



# WLCG and Globus

The next chapter

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# Why are we here?

- **Globus is in the news for two reasons**
  - **With the end of support for their open source software distribution (GT), WLCG is *moving away* from their data transfer solution, GridFTP**
  - **With the rise in resources available at HPC centres, WLCG is being *pulled back* to Globus**
    - **Why? Because Globus is the HPC go-to data movement solution**
    - **But... GridFTP is not what it used to be...**



the globus alliance

www.globus.org

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Toolkit Components

- ▶ [Core](#)

## Globus Toolkit

The Globus Toolkit is an open source software toolkit used for building grids. 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. [Learn more...](#)

## Releases

### Latest Stable Release

[Globus Toolkit 3.2](#)  
[\[ release notes \]](#) [\[ download \]](#) [\[ docs \]](#)

Our newest stable release contains many bug fixes, performance improvements and new features, as well as a completely new documentation structure.

### Latest Development Release

[Development Releases](#)  
[\[ download \]](#) [\[ docs \]](#)

Please read the respective *Calls for Community Testing*, located [here](#).

For the latest information about plans for GT4, click [here](#).

## Developer News

**XML**

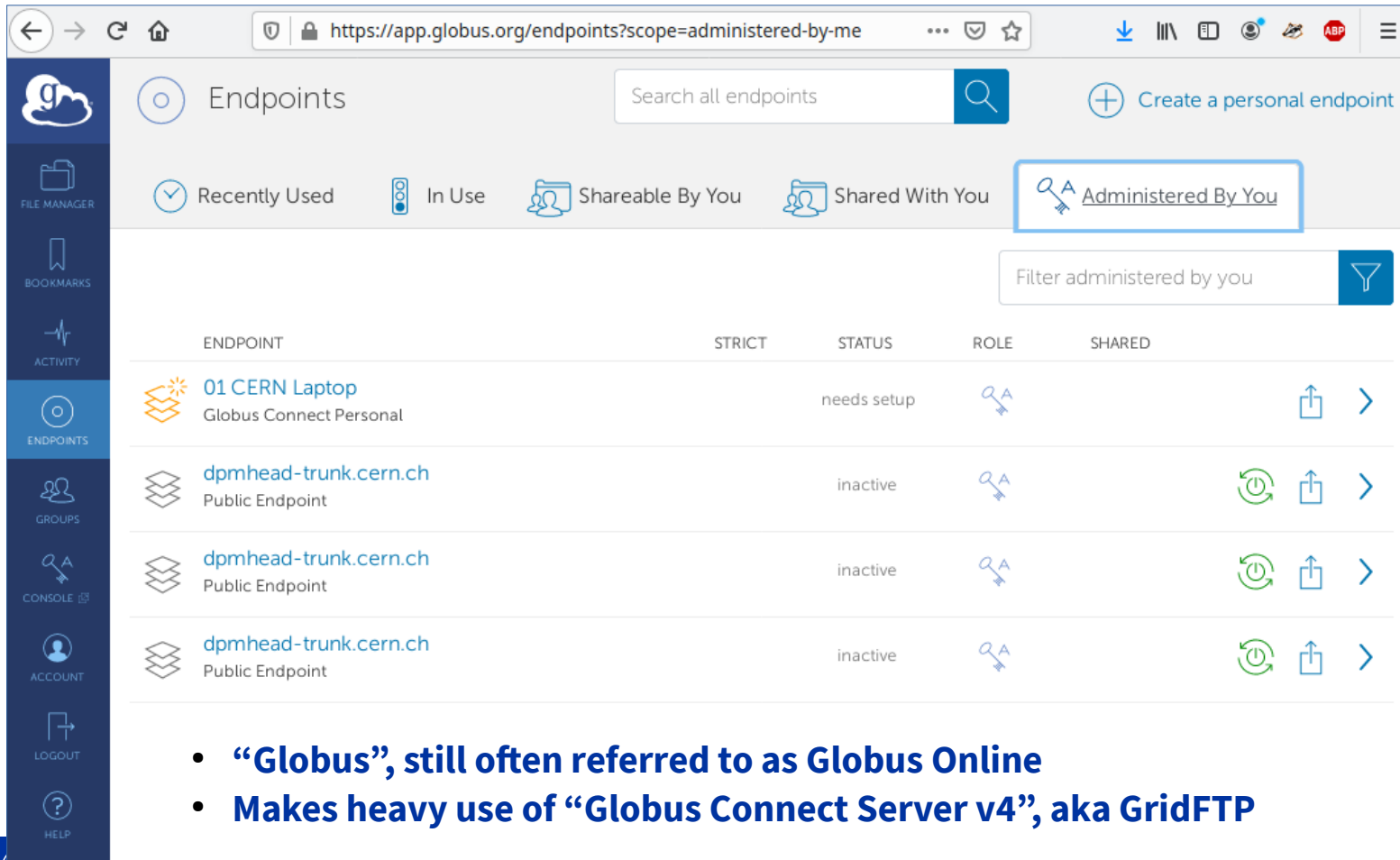
12.17.2004 A new [GT4 Alpha development release](#) is now available.

