulBuild/artifact/install.tar.gz`
 - `tar xzpvf install.tar.gz`

Installation steps Linux (7)

- Install platform dependencies
 - `cd platformDependencies`
 - `mvn install`
 - `cd ..`
 - Obtain platform bootstrap packages
 - `mvn package -DskipTests`
 - Modify the IP address for the platform in the configuration file
(src/main/easy/InstallTest.ivml) or use the following two commands to do so
 - `export localIP=$(hostname -I | cut -d ' ' -f1)`
 - `sed -i 's/147.172.178.145/'$localIP'/g'`
- src/main/easy/InstallTest.ivml

Installation steps Linux (8)

- Instantiate platform: Execute in “install folder”
 - `mvn exec:java`
- Now the platform is installed, the script files are create and ready to start.
- The broker scripts and files in “Install/gen/broker” folder, run the following script to start it
 - `broker.sh`
- The platform scripts and files in “Install/gen” folder, run the following script to start it
 - `platform.sh`



Installation steps Linux (9)

- To make the platform machine working as resources run the following script
 - `ecs.sh`
 - `serviceMgr.sh`
- Or just run the following script
 - `ecsServiceMgr.sh`
- To start the command line interface for the platform run the following script
 - `cli.sh`
- The above scripts are exists in “Install/gen” folder



Setup the IDE Eclipse environment

- To setup the IDE Eclipse environment, follow the guideline in the following link
<https://github.com/iip-ecosphere/platform/blob/main/platform/documentation/Guideline.pdf>



Add a Linux device to the platform

- Do the Installation steps Linux slides (1) to (3) except the last step in slide (3) – which is changing the IP Address.
- Copy the following files from the platform server to the device
 - gen\ecsJars (folder)
 - gen\broker (folder)
 - gen\svcJars (folder)
 - gen\ecs.sh (file)
 - gen\serviceMgr.sh (file)
 - gen\ecsServiceMgr.sh (file)

Add a Linux device to the platform

- To join the device as resources in the platform run the following script
 - `ecs.sh`
 - `serviceMgr.sh`
- Or just run the following script
 - `ecsServiceMgr.sh`



Add a Linux Edge device to the platform

- The difference between a device and an Edge devices is
 - Edge devices should install Java 8
 - Copy the following files from the platform server to the Edge device and run it
 - `gen\ecs8.sh` instead of `gen\ecs.sh`
 - `gen\serviceMgr8.sh` instead of `gen\serviceMgr.sh`
 - `gen\ecsServiceMgr8.sh` instead of `gen\ ecsServiceMgr.sh`



IIP-Ecosphere

Kontakt



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