



Enabling Grids for  
E-science in Europe

[www.eu-egee.org](http://www.eu-egee.org)

This product includes material developed  
by the Globus Project (<http://www.globus.org/>).

## Exercise 1

**Deployment: Stand Up a FileShare Service**



# How to Build a Grid Service Using GT3

- Overview of Grid Services and GT3
- Build a Grid Service
  - **Overview**
  - 1. Deployment: Stand Up a FileShare Service
  - 2. Naming: Share Files using Identifiers
  - 3. Inspection: Add Service Data
  - 4. Virtual Organization: Register with a Community Index
  - 5. Lifetime Management: Maintain service registration
  - 6. Discovery: Find a File
  - 7. GT3 Security: Share Files Securely
- **Time permitting:**
  - 8. Transience: Create and Destroy FileShares
- Publish your Grid Service: The GTR

# Hands-On Tutorial Structure

- The hands-on portion of the tutorial is organized as a series of exercises in which students add increasing functionality to a skeletal service implementation
- The exercises demonstrate fundamental interactions using Open Grid Services Infrastructure
- Each exercise includes:
  - A discussion of the concepts behind the exercise
  - Implementation details
  - Step-by-step instructions
  - A view of the finished exercise

# Supporting Tutorial Materials

- Each attendee will use
  - This slideset
  - A code bundle, including
    - A FileShare service implementation with annotations for each exercise
  - A set of exercise notes
  - X.509 certificates
  - Files for sharing
  - The oracle (Oliver)
- The instructors will use
  - An index service containing attendee service entries
    - The index service used in this tutorial will be included in GT 3.2
  - A visualizer for the index service's data

# How to Build a Grid Service Using GT3

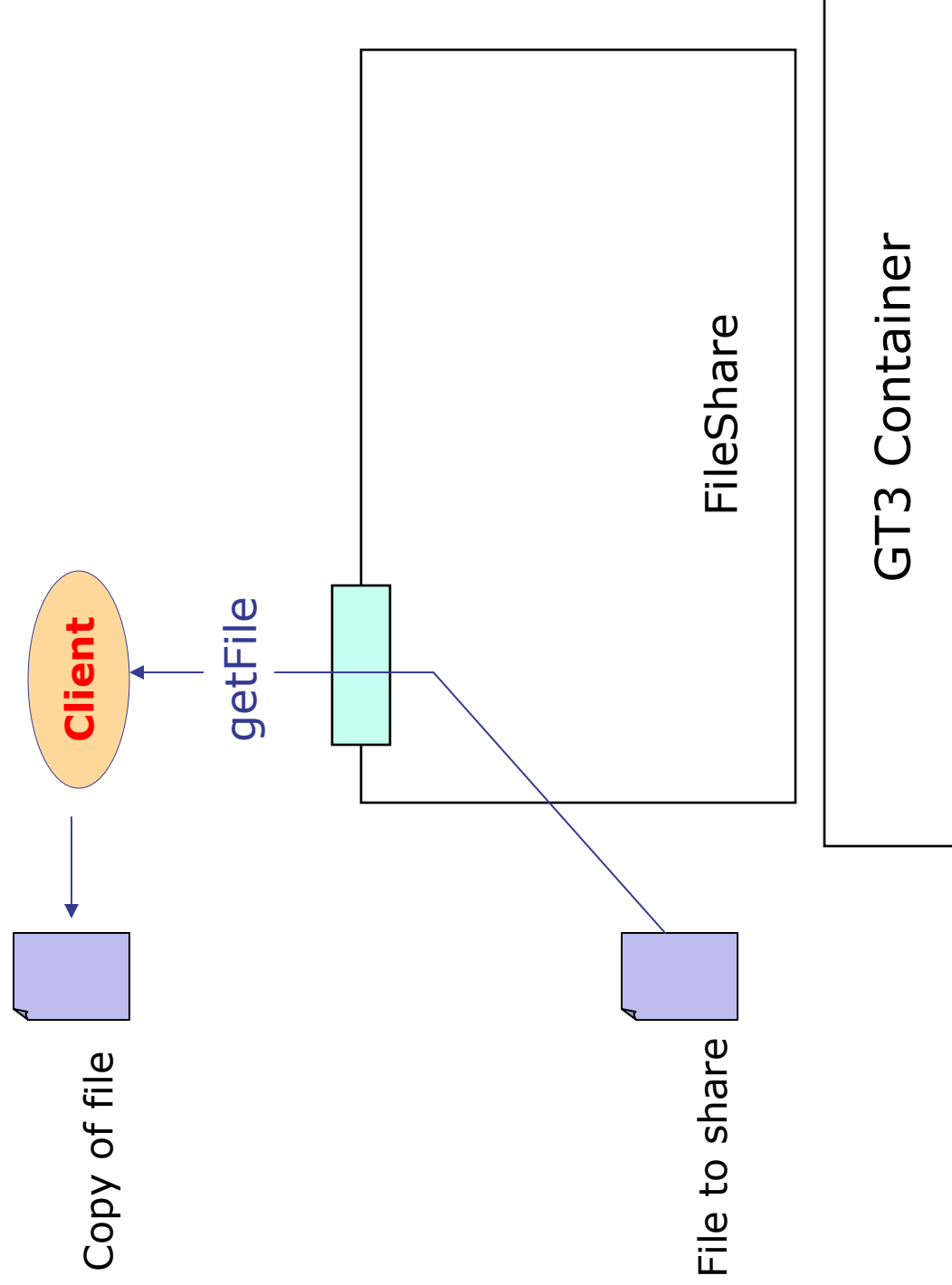
- Overview of Grid Services and GT3
  - Build a Grid Service
    - Overview
    - **1. Deployment: Stand Up a FileShare Service**
    - 2. Naming: Share Files using Identifiers
    - 3. Inspection: Add Service Data
    - 4. Virtual Organization: Register with a Community Index
    - 5. Lifetime Management: Maintain service registration
    - 6. Discovery: Find a File
    - 7. GT3 Security: Share Files Securely
- Time permitting:**
- 8. Transience: Create and Destroy FileShares
- Publish your Grid Service: The GTR

