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#oscon

Orion: Development Tools for the Web, on the Web


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Demo coming...want to follow along?

- orionhub.org



tools for the web on the web



```
function setUsername (registry, dropdown){  
  var userService = registry.getService("orion.core.user")  
  var authenticationIds = [];  
  var authServices = registry.getServiceReferences("orion.core.auth")
```

Log in

username

password




[Forgot password?](#)

Sign in

New to Orion?

Register

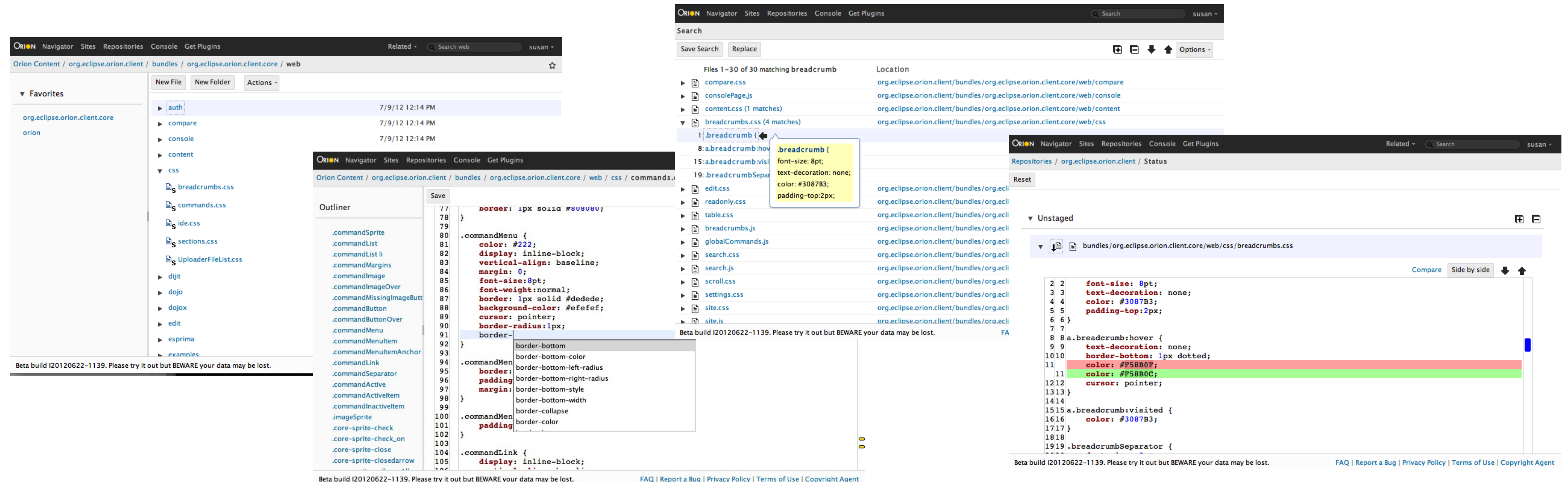
Log in with:



Software development in a browser

- Workflows across a set of linked web pages
- Collaboration via shared data and links
- Not like a desktop IDE

The web is the platform



Orion Design Principles

- Don't fight the browser
- Use native browser capabilities
Real hyperlinks, back button, bookmarking, link sharing, ...
- Functionality on separate pages
Page = Task + Resource
- Performant and lightweight
Speed trumps function

Strengths of the Web

- Highly distributed content
- Scalable computing power
- Simple connectivity -- links
- Trivial update mechanism
- Powerful rendering engine
- Large, active community

Integration Possibilities

- Hyperlinks as an integration mechanism
- OSLC, OAuth: Consume and produce server APIs
- Client-side extensions (plug-ins): adding commands to existing UI
- Integrate with browser debuggers: Firebug, WebKit Inspector

