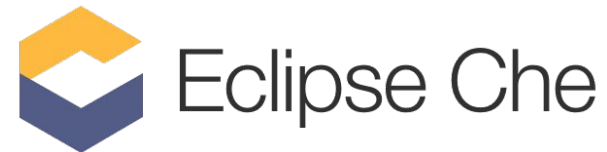


Eclipse Theia and Che, explained and explored!



Jonas Helming
EclipseSource



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



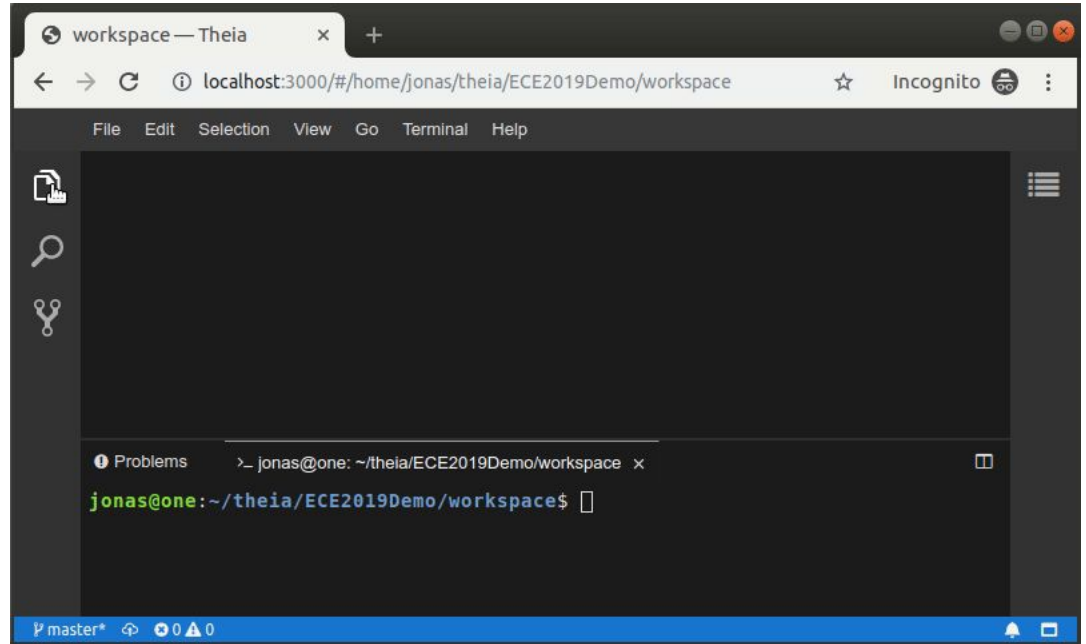
How to launch Theia?

- 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?