# Exercise 1: Deployment

**1. Deployment:**  
Stand up a  
FileShare  
service on  
your  
computer

FileShare

# The FileShare Service



# Fileshare Service Overview

- Interface Description
  - .gwsdl files
- Service and Client Implementation
  - .java files
- Build Instructions for Ant
  - build.xml (like a Makefile)
- Deployment Description
  - .wsdd files



# Pieces to Install

- **GT3 core**
  - Includes the container
    - globus-start-container – starts container
- **Fileshare service**
  - Includes the service and client
  - Automated build/deploy using ant
    - cleanAll – similar to “make clean”
    - deployGar – compiles .java, installs into container
    - undeployGar – uninstalls from container

# What Attendees Should Do

- Install GT3 core, fileshare service
- Start the GT3 container
  - Will start FileShare service automatically
- Run the GetFile client
  - Get a file (for example, LICENSE)

# What Attendees Should See

- When GT3 container is started, a list of deployed services
- bin/globus-start-container
  - org.globus.ogsa.server.ServiceContainer [run:569] INFO: Starting SOAP server at: <http://140.221.11.99:8080/ogsa/services/>
  - With the following persistent services:
    - <http://140.221.11.99:1888/ogsa/services/core/admin/AdminService>
    - [and many more]

# What Attendees Should See

- After client is run, the file you requested is copied into your current directory

```
java org.globus.ogsa.impl.samples.fileshare.client.getFile LICENSE
```

- Receive file 'LICENSE' of size 6615

## Exercise 1 Review

- **\$GLOBUS\_LOCATION**
  - Place to run globus-start-container
- **\$TUTORIAL\_LOCATION**
  - Contains the WSDD file and ant build.xml
  - src/org/globus/ogsa/impl/samples/fileshare
  - schema/samples/fileshare/
  - src/org/globus/ogsa/impl/samples/fileshare/client
- **\$CLIENT\_LOCATION**
  - Location for receiving files