



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
South American Regional Office**

**REGIONAL PROJECT RLA/03/901
REDDIG Management System and Satellite Segment Administration**

THIRD REDDIG TECHNICAL-OPERATIONAL MEETING (RTO/3)

(Paramaribo, Suriname, 15 to 16 October 2009)

Agenda Item 4: REDDIG IP Addressing Plan

(Presented by the REDDIG Administration)

SUMMARY

This working paper presents the IP (Ipv4) (WAN and LAN) addressing plan developed by the ATN Task Force of the ICAO ATM/CNS Subgroup for the CAR/SAM Regions, to be applied in the services to be provided through the REDDIG.

1. Background

1.1 REDDIG is a multi-protocol network and, thus, also supports applications and services based on the IP protocol.

1.2 New IP-based aeronautical applications, such as the AMHS service, are being incorporated into the REDDIG to provide international services among the different States of the Region.

1.3 The States of the Region have been taking care, within their own jurisdiction, of the assignment of private IP addresses to the new applications based on the IP protocol.

1.4 It has been noted that some States use the same set of IP addresses for their IP-based applications. This could generate network addressing or routing conflicts when these applications or services are exchanged among the States.

1.5 The ATN Task Force of the CNS Committee of the GREPECAS ATM/CNS Subgroup developed a complete setup for the assignment of IP (IPv4) addresses for the CAR/SAM Regions; for the SAM Region, the REDDIG Administration uses the addressing setup established for intra-regional links.

2. **Recommendation**

2.1 In order to implement IP-based applications in the REDDIG, using a planned setup to assign the IP addresses to be used by the States for their international connections, while maintaining the IP address assignments that the States have established or may establish in their internal networks, it is recommended that the IP address assignment setup for the SAM Region shown in **Appendix A** to this working paper be adopted.

2.2 Likewise, it is necessary to use the NAT (Network Address Translation) facility in the router equipment, for both origin and destination, to translate the respective addresses.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information presented in this working paper;
- b) analyse any other aspect related to this matter that the Meeting may deem necessary.

APPENDIX A

NETWORKS ALLOCATION BY STATE/TERRITORY
Asignación de Redes por Estado/Territorio.

Región	Nro	Estado / Territorio	Red	Direcciones utilizables	Notacion Decimal	Notacion Binaria				
						Región	Estado / Territorio	Host's		
SAM	1	Argentina	10.0.0.0 / 19	Primera	10 . 0 . 0 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 0 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 31 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 0 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	2	Chile	10.0.32.0 / 19	Primera	10 . 0 . 32 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 0 1	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 63 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 0 1	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	3	Brasil	10.0.64.0 / 19	Primera	10 . 0 . 64 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 1 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 95 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 1 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	4	Uruguay	10.0.96.0 / 19	Primera	10 . 0 . 96 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 1 1	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 127 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 0 1 1	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	5	Paraguay	10.0.128.0 / 19	Primera	10 . 0 . 128 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 0 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 159 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 0 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	6	Bolivia	10.0.160.0 / 19	Primera	10 . 0 . 160 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 0 1	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 191 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 0 1	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	7	Peru	10.0.192.0 / 19	Primera	10 . 0 . 192 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 1 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 223 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 1 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	8	Ecuador	10.0.224.0 / 19	Primera	10 . 0 . 224 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 1 1	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 0 . 255 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 0 . 1 1 1	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	9	Colombia	10.1.0.0 / 19	Primera	10 . 1 . 0 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 0 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 1 . 31 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 0 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	10	Venezuela	10.1.32.0 / 19	Primera	10 . 1 . 32 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 0 1	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 1 . 63 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 0 1	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	
	11	Guyana	10.1.64.0 / 19	Primera	10 . 1 . 64 . 1	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 1 0	0 0 0 0 0 . 0 0 0 0 0 0 0 0 1	
				-	-	-	-	-	-	-
				Ultima	10 . 1 . 95 . 254	0 0 0 0 1 0 1 0 .	0 0 0 0	0 0 0 1 . 0 1 0	1 1 1 1 1 . 1 1 1 1 1 1 1 1 0	

Asignación de Redes por Estado/Territorio.

Región	Nro	Estado / Territorio	Red	Direcciones utilizables	Notacion Decimal	Notacion Binaria		
						Región	Estado / Territorio	Host's
SAM	12	Surinam	10.1.96.0 / 19	Primera	10 . 1 . 96 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 0 1 1	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 1 . 127 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 0 1 1	1 1 1 1 1 . 1 1 1 1 1 1 0
	13	Guyana Francesa (France)	10.1.128.0 / 19	Primera	10 . 1 . 128 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 0 0	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 1 . 159 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 0 0	1 1 1 1 1 . 1 1 1 1 1 1 0
	-	VACANTE	10.1.160.0 / 19	Primera	10 . 1 . 160 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 0 1	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 1 . 191 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 0 1	1 1 1 1 1 . 1 1 1 1 1 1 0
	-	VACANTE	10.1.192.0 / 19	Primera	10 . 1 . 192 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 1 0	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 1 . 223 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 1 0	1 1 1 1 1 . 1 1 1 1 1 