

Ecore Editor in the cloud - behind the scenes



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Why Ecore/EMF in the cloud?

- What is EMF?
 - A simple, pragmatic approach to **modeling the data**
 - Often used for DSLs and data-centric tools
 - **Ecore is the language to define models**
- Why EMF in the cloud?
 - **Reuse** mature functionality (model manipulation, serialisation, code generator)
 - Access to large EMF **ecosystem** (EMF Compare, Edapt, EMF Validation)
 - Out-of-the-box **compatibility** with existing DSLs



What is Eclipse Theia and EMF.cloud?

- Eclipse Theia:
 - An open source platform for building web-based tools and IDEs



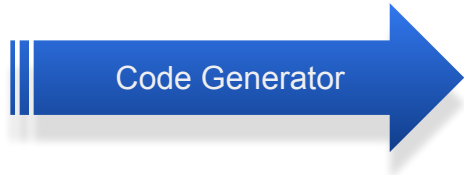
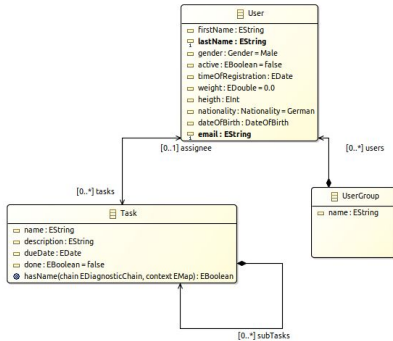
- EMF.cloud:
 - Enables the benefits of EMF in web-based tools
 - Provides adapter to migrate existing EMF-based applications
 - Provides new components for web-based tools when applicable



Goals:

Enable Ecore modeling in Eclipse Theia
Reuse, do not reinvent the wheel

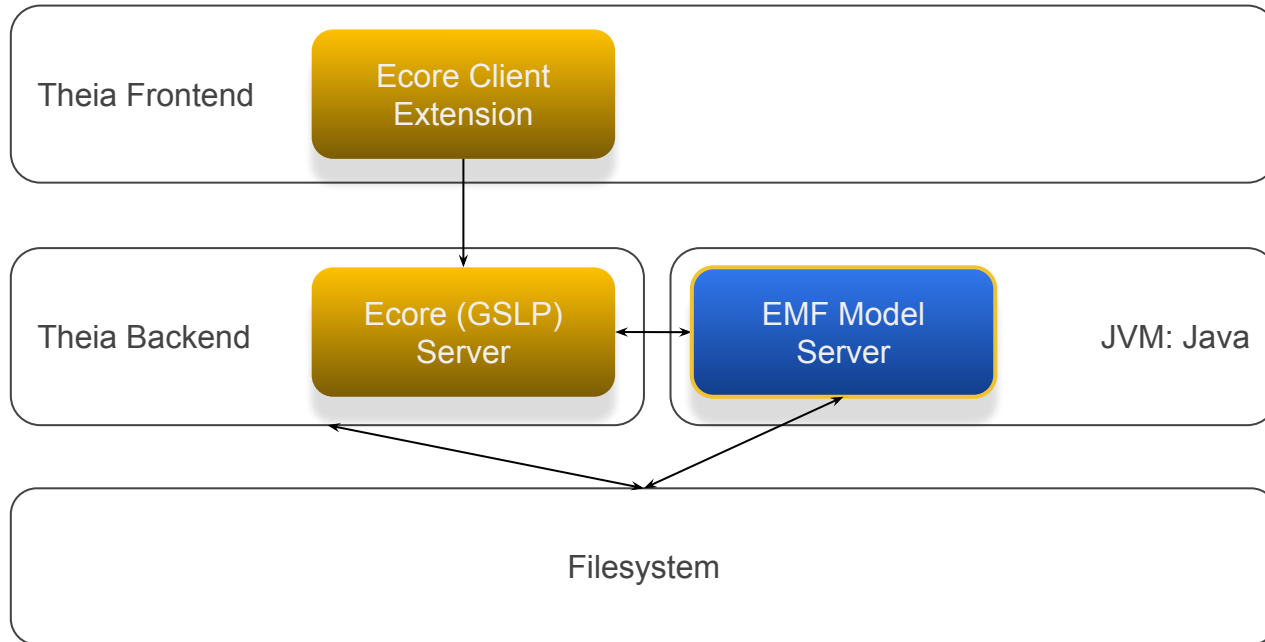
Ecore/EMF Tooling



- ▼ Task
- [^]getName() : String
- [^]setName(String) : void
- [^]getDescription() : String
- [^]setDescription(String) : void
- [^]getAssignee() : User
- [^]setAssignee(User) : void
- [^]getDueDate() : Date
- [^]setDueDate(Date) : void
- [^]getSubTasks() : EList<Task>
- [^]isDone() : boolean
- [^]setDone(boolean) : void
- [^]hasName(DiagnosticChain, Map<?, ?>) : boolean

