P2 Repositories

Overview

From version 2.4, Artifactory provides advanced support for proxying and caching of P2 repositories and aggregating P2 metadata using an Artifactory virtual repository which serves as a single point of distribution (single URL) for Eclipse, Tycho and any other P2 clients.

This virtual repository aggregates P2 metadata and P2 artifacts from underlying repositories in Artifactory (both local and remote) providing you with full visibility of the P2 artifact sources and allowing powerful management of caching and security for P2 content.

For more information on defining virtual repositories please refer to Virtual Repositories.

For P2 support we recommend using Eclipse Helios (version 3.6) and above.

Older versions of Eclipse may not work correctly with Artifactory P2 repositories.

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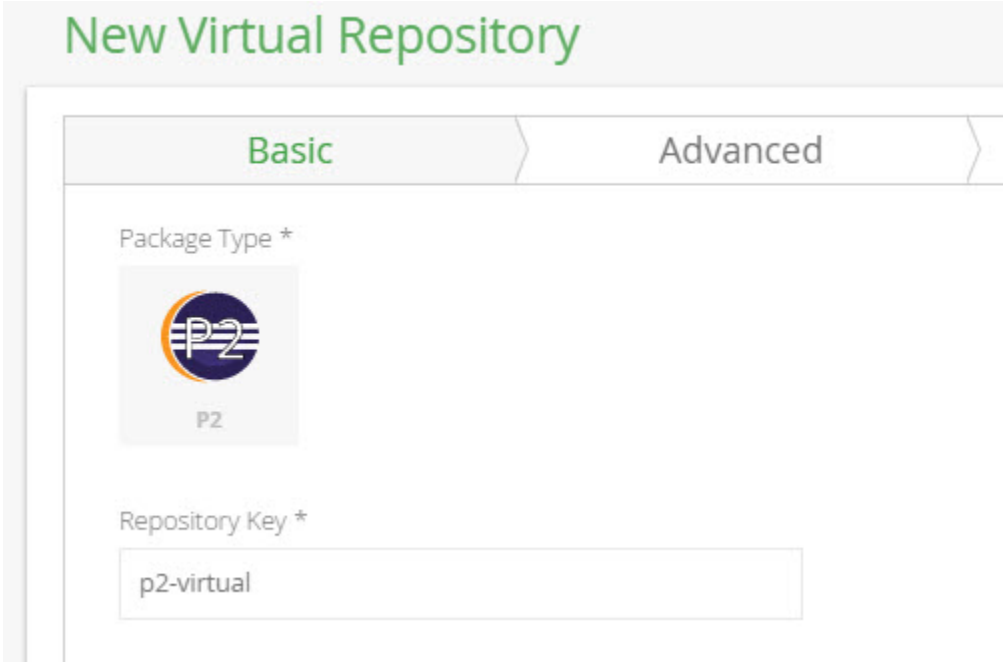
Configuration

To use P2 repositories, follow the steps below:

- Define a virtual repository in Artifactory
- Select local repositories to add to your virtual repository
- Select remote repositories to add to your virtual repository
- Create the selected local and remote repositories in your virtual repository
- Configure Eclipse to work with your virtual repository

Defining a Virtual Repository

- Create a new virtual repository and set **P2** as the **Package Type**



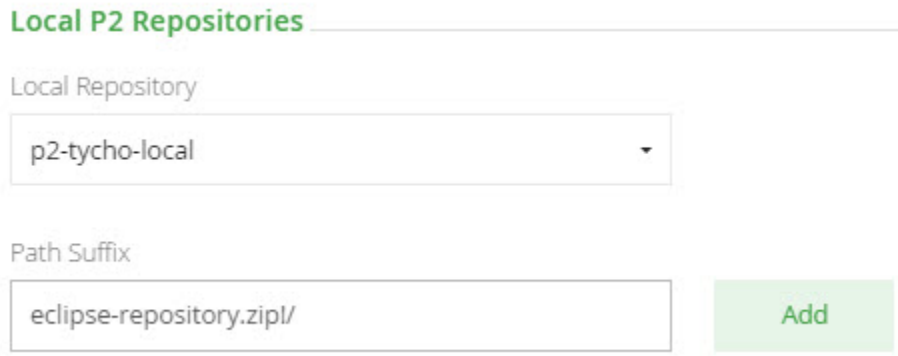
If developers in your organization use different versions of Eclipse (e.g. Helios and Juno), we recommend that you define a different P2 virtual repository for each Eclipse version in use.

Selecting Local Repositories

Adding a local repository to your virtual P2 repository does not require any special configuration:

- Simply select the desired local repository from the **Local Repository** field
- In the **Path Prefix** field, specify the path to the P2 metadata files (`content.jar, artifacts.jar, compositeContent.xml` etc.). If left empty, the default is to assume that the P2 metadata files are directly in the repository root directory.
- Click the "Add" button.