# Globus Online 2011




















The screenshot shows the homepage of Globus Online. At the top, there is a browser address bar with the URL `https://www.globusonline.org/` and a calendar widget showing the date July 11, 2011. The main header features the Globus Online logo and the tagline "Reliable File Transfer. No IT Required." with "Sign Up" and "Sign In" buttons. The central message reads "Reliable, high-performance, secure file transfer. Move files fast. No IT required." Below this, there are two prominent buttons: an orange "WATCH A VIDEO" button with the subtext "Globus Online in a nutshell" and a red "GET STARTED" button with the subtext "Sign up and get moving". A large white arrow points upwards in the background.

This screenshot shows a different section of the Globus Online website. It features a graphic with three circular arrows labeled "store", "move", and "sync" surrounding the text "BIG DATA". To the right, there is a large number "120,501,102" and a "MB" icon. Below the graphic, the text reads "researcher You've got BIG data. provider". At the bottom, there are two columns of text: "Globus Online enables you to move, sync, and share your data using just a web browser. We" and "Globus Online helps you deliver robust data management solutions to your researchers."

# “Globus” 2020



The screenshot shows the Globus web interface at the URL `https://app.globus.org/endpoints?scope=administered-by-me`. The page title is "Endpoints". A search bar contains "Search all endpoints". A navigation bar includes "Recently Used", "In Use", "Shareable By You", "Shared With You", and "Administered By You" (highlighted with a blue box). A filter dropdown is set to "Filter administered by you". The main content is a table of endpoints:

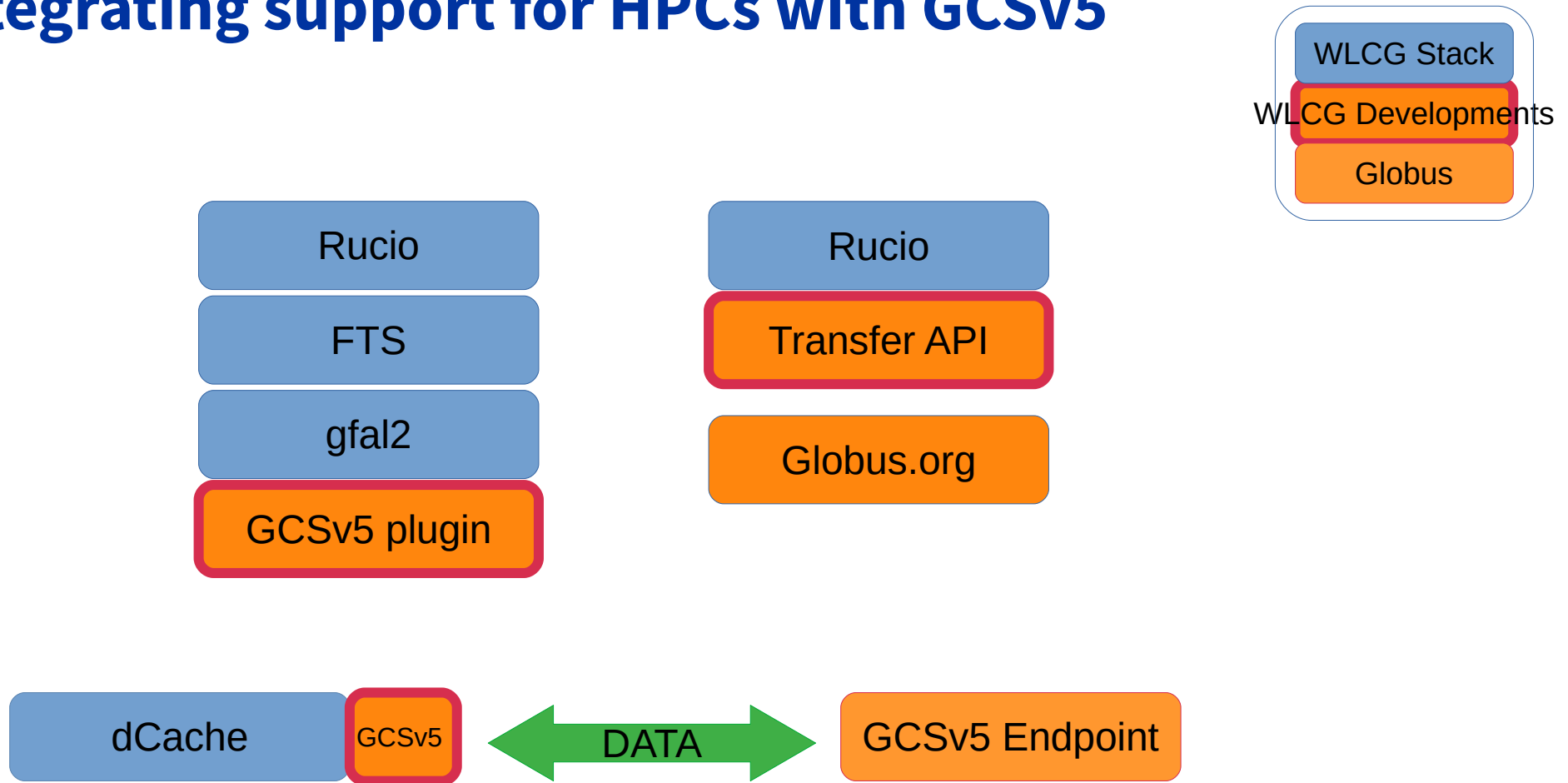
ENDPOINT	STRICT	STATUS	ROLE	SHARED
 01 CERN Laptop Globus Connect Personal		needs setup		 
 dpmhead-trunk.cern.ch Public Endpoint		inactive		  
 dpmhead-trunk.cern.ch Public Endpoint		inactive		  
 dpmhead-trunk.cern.ch Public Endpoint		inactive		  

- **“Globus”, still often referred to as Globus Online**
- **Makes heavy use of “Globus Connect Server v4”, aka GridFTP**

# Enter Globus Connect Server (GCS) v5

- **Globus Connect Server v4 was GridFTP**
- **Globus Connect Server v5 is now available**
  - **Something GridFTP-ish**
    - **No protocol documentation**
      - Legal questions?
    - **No long-term interoperability with v4 (GridFTP)**
      - V4's lifetime is limited
    - **No open source reference implementation**
      - Only dCache has their own GridFTP implementation
      - EOS and DPM (at least) use the Globus GridFTP server with a backend plugin

# Integrating support for HPCs with GCSv5



# The solution(s)

- **Where does the bridge get built?**

- 1) WLCG implements support for GCS v5**

- Protocol support in (all?) SEs, gfal2/FTS, Rucio
  - Can we deploy “dual stack” systems?
- Configure GCS v5 side to authenticate and authorise WLCG clients

- 2) GCS v5 implements support for WebDAV**

- They already advertise “direct access from browsers and other HTTPS clients”
- With pressure from WLCG through the HPC centres
- Easy request to articulate, to justify and, technically, to satisfy

- 3) WLCG provides an alternative WebDAV endpoint for HPCs**

- Maybe part of the “pressure” above





[home.cern](http://home.cern)