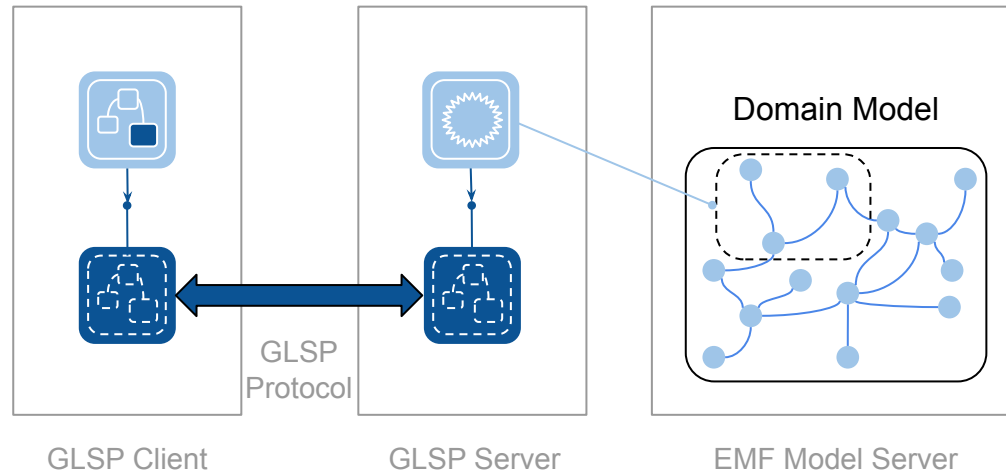
Model Creation
 Graphical Modeling
 Code Generation
 Property view
 Validation

Ecore Editor - architecture



Eclipse Graphical Server Language Platform (GLSP)

- Like LSP for diagrams
- Based on Eclipse Sprouty



Demo

Cloud Hosting?

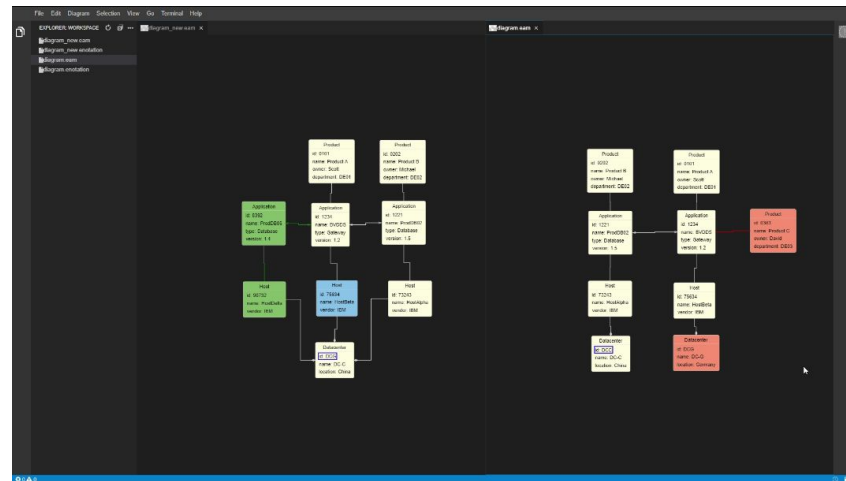
What is Eclipse Che?

- A “workspace server” for cloud-based tools
- Management for developer workspaces/runtimes
- Uses Eclipse Theia as the default IDE
- Allows to integrator custom “Editors”






Outlook

- Current state:
 - Alpha version available under the EPL, available in EMF.cloud
- In the lab:
 - EMF Compare
- We are looking for:
 - Contributions
 - Interested parties
 - Sponsoring



Conclusion

- Reusing existing components on the server allows to:
 - Save a lot of effort!
 - Preserve existing investments
 - Custom extensions
 - DSL specifications
 - Instance data
- Relevant projects:
 - EMF.cloud: <https://emf.cloud> 
 - GLSP: <https://glsp.io> 
 - JSON Forms: <https://jsonform.io> 

Evaluate ~~this~~ Sessions

Sign in and vote at [Eclipsecon.org](https://eclipsecon.org)

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Questions?

Get in contact with us for support around web-based or
desktop-based tools!

Here at our booth or jhelming@eclipsesource.com