If you have a Tycho repository deployed to a local repository as a single archive, specify the archive's root path. For example: *eclipse-repository.*



zip!/

Selecting Remote Repositories

To add a remote P2 repository to Artifactory, enter the URL to the corresponding P2 metadata files (`content.jar, artifacts.jar, compositeContent.xml`, etc.) and click the "Add" button

Two common examples are:

1. The main Juno repository: *http://download.eclipse.org/releases/juno*
2. The Google plugins repository for Indigo (GWT, GAE, etc.): *http://dl.google.com/eclipse/plugin/3.7*

Artifactory analyzes the added URL and identifies which remote repositories should to be created in Artifactory based on the remote P2 metadata (since remote P2 repositories may aggregate information from different hosts).

When P2 metadata files reside inside an archived file, simply add '!' to the end of the URL.

For example: *http://eclipse.org/equinox-sdk.zip!/*

Creating the Repositories

Once you have selected the local and remote repositories to include in your virtual repository, Artifactory will indicate what action will be taken once you select the "Save & Finish" button.

The possible actions are as follows:

Create*	Creates a new, P2 enabled, remote repository with the given key (you may still edit the remote repository key).
Modify*	Enables P2 support in an existing remote repository.
Include	Adds the repository to the list of repositories aggregated by this virtual repository.
Included	No action will be taken. This repository is already included in the virtual repository.

*For remote repositories only

Filter by Repository

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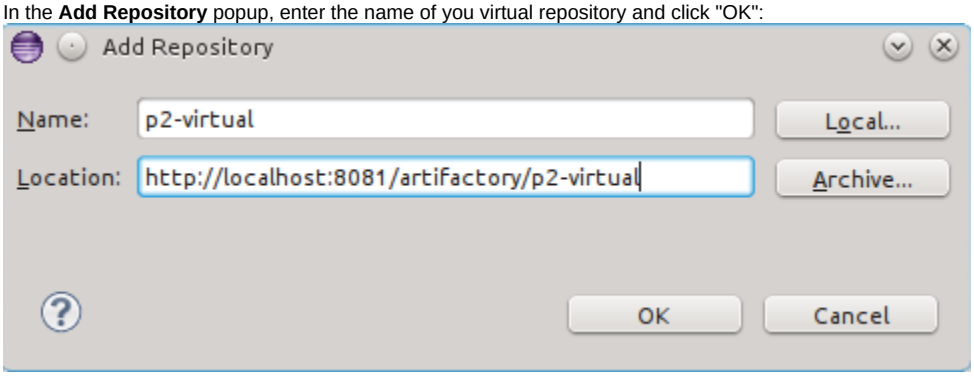
Action	Repository	URL
include	download.eclipse.org	http://download.eclipse.org
include	p2-local	local://p2-local/pathto/metadata
include	p2-tycho-local	local://p2-tycho-local/eclipse-repositor...

Eclipse

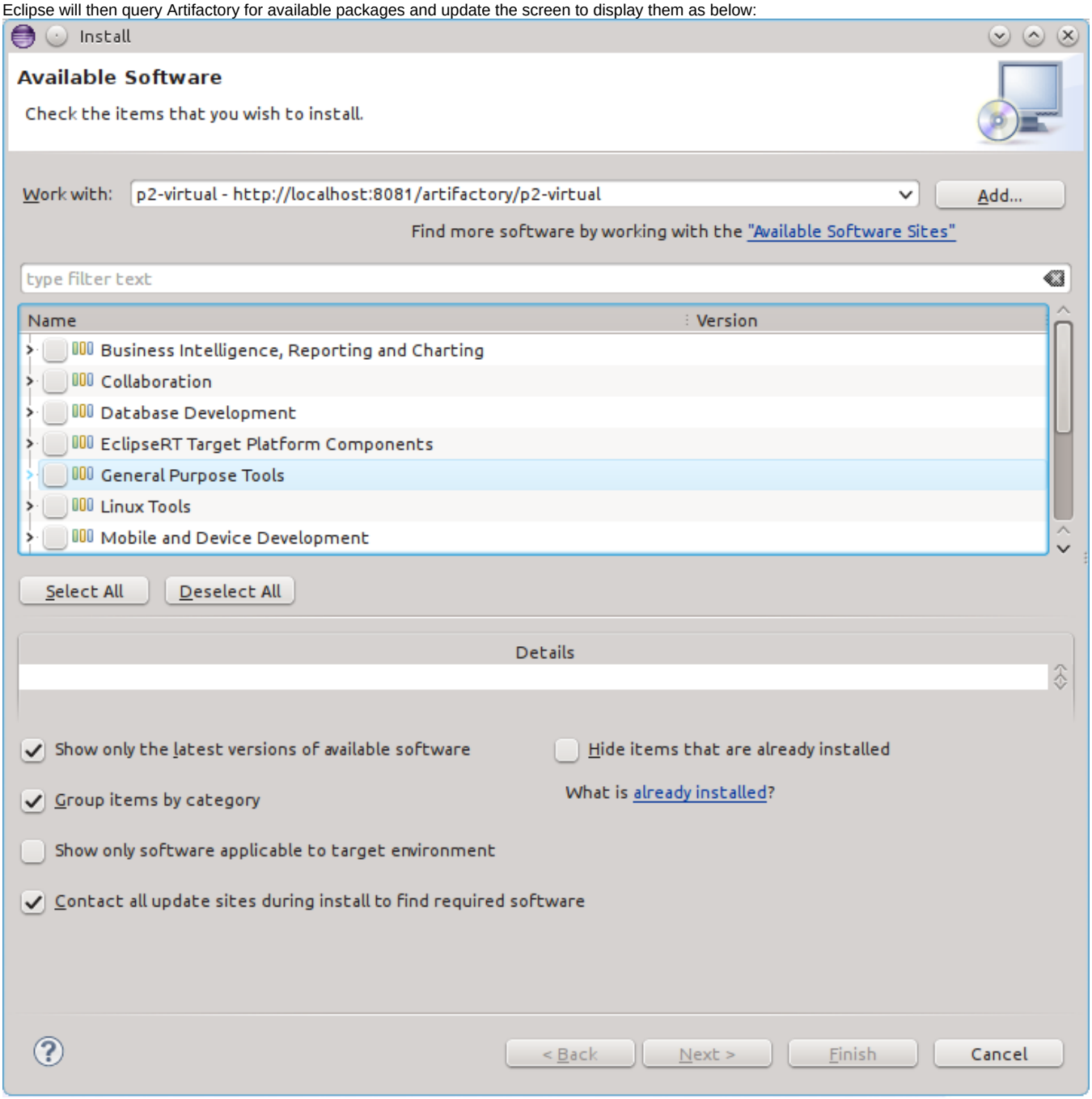
You are now ready to configure eclipse to work with the virtual repository you have created above.