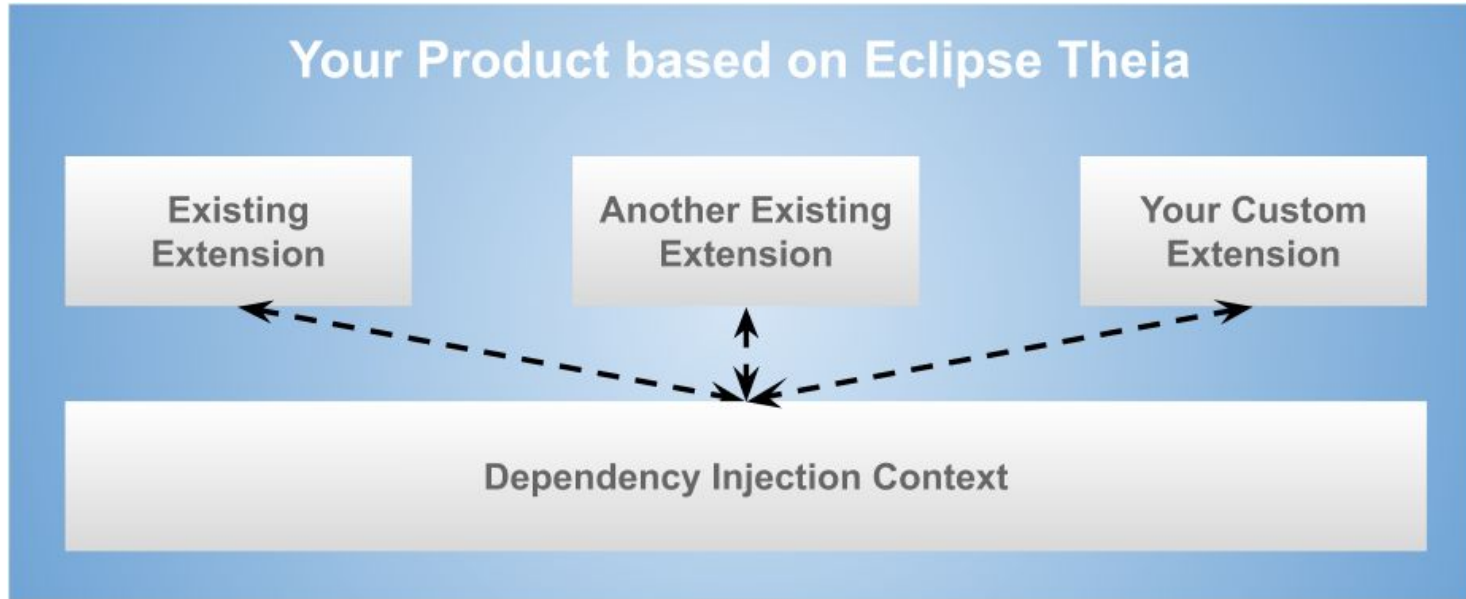
- The basics
- Commands
- Terminal
- The Git workflow
- Language support
- Debugger



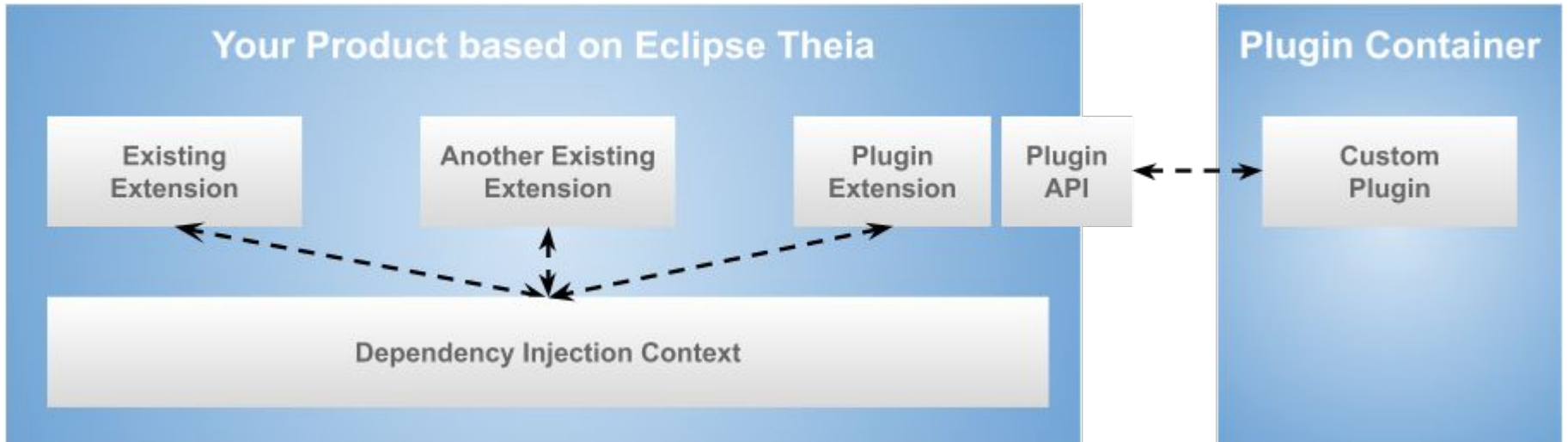
What are the key features of Eclipse Theia

