

GT 4.2.0 C WS Core : System Administrator's Guide

DRAFT

GT 4.2.0 C WS Core : System Administrator's Guide

Introduction

This guide contains advanced configuration information for system administrators working with C WS Core. It provides references to information on procedures typically performed by system administrators, including installation, configuring, deploying, and testing the installation.

Important

This information is in addition to the basic Globus Toolkit prerequisite, overview, installation, security configuration instructions in the [Installing GT 4.2.0](#). Read through this guide before continuing!

DRAFT

Table of Contents

1. Building and Installing	1
2. Configuring	3
3. Deploying	4
4. Testing	5
5. Security Considerations	6
1. Security Considerations for C WS Core	6
6. Debugging	7
1. Logging	7
7. Troubleshooting	8
1. C WS Core Errors	9
8. Usage statistics collection by the Globus Alliance	11
1. Usage statistics sent by C WS Core	11
Index	12

DRAFT

List of Tables

1.1. Building C WS Core from installer	1
1.2. Building C WS Core from CVS	2
7.1. C WS Core Errors	10

DRAFT

Chapter 1. Building and Installing

If you want to install only C WS Core (as opposed to the entire Globus Toolkit), we describe two options below: from the installer and from CVS.

In order to build and install the C WS-Core component from an official release:

Table 1.1. Building C WS Core from installer

1	Obtain the latest GT 4.x.x release tarball installer from the Download webpage ¹ .
2	Untar the tarball: <pre>tar xvfz gt<version>-all-source-installer.tar.gz</pre>
3	Change to the installer directory: <pre>cd gt<version>-all-source-installer</pre>
4	Run: <pre>./configure -prefix=<path to install></pre>
5	Run: <pre>make wsc</pre>
6	Run: <pre>make install</pre>

In order to build C WS Core from CVS:

¹ <http://www.globus.org/toolkit/downloads/>

Table 1.2. Building C WS Core from CVS

1	<p>Obtain the source code for C WS Core from CVS:</p> <ol style="list-style-type: none">To get the latest source from CVS execute: <pre>cvsv -d :pserver:anonymous@cvs.globus.org:/home/globdev/CVS/globus-packages \ che packaging</pre>Change into the packaging directory. <pre>cd packaging</pre>
2	<p>Set the GLOBUS_LOCATION environment variable to the absolute path of the target directory of your installation.</p> <p>On Unix/Linux:</p> <pre>setenv GLOBUS_LOCATION /soft/gt4/</pre> <p>or</p> <pre>export GLOBUS_LOCATION=/soft/gt4/</pre>
3	<p>Run <code>make-packages.pl</code></p> <pre>./make-packages.pl -bundles=gt4-c-ws-core -deps -install=\$GLOBUS_LOCATION</pre>

Chapter 2. Configuring

N/A (The C WS-Core component does not provide global configuration functionality.)

DRAFT

Chapter 3. Deploying

The C WS-Core does not require configuration/deployment steps. All parameter configuration is done programmatically at present.

DRAFT

Chapter 4. Testing

The C WS-Core has a test suite that tests a number of different packages included in the component. The tests can be built using either the `wsctests` target to make in the installer of a release, or they can be built using the `4-c-ws-core-test` bundle in the `./make-packages.pl` command mentioned previously.

The tests are installed into `$GLOBUS_LOCATION/test`, and can be run from the appropriate sub-directories.

DRAFT

Chapter 5. Security Considerations

1. Security Considerations for C WS Core

1.1. Supported Protocols

C WS-Core supports secure transport (https) and secure message (just X509 signing, not encryption).

1.2. Secure Transport

With secure transport, the entire container must be run over an https transport. This is done by default for the C container. If the user does not want security in the container, or wants to use secure message instead of secure transport, they should use the `-nosec` argument to `globus-wsc-container`.

For clients, the secure transport is enabled if the contact URI contains the 'https' scheme instead of 'http', so the client doesn't have to enable or disable it explicitly.

Chapter 6. Debugging

1. Logging

As of 4.2.0, the Globus Toolkit provides system administration logs that are [CEDPs best practices](#)¹ compliant.

To enable CEDPS logging, pass the `-log PATH` parameter to the `globus-wsc-container` program.

For more details on the CEDPS Logging format, including descriptions of reserved name-value pairs, see <http://cedps.net/index.php/LoggingBestPractices>:

1.1. Sample log file

The [sample log file](#)² contains many log entries for various scenarios in the C WS container.

