



**IIP-Ecosphere**

Next Level Ecosphere for  
Intelligent Industrial Production



# Service Integration: How to use the Development Container

Gefördert durch:



Bundesministerium  
für Wirtschaft  
und Klimaschutz

IIP-Ecosphere Platform



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- **The Development Container**
- Using the UI
- Eclipse
- Container Persistence
- Using the Terminal



# The Development Container

- Docker based development environment for IIP-Ecosphere
  - Enables the development on every platform that can run docker
  - There is no need for outside installation
  - The container is portable
  - Container runs Ubuntu 20.04



# Getting the Container

- On first start:
  - Make sure docker is running (Windows, depending on installation)
  - Run `docker run -p 6080:80 -v /dev/shm:/dev/shm iipecosphere/dev-container:0.2` to get the image from docker hub and start it
  - Start a browser and type `localhost:6080` in the upper search bar



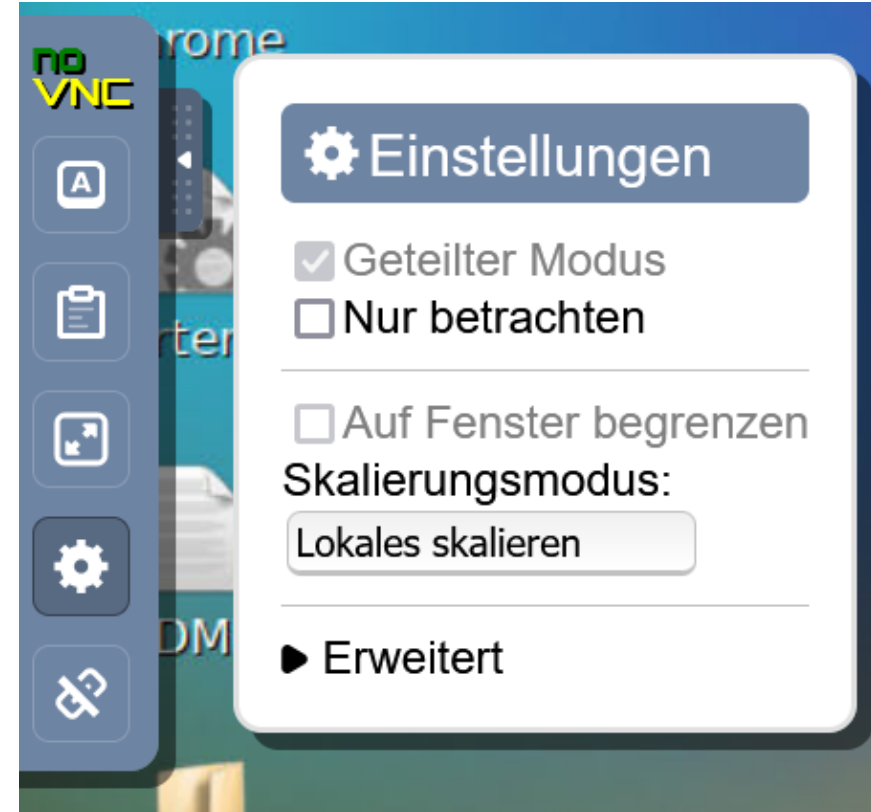
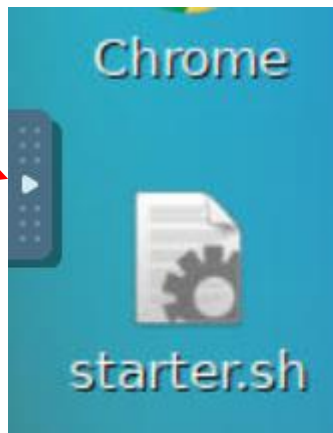
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# Using the Container UI (1)

- Start a browser and type “localhost:6080” in the upper search bar
  - To make the image fill the screen: set “Skalierungsmodus” to “Lokales skalieren”





# Using the Container UI (2)

- Changing the resolution:
  - The container UI will take the screen resolution available when loading the UI in the browser for the first time after the container start
  - It cannot be changed otherwise



