



GT3IDE

An Eclipse plug-in for Globus Toolkit Programmers

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GT3IDE



What is GT3IDE?

- ▶ A plugin for Eclipse 3
 - ▶ Eclipse: An open **extensible** IDE. Mainly Java-oriented, but supports other languages (C++)
- ▶ Allows Globus Toolkit 3/4 programmers to develop Grid Services/Web Services easily, by providing an environment which seamlessly integrates all the steps from coding to deployment.
 - ▶ Yes, we will support GT4.

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Motivation

- ▶ Programming with the Globus Toolkit is currently performed mainly from a command-line interface.
- ▶ Using Java-friendly editors (EMACS, UltraEdit, etc.) and Ant can ease the programmer's interaction with the toolkit.
- ▶ However, there is currently no Integrated Development Environment (IDE) specifically suited for Grid/Web Services programming with the Globus Toolkit.
 - ▶ High-level IDE: GrIDE <http://apstc.sun.com.sg/gride/> (presented in GlobusWORLD2004)

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Why do we need an IDE? (I)

- ▶ Because working only from the command-line can be so error-prone and such a pain!
 - ▶ Some people disagree with that statement :-)
- ▶ Potential advantages of using an IDE:
 - ▶ A typical Globus project consists of a lot of different files with different syntaxes (WSDL, WSDD, Java, etc.). Some of these files could be generated automatically, or specified from a GUI (so the user doesn't have to learn the exact syntax of each type of file).
 - ▶ No need to fiddle with the Ant file to customize it to my needs (an IDE could provide a generic Ant build file suitable for practically all types of projects)

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Why do we need an IDE? (II)

- ▶ All the advantages of using a Java IDE:
 - ▶ Debugging!
 - ▶ On-the-fly syntax checking
 - ▶ Code completion (e.g. pull-down list showing the methods an object accepts)
 - ▶ Automatic code formatting
 - ▶ Viewing your Java classes in tree representation
 - ▶ Etc, etc.

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Goals of the project

- ▶ With this in mind, we started the project in November 2003 with the following goals:
 - ▶ *Make life easier for the programmer*
 - ▶ Provide an environment which seamlessly integrates all the steps from coding to deployment.
 - ▶ If something can benefit from a layer of abstraction... add that layer!
 - ▶ e.g. The namespace-to-packages mappings
 - ▶ But still allow power-users to tinker with the nuts and bolts if they want to.

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- ▶ The result: GT3IDE
 - ▶ First release: May 2004
- ▶ Published under a BSD license
- ▶ Still under development

<http://gt3ide.sourceforge.net/>

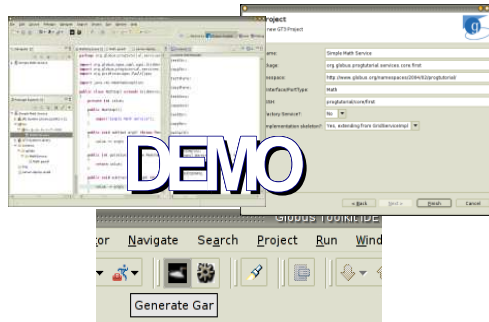
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GT3IDE Features

- ▶ Automatic generation of WSDD and namespace mappings
- ▶ Partial generation of Java and WSDL
 - ▶ A Java skeleton is provided
 - ▶ Add a new remote method and the corresponding WSDL code is generated.
- ▶ “Generate+Compile Stubs” and “Build GAR” buttons

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Demonstration



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The future of GT3IDE (I)

- ▶ The response so far to GT3IDE has been positive.
- ▶ Add support for GT4
- ▶ Add new features:
 - ▶ Remote debugging of services
 - ▶ Collaborative development
 - ▶ Specifying service data (Resource Properties) using a GUI
 - ▶ More documentation

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The future of GT3IDE (II)

- ▶ Open source project
 - ▶ The more developers that contribute to the project, the earlier we'll have all those nifty features out the door!
 - ▶ If you're interested in contributing, please check out our website:

<http://gt3ide.sourceforge.net/>

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Questions?

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