

Martha's Vineyard Coastal Observatory: 3. User Data Access

Data from the user's instrument is immediately fed into the Internet network at the node itself. Therefore, the user's data may be accessed from anywhere on the Internet. The bandwidth is limited by the location selected, depending on the Internet service at that location. The highest possible bandwidth connection to the instrument is available at the shore lab on Martha's Vineyard. Users may elect to set up logging computers at the shore lab to take advantage of the high-bandwidth connection, the most reliable location in the event of storm damage to local telephone and power services. Processed or logged data may then be offloaded over the network using FTP or a similar method on a regular basis. User computers may utilize generator-backed power in the shore lab.

Data From Serial Devices

A two-way data connection to a serial device is made via the Cisco model 2511 Access Server, which is located in the node electronics housing. The user will be assigned a specific IP address for his/her data port. The simplest data port connection may be made across the Internet using Telnet software. Alternatively, the user may develop a custom program designed to connect to that IP address and port number for the purpose of controlling the instrument and automatically logging data. WHOI has developed such a program that will mate the IP connection and log data from most serial instruments. If the instrument includes factory software for control and logging, then the use of the comm-port redirection software would allow the user to continue using the factory software to communicate with the instrument over the network. WHOI can work with the user to assist in determining the best method of data logging and archiving. The MVCO manager can recommend an engineer to provide technical assistance.

For the most robust operation, it is recommended that a method of data logging be designed to automatically detect connection failures and attempt reconnects in the event that a failure does occur. The user's port or the entire observatory will occasionally shut down for routine maintenance or technical problems. Electronic-mail notices of known shutdowns will be sent to the users. However, there may still be occasional, unanticipated shutdowns.

If a serial device is to be used, WHOI must first set the 2511 Access Server port to the proper serial interface parameters. Users will need to provide WHOI with the data protocol information required for the instrument. Users must complete the Guest Port Configuration Form and return it to the MVCO Manager.

Data From Ethernet Devices

Ethernet devices connect directly to the network at the node. These devices will often have their own internal data-logging computer and disk drive. Since they are connected to the network, the user can easily access the data from anywhere on the Internet using FTP or remote disk networking software, such as is provided with the Windows operating system. WHOI will assign users an IP address for their instrument prior to its installation into the MVCO system.

Last updated: September 11, 2013

Copyright ©2007 Woods Hole Oceanographic Institution, All Rights Reserved.

Mail: Woods Hole Oceanographic Institution, 266 Woods Hole Road, Woods Hole, MA 02543, USA.

E-Contact: info@whoi.edu; press relations: media@whoi.edu, tel. (508) 457-2000

Problems or questions about the site, please contact webdev@whoi.edu