¹ <http://cedps.net/index.php/LoggingBestPractices>

² <http://www.globus.org/toolkit/docs/4.2/4.2.0/common/cwscore/sample-container-log.txt>

Chapter 7. Troubleshooting

For a list of common errors in GT, see [Error Codes](#).

This is a new component. If you are having trouble using it, please let us know!

DRAFT

1. C WS Core Errors

DRAFT

Table 7.1. C WS Core Errors

Error Code	Definition	Possible Solutions
globus_soap_message_module: Failed sending request http://widgetgets.com/WidgetPortType/createWidgetRequest. globus_xio: Unable to connect to grid.example.org:8080 globus_xio: System error in connect: Connection refused globus_xio: A system call failed: Connection refused	Unable to contact service container	Check that the service endpoint refers to a running container.
globus_soap_message_module: Failed sending request http://widgetgets.com/WidgetPortType/createWidgetRequest. globus_xio_gsi: gss_init_sec_context failed. GSS Major Status: Unexpected Gatekeeper or Service Name globus_gsi_gssapi: Authorization denied: The name of the remote entity (/C=US/O=Globus Alliance/OU=Service/CN=host/grid.example.org), and the expected name for the remote entity (/C=US/O=Globus Alliance/OU=Service/CN=host/cloud.example.org) do not match	Service is not running with the expected security credential.	Verify that the service credential being presented by the service (first parenthesized name) is a reasonable certificate name for the service. If so, set the GLOBUS_SOAP_MESSAGE_PEER_IDENTITY_KEY attribute on the soap message handle to that identity. For most command-line wsrfl tools, this can be done by passing it as an argument to the -z command-line parameter.
globus_soap_message_module: SOAP Fault Fault code: Client Fault string: globus_service_engine_module: Failed to find operation: {XXXX}YYYY for service: {ZZZZ}BBBB	The service port type {ZZZZ}BBBB does not contain a {XXXX}YYYY operation.	Verify that the client bindings are built from the same WSDL and XML Schema documents as the service.
globus_soap_message_module: Failed receiving response http://widgetgets.com/WidgetPortType/createWidgetResponse. ws_addressing: Addressing header is a draft version of WS Addressing: "http://schemas.xmlsoap.org/ws/2004/03/addressing". This could be a GT version mismatch, client is GT 4.2.x and response is from GT 4.0.x server	The service is running on a container which is using a draft version of the WS-Addressing specification. This was used by GT 4.0.x	Update the service to work with GT 4.2.x or compile your client with GT 4.0.x libraries.
globus_soap_message_module: Failed sending request http://widgetgets.com/WidgetPortType/createWidgetRequest. globus_xio: The GSI XIO driver failed to establish a secure connection. The failure occurred during a handshake read. globus_xio: An end of file occurred	The service container either did not support SSL authentication, or the service container did not trust the client certificate	Consult the service administrator to verify that the service container supports SSL and that your certificate is issued by a certificate authority trusted by the service.

Chapter 8. Usage statistics collection by the Globus Alliance

1. Usage statistics sent by C WS Core

The following usage statistics are sent by C WS Core by default in a UDP packet :

- On container start
 - ip address of container
 - container id - random number
 - event type - container startup
 - list of deployed service names
- On container shut down
 - ip address of container
 - container id - random number
 - event type - container shutdown
 - list of activated services

It sends it at container startup (globus-wsc-container) and receipt of that packet tells us that the container started.

If you wish to disable this feature, you can set the following environment variable before running the C container:

```
export GLOBUS_USAGE_OPTOUT=1
```

By default, these usage statistics UDP packets are sent to `usage-stats.globus.org:4180` but can be redirected to another host/port or multiple host/ports with the following environment variable:

```
export GLOBUS_USAGE_TARGETS="myhost.mydomain:12345 myhost2.mydomain:54321"
```

You can also dump the usage stats packets to stderr as they are sent (although most of the content is non-ascii). Use the following environment variable for that:

```
export GLOBUS_USAGE_DEBUG=MESSAGES
```

Also, please see our [policy statement](#)¹ on the collection of usage statistics.

¹ ../../Usage_Stats.html

Index

B

building and installing

Core-only from CVS, 1

Core-only from installer, 1

C

configuring, 3

E

errors, 9

I

installing

Core-only from CVS, 1

Core-only from installer, 1

L

logging, 7

S

security considerations, 6

T

testing, 5

U

usage statistics, 11

DRAFT