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# Eclipse

- A specific Eclipse is installed
  - Start Eclipse

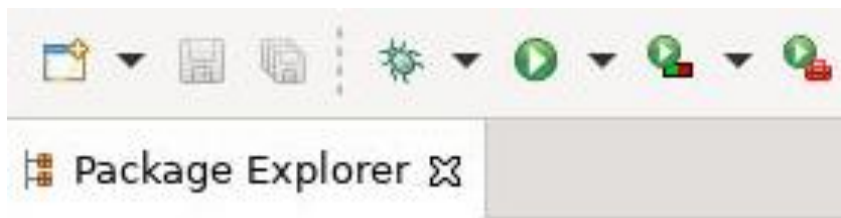


- It will NOT ask for a workspace on start
- Initially the workspace is empty
- Import the project from “/root/Desktop/eclipse-workspace”



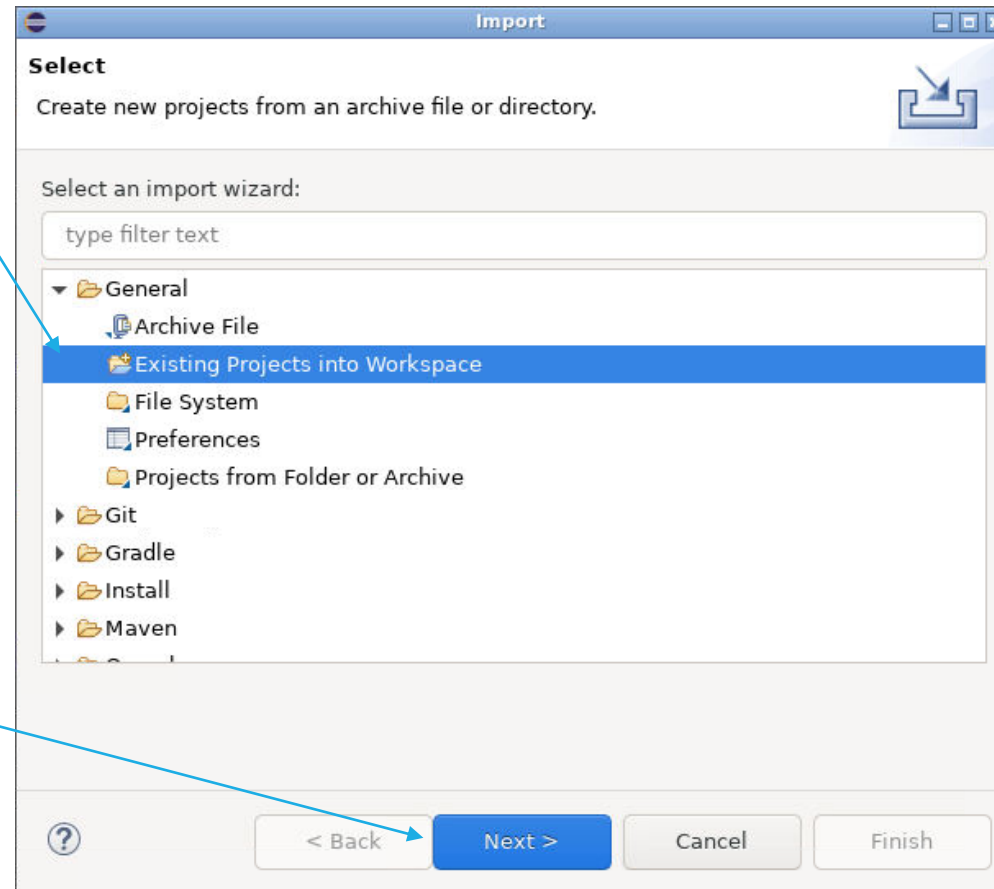
# Eclipse: Import Project (1)

- Import the project from “/root/Desktop/eclipse-workspace”



There are no projects in your workspace.  
To add a project:

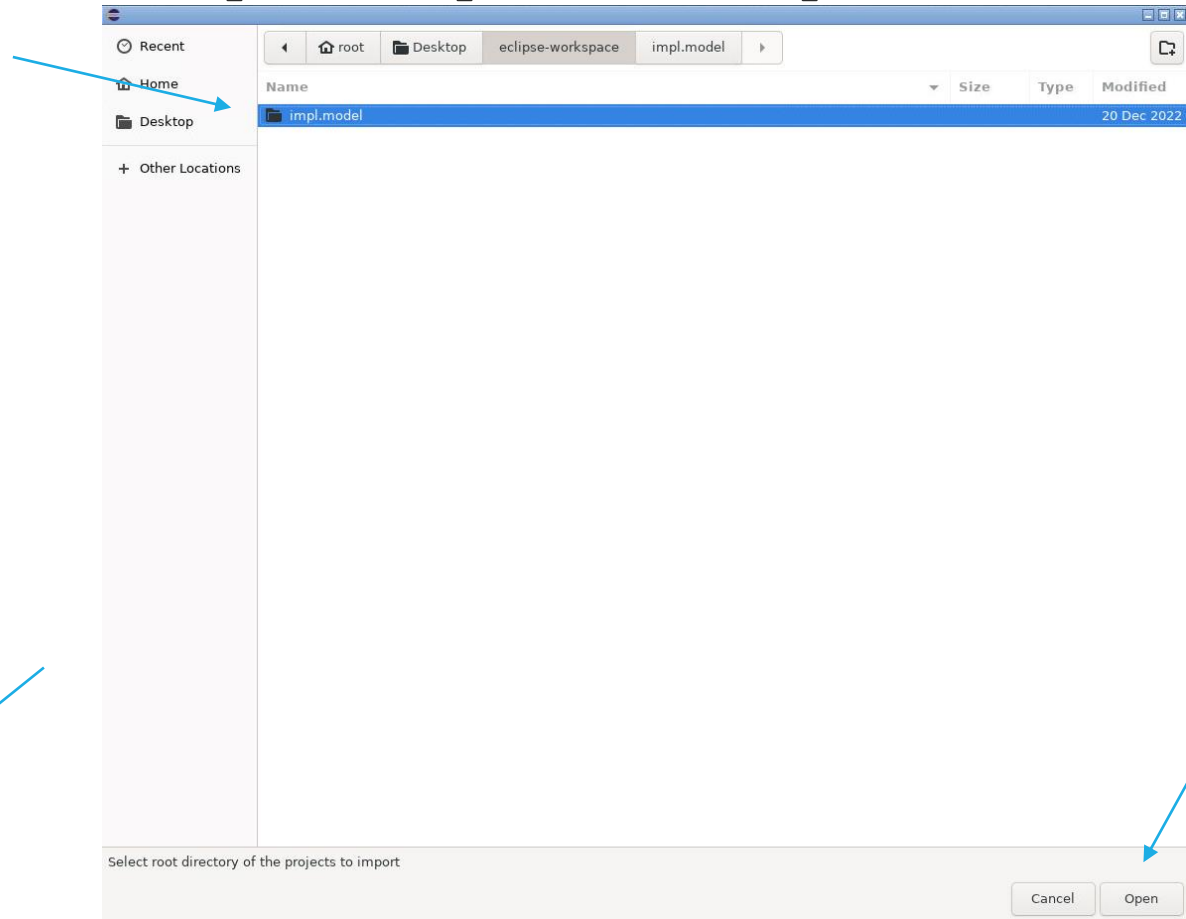
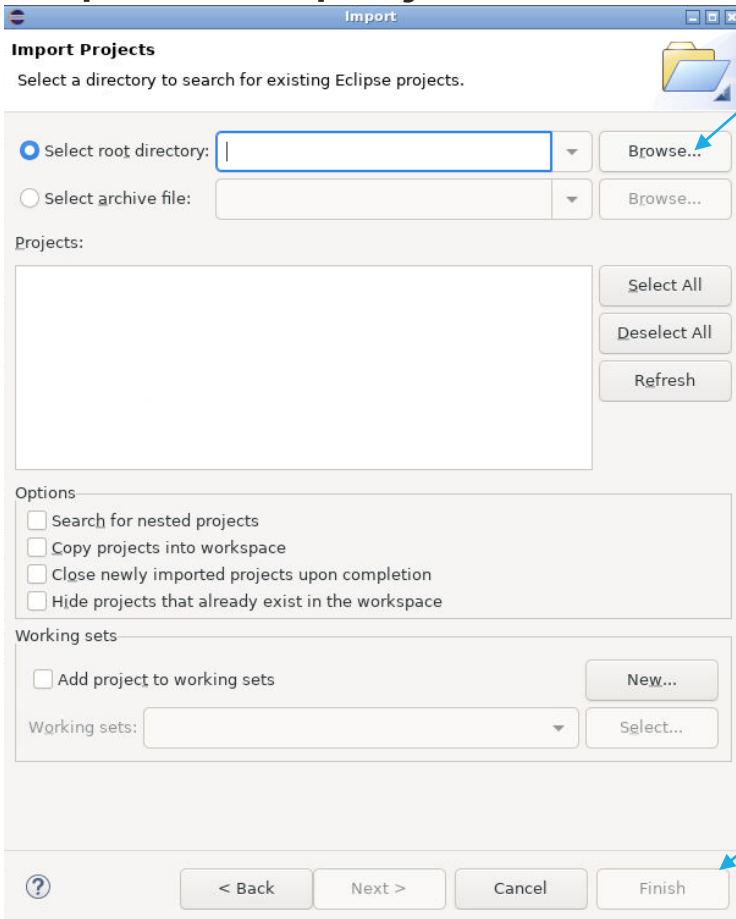
- [Create a Java project](#)
- [Create a project...](#)
- [Import projects...](#)





# Eclipse: Import Project (2)

- Import the project from “/root/Desktop/eclipse-workspace”





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# Container Persistence

- To keep the changes done the container needs to be stopped
  - Use “`docker ps`” to list all containers
  - Use “`docker stop <containerID>`” to stop the container
- To re-run the container
  - Use “`docker ps -a`” to list all containers including the stopped once
  - Use “`docker start <containerID>`”
  - Load “`localhost:6080`” in a browser to see the container UI



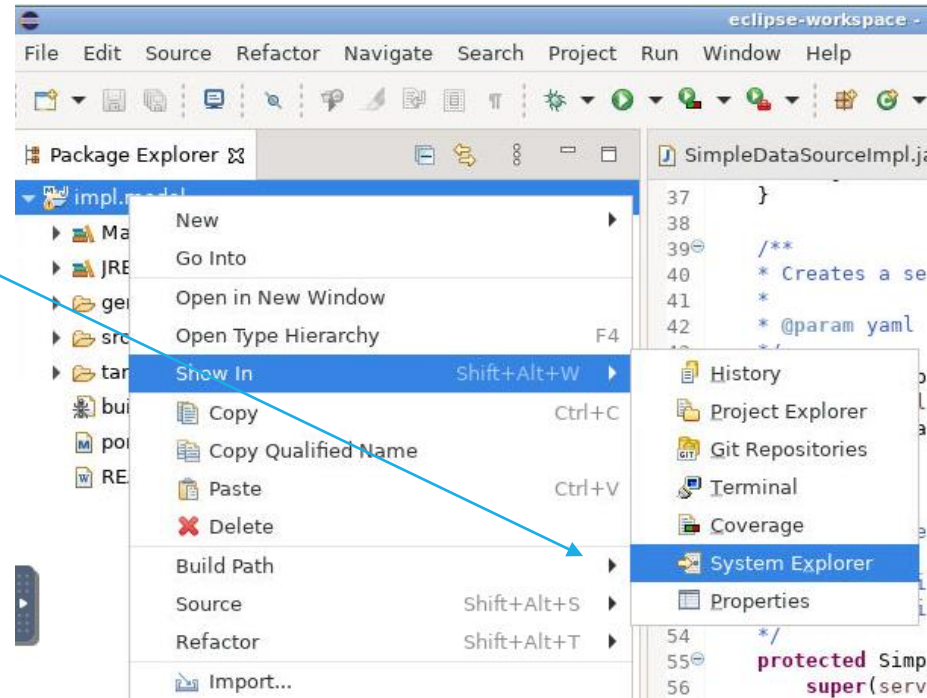
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# Using the Terminal (1)

