DNS naming and IPv4 allocation

CLARA Network Engineering Group

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This document presents the DNS naming convention for the interfaces, equipments and sub domains of RedCLARA.

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Version-1.2

VERSION MANAGEMENT

This guide outlines the DNS naming schema that is adopted for the RedCLARA backbone, NRENs connections and NOC equipments. When new procedures are required or other changes made, it will be updated accordingly, and the new version release will be recorded in the table below.

Version	Modification description	Date	Reviewed by
preliminary	First draft	24-Jan-2005	Eduardo Alvarez
1.0	Corrections and changes	23-Feb-2005	Eriko Porto & Eduardo Alvarez
1.1	Corrections and changes	01-Mar-2005	Eriko Porto & Eduardo Alvarez
1.2	Corrections and changes	26-Sep-2005	Eriko Porto

Summary

1. Introduction

The following domains are registered for RedCLARA and will be under the responsibility of CLARA organization:

- **redclara.net**
- **redclara.org**
- **redeclara.net**
- **redeclara.org**

The preferred domain that is being used to assign the names for the equipment is the **redclara.net** domain. The DNS service for RedCLARA domain is being managed by Brazilian NREN – RNP (Rede Nacional de Ensino e Pesquisa) – and is placed at servers within their network.

Any requests or remarks concerning this service must be forwarded to **neg@redclara.net**, which will be responsible to forward them to the proper department to be dealt with.

2. Sub-domains

Under **redclara.net** domain there are 4 other sub domains:

- **core.redclara.net**
- **peer.redclara.net**
- **lan.redclara.net**
- **noc.redclara.net**

The CLARA-NOC will be using and managing the sub domain **noc.redclara.net.** The NOC will have administrative authority of this zone which will contain the resource records for all NOC equipment and services. Table 1 shows the hosts and services with their respective IPv4 addresses that will be primarily registered at this sub domain.

Table 1: NOC resource records

NAME	VALUE	RR Type	SERVICE
noc.redclara.net	132.248.10.2	**NS**	Name Server
alfa.noc.redclara.net	132.248.120.221	**A**	SERVER1
minerva.noc.redclara.net	132.248.120.219	**A**	PC1
deimos.noc.redclara.net	132.248.120.218	**A**	PC2
genesis.noc.redclara.net	132.248.120.217	**A**	PC3
omega.noc.redclara.net	132.248.120.220	**A**	SERVER2
www.helpdesk.noc.redclara.net	**alfa.noc.redclara.net**	**CN**	Ticket manager
noc.redclara.net	**alfa.noc.redclara.net**	**MX**	Mail exchanger

The other 3 domains are under the administration of RNP together with the main **redclara.net** domain.

3.
Core interfaces

Table 2 describes the IPv4 addresses and names associations for the interfaces of the main core routers of the backbone.

Table 2: Core ring and loopback interfaces

DEVICE	INTERFACE	IP	NAME
Tijuana			
PoP Panama City - Panama	POS2/0	200.0.204.13	**panama-tijuana.core.redclara.net**
PoP Sao Paulo - Brazil	POS2/1	200.0.204.6	**saopaulo-tijuana.core.redclara.net**
Loopback0	Loop0	200.0.205.13	**tijuana.core.redclara.net**
Loopback1	Loop1	200.0.205.6	**l1-tijuana.core.redclara.net**
Sao Paulo PoP			
PoP Tijuana - Mexico	POS2/0	200.0.204.5	**tijuana-saopaulo.core.redclara.net**
PoP Buenos Aires – Argentina	POS2/1	200.0.204.38	**buenosaires-saopaulo.core.redclara.net**
Loopback0	Loop0	200.0.205.5	**saopaulo.core.redclara.net**
Loopback1	Loop1	200.0.205.38	**l1-saopaulo.core.redclara.net**
Buenos Aires PoP			
PoP Sao Paulo – Brazil	POS2/0	200.0.204.37	**saopaulo-buenosaires.core.redclara.net**
PoP Santiago – Chile	POS2/1	200.0.204.30	**santiago-buenosaires.core.redclara.net**
Loopback0	Loop0	200.0.205.37	**buenosaires.core.redclara.net**
Loopback1	Loop1	200.0.205.30	**l1-buenosaires.core.redclara.net**
Santiago PoP			
PoP Buenos Aires – Argentina	POS2/0	200.0.204.29	**buenosaires-santiago.core.redclara.net**
PoP Panama City - Panama	POS2/1	200.0.204.22	**panama-santiago.core.redclara.net**
Loopback0	Loop0	200.0.205.29	**santiago.core.redclara.net**
Loopback1	Loop1	200.0.205.22	**l1-santiago.core.redclara.net**
Panama PoP			
PoP Santiago - Chile	POS2/0	200.0.204.21	**santiago-panama.core.redclara.net**
PoP Tijuana - Mexico	POS2/1	200.0.204.14	**tijuana-panama.core.redclara.net**
Loopback0	Loop0	200.0.205.21	**panama.core.redclara.net**
Loopback1	Loop1	200.0.205.14	**l1-panama.core.redclara.net**