- 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



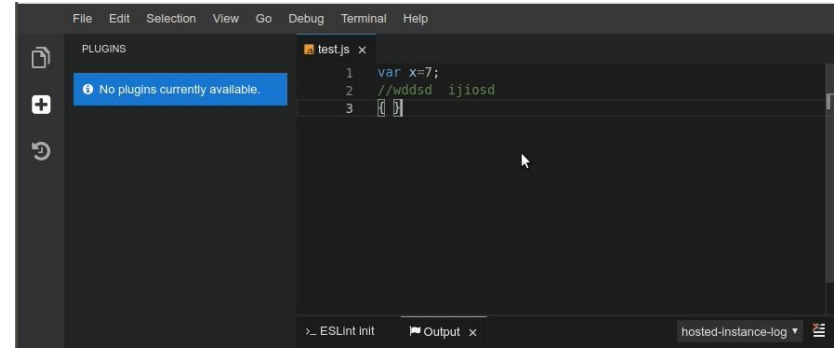
Theia plugin vs. Theia extension



VS Code extensions in Eclipse Theia?



- Theia provides (almost) the same pluginAPI 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?

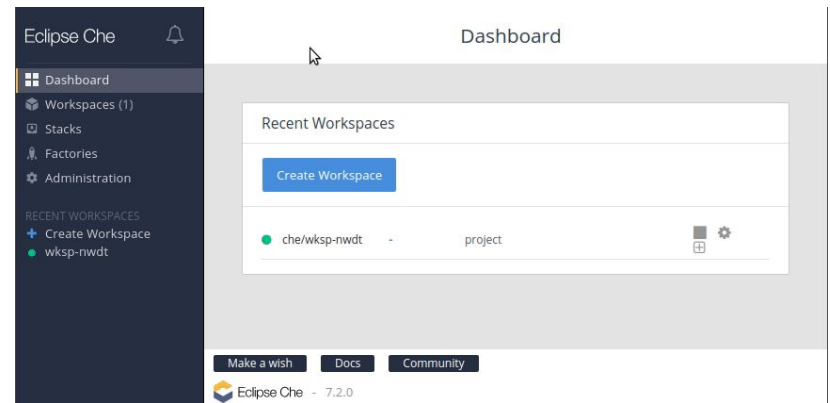
- A “workspace server” for cloud-based tools
- Management for developer workspaces/runtimes
 - Set-up workspaces (as containers)
 - Share workspaces
 - User management
 - Resource management
- Uses Eclipse Theia as the default IDE
- Provides preconfigured products based on Theia
- Provides additional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

