Solar outpost documentation

Technical documentation

These links are for people that want to modify the system and are not meant for normal users.

Technical details about how the network works.

Document files

These links point to OpenOffice documents about how to set up the system and various other files we have included with the system.

Solar system setup documentation [http://local.tznet/shared/outpostdocs/power-system/Set%20up%20Documentation.odt]

Network setup documentation [http://local.tznet/shared/outpostdocs/network-hardware/Wireless%20System%20Documentation.odt]

Collection of documents and software for the solar outpost project [http://local.tznet/shared/outpostdocs/]

How to use the system

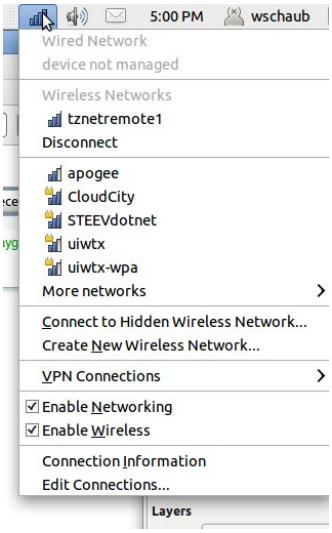
If you are reading this chances are you already know how to use the system. Assuming that you don't know let me explain how it works.

To connect to the system you want to join the access point called tznetmain or tznetremote1 tznetmain is the wireless access point for the main site and tznetremote1 is the access point for the remote solar powered site.

once connected you can simply point your web browser to local.tznet to reach the fileserver at your location.

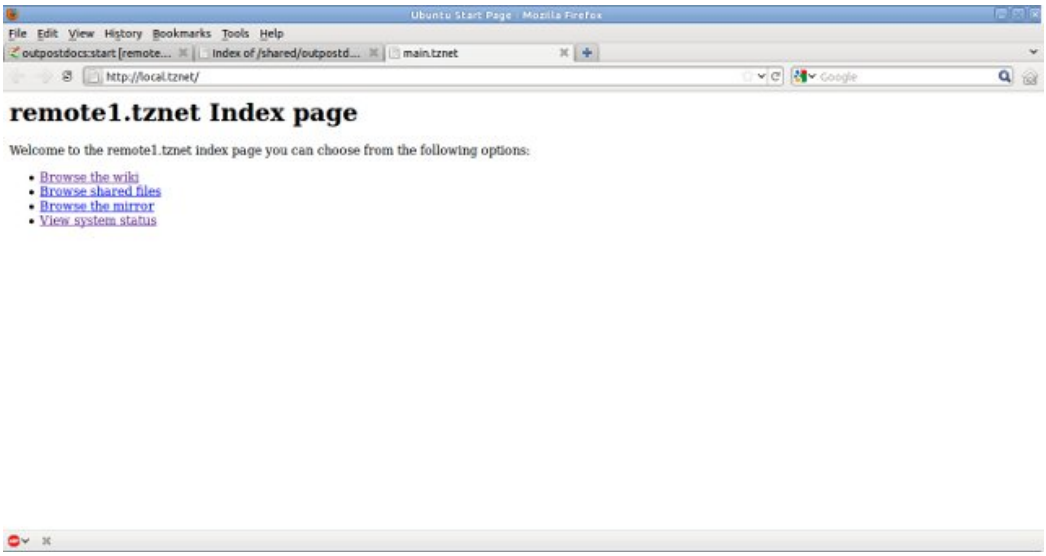
If the point to point link is up and running you will be able to connect to remote1 by typing in remote1.tznet in the address bar and the main site by typing in main.tznet in the address bar.

Both sites work exactly the same.



How to use the webserver

when you reach local.tznet you will get a page that looks similar to this:



The following sections describe what each link does:

Browse the wiki

This link brings you to the wiki you are now reading.It allows you to create content quickly and easily that can be shared with and edited by many people at the same time using the web server software. for a tutorial on how to use the wiki please look at the Wiki Tutorial.

Browse shared files

The web server has a /shared directory that is linked to the file server (explained in the next section) any files and directories uploaded to the file server will show up here and can be accessed from your web browser without having to mount the networked drive.

Browse the mirror

The /mirror directory on the webserver is a special place where copies of the other locations are stored. for example if you are on the main site /mirror will contain a copy of main.tznet as well as a copy of remote1.tznet

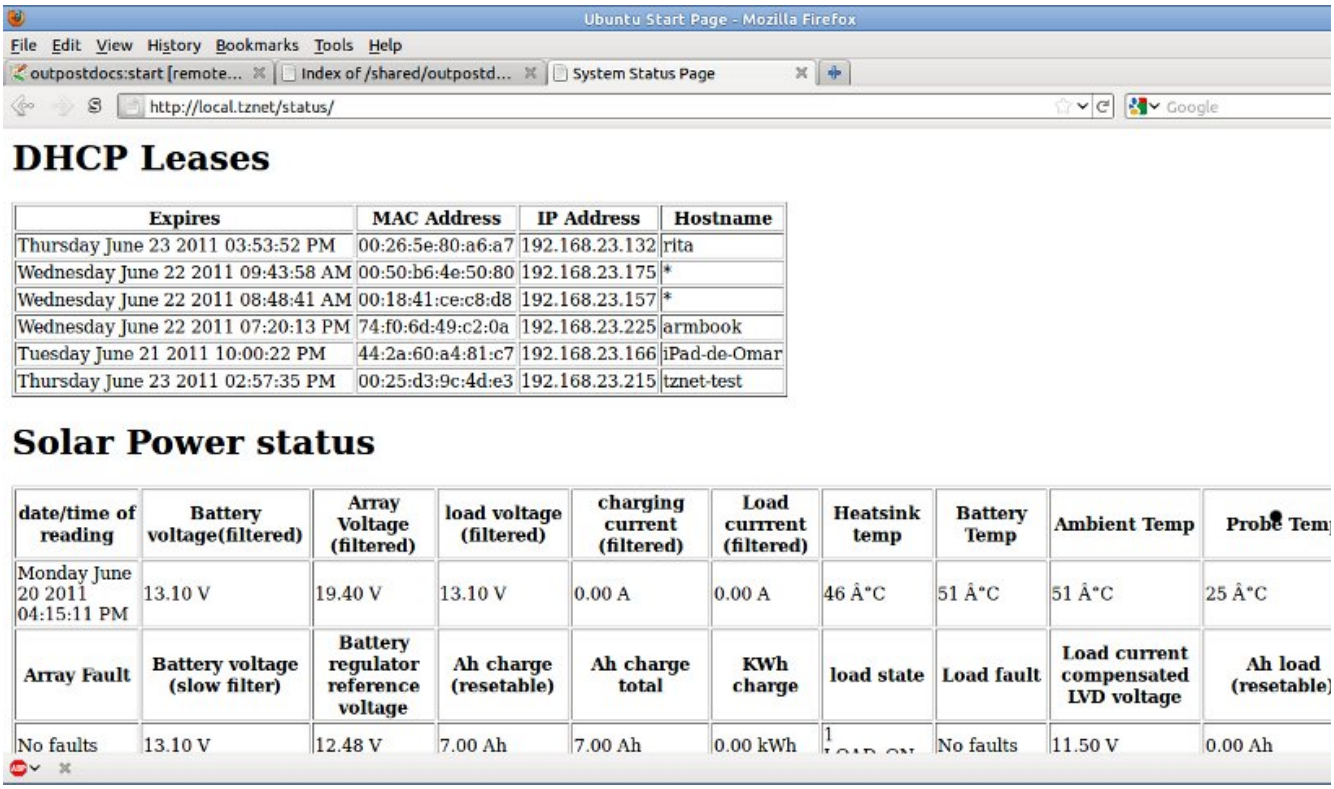
If you are at a remote site /mirror will contain a copy of main.tznet and a copy of every other remote site by name except for yours.

so for example going to http://local.tznet/mirror/main.tznet/wiki [http://local.tznet/mirror/main.tznet/wiki] will give youa read-only copy of the wiki for main.tznet. just click on the browse the mirror link, click on the name of the site you want to get files from and then click on either the wiki to view the wiki or shared to grab the shared files.

The reason for this feature is to allow access to the shared content on all active sites even if the network connection goes down. it also serves as a backup.

View system status

This link brings up a page that gives you information on all the computers attached to the network and (if you have a solar system at your site) information about the last known state of the solar system.



DHCP Leases

Expires	MAC Address	IP Address	Hostname
Thursday June 23 2011 03:53:52 PM	00:26:5e:80:a6:a7	192.168.23.132	rita
Wednesday June 22 2011 09:43:58 AM	00:50:b6:4e:50:80	192.168.23.175	*
Wednesday June 22 2011 08:48:41 AM	00:18:41:ce:c8:d8	192.168.23.157	*
Wednesday June 22 2011 07:20:13 PM	74:f0:6d:49:c2:0a	192.168.23.225	armbook
Tuesday June 21 2011 10:00:22 PM	44:2a:60:a4:81:c7	192.168.23.166	iPad-de-Omar
Thursday June 23 2011 02:57:35 PM	00:25:d3:9c:4d:e3	192.168.23.215	tznet-test

Solar Power status

date/time of reading	Battery voltage(filtered)	Array Voltage (filtered)	load voltage (filtered)	charging current (filtered)	Load currrent (filtered)	Heatsink temp	Battery Temp	Ambient Temp	Probe Tem
Monday June 20 2011 04:15:11 PM	13.10 V	19.40 V	13.10 V	0.00 A	0.00 A	46 Â°C	51 Â°C	51 Â°C	25 Â°C
Array Fault	**Battery voltage (slow filter)**	**Battery regulator reference voltage**	**Ah charge (resetable)**	**Ah charge total**	**KWh charge**	**load state**	**Load fault**	**Load current compensated LVD voltage**	**Ah load (resetable)**
No faults	13.10 V	12.48 V	7.00 Ah	7.00 Ah	0.00 kWh	1	No faults	11.50 V	0.00 Ah

The DHCP leases table contains information on the time that IP address expires, the IP address and MAC address of each computerand most importantly the hostname of that computer. You can connect to any computer on that table by its hostname either by itself or by adding .tznet onto the end of it.

How to use the fileserver

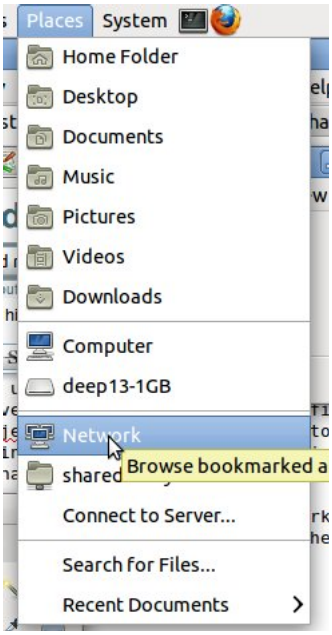
The file server is just a place to store files and folders which are objectsthat your computer uses to store information. a file contains information and a folder is just a place to store files. folders can have folders inside of them that contain yet more files and so on.

All you really need to know is that it works just like storing files on your local computer except that everyone can see and update the files that belong on the server instead of just you.

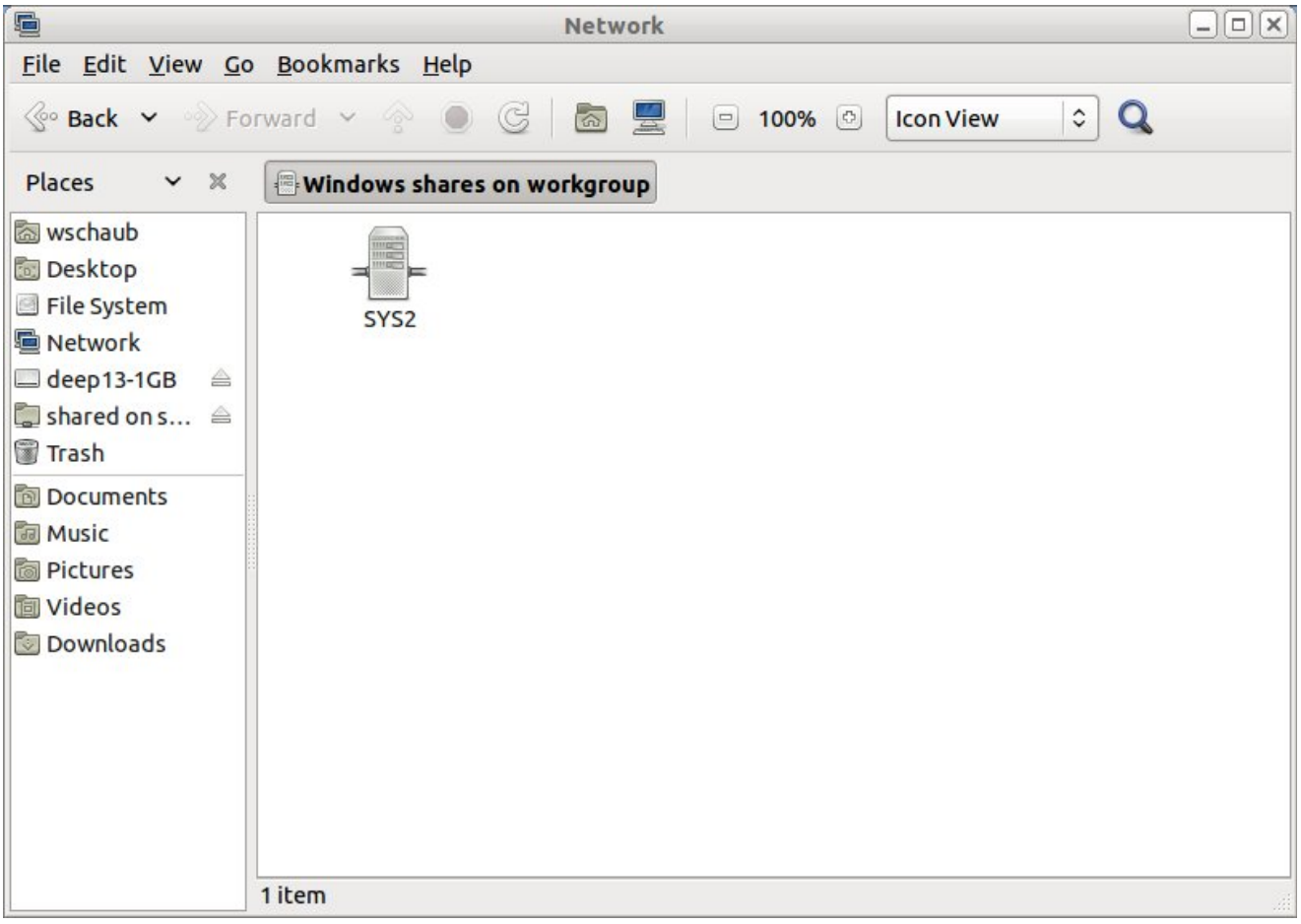
connecting to the file server.

1. Go to the Places menu
2. Select network
3. double click on SYS1 or SYS2 (whichever is displayed)
    I. if SYS1 or SYS2 are not displayed just double click on windows network and then double click on WORKGROUP you should then see SYS1 or SYS2
    II. double click on SYS1 or SYS2
4. you will see three folders “mirror” “print$” and “shared”
5. double click on shared and start using the shared folder like you would any other folder.

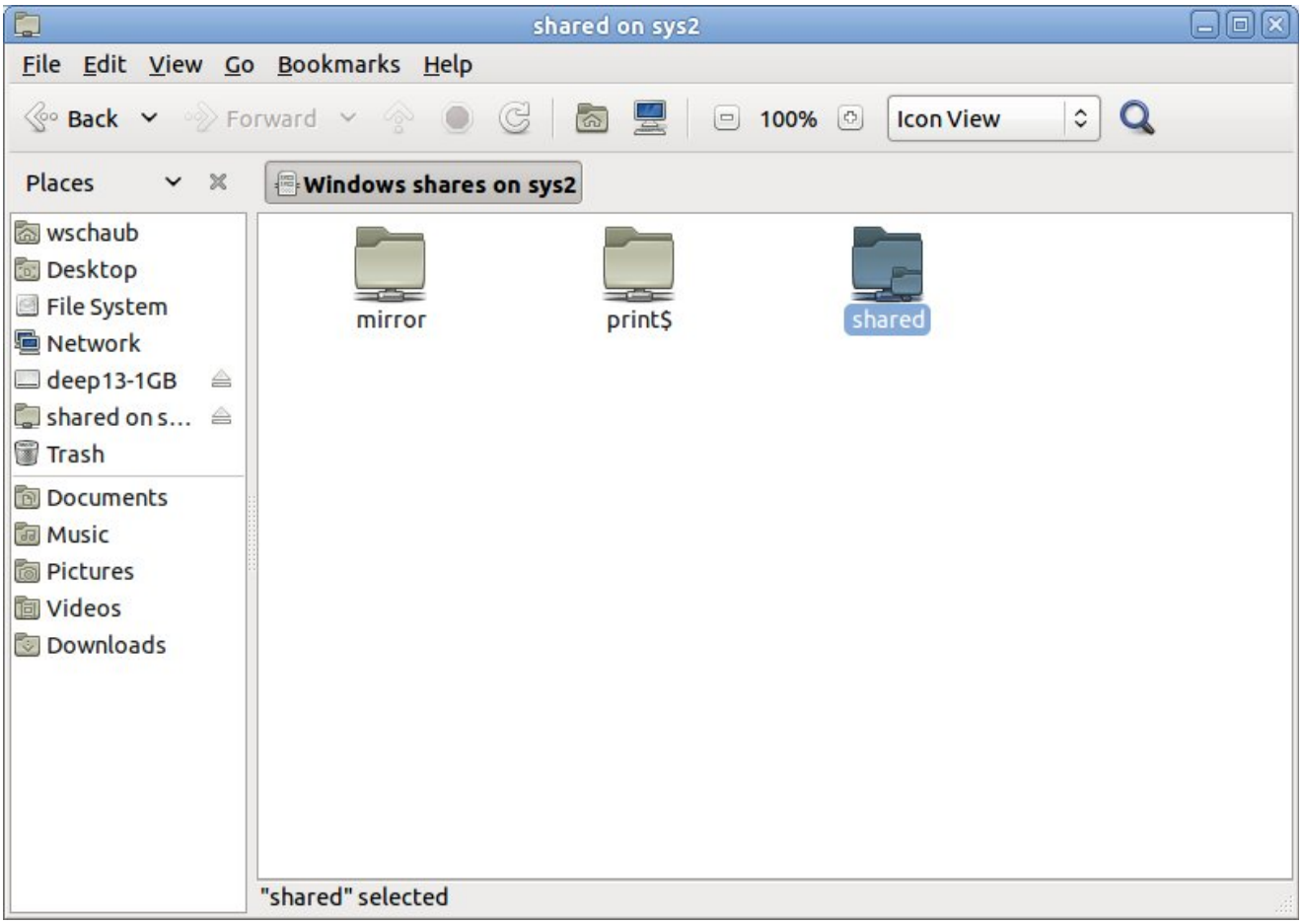
Places menu



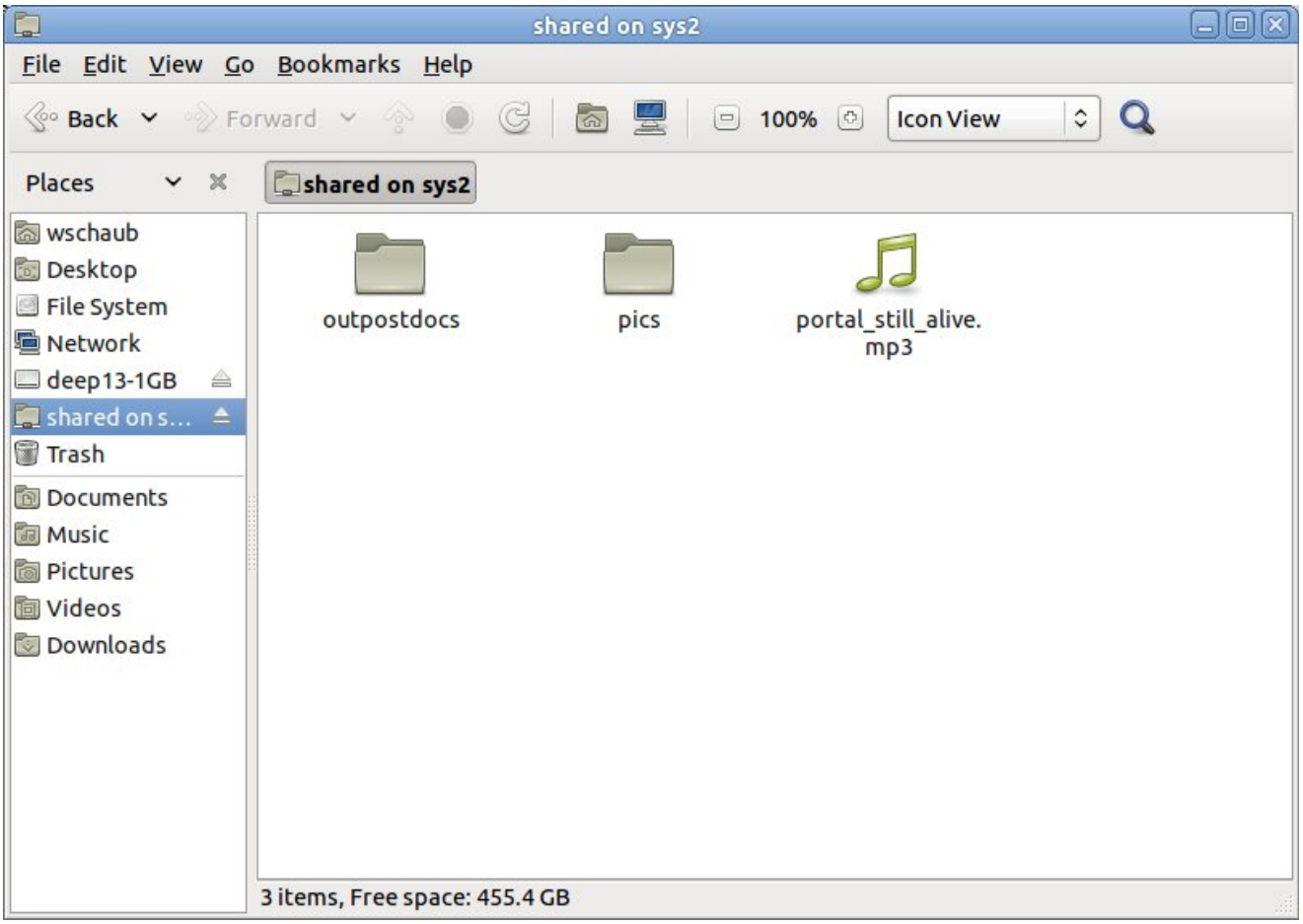
Network screen



shared drives on the file server



Shared folder



The file server is connected to the web server

every file in the shared folder appears on the “browse shared files” link on the web server and the layout is exactly the same.

In fact if you wanted to create your own web pages that did not live on the wiki you could upload your HTML and image files to a folder inside of shared and then view the page from the web by going to http://local.tznet/shared/yourdirhere/ [http://local.tznet/shared/yourdirhere/]

The mirror folder

The mirror folder works exactly the same as the “browse the mirror” link on the webserver. it contains the exact same content and works exactly the same as the shared folder.

There is one exception however: The mirror folder is *read-only*. What this means is that you can view files and copy files but you can not put new ones in or change existing files.

If there is a file in the mirror from another site that you wish to work on just copy it from the mirror to either your local computer or the shared folder first.