Bundle Recipes
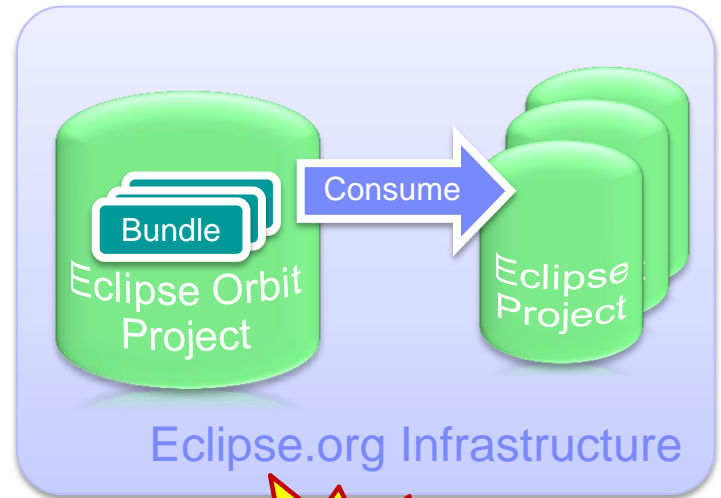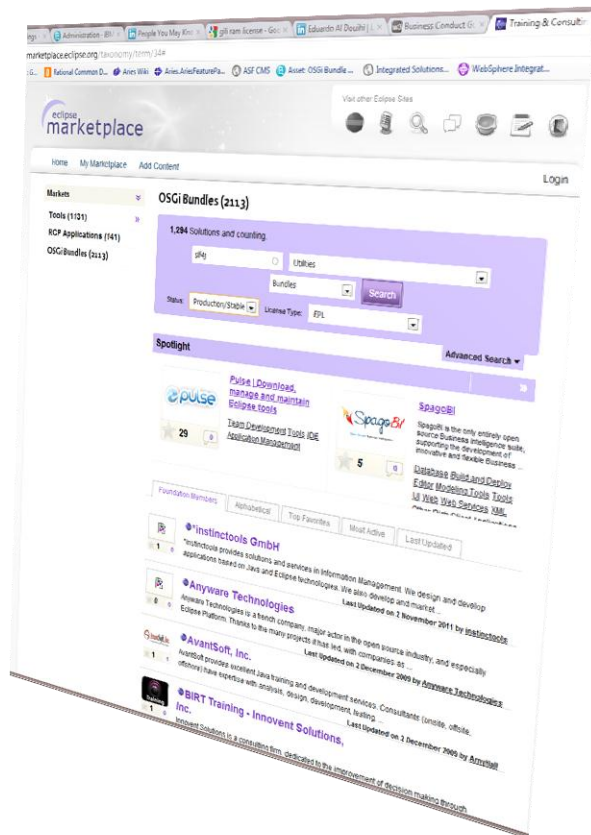## Helping users consume open source as OSGi bundles

Motivation

- OSGi as a modularity system has grown in popularity and is now predominant in environments from micro to desktop to enterprise runtimes

- A major inhibitor to OSGi adoption in the Enterprise is the lack of good quality bundles for common third-party libraries
  - An open source OSGi bundles market will enable a vibrant community sharing bundles and features that benefit the OSGi runtime and end customer applications
  - Provide a market of reusable assets that makes consuming Eclipse RT projects easier (e.g. makes it easier to write Virgo applications)
  - Eclipse recognition as the place enabling the capability (big kudos to Eclipse)

- Benefits developers
  - Typically need to look for a bundle-ized version of a library and have to do it yourself
  - Reduces duplicating of this effort by all consumers
  - Easier to write eclipse plugins
  - Easer for RT teams to write their code
  - A route for providing bundled projects that can go into Orbit as and when needed (helps Orbit)

