



# **Packaging Grid Software for Linux Distributions**

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Umeå**

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- High Energy Physics experiments today utilise computing Grids to fulfil their needs for processing power and storage
- However, the tools needed to access these resources are not part of the Linux distributions the users have on their computers
  - This makes the installation of the needed tools a threshold for new users

- The normal way for a Linux user to install a new piece of software on a computer is to use the yum or apt repository of the Linux distribution
- If the software is not available in these repositories some users will not install the software on their own computer even though it would make their work easier
  - “Can I get an account on a machine where the software is already installed?”

- The Globus Toolkit is a foundation upon many Grid middleware stacks are built
- Getting the Globus Toolkit into the major Linux distributions would pave the way for those that depend on it

- Grid Packaging Tools (GPT)
  - the Globus Toolkit uses its own build system
- Globus Core
  - contains common build configuration used by all Globus packages
- Once these two were adopted to be “Linux distribution friendly” the rest of the packages were quite simple
  - a rebootstrap is needed in order to take advantage of the new versions of GPT and Globus Core

- Filesystem Hierarchy Standard (FHS)
  - Installation in /usr
  - No libexec directory
- No environment variables
  - Make GPT and Globus work without setting GPT\_LOCATION and GLOBUS\_LOCATION when installed in /usr
- Remove flavour tags in library names
  - Possible to turn off this “feature” by adding an attribute to the GPT metadata file

- Each Globus package's GPT metadata file states its build and runtime dependencies
  - this information can be used to autogenerate RPM spec files and Debian control files
- GPT divides the installed files into runtime, development and documentation packages
  - this division can be used to automatically create the corresponding RPM and deb packages

- Currently 30 Globus packages are (or will soon be) available from standard repositories for
  - Fedora 9, 10, 11 and devel (to be 12)
  - EPEL for RHEL 4 and 5
    - and its derivatives like CentOS and Scientific Linux
  - Debian unstable (sid) and Debian testing (squeeze)
  - Ubuntu karmic





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[Advanced search](#)23 matches found in **all** for package **globus**:<< < **1** [2](#) > >> [\[show all\]](#)**globus-core** -- Globus Toolkit - Globus Core

The Globus Toolkit is an open source software toolkit used for building Grid systems and applications. It is being developed by the Globus Alliance and many others all over the world. A growing number of projects and companies are using the Globus Toolkit to unlock the potential of grids for their cause. The globus-core package contains: Globus Core

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**globus-libtool** -- Globus Toolkit - Globus libtool package

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**globus-common** -- Globus Toolkit - Common Library

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Sök

namn på källkodspaket ▾

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- [squeeze](#) (net): 0.7-4  
Binärpaket: [libglobus-callout-dev](#), [libglobus-callout-doc](#), [libglobus-callout0](#)
- [sid](#) (net): 0.7-4  
Binärpaket: [libglobus-callout-dev](#), [libglobus-callout-doc](#), [libglobus-callout0](#)

**Källkodspaketet globus-common**

- [squeeze](#) (net): 10.2-4  
Binärpaket: [globus-common-progs](#), [libglobus-common-dev](#), [libglobus-common-doc](#), [libglobus-common0](#)
- [sid](#) (net): 10.2-4  
Binärpaket: [globus-common-progs](#), [libglobus-common-dev](#), [libglobus-common-doc](#), [libglobus-common0](#)

**Källkodspaketet globus-core**

- [squeeze](#) (net): 5.15-5  
Binärpaket: [globus-core](#)

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## Källkodspaketet globus-callout

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- **karmic** (net): 0.7-4 [**universe**]  
Binärpaket: [libglobus-callout-dev](#), [libglobus-callout-doc](#), [libglobus-callout0](#)

## Källkodspaketet globus-common

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- **karmic** (net): 10.2-4 [**universe**]  
Binärpaket: [globus-common-progs](#), [libglobus-common-dev](#), [libglobus-common-doc](#), [libglobus-common0](#)

## Källkodspaketet globus-core

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- **karmic** (net): 5.15-5 [**universe**]  
Binärpaket: [globus-core](#)

## Källkodspaketet globus-ftp-client

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- **karmic** (net): 3.14-5 [**universe**]  
Binärpaket

- Having these Globus packages in the distributions will make it possible for other Grid tools that build upon them to be submitted as well
  - VOMS
  - Myproxy
  - LFC/DPM
  - NorduGrid ARC
  - ... your favourite Globus based Grid tool