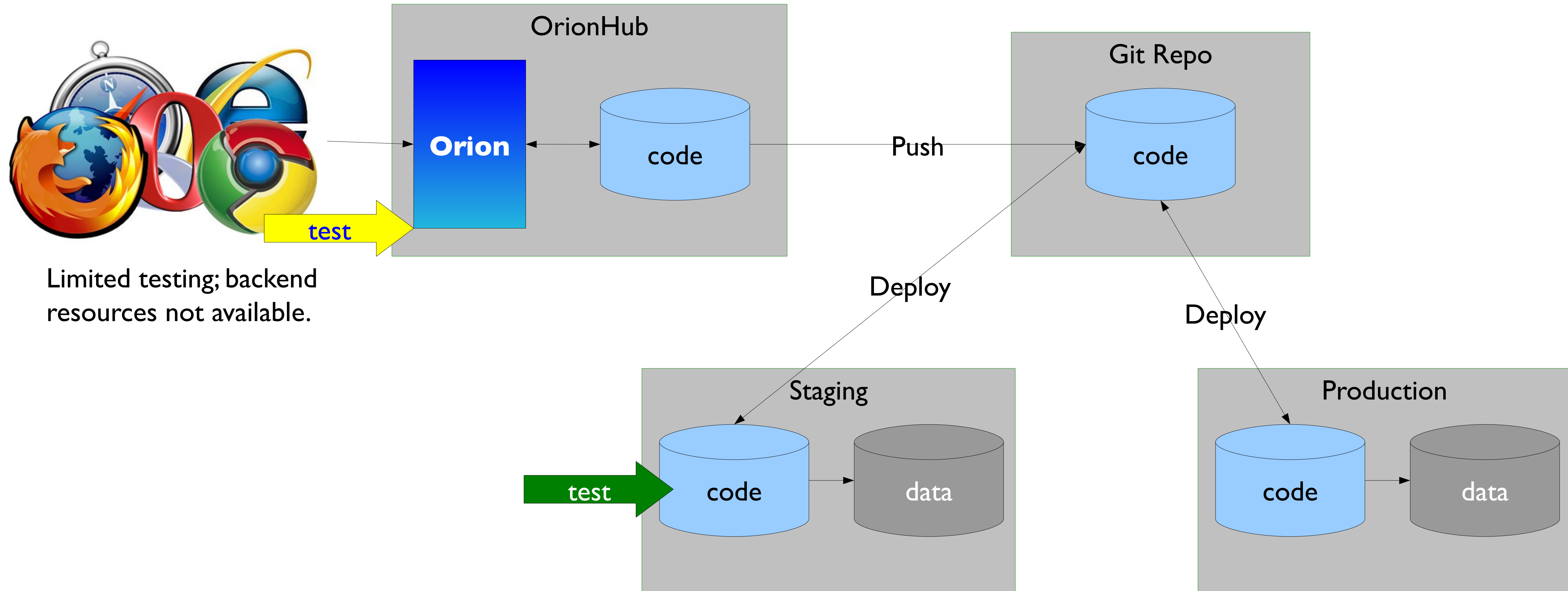
Core coding activities + extensions

- Platform provides basic tasks for web client development
 - HTML, CSS, JS editing in a performant, robust editor
 - Version control (git) support
 - Global search, site hosting, unit testing
- Linking in additional features
 - Outward bound links via navigation bar, related pages, navigator
 - Inward bound links via URI Templates for invoking Orion functions
- Extend capabilities of existing pages
 - Editor capabilities, content manipulation, alternate editors
- Extend core capabilities
 - Content hosting (S3, WebDAV, HTML5 local files)
 - Authentication strategies

