



Observatoire des Sciences de l'Univers de La Réunion



Observatoire de Physique
de l'Atmosphère de la Réunion

Technical information

Install your instrument into the OPAR's information system

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1. INTRODUCTION

Soon, you will install an instrument into one of OPAR's observation sites : this document give you some keys to understand our information system organization and our services about network and data.

Please also consider and fill the « **request form to deploy instruments at OPAR** » document and the « **Data management plan for instrument** » document. These documents allow us to better understand your instrument and your goals.

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2. NETWORK ORGANIZATION

2.1.1 Network organization for the Maïdo station site

The Maïdo station is connected to internet through an hertzien antenna which enables a connection to the University network (St Denis) with a bandwidth of 20MB/s for all the equipments and the users.

There are two routing levels : one managed by the University's IT team (general rules) and one managed by us (station's router with specific rules = station network).

The station network is split up into 3 subnetworks (VLAN) with a dynamic allocation for your equipment into a VLAN depending on equipment's MAC adress :

- **VLAN «guest»** (default) [10.220.30] : guest area (web and printer access only) : no MAC adress identification needed, dynamic private IP (DHCP).
- **VLAN «users»** [10.220.50] : reserved area for OPAR staff (and collaborators on demand) : MAC adress identification, dynamic private IP (DHCP).
- **VLAN «operational »** [10.220.100] : restricted area for instruments : MAC adress identification, fixed private IP adress.

Communications with this VLAN are filtered (tell us if you need to open some specific ports). **Your instrument will be integrated into the operational VLAN.**

➔ **Soon as possible, we need information from you to prepare instrument installation.**

We have to manage bandwidth activity (which requires some analysis about the optimal data transfer time, etc)

We wont be able to give you a public IP, but you will be able to remotly access to your equipments with our remote access service. For security reason, direct remote control software (which avoid firewalls) like teamviewer are proscribed.

To prevent frequency interferences, there isn't wireless internet access at Maïdo station.

2.1.2 Network organization for the St Denis University site

The organization is similar on other OPAR sites (St Denis University operational subnetwork is the 10.10.61).

3. REMOTE ACCESS SERVICE

We have a VPN server based on OpenVPN software which allows you to access to your instrument at your convenience.

In practice, we will give you one VPN certificate to install on your computer (warning : a certificate can't be installed on several computers, tell us if you need several certificates). You will need to install openvpn software on your remote computer.

If you need this service, it is better to test it before your arriving.

Don't forget that VPN access is an open access to your equipment from your remote computer. So, your remote computer ought be protected against virus or intrusions.

4. DATA STORAGE AND DATA TRANSFER SERVICE

4.1.1 *OPAR storage area with FTP access*

We have a FTP server associated to a storage area (tramontane.univ-reunion.fr). From your acquisition computer, we can copy your data on it and give you a personal FTP access.

It isn't mandatory but it's faster than a direct transfer to your remote database from your acquisition computer. In addition, this service can offer you a main or a backup storage area.

If you manage yourself the data transfer to your remote database, don't forget that some network perturbations can come out. You will need a data transfer software with cut-off management.

4.1.2 *Data transfer tools at OPAR*

For information, we use Cobian Backup software on Windows (<http://www.cobiansoft.com/index.htm>) and MiscBox software on Linux (homemade software).

5. IT TEAM SUPPORT AND RECOMMENDATIONS

Support on :

- Installation.
- Data transfer and management.
- Remote access and instrument survey.
- Fixing problems during operation.

Recommendations :

- Give us adequate information/training and contacts about IT on your instrument.
- Don't forget that Maïdo station altitude is 2200m, elements of computer such as hard drive are sensitive to altitude (pressure variations). → **please don't use an old computer as acquisition station and think about spare.**