- Eclipse OSGi Bundle Market: the key resource for OSGi based application developers to find open source jars in bundle-ready form
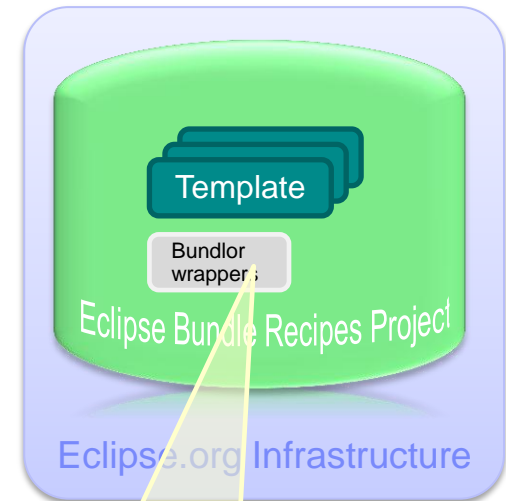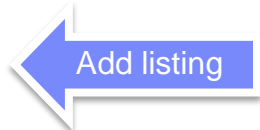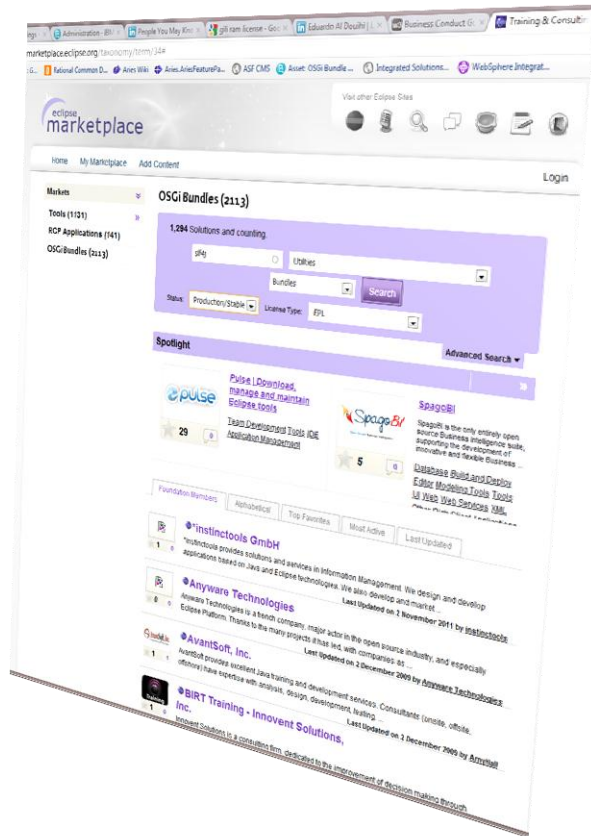
Eclipse += OSGi Bundles Market

- Adds 'OSGi Bundles' market to the Eclipse MarketPlace
- Pre-existing bundles may be listed in the MarketPlace (listing per bundle)
- Enhancements to Marketplace Client to pull bundles into IDE workspace
- Dependency graph for each bundle fulfilled by entries in the market
- Dependencies navigable in the market

Add listing

Consume

Bundle

Eclipse Orbit Project

Eclipse Project

Eclipse.org Infrastructure

Pre-existing

Add listing

Bundle

Bundles generated outside Eclipse

Eclipse += Bundle Recipes Project (provisional name)

- Collaborate around creation of high-quality OSGi bundles (will be joint proposal)
- Virgo Bundlor Template descibes how to convert Jar to Bundle
- One template … one bundle … one listing in the MarketPlace
- 2000+ templates as seed from SpringSource/VMware EBR
- Bundlor wrappers enable client side bundle generation as needed