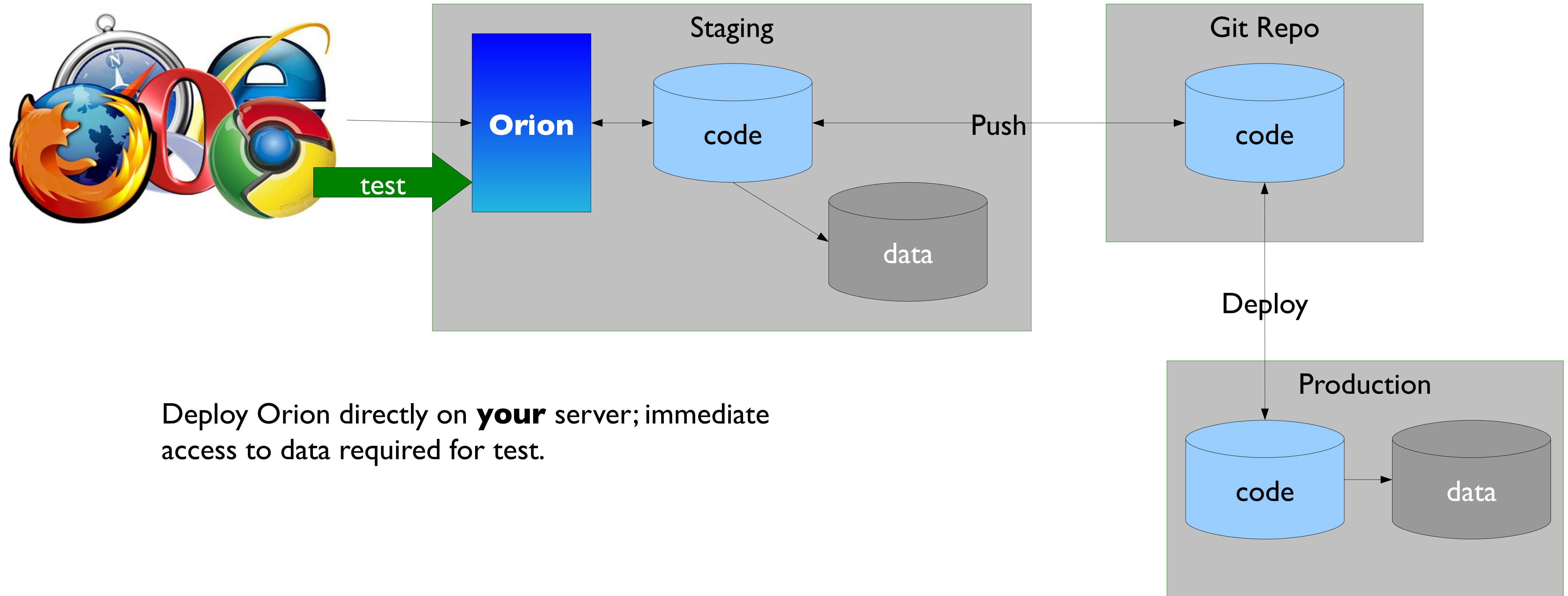
Orion 0.5 demo

- Project setup, navigation, editing HTML, CSS, JS
- Site hosting
- Using plug-ins
- Version control (git) support

Scenario: Orion on Our Server



Scenario: Orion on Your Server



Some History

- Early demos of “Eclipse on the Web” in spring 2008
- Bespin project from Mozilla in spring 2009
 - Extensible web-based code editing framework
 - Eclipse experimental server
- Revisit the problem in fall 2010
 - Web development (HTML, CSS, JS)
 - Contribute to Eclipse Foundation in early 2011
- orionhub launched in spring 2011

Plug-ins: Extending the system

- Users install plug-ins from other domains

Pages request necessary micro-services from plug-in/service registry

Plug-ins loaded as needed (hidden iframes)

Don't call us, we'll call you (today)

Authentication, licensing (1.0)

- UI extension points

Narrowly defined contributions

Semantic in nature (for flexibility in changing our UI)

- Core extension points

Alternate file systems

Authentication strategies

Plug-ins: Micro Services Example (1/2)

- Declarative behavior - “Related” links menu

```
window.onload = function() {  
    var provider = new eclipse.PluginProvider();  
    provider.registerServiceProvider("orion.page.link.related", null, {  
        nameKey: "Git Status",  
        id: "eclipse.git.status2",  
        tooltipKey: "Go to Git Status",  
        nls: "git/nls/gitmessages",  
        validationProperties: [{  
            source: "StatusLocation|Clone:StatusLocation",  
            variableName: "GitStatusLocation"  
        }],  
        uriTemplate: "{OrionHome}/git/git-status2.html#{GitStatusLocation}"  
    });  
}
```


Plug-ins: Micro Services Example (2/2)