4.
LAN equipment

Table 3 shows the IPv4 addresses and names associations for the LAN auxiliary equipment of each RedCLARA PoP. These resource records are under the **lan.redclara.net** sub domain.

Table 3: LAN equipment

IP	LAN Equipment	INTERFACE	NAME
Tijuana block - 200.0.206.0/27			
200.0.206.1	Cat 3550 switch	Vlan1	**c3550-tijuana.lan.redclara.net**
200.0.206.2	Gigabit Eth port of Cisco 12006	Giga1/0	**lan-tijuana.lan.redclara.net**
200.0.206.3	Ethernet port of Cisco 2610	Fast0/0	**oba2610-tijuana.lan.redclara.net**
200.0.206.4	Ethernet NIC 0 of PC1	Eth0	**server1-tijuana.lan.redclara.net**
200.0.206.5	Ethernet NIC 0 of PC2	Eth0	**server2-tijuana.lan.redclara.net**
200.0.206.6	Ethernet NIC of Sentry 70A	Ethernet	**sentry70a-tijuana.lan.redclara.net**
200.0.206.7	Ethernet NIC of Sentry 35A	Ethernet	**sentry35a-tijuana.lan.redclara.net**
200.0.206.8	Ethernet NIC of Sentry 20A	Ethernet	**sentry20a-tijuana.lan.redclara.net**
200.0.206.9	Cat 3750 switch (CUDI)	Vlan1	**c3750-cudi-bestel.lan.redclara.net**
200.0.206.10	Cat 3750 switch (CLARA)	Vlan1	**c3750-clara-telnor.lan.redclara.net**
200.0.206.11	Cisco 7206 (CLARA)	Vlan1	**aux7206-clara-telnor.lan.redclara.net**
200.0.206.12	Cat 4203 (CENIC)	Vlan1	**c7206-clara-telnor.lan.redclara.net**
200.0.206.13	Not in use		
200.0.206.14	Not in use		
Sao Paulo block - 200.0.206.128/28			
200.0.206.129	Cat 3550 switch	Vlan1	**c3550-saopaulo.lan.redclara.net**
200.0.206.130	Gigabit Eth port of Cisco 12006	Giga1/0	**lan-saopaulo.lan.redclara.net**
200.0.206.131	Ethernet port of Cisco 2610	Fast0/0	**oba2610-saopaulo.lan.redclara.net**
200.0.206.132	Ethernet NIC 0 of PC1	Eth0	**server1-saopaulo.lan.redclara.net**
200.0.206.133	Ethernet NIC 0 of PC2	Eth0	**server2-saopaulo.lan.redclara.net**
200.0.206.134	Ethernet NIC of Sentry 70A	Ethernet	**sentry70a-saopaulo.lan.redclara.net**
200.0.206.135	Ethernet NIC of Sentry 35A	Ethernet	**sentry35a-saopaulo.lan.redclara.net**
200.0.206.136	Not in use		
200.0.206.137	Not in use		
200.0.206.138	Not in use		
200.0.206.139	Not in use		
200.0.206.140	Not in use		
200.0.206.141	Not in use		
200.0.206.142	Not in use		

