



DEPARTMENT OF PHYSICAL OCEANOGRAPHY

CMIP5 COMMUNITY STORAGE SERVER

Data Access

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3. Introduction

This document describes data access methods for the WHOI CMIP5 community storage server. This is an evolving document which shall be updated as new accesses methods become available.

There are currently two ways to access the CMIP5 data. Establishing an NFS mount allows one to access the data directly on the server without needing to download or transfer the (large) files to one's own local computer. Data files are effectively accessible as though they are stored on your local machine. For example, after mounting, one can point a MATLAB session running on a local workstation to the location of the data file(s) on the WHOI CMIP5 storage server and read in the data.

Alternatively, one may download/transfer files from the WHOI CMIP5 storage server via FTP using command line, a GUI client, or a web browser. This allows allow faster read speeds and the ability to modify data files if desired, at the cost of local storage overhead.

In the future, a robust web interface capable of searching and faceted subsetting of data files prior to transfer will be provided.

4. NFS (CIFS) Mount

Mounting a network drive allows users to access data files as though they were stored on a local machine without actually consuming any local storage. For most users, this is the most useful interface for data access.

- hostname: **//cmip5.whoiedu/**
- sharename: **data**
- domain: **WORKGROUP**

The share is hosted by a samba server, and allows users to mount anonymously with read-only access. The network share is only accessible via the local WHOI network or VPN.

4.1. Mounting a network share in Linux

Required Packages:

- **cifs-utils** - Common Internet File System utilities
- **samba-common** - common files used by both the Samba server and client
- **samba-common-bin** - common files used by both the Samba server and client

Install required packages on Debian/Ubuntu:

```
root@aekholm-a900:/# apt-get install cifs-utils samba-common samba-common-bin
```

Mount the share:

```
root@aekholm-a900:~# mkdir /mnt/data
root@aekholm-a900:~# mount -t cifs //cmip5.whoiedu/data /mnt/data -ouser=cmip5user,password=
root@aekholm-a900:~# ln -s /mnt/data /data # optional
```

4.2. Mounting a network share in Windows

Right click on **computer** and navigate to **Map network drive...**

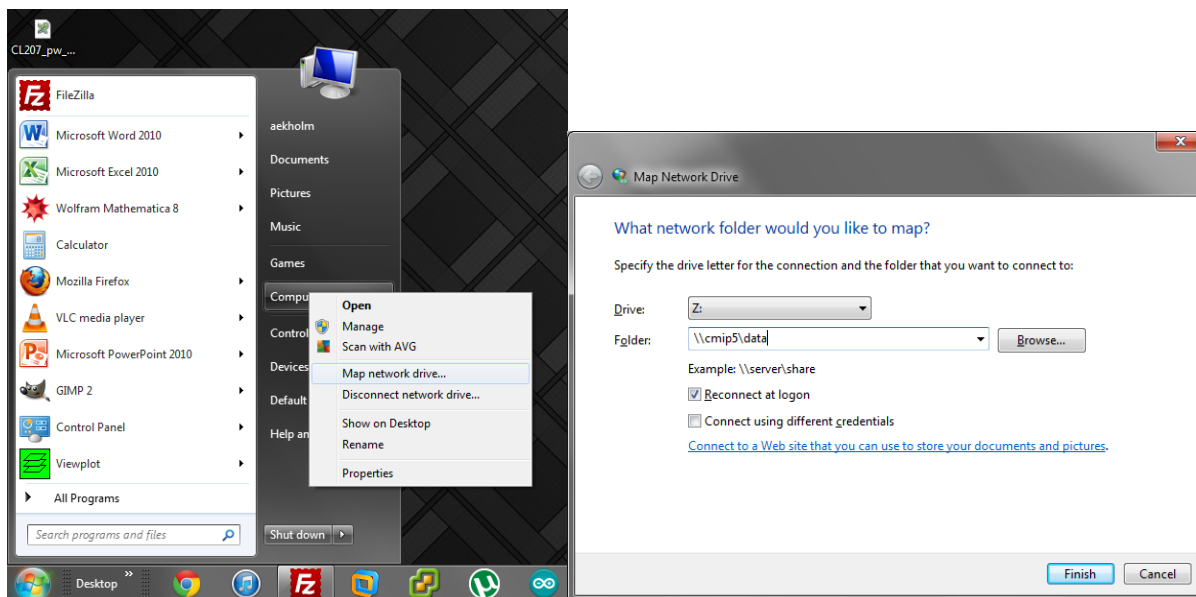


Figure 1: Windows - Map Network Drive

Enter network share for “Folder”: `\\cmip5.who.edu/data`. Click **Finish**. The share should now appear in **Computer**.

