Eclipse Theia and Che, explained and explored!

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Goal of this talk is to answer

- What is it?
- What are the core features?
- How can you use it?
- How to customize and extend it?
- How does it relate to XYZ?

For Eclipse Theia and Eclipse Che
What is Eclipse Theia?

- A platform for building web-based tools and IDEs
  - A basic workbench frame
  - A modular extension mechanism
  - Common tool features to be reused
How to launch Theia?

- Theia is a platform and a collection of “extensions”
- Extensions are technically node packages

To launch “Theia” you need to:
- Configure your own product based on Theia
- Launch a predefined product based on Theia
- Use Theia within Eclipse Che
- Use any provided product based on Eclipse Theia
How to use Theia?

- The basics
- Commands
- Terminal
- The Git workflow
- Language support
- Debugger
What are the key features of Eclipse Theia

- Based on modern web technologies (TypeScript, HTML and CSS)
- Integrates LSP and the Monaco editor
- Online and offline
- Does not reinvent the wheel!
- Vendor neutral
- Extensibility
Theia extensions

Your Product based on Eclipse Theia

- Existing Extension
- Another Existing Extension
- Your Custom Extension

Dependency Injection Context
Theia plugin vs. Theia extension
VS Code extensions in Eclipse Theia?

- Theia provides (almost) the same plugin API as VS Code does
- You can install VS Code extensions and check whether they work out of the box
- Note: Installation via the VS Code Marketplace is technically possible, but forbidden by the terms of use
What is Eclipse Che?

- A “workspace server” for cloud-based tools
- Management for developer workspaces/runtimes
  - Set-up workspaces (as containers)
  - Share workspaces
  - User management
  - Resource management
- Uses Eclipse Theia as the default IDE
- Provides preconfigured products based on Theia
- Provides additional extensions and plugins for Theia
- Provides an extended plugin mechanism
How to run/use Eclipse Che

- You can deploy Eclipse Che on any Kubernetes cluster, e.g. AWS, OpenShift, Google Cloud Platform or Azure
- To try it locally, use MiniKube

- Workspaces
- Plugins
- Stacks
- Factories
How to extend Eclipse Che

● You can extend the Theia IDE via:
  ○ Extensions
  ○ Plugins (including VS Code extensions)
  ○ Che-Theia plugins

● You can extend Eclipse Che via:
  ○ Custom stacks
  ○ Custom plugins
  ○ Custom editors
  ○ … and more
Conclusion

- Eclipse Theia vs. Eclipse Che?
- Eclipse Theia vs. VS Code?
- Theia extension vs. Theia plugin vs. Che-Theia plugin
- Additional technologies to be used: GSLP, Sprotty, EMF.cloud...

Questions?

Get in contact with us for support around Eclipse Theia and Che!
Here at our booth or jhelming@eclipsesource.com
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