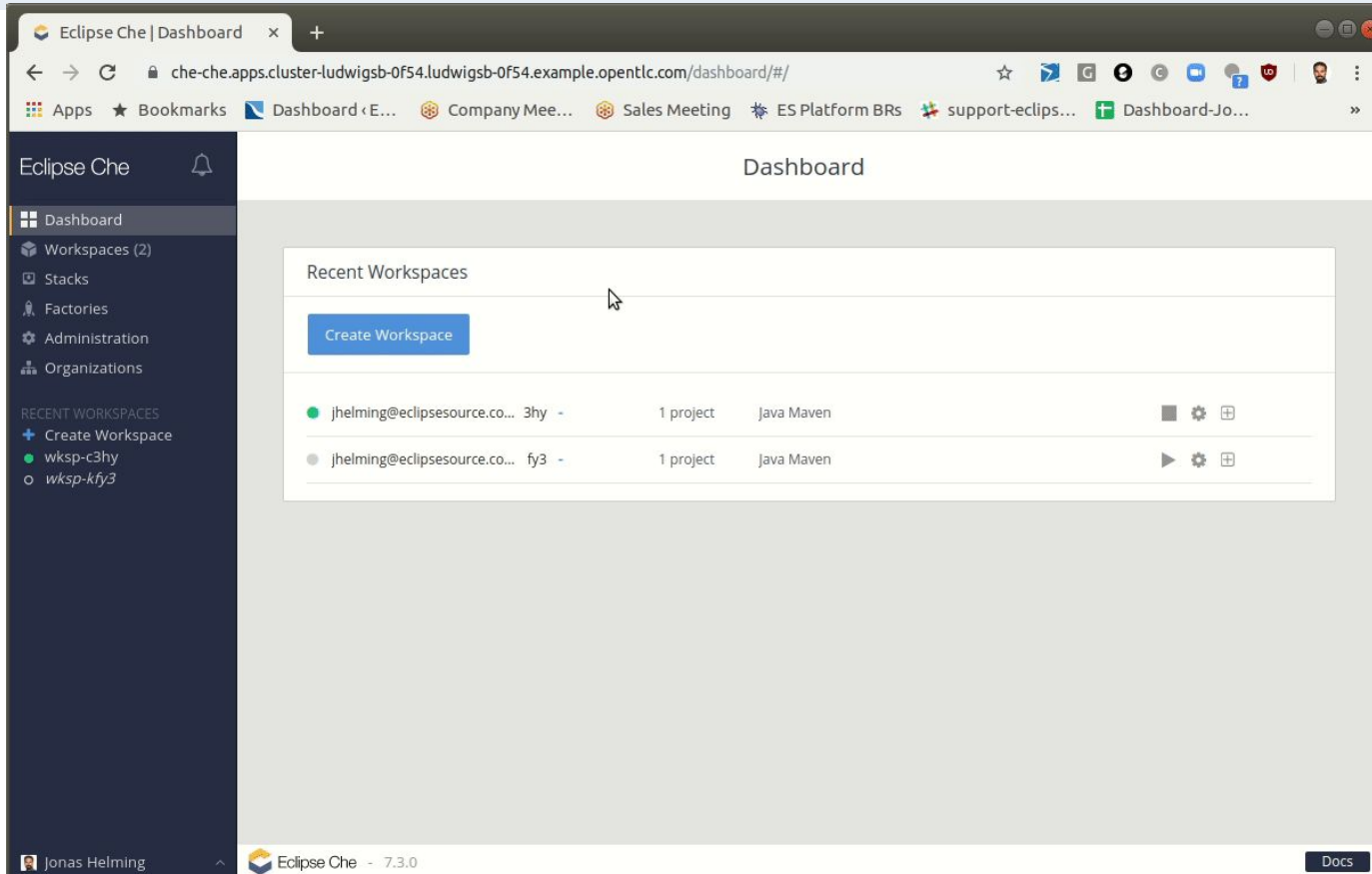


How to run/use Eclipse Che

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

- Workspaces
- Plugins
- Stacks
- Factories





The screenshot shows the Eclipse Che Dashboard in a web browser. The browser's address bar displays the URL: `che-che.apps.cluster-ludwigsb-0f54.ludwigsb-0f54.example.opentlc.com/dashboard/#/`. The dashboard has a dark sidebar on the left with navigation options: Dashboard, Workspaces (2), Stacks, Factories, Administration, and Organizations. Under 'RECENT WORKSPACES', there is a 'Create Workspace' button and two workspace entries: 'wksp-c3hy' and 'wksp-kfy3'. The main content area is titled 'Dashboard' and features a 'Recent Workspaces' section. This section includes a 'Create Workspace' button and a table of workspace details.

Workspace Name	Projects	Language	Actions
jhelming@eclipsesource.co... 3hy	1 project	Java Maven	[Stop] [Settings] [Expand]
jhelming@eclipsesource.co... fy3	1 project	Java Maven	[Play] [Settings] [Expand]

At the bottom of the dashboard, the user 'Jonas Helming' is logged in, and the version 'Eclipse Che - 7.3.0' is displayed. A 'Docs' button is located in the bottom right corner.

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, Sprouty, 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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