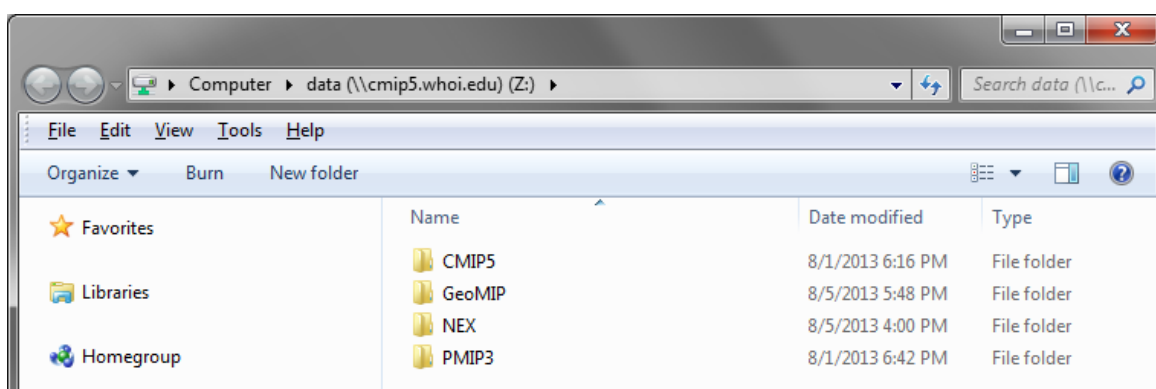


Figure 2: Windows Network Share

5. FTP¹

FTP provides the ability for users to copy or transfer data files to a local machine. Copying files to a local machine has some advantages, namely faster read speeds and the ability to modify data files if desired. However, this comes at the cost of local storage overhead.

- host: <ftp://cmip5.who.edu/>
- username: **anonymous** or **ftp**

Like the network share, the FTP server also allows anonymous read only access to the /data directory. It is accessible via command-line, FTP client, or web browser on the WHOI network.

5.1. Linux – FTP Access via Command Line

To access the FTP server via command line, log in using username **anonymous** or **ftp**:

¹ These following instructions are intended for FTP connections, and will not work for SFTP.

```

aekholm@aekholm-a900:~$ ftp cmip5.whoi.edu
Connected to cmip5.whoi.edu.
220 ProFTPD 1.3.4a Server (CMIP5 Community Storage Server) [::ffff:128.128.181.139]
Name (cmip5.whoi.edu:aekholm): anonymous
331 Anonymous login ok, send your complete email address as your password
Password:
230 Anonymous access granted, restrictions apply
Remote system type is UNIX.
Using binary mode to transfer files.

```

The FTP command-line interface may then be used to transfer files to a local machine.

5.2. Access via FTP Client

FTP clients provide a more user-friendly graphical interface for transferring files over FTP. FileZilla (<https://filezilla-project.org/>) is a popular FTP client that is available for Windows and Linux. Enter **cmip5.whoi.edu** for “host”, **anonymous** for “user”, and leave the “password” blank.

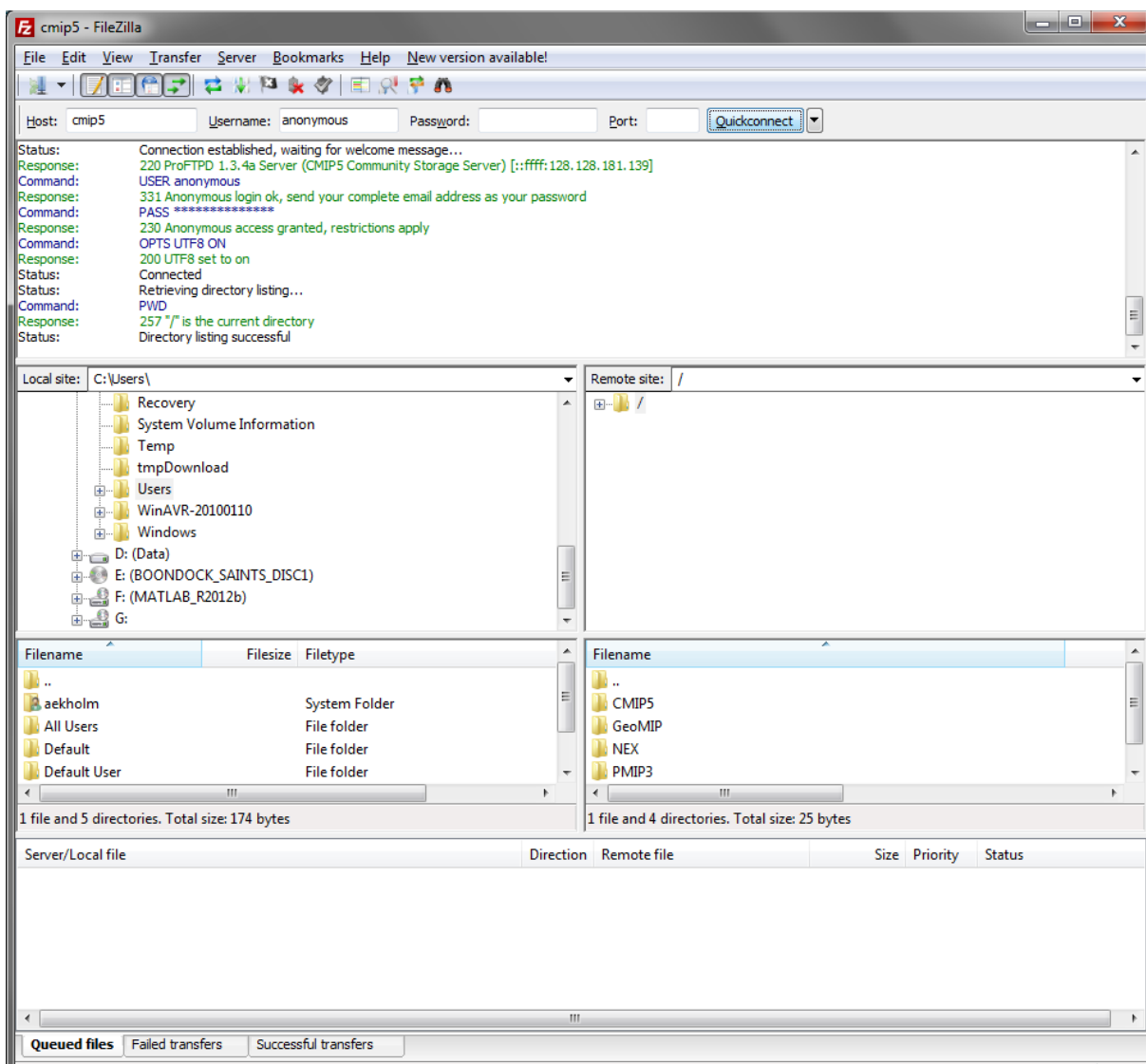


Figure 3: FileZilla FTP Client

5.3. FTP Access via Web Browser

The FTP server content is also accessible via web browser. Navigate to <ftp://cmip5.whoi.edu/> to browse the data. The web interface provides the ability to navigate the filesystem hierarchy and download files to a local machine.

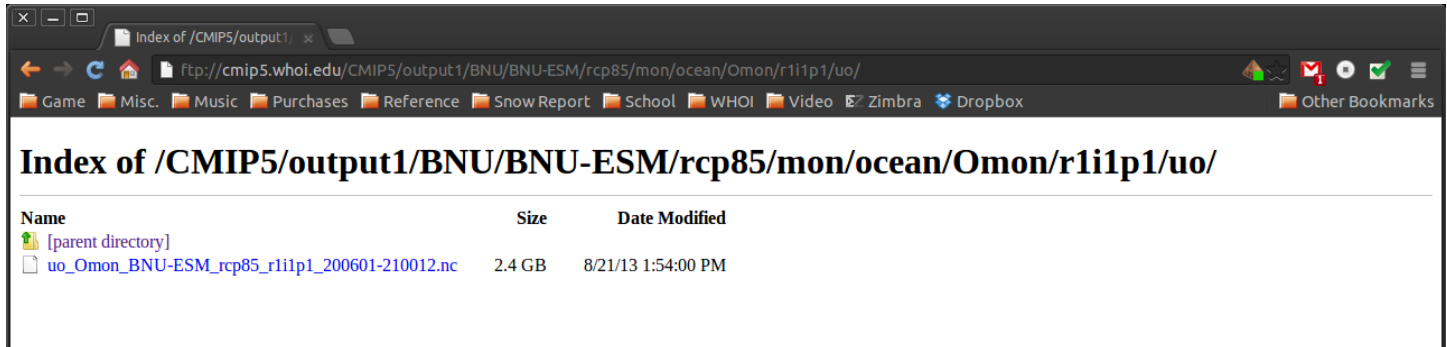


Figure 4: FTP Access via Web Browser

6. Document Revision History

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|--------------------------|---|
| 0.2 3 Sep 2013 | <ul style="list-style-type: none">• Document Revision History added.• Expanded on Introduction, NFS (CIFS) Mount, and FTP. |
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