In the Eclipse menu, select **Help | Install new Software** and then click **Add**.

In the **Add Repository** popup, enter the name of you virtual repository and click "OK":



Eclipse will then query Artifactory for available packages and update the screen to display them as below:



Integration with Tycho Plugins

Artifactory fully supports hosting of Tycho plugins as well as resolving Tycho build dependencies.

To resolve all build dependencies through Artifactory, simply change the repository URL tag of your build pom.xml file and point it to a dedicated virtual repository inside Artifactory

For example:

```
<repository>
    <id>eclipse-indigo</id>
    <layout>p2</layout>
    <url>http://localhost:8081/artifactory/p2-virtual</url>
</repository>
```

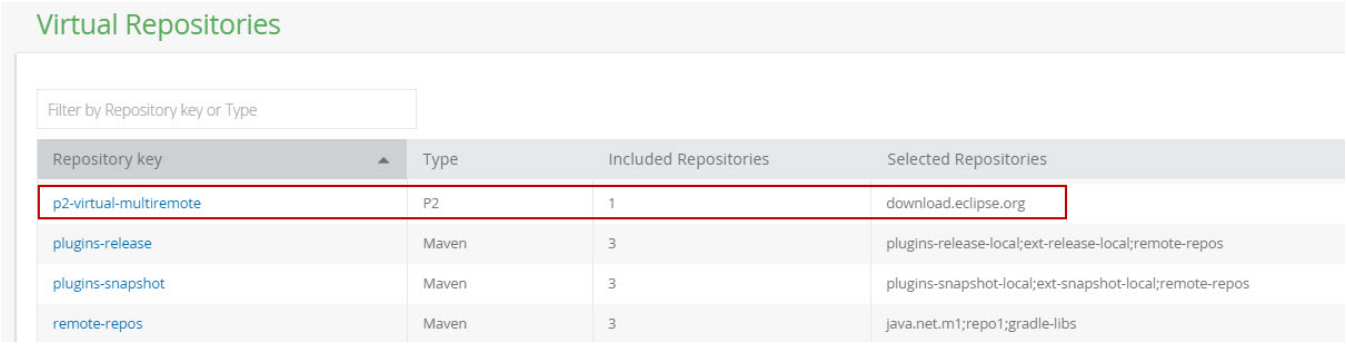
⚠ The P2 virtual repository should contain URLs to all local repositories with an optional sub-path in them where Tycho build artifacts reside.

Multiple Remote Repositories with the Same Base URL

When using P2-enabled repositories with multiple remote repositories that have the same base URL (e.g *http://download.eclipse.org*) , you need to ensure that only 1 remote repository is created within your virtual repository (for each base URL). When creating your virtual repository, Artifactory takes care of this for you, but if you are creating the remote repositories manually, you must ensure to create only a single remote repository, and point the sub-paths accordingly in the P2 virtual repository definition.

In the example below, http://download.eclipse.org/releases/helios and http://download.eclipse.org/releases/juno were both added to the same virtual repository...repository.

...but in fact, the virtual repository only really includes one remote repository



Configuring Google Plugins Repository

The Google Plugins repository (*http://dl.google.com/eclipse/plugin/3.7*) is aggregated across 3 different URLs. Therefore you need to configure Artifactory to create all of them in order to resolve P2 artifacts correctly: