CEIBAL Plan
Technical Area

Fiorella Haim

Plan Ceibal

Structure

- LATU is in charge of technical implementation
- 23 young engineers and advanced students (telecom and computer)
- 4 Departments: Projects, Connectivity, Systems and (network) Support

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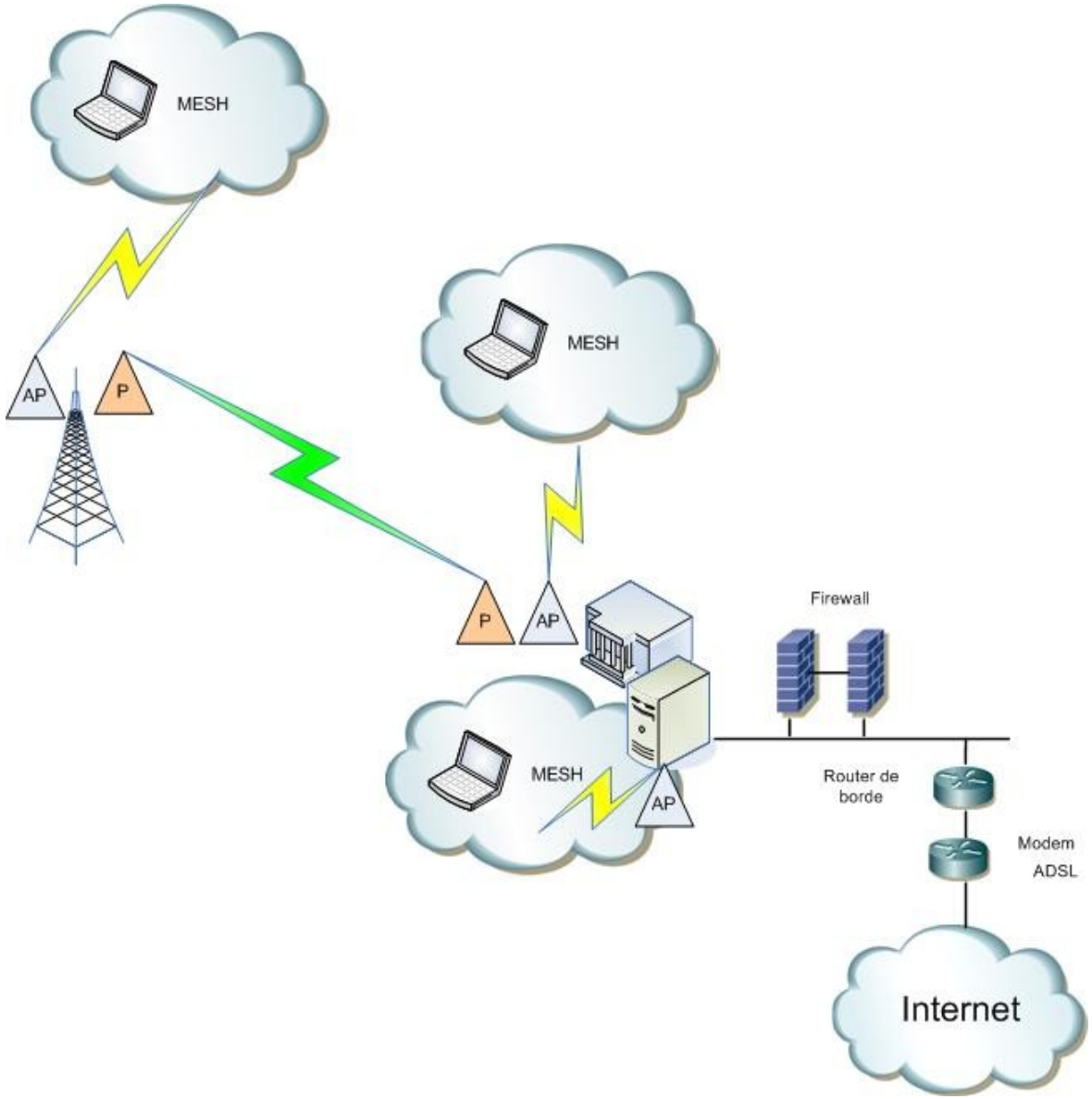
Generic Network Diagram



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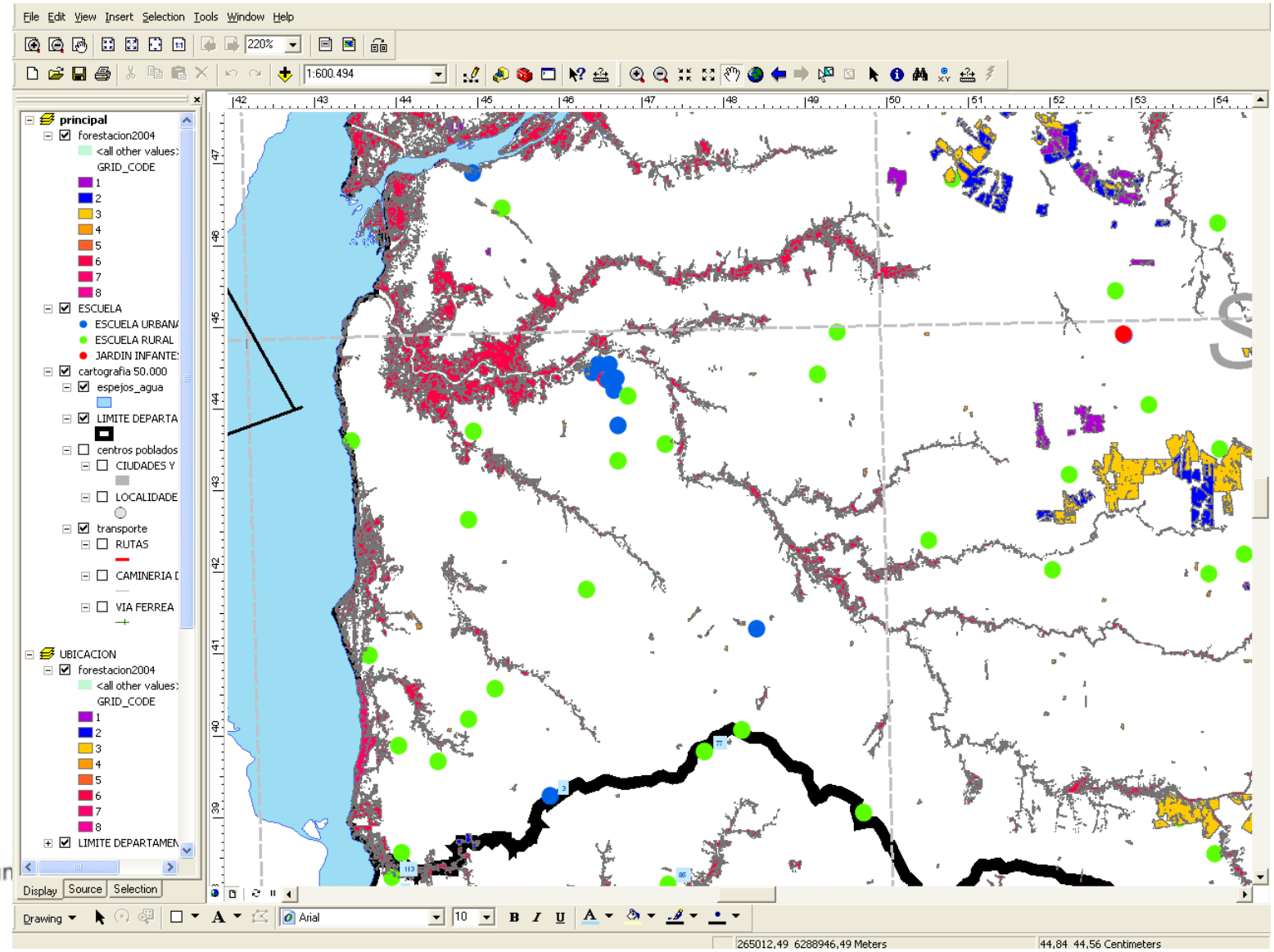
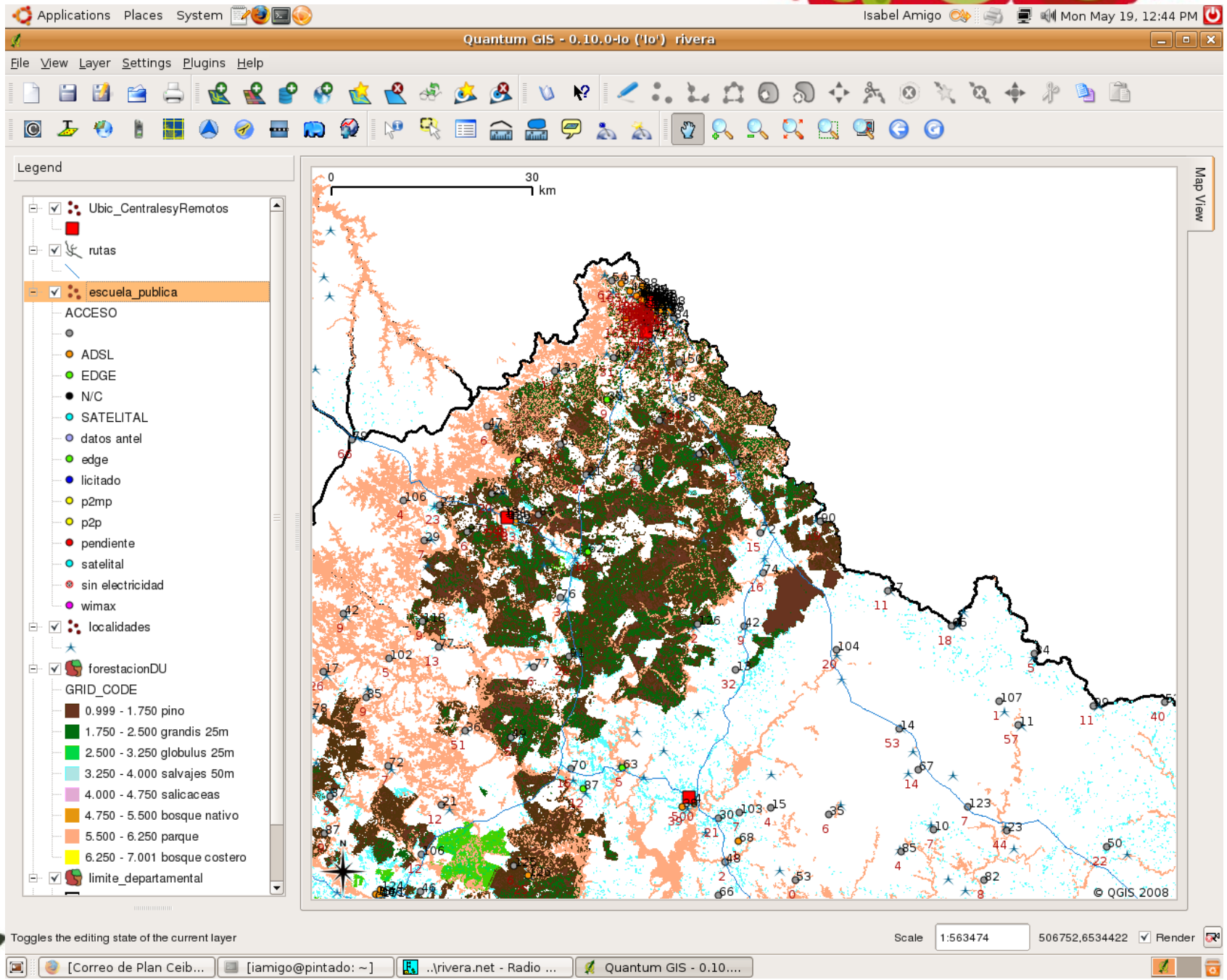
Stages

- Design and planning
  - Study of zones
  - Connection to internet (ADSL, EDGE, 3G, Satelite, P2P links)
- Network Implementation
  - LATU
  - Tender (more than 1 supplier to be faster)
  - Different technologies (MIMO, Wimax, P2P, EDGE / HSDPA, satelite)
  - Optimization
- Servers and laptops
- Management and monitoring network tools (software)

Pre design at zone level




Applications Places System
Isabel Amigo
Mon May 19, 12:44 PM
Quantum GIS - 0.10.0-Io ('Io') rivera
File View Layer Settings Plugins Help
Legend
Ubic_CentralesyRemotos
rutas
escuela_publica
ACCESO
ADSL
EDGE
N/C
SATELITAL
datos antel
edge
licitado
p2mp
p2p
pendiente
satelital
sin electricidad
wimax
localidades
forestacionDU
GRID_CODE
0.999 - 1.750 pino
1.750 - 2.500 grandis 25m
2.500 - 3.250 globulus 25m
3.250 - 4.000 salvajes 50m
4.000 - 4.750 salicaceas
4.750 - 5.500 bosque nativo
5.500 - 6.250 parque
6.250 - 7.001 bosque costero
limite_departamental
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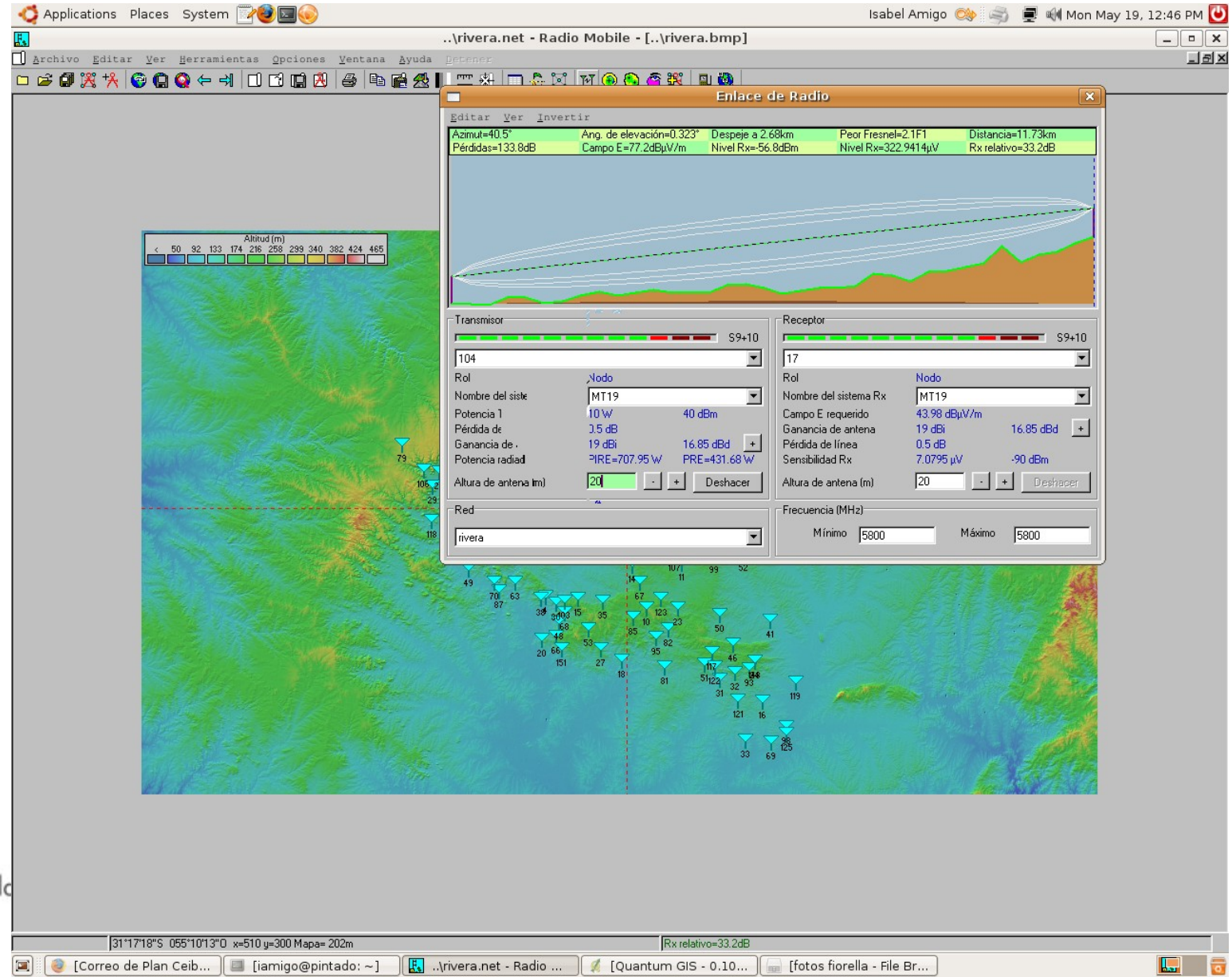
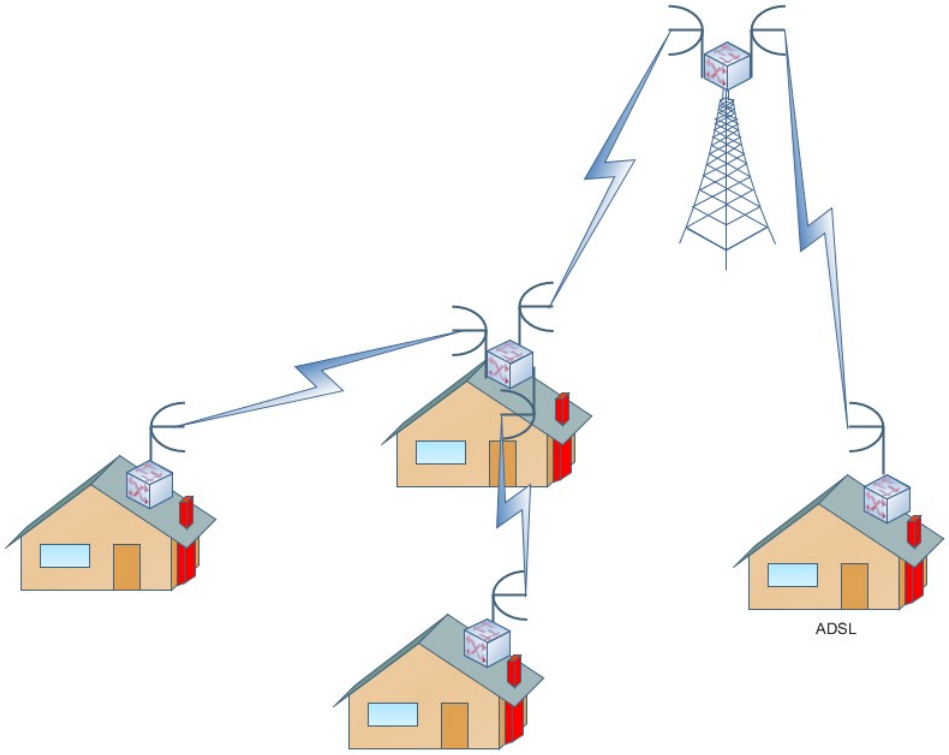
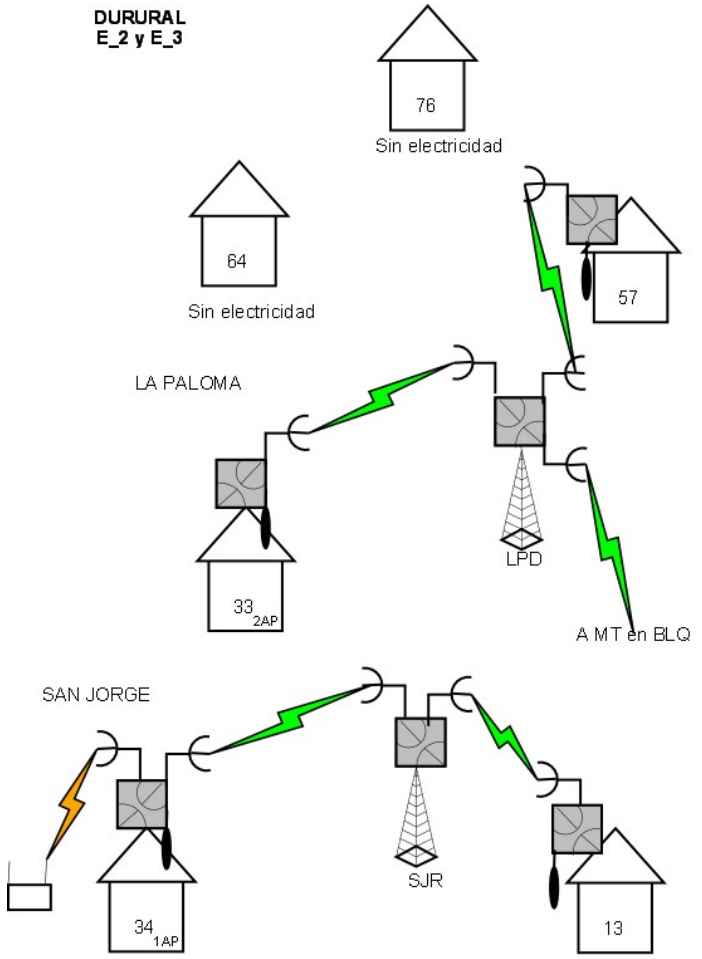
30
km
Map View
© QGIS 2008
Toggles the editing state of the current layer
Scale
1:563474
506752,6534422
Render
[Correo de Plan Ceib...
[iamigo@pintado: ~]
..\rivera.net - Radio ...
Quantum GIS - 0.10....

P2P link calculations



Project details





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Connectivity

- Write tenders
- Evaluate and assign zones
- Implement zones
- Control and manage suppliers
- Optimize coverage

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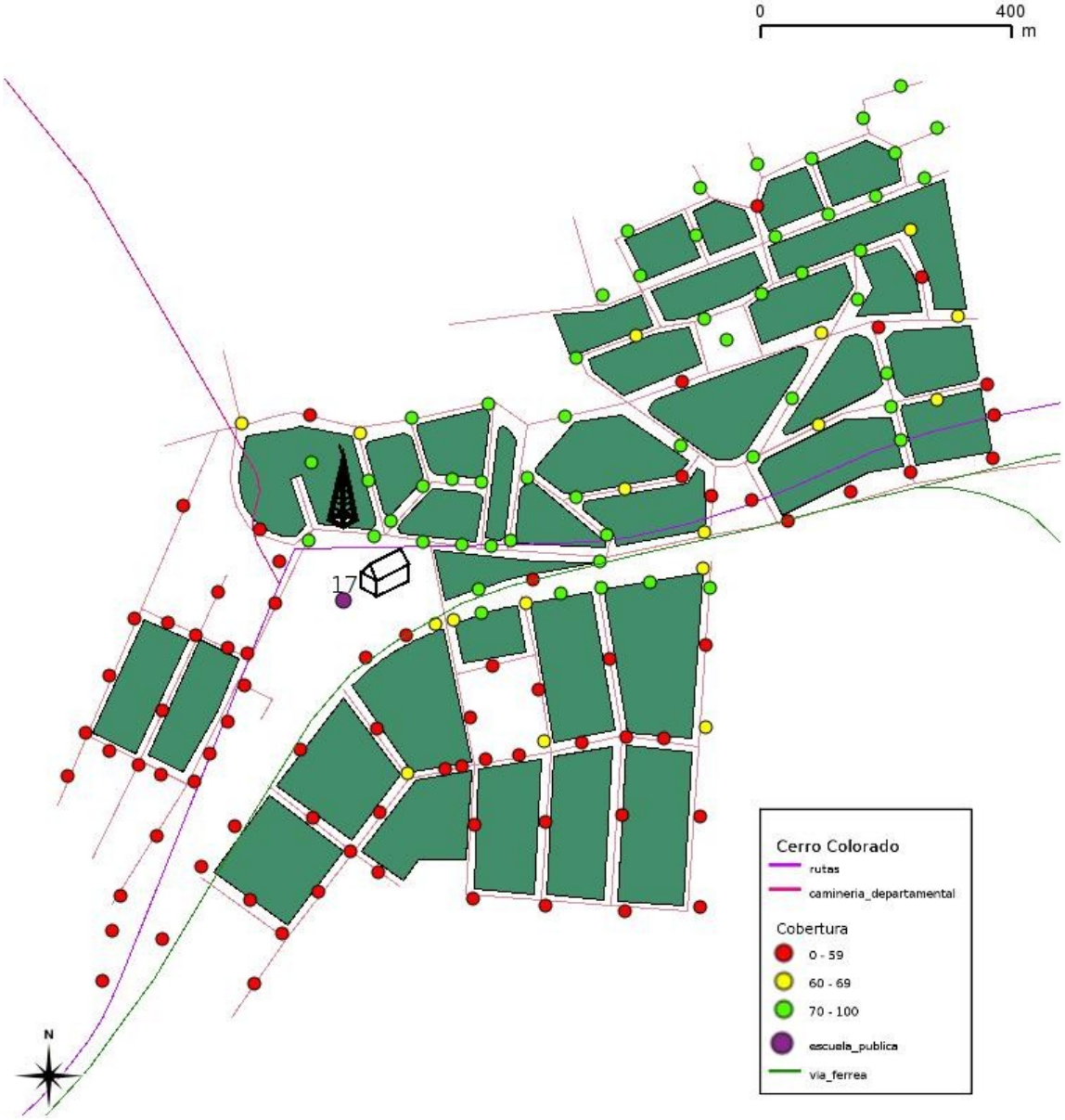
Towers

- From ANTEL, OSE, AFE, MoD, Radios, Cable, UTE, MEVIR.

Control and optimization



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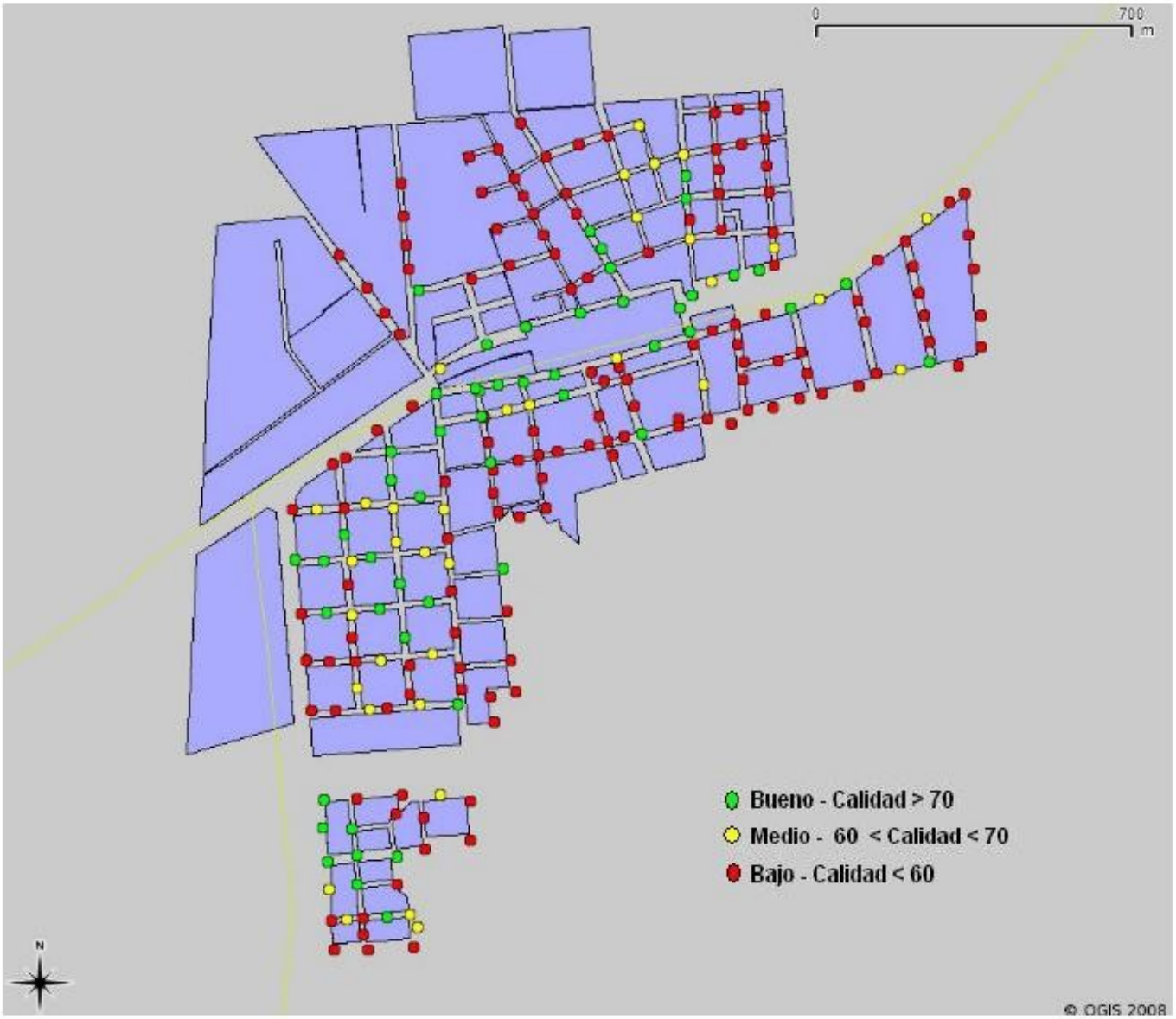
0
700
m
Bueno - Calidad > 70
Medio - 60 < Calidad < 70
Bajo - Calidad < 60
N
© OGIS 2008

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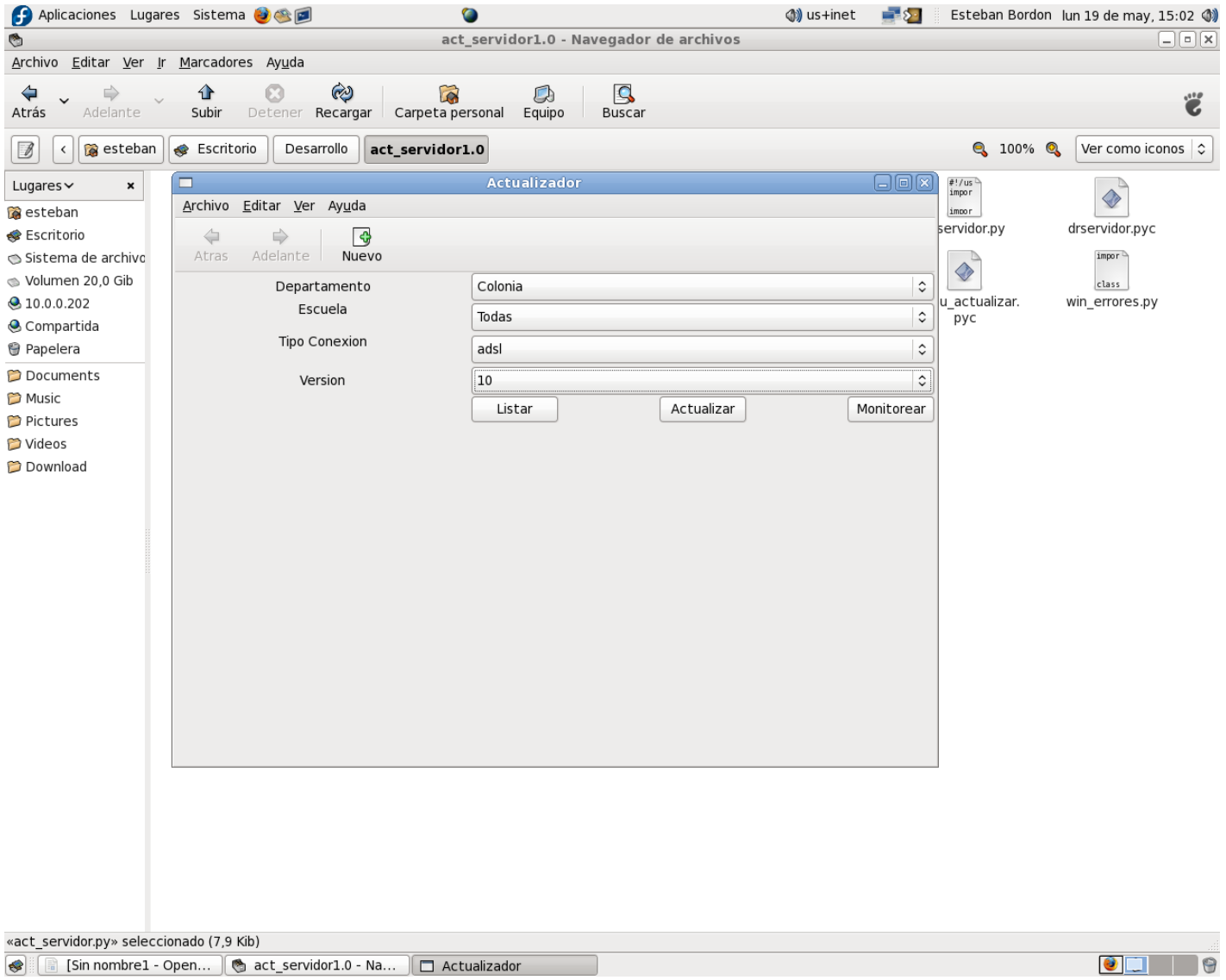
Server update tool



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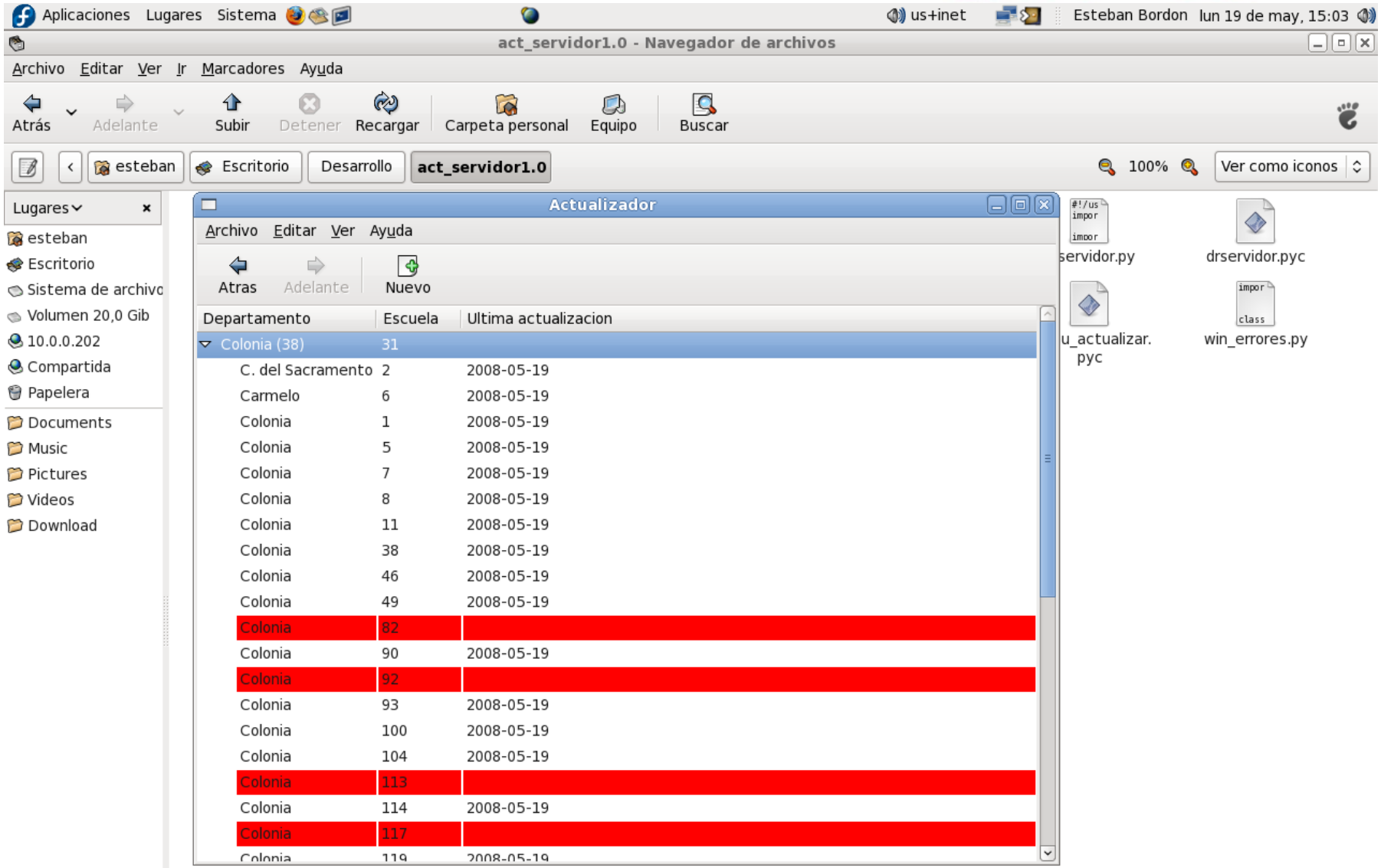
Aplicaciones Lugares Sistema
us+inet
Esteban Bordon lun 19 de may, 15:03
act_servidor1.0 - Navegador de archivos
Archivo Editar Ver Ir Marcadores Ayuda
Atrás Adelante Subir Detener Recargar Carpeta personal Equipo Buscar
esteban Escritorio Desarrollo act_servidor1.0
100% Ver como iconos
Lugares
esteban
Escritorio
Sistema de archivo
Volumen 20,0 Gib
10.0.0.202
Compartida
Papelera
Documents
Music
Pictures
Videos
Download
Actualizador
Archivo Editar Ver Ayuda
Atras Adelante Nuevo
Departamento Escuela Ultima actualizacion
Colonia (38) 31
C. del Sacramento 2 2008-05-19
Carmelo 6 2008-05-19
Colonia 1 2008-05-19
Colonia 5 2008-05-19
Colonia 7 2008-05-19
Colonia 8 2008-05-19
Colonia 11 2008-05-19
Colonia 38 2008-05-19
Colonia 46 2008-05-19
Colonia 49 2008-05-19
Colonia 82
Colonia 90 2008-05-19
Colonia 92
Colonia 93 2008-05-19
Colonia 100 2008-05-19
Colonia 104 2008-05-19
Colonia 113
Colonia 114 2008-05-19
Colonia 117
servidor.py
drservidor.pyc
u_actualizar.pyc
win_errores.py

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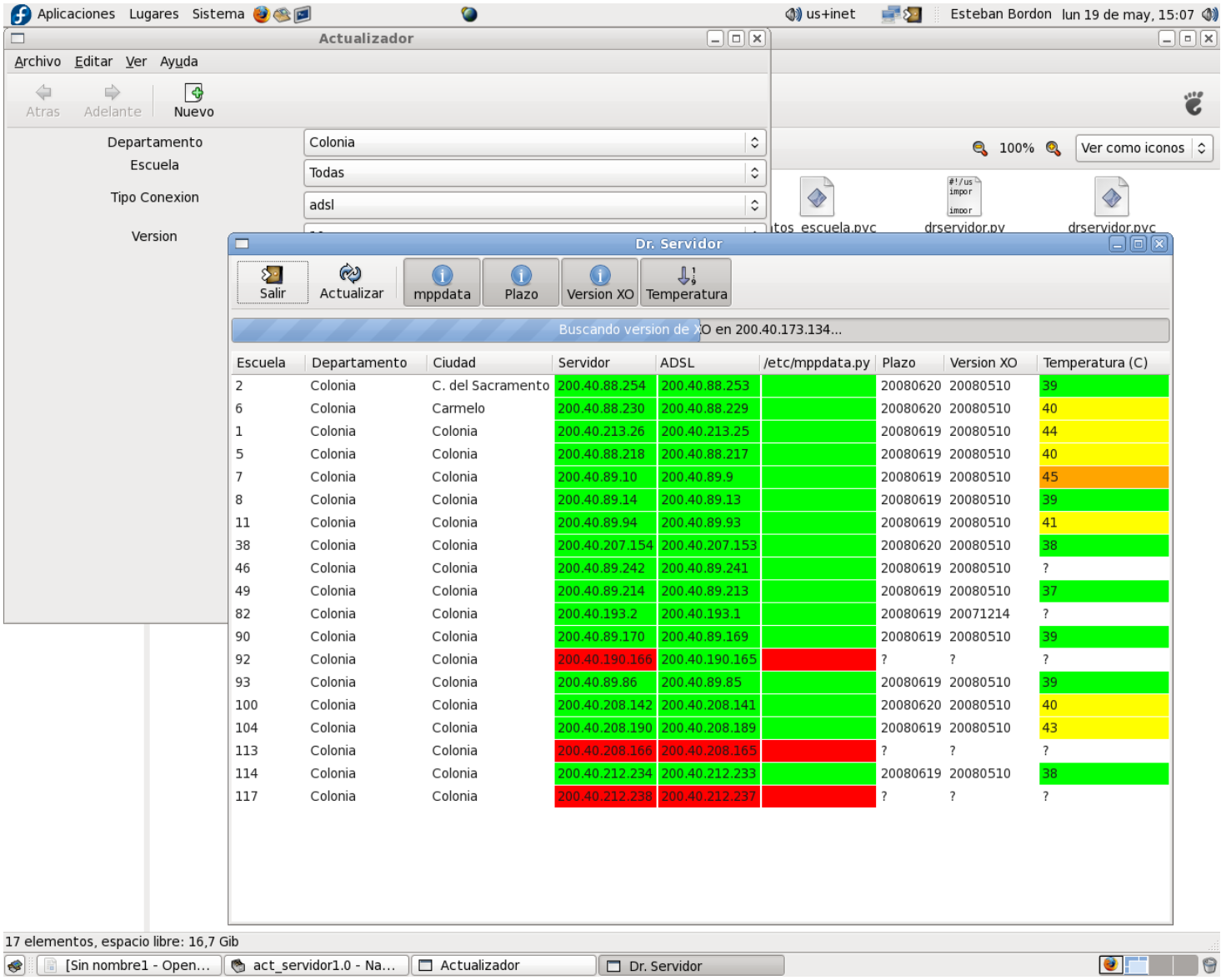
Monitoring servers



Escuela	Departamento	Ciudad	Servidor	ADSL	/etc/mppdata.py	Plazo	Version XO	Temperatura (C)
2	Colonia	C. del Sacramento	200.40.88.254	200.40.88.253		20080620	20080510	39
6	Colonia	Carmelo	200.40.88.230	200.40.88.229		20080620	20080510	40
1	Colonia	Colonia	200.40.213.26	200.40.213.25		20080619	20080510	44
5	Colonia	Colonia	200.40.88.218	200.40.88.217		20080619	20080510	40
7	Colonia	Colonia	200.40.89.10	200.40.89.9		20080619	20080510	45
8	Colonia	Colonia	200.40.89.14	200.40.89.13		20080619	20080510	39
11	Colonia	Colonia	200.40.89.94	200.40.89.93		20080619	20080510	41
38	Colonia	Colonia	200.40.207.154	200.40.207.153		20080620	20080510	38
46	Colonia	Colonia	200.40.89.242	200.40.89.241		20080619	20080510	?
49	Colonia	Colonia	200.40.89.214	200.40.89.213		20080619	20080510	37
82	Colonia	Colonia	200.40.193.2	200.40.193.1		20080619	20071214	?
90	Colonia	Colonia	200.40.89.170	200.40.89.169		20080619	20080510	39
92	Colonia	Colonia	200.40.190.166	200.40.190.165		?	?	?
93	Colonia	Colonia	200.40.89.86	200.40.89.85		20080619	20080510	39
100	Colonia	Colonia	200.40.208.142	200.40.208.141		20080620	20080510	40
104	Colonia	Colonia	200.40.208.190	200.40.208.189		20080619	20080510	43
113	Colonia	Colonia	200.40.208.166	200.40.208.165		?	?	?
114	Colonia	Colonia	200.40.212.234	200.40.212.233		20080619	20080510	38
117	Colonia	Colonia	200.40.212.238	200.40.212.237		?	?	?

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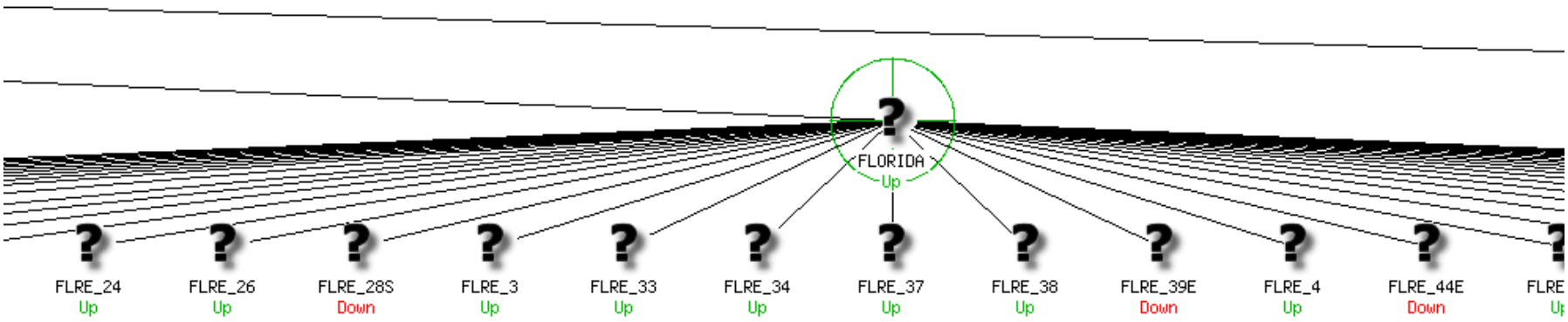
Network monitoring



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Report details

Debian GNU/Linux

Name:	FLRE_28S
Alias:	Florida - Escuela 28
Address:	200.115.2.98
State:	Down
Status Information:	CRITICAL - Plugin timed out after 10 seconds
State Duration:	0d 13h 43m 47s
Last Status Check:	2008-05-19 12:55:30
Last State Change:	2008-05-18 23:13:02
Parent Host(s):	FLORIDA
Immediate Child Hosts:	0

Services:
- 8 critical

Zoom In

Layout Method: Balanced tree

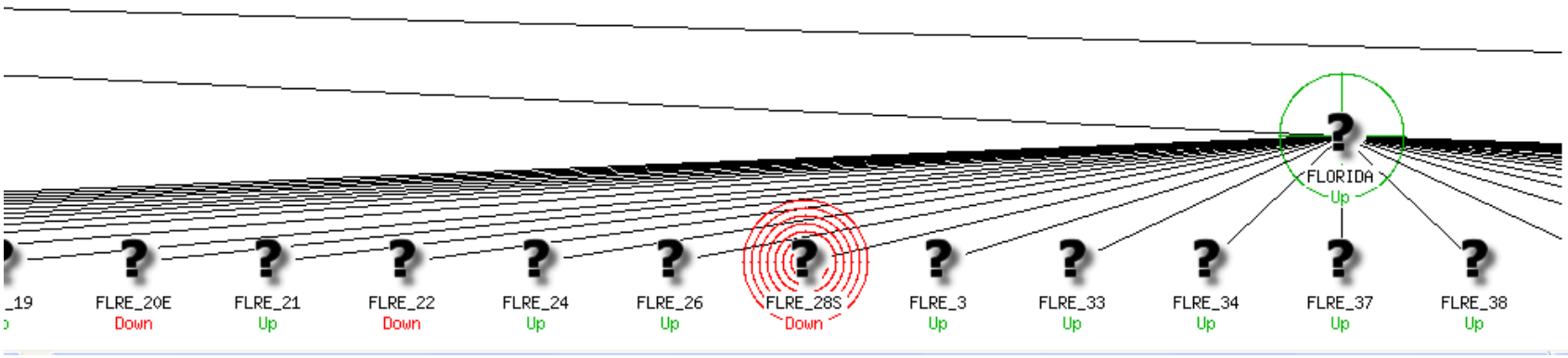
Scaling factor: 0.0

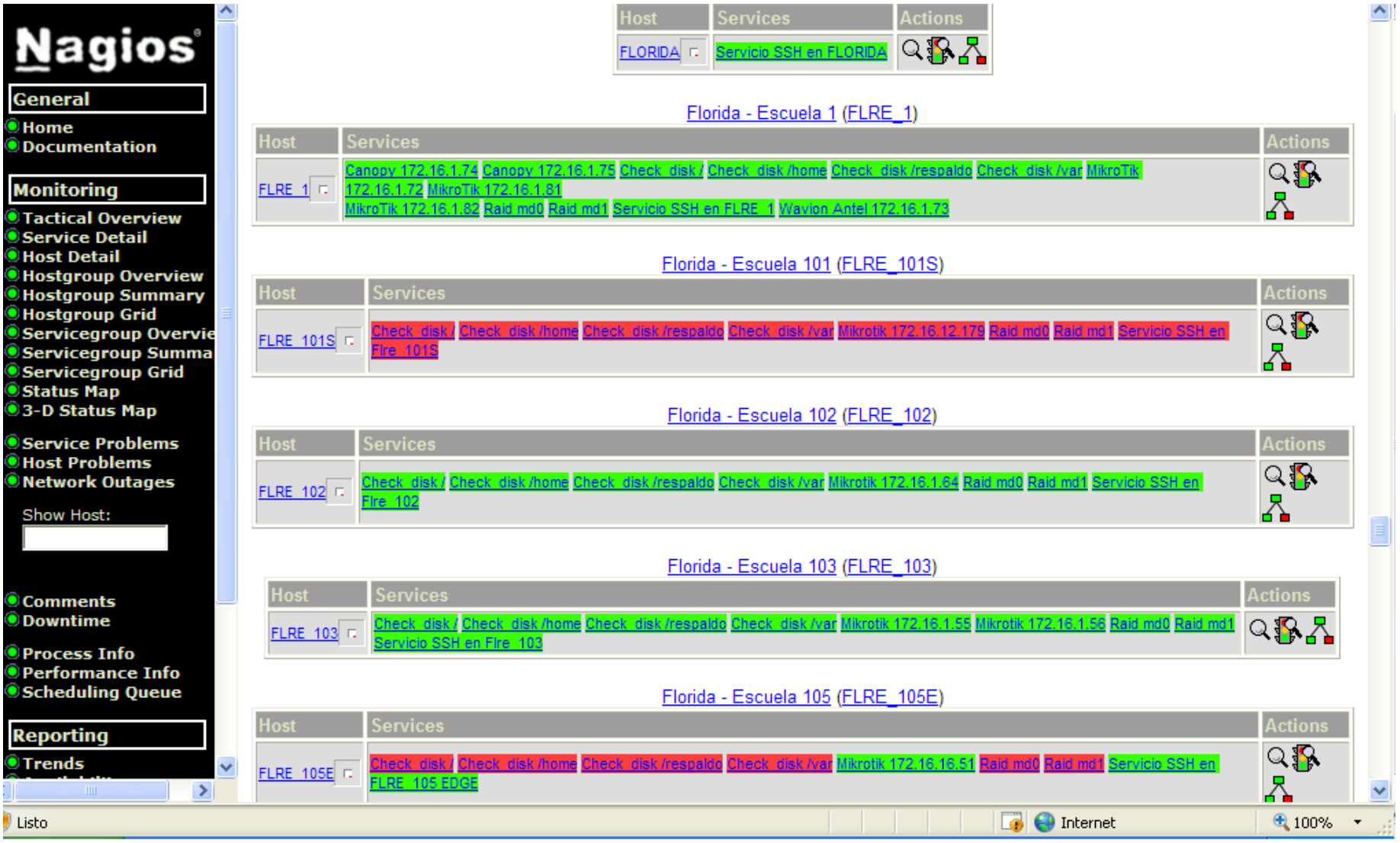
Drawing Layers:
Colonia - Escuela 1
Colonia - Escuela 10
Colonia - Escuela 100
Colonia - Escuela 104

Layer mode: Include / Exclude

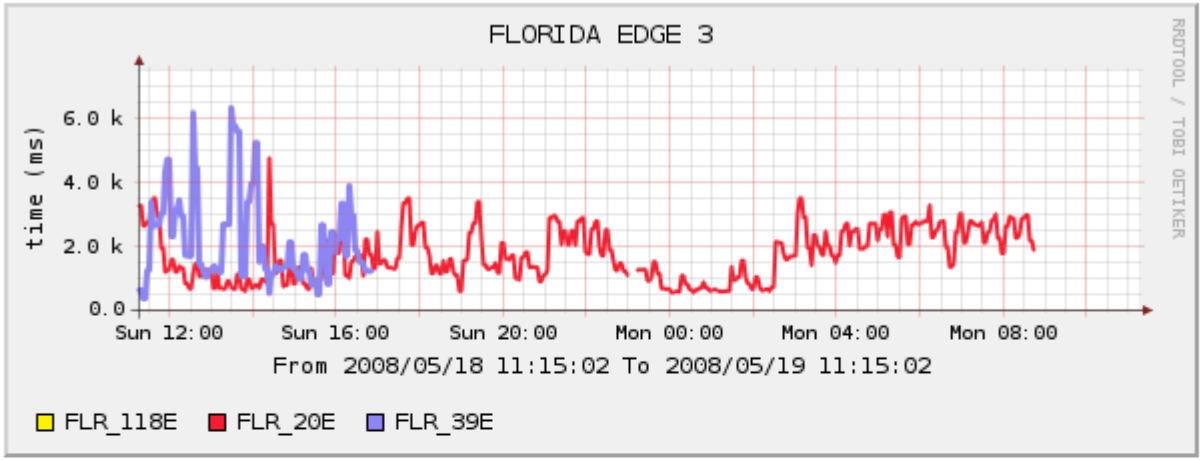
Suppress popups:

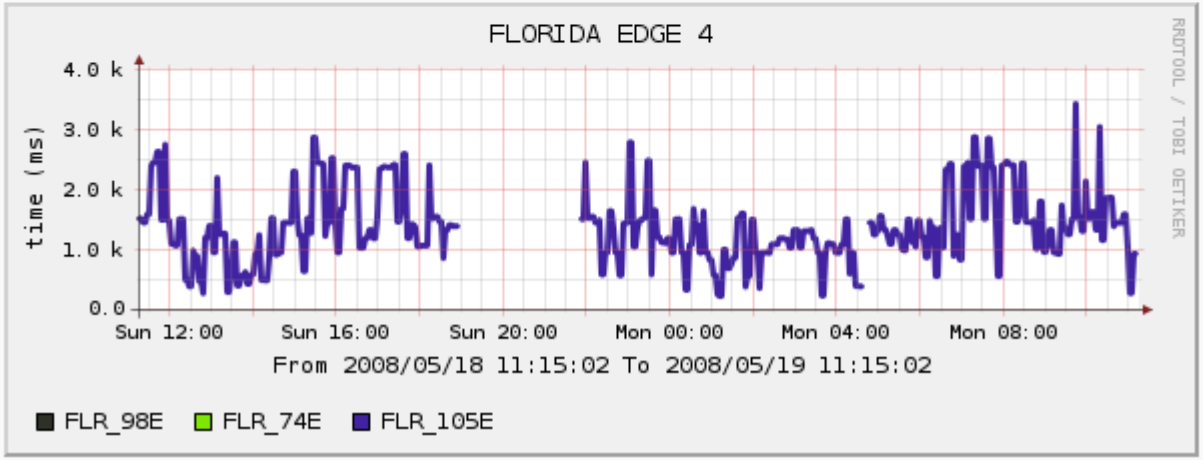
Update




Nagios
General
Home
Documentation
Monitoring
Tactical Overview
Service Detail
Host Detail
Hostgroup Overview
Hostgroup Summary
Hostgroup Grid
Servicegroup Overvie
Servicegroup Summa
Servicegroup Grid
Status Map
3-D Status Map
Service Problems
Host Problems
Network Outages
Show Host:
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Reporting
Trends
Host
Services
Actions
FLORIDA
Servicio SSH en FLORIDA
Florida - Escuela 1 (FLRE_1)
FLRE_1
Canopy 172.16.1.74 Canopy 172.16.1.75 Check_disk / Check_disk /home Check_disk /respaldo Check_disk /var MikroTik 172.16.1.72 MikroTik 172.16.1.81 MikroTik 172.16.1.82 Raid md0 Raid md1 Servicio SSH en FLRE_1 Wavion Antel 172.16.1.73
Florida - Escuela 101 (FLRE_101S)
FLRE_101S
Check_disk / Check_disk /home Check_disk /respaldo Check_disk /var Mikrotik 172.16.12.179 Raid md0 Raid md1 Servicio SSH en Flre_101S
Florida - Escuela 102 (FLRE_102)
FLRE_102
Check_disk / Check_disk /home Check_disk /respaldo Check_disk /var Mikrotik 172.16.1.64 Raid md0 Raid md1 Servicio SSH en Flre_102
Florida - Escuela 103 (FLRE_103)
FLRE_103
Check_disk / Check_disk /home Check_disk /respaldo Check_disk /var Mikrotik 172.16.1.55 Mikrotik 172.16.1.56 Raid md0 Raid md1 Servicio SSH en Flre_103
Florida - Escuela 105 (FLRE_105E)
FLRE_105E
Check_disk / Check_disk /home Check_disk /respaldo Check_disk /var Mikrotik 172.16.16.51 Raid md0 Raid md1 Servicio SSH en FLRE_105 EDGE
Listo
Internet
100%

Special cases





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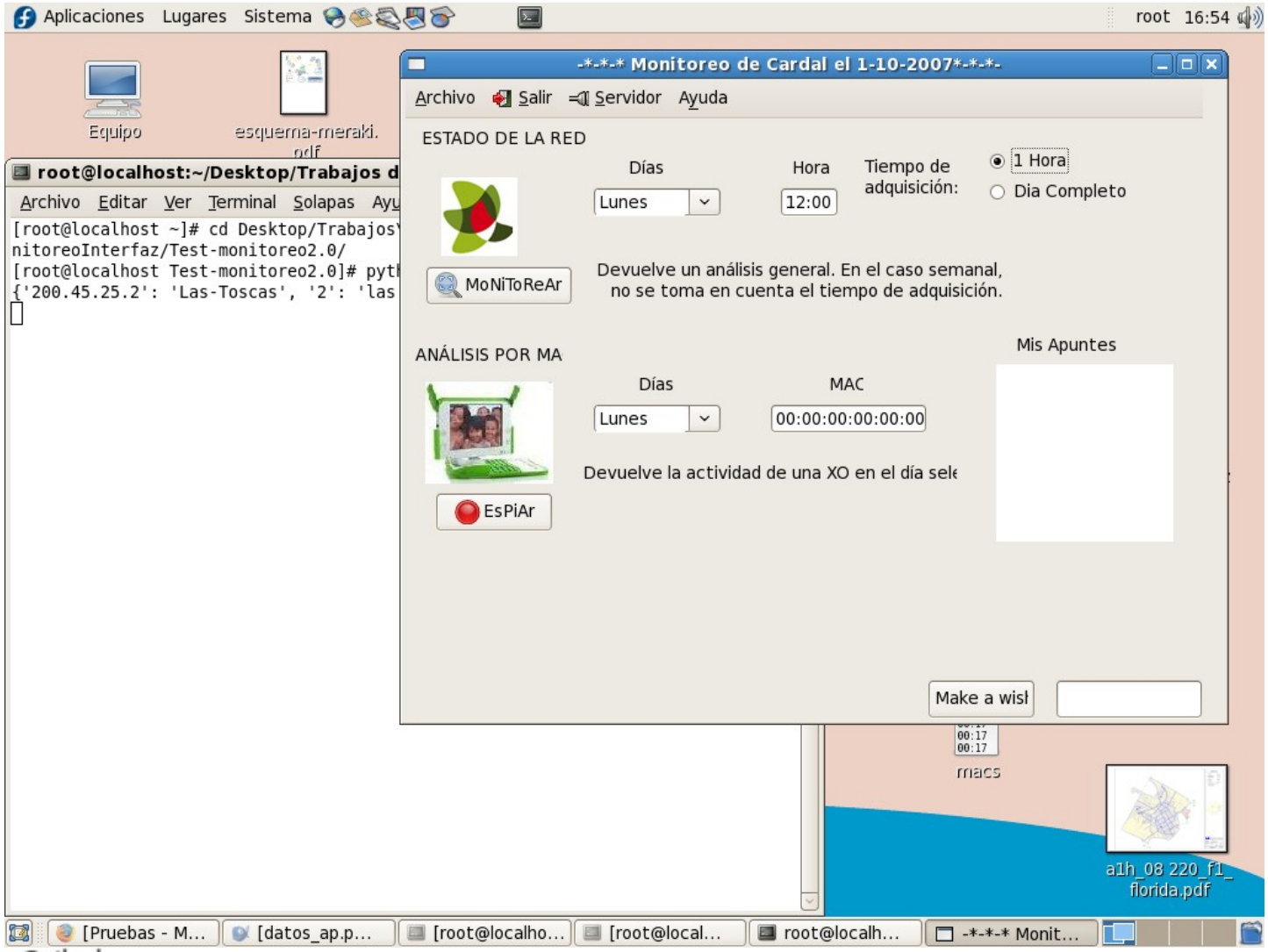
Laptops monitoring software



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Questions?

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