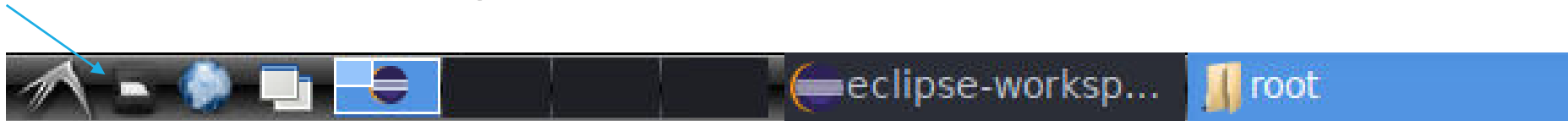
- Even though Eclipse has a Maven integration it tends to work best to directly use the terminal
  - Does not work!



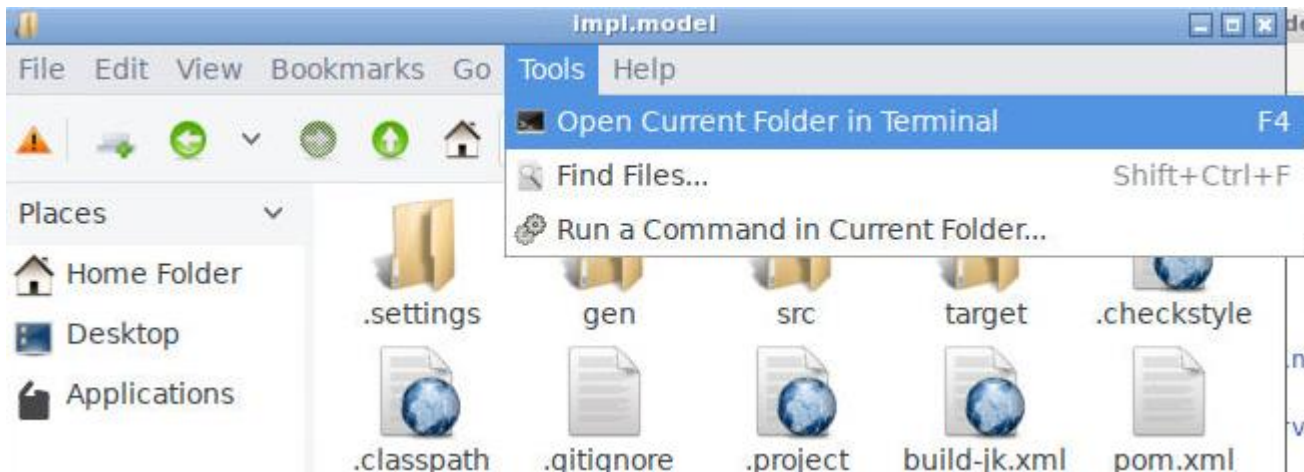


# Using the Terminal (2)

- You need to navigate to the files via explorer



- When in the correct directory

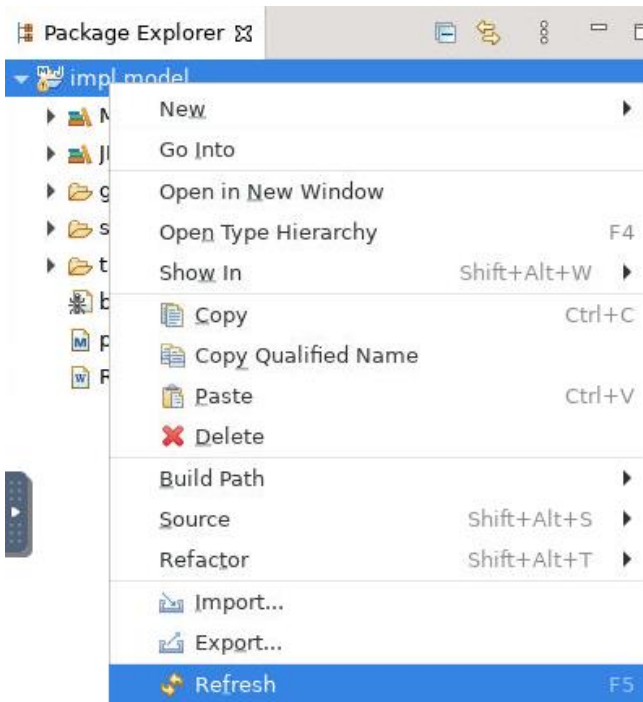






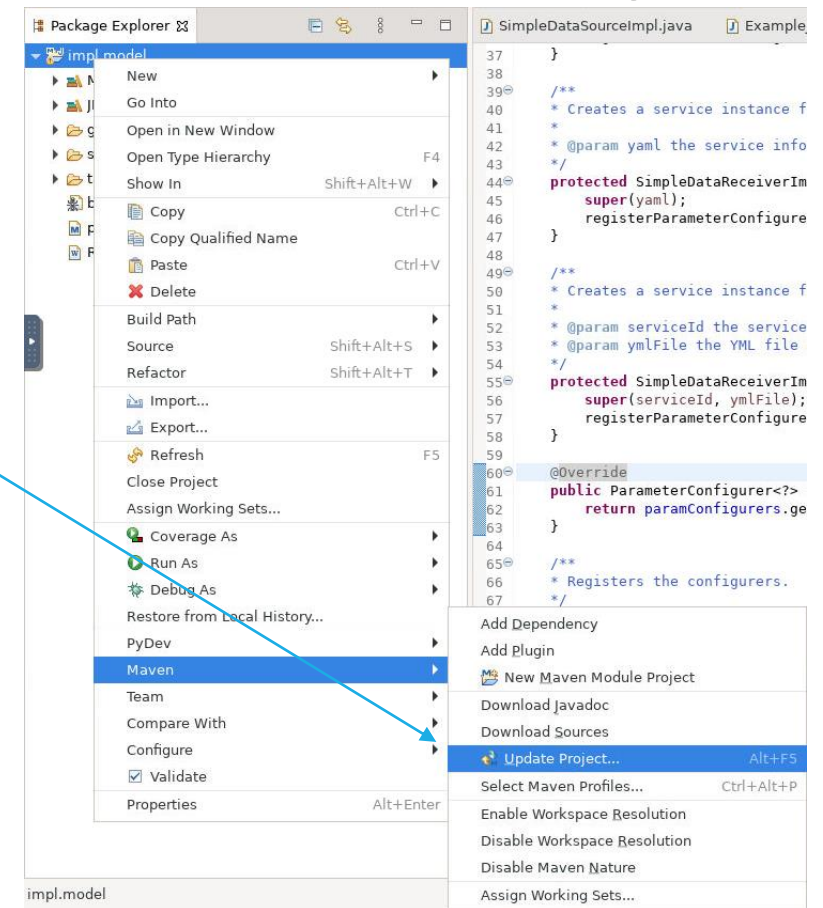
# Using the Terminal (3)

- If Eclipse does not reflect the change directly after successfully executing a Maven command in the terminal
- Select the project in question



If there are errors present:  
try Maven update

If a directory does not  
show up: try refresh





# Copying item into the Container (Windows)

- To get files into the container utilise the command “*docker cp*”
- Syntax: “*docker cp <src\_path> <dest\_path>*”
- One of the two paths should be inside the container and is given as “*<containerID>:path*”
- When docker is installed using Windows Subsystem Linus you might need to add “*wsl*” in front of the command
- From container to Windows: start “*<dest\_path>*” with “*/mnt/*” as this is how WSL sees the filesystem. E.g. “*/mnt/C/work/...*”
- Example:
  - *wsl docker cp C:/work/Text.txt 4d39848b0dff:/root/Desktop*



# Summary

- What we learned
  - How to start and utilise the development container
- How to go on
  - How to edit datatypes