Buenos Aires block - 200.0.206.160/28			
200.0.206.161	Cat 3550 switch	Vlan1	**c3550-buenosaires.lan.redclara.net**
200.0.206.162	Gigabit Eth port of Cisco 12006	Giga1/0	**lan-buenosaires.lan.redclara.net**
200.0.206.163	Ethernet port of Cisco 2610	Fast0/0	**oba2610-buenosaires.lan.redclara.net**
200.0.206.164	Ethernet NIC 0 of PC1	Eth0	**server1-buenosaires.lan.redclara.net**
200.0.206.165	Ethernet NIC 0 of PC2	Eth0	**server2-buenosaires.lan.redclara.net**
200.0.206.166	Ethernet NIC of Sentry 70A	Ethernet	**sentry70a-buenosaires.lan.redclara.net**
200.0.206.167	Ethernet NIC of Sentry 35A	Ethernet	**sentry35a-buenosaires.lan.redclara.net**
200.0.206.168	Not in use		
200.0.206.169	Not in use		
200.0.206.170	Not in use		
200.0.206.171	Not in use		
200.0.206.172	Not in use		
200.0.206.173	Not in use		
200.0.206.174	Not in use		
Santiago block - 200.0.206.192/28			
200.0.206.193	Cat 3550 switch	Vlan1	**c3550-santiago.lan.redclara.net**
200.0.206.194	Gigabit Eth port of Cisco 12006	Giga1/0	**lan-santiago.lan.redclara.net**
200.0.206.195	Ethernet port of Cisco 2610	Fast0/0	**oba2610-santiago.lan.redclara.net**
200.0.206.196	Ethernet NIC 0 of PC1	Eth0	**server1-santiago.lan.redclara.net**
200.0.206.197	Ethernet NIC 0 of PC2	Eth0	**server2-santiago.lan.redclara.net**
200.0.206.198	Ethernet NIC of Sentry 70A	Ethernet	**sentry70a-santiago.lan.redclara.net**
200.0.206.199	Ethernet NIC of Sentry 35A	Ethernet	**sentry35a-santiago.lan.redclara.net**
200.0.206.200	Not in use		
200.0.206.201	Not in use		
200.0.206.202	Not in use		
200.0.206.203	Not in use		
200.0.206.204	Not in use		
200.0.206.205	Not in use		
200.0.206.206	Not in use		
Panama block - 200.0.206.224/28			
200.0.206.225	Cat 3550 switch	Vlan1	**c3550-panama.lan.redclara.net**
200.0.206.226	Gigabit Eth port of Cisco 12006	Giga1/0	**lan-panama.lan.redclara.net**
200.0.206.227	Ethernet port of Cisco 2610	Fast0/0	**oba2610-panama.lan.redclara.net**
200.0.206.228	Ethernet NIC 0 of PC1	Eth0	**server1-panama.lan.redclara.net**
200.0.206.229	Ethernet NIC 0 of PC2	Eth0	**server2-panama.lan.redclara.net**
200.0.206.230	Ethernet NIC of Sentry 70A	Ethernet	**sentry70a-panama.lan.redclara.net**
200.0.206.231	Ethernet NIC of Sentry 35A	Ethernet	**sentry35a-panama.lan.redclara.net**
200.0.206.232	Not in use		
200.0.206.233	Not in use		
200.0.206.234	Not in use		
200.0.206.235	Not in use		
200.0.206.236	Not in use		
200.0.206.237	Not in use		
200.0.206.238	Not in use		

5. NRENs

Table 4 shows the IPv4 addresses allocated to connect the NRENs to the RedCLARA backbone, and the names registered at the **redclara.net** domain for the interfaces of the devices.