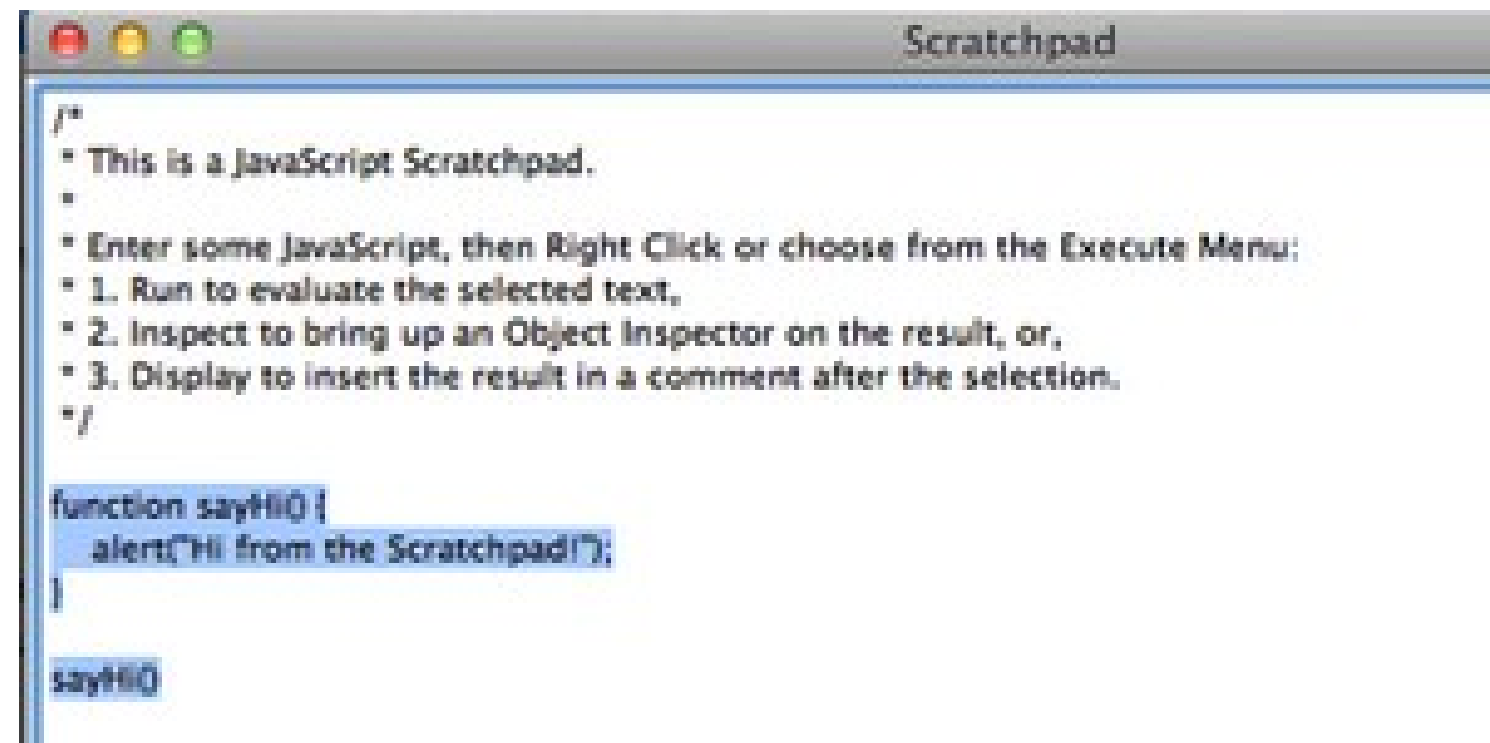
- Asynchronous javascript implementation – i18n validator

```
provider.registerServiceProvider("orion.edit.validator", {
  checkSyntax: function(title, contents) {
    var problems = [];
    // a bunch of implementation detail finding and pushing problems...
    problems.push({
      reason: "Non externalized string literal " + strings[j][0],
      line: i + 1,
      character: strings[j].index + 1,
      end: strings[j].index + strings[j][0].length,
      severity: "warning" });
  }
  return { problems: problems };
}},{
contentType: ["application/javascript"]
}
);
```

Consuming Orion: The Editor

- Mozilla Dev Tools (Scratchpad)

<http://blog.mozilla.org/devtools/2011/08/15/introducing-scratchpad/>

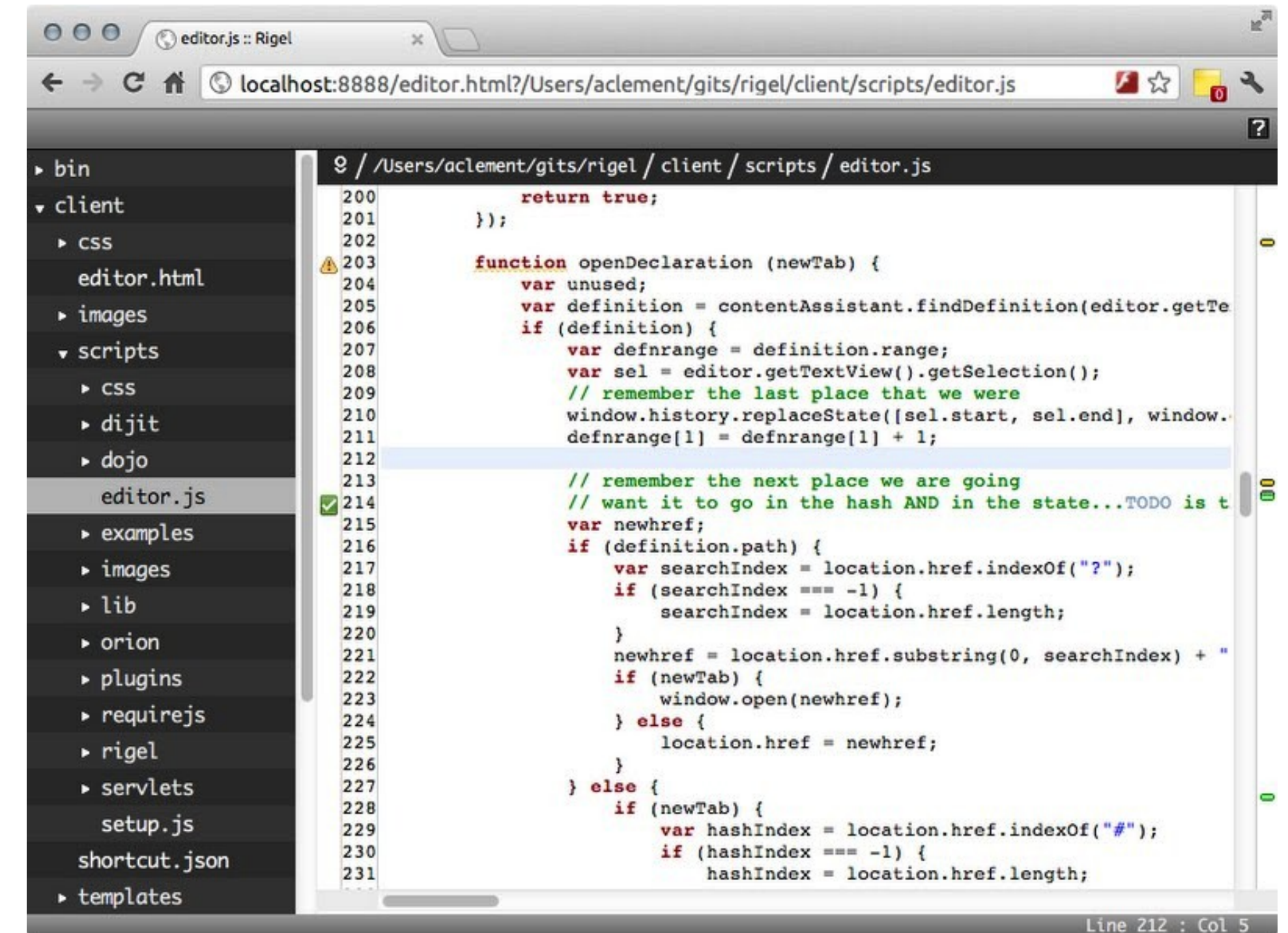


- Rigel (VMWare)

Lightweight editing of local files

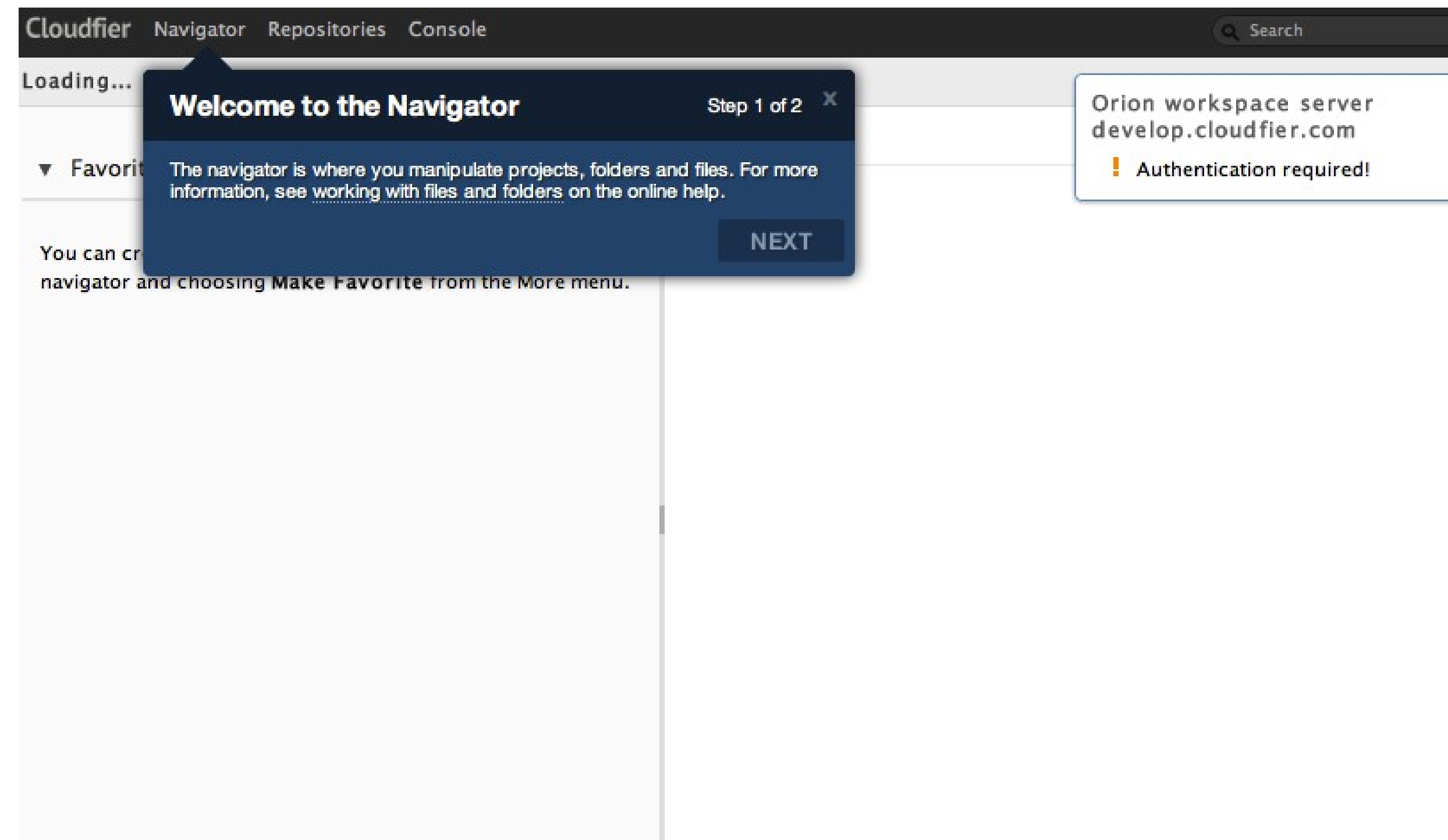
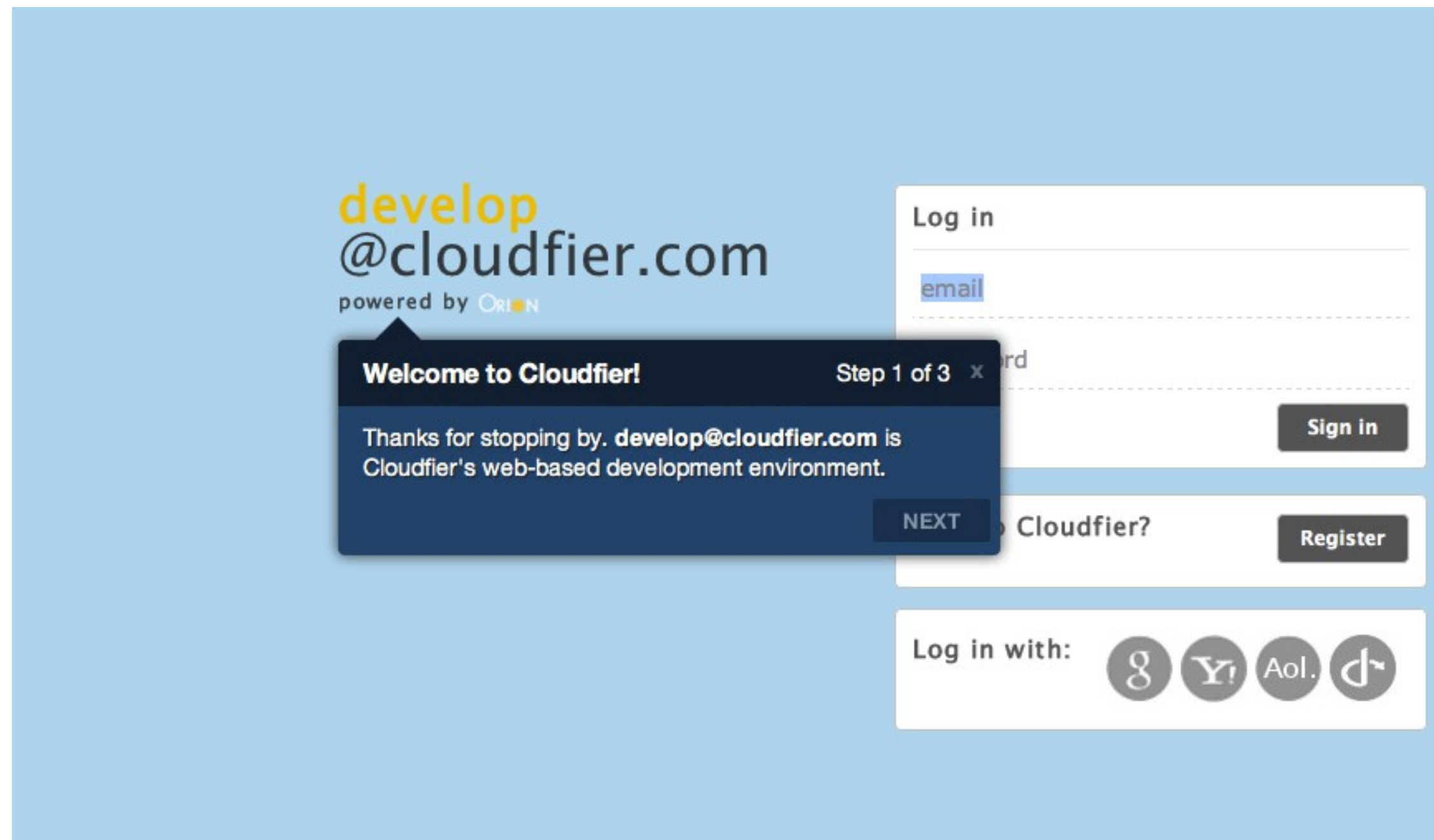
Node app serving up local files

Content assist and navigation based on commonjs or Amd module systems



Consuming Orion: extending and rebranding

- Cloudfier - <http://cloudfier.com/>



Building a Community

- Orion Hub: a demo for users to experiment
Success = a community of users, adopters and contributors
- Focus is on a federation of tooling
All development does not need to be done at Eclipse Foundation
- Initial code contribution
Generate discussion, ideas and community
- Please use and look at the code; we want feedback

Contributing to Orion

- Get involved

Use Orion

Adopt Orion

Contribute to Orion

Join the project!

- Project website <http://www.eclipse.org/orion>
- Project forum <http://www.eclipse.org/forums/eclipse.orion>

Coming in Orion 1.0

- Robustness

Performance, consumability of components, code quality, API

Finish up accessibility, i18n

Reevaluate js framework usage

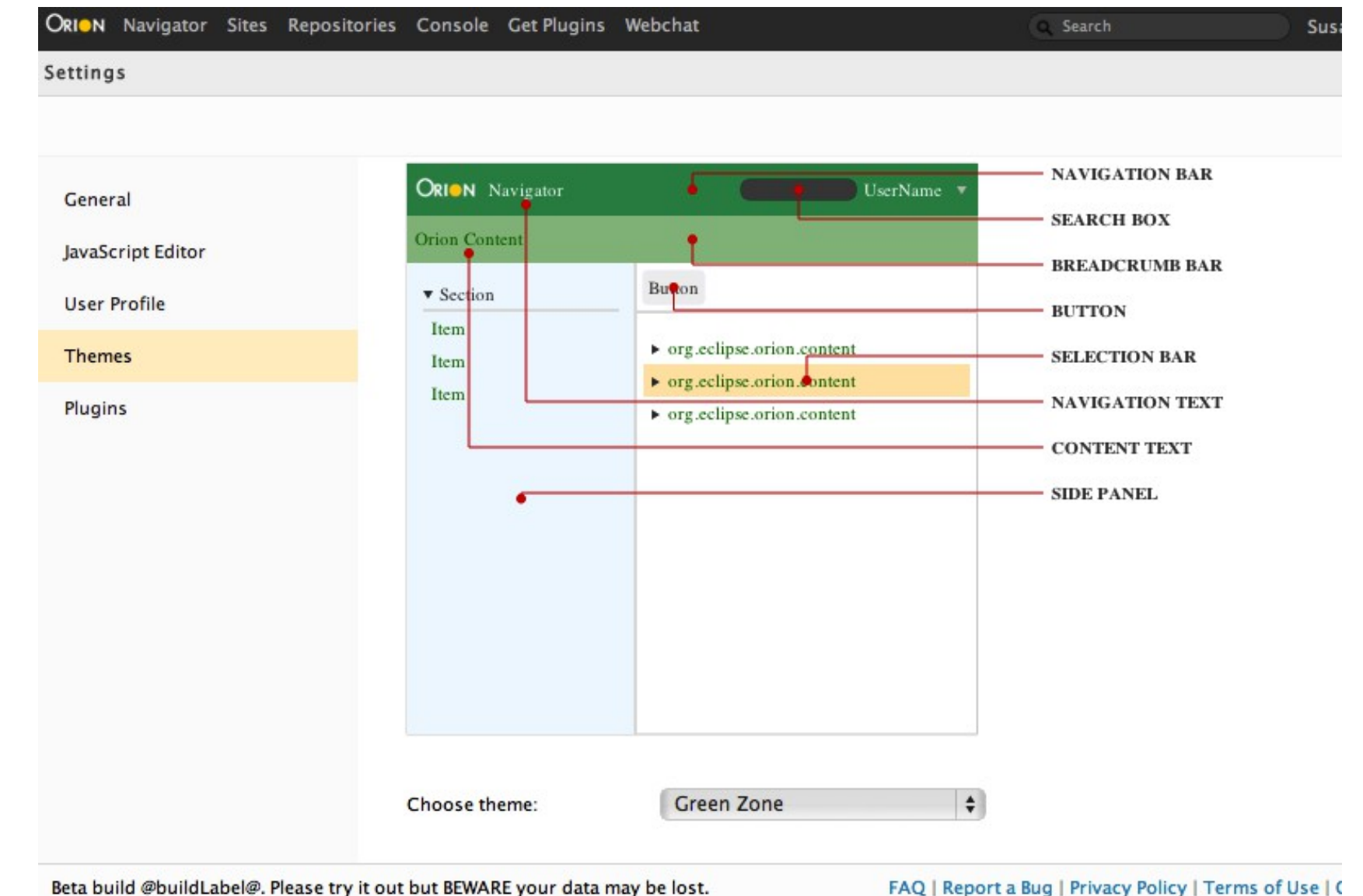
- Key missing features (not committed yet)

Theme Builder (LESS)

Offline support (investigating)

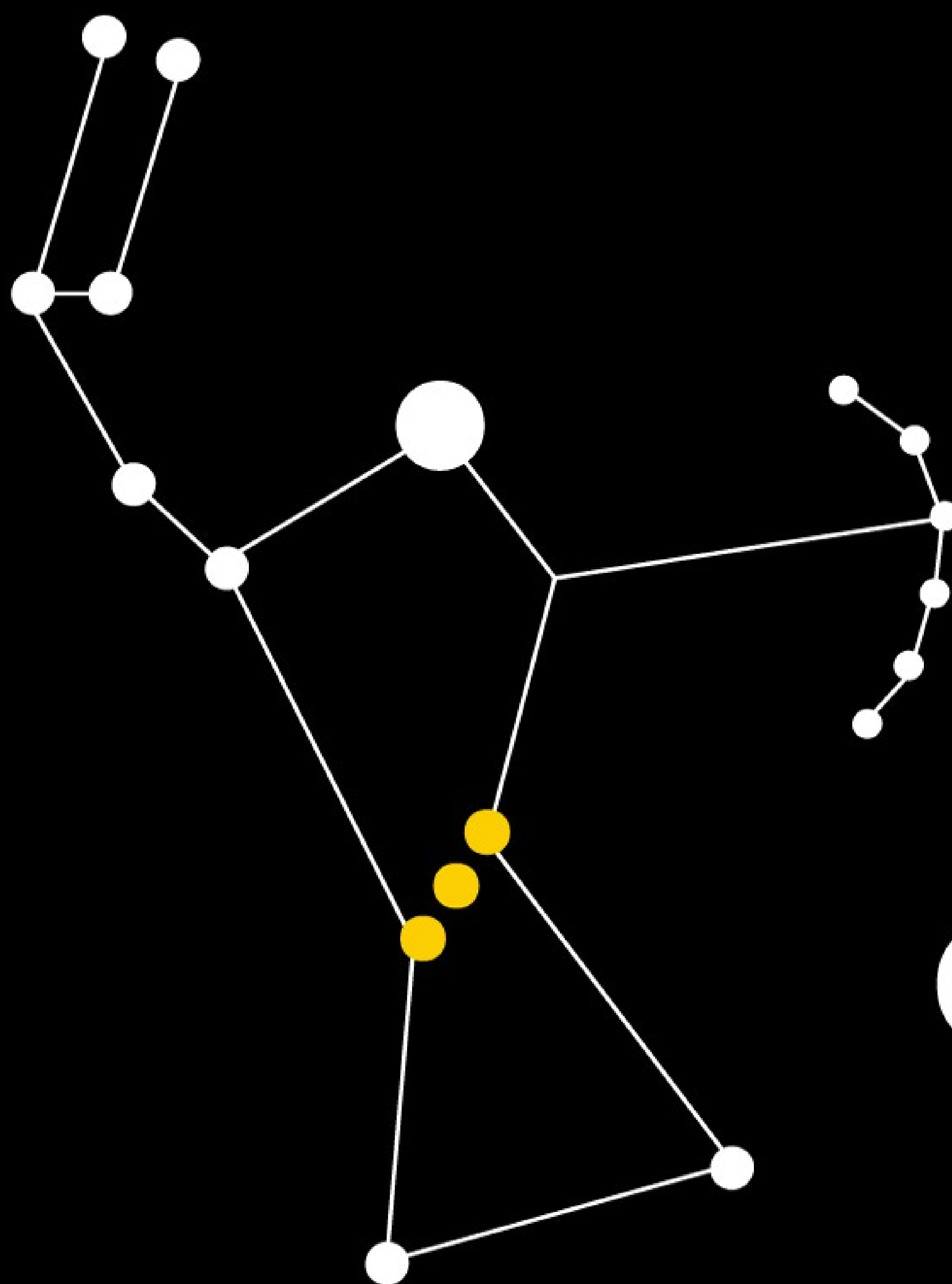
Consumable (and relocatable) Navigator

- M1 8/10/2012, M2 9/21/2012, Release October 2012



Learning more

- orionhub.org - Kick the tires
- [@orionhub](https://twitter.com/orionhub) on Twitter
- <http://wiki.eclipse.org/Orion>
 - Downloading builds, git repos, contributions
 - Architecture and programmer doc
 - User doc
- planetorion.org – news and articles



ORION