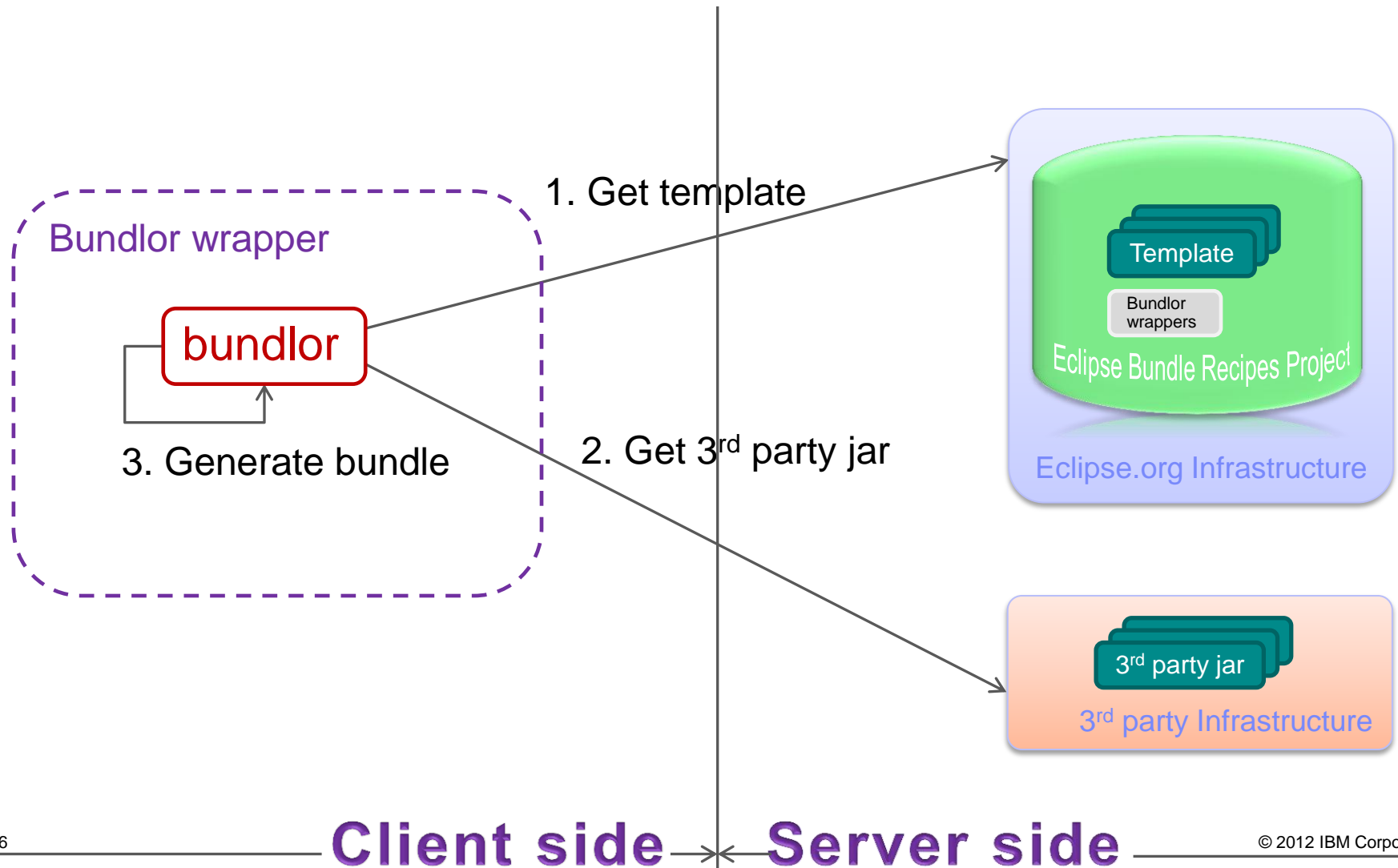Add listing

Template

Bundlor wrappers

Eclipse Bundle Recipes Project

Eclipse.org Infrastructure

Note:
- source for browser, maven, ant bundlor wrappers are developed at the Eclipse Bundle Recipes Project
- source is EPL

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Eclipse Virgo Bundlor enables client side bundle generation

- Bundles are created when needed on the client
  - Looked at hosting bundles generated from open source
  - IP Review would have been required on each bundle (2000+ bundles coming from SpringSource EBR)

- Eclipse Virgo Bundlor (pre-existing)
  - Takes: Authored Template + Jar -> Bundle
  - New: enhancements to template to describe Jar location & Jar hash sum

- New: client platform Bundlor enablement wraps Bundlor for key environments
  - Bundlor Maven plugin
  - Bundlor Ant task
  - Bundlor Eclipse plugin
  - Bundlor in the Marketplace web page
    - Java applet embedded in OSGi Bundles marketplace runs Bundlor client side

- Ensures
  - Bundle is created client side
  - Open source Jar that hasn't been IP reviewed by Eclipse is not served up from Eclipse h/w

Eclipse += Bundle Recipes Project

- Bundlor wrappers enable variety of clients: maven, ant, eclipse, java applet

New Project Proposal - Eclipse Bundle Recipes

- Propose a new Open Source Eclipse Bundle Recipes project (provisional title)
  - Place to collaborate around creation of high-quality OSGi bundles
  - Templates used to create bundles stored at Eclipse.org and listed in the Eclipse MarketPlace

- Propose a new Open Source Eclipse Marketplace "market" - OSGi Bundles
  - Directory of bundles with Bundlor templates in new Eclipse Bundle Recipes project
  - Eclipse project and Eclipse Orbit bundles included
  - Also include bundles created and hosted outside Eclipse

- Content
  - SpringSource/VMware EBR seed (templates)
  - New templates developed by the community as the Eclipse Bundle Recipes project takes off
  - Templates for creating bundles from open source projects licensed under any Eclipse MarketPlace acceptable license

- Governance
  - Eclipse Marketplace governance for OSGi Bundles market
  - Eclipse project governance for Bundle Recipes project
    - Listings in Marketplace indicate 3rd party Jars are sourced from 3rd party site
    - No IP review
    - Supplied "as is"

- Dev tools – Continue to evolve existing toolset
  - Virgo Bundlor tool builds bundles using template definitions and binary + source
  - Consume via ant, ivy, maven, eclipse IDE integration
  - Marketplace Client enhancements
    - Bundlor integration into Eclipse IDE to provide bundle to the target platform
    - Legal notice of where 3rd party Jar is being downloaded from

In Summary

- OSGi Bundle market becomes the key resource for OSGi application developers to find bundle-ready forms of open source projects

- The wider open source community list their bundles in the market

- Open source projects not already provided as bundles are assisted by the new Eclipse Bundle Recipes project where developers collaborate to create templates to convert Jars up to Bundles.