Table 4: NRENs IPv4 allocation

IP	SUBNET TYPE	NREN	PoP	NAME
200.0.204.128/30				
200.0.204.129	/30	RNP - BR	Sao Paulo	**deprecated**
200.0.204.130	/30	RNP - BR - peer	Sao Paulo	**deprecated**
200.0.204.132/30				
200.0.204.133	/30	CUDI - MX	Tijuana	**cudi-mx.tijuana.core.redclara.net**
200.0.204.134	/30	CUDI - MX] - peer	Tijuana	**cudi-mx.tijuana.peer.redclara.net**
200.0.204.136/30				
200.0.204.137	/30	RedCyT - PA	Panama City	**redcyt-pa.panama.core.redclara.net**
200.0.204.138	/30	RedCyT - PA - peer	Panama City	**redcyt-pa.panama.peer.redclara.net**
200.0.204.140/30				
200.0.204.141	/30	REUNA - CL	Santiago	**reuna-cl.santiago.core.redclara.net**
200.0.204.142	/30	REUNA - CL - peer	Santiago	**reuna-cl.santiago.peer.redclara.net**
200.0.204.144/30				
200.0.204.145	/30	RETINA - AR	Buenos Aires	**retina-ar.buenosaires.core.redclara.net**
200.0.204.146	/30	RETINA - AR - peer	Buenos Aires	**retina-ar.buenosaires.peer.redclara.net**
200.0.204.148/30				
200.0.204.149	/30	REACCIUN - VE	Sao Paulo	**reacciun-ve.saopaulo.core.redclara.net**
200.0.204.150	/30	REACCIUN - VE - peer	Sao Paulo	**reacciun-ve.saopaulo.peer.redclara.net**
200.0.204.192/29				
200.0.204.193	/29	RNP - BR	Sao Paulo	**rnp-br.saopaulo.core.redclara.net**
200.0.204.194	/29	RNP - BR - peer	Sao Paulo	**rnp-br.saopaulo.peer.redclara.net**
200.0.204.195	/29	RNP - BR - GIGA	Sao Paulo	**rnp-giga.saopaulo.peer.redclara.net**
200.0.204.196	/29	Not in use	Sao Paulo	
200.0.204.197	/29	Not in use	Sao Paulo	
200.0.204.198	/29	Not in use	Sao Paulo	
200.0.204.152/30				
200.0.204.153	/30	RAU - UY	Buenos Aires	**rau-uy.buenosaires.core.redclara.net**
200.0.204.154	/30	RAU - UY - peer	Buenos Aires	**rau-uy.buenosaires.peer.redclara.net**
200.0.204.156/30				
200.0.204.157	/30	RAAP - PE	Santiago	**raap-pe.santiago.core.redclara.net**
200.0.204.158	/30	RAAP - PE - peer	Santiago	**raap-pe.santiago.peer.redclara.net**
200.0.204.160/30				
200.0.204.161	/30	CR2Net - CR	Tijuana	**cr2net-cr.tijuana.core.redclara.net**
200.0.204.162	/30	CR2Net - CR - peer	Tijuana	**cr2net-cr.tijuana.peer.redclara.net**
200.0.204.164/30				
200.0.204.165	/30	RENIA - NI	Tijuana	**renia-ni.tijuana.core.redclara.net**
200.0.204.166	/30	RENIA - NI - peer	Tijuana	**renia-ni.tijuana.peer.redclara.net**

200.0.204.168/30				
200.0.204.169	/30	RAGIE - GT	Tijuana	**ragie-gt.tijuana.core.redclara.net**
200.0.204.170	/30	RAGIE - GT - peer	Tijuana	**ragie-gt.tijuana.peer.redclara.net**
200.0.204.172/30				
200.0.204.173	/30	RAICES - SV	Tijuana	**raices-sv.tijuana.core.redclara.net**
200.0.204.174	/30	RAICES - SV - peer	Tijuana	**raices-sv.tijuana.peer.redclara.net**
Buenos Aires PoP				
	/30	Arandu - PY	Buenos Aires	**arandu-py.buenosaires.core.redclara.net**
	/30	Arandu - PY - peer	Buenos Aires	**arandu-py.buenosaires.peer.redclara.net**
Santiago PoP				
	/30	CEDIA - EC	Santiago	**cedia-ec.santiago.core.redclara.net**
	/30	CEDIA - EC - peer	Santiago	**cedia-ec.santiago.peer.redclara.net**
	/30	ADSIB - BO	Santiago	**adsib-bo.santiago.core.redclara.net**
	/30	ADSIB - BO - peer	Santiago	**adsib-bo.santiago.peer.redclara.net**
	/30	RedUniv - CU	Santiago	**reduniv-cu.santiago.core.redclara.net**
	/30	RedUniv - CU - peer	Santiago	**reduniv-cu.santiago.peer.redclara.net**
Panama PoP				
	/30	UNITEC - HN	Panama City	**unitec-hn.panama.core.redclara.net**
	/30	UNITEC - HN - peer	Panama City	**unitec-hn.panama.peer.redclara.net**
	/30	UNICAUCA - CO	Panama City	**unicauca-co.panama.core.redclara.net**
	/30	UNICAUCA - CO - peer	Panama City	**unicauca-co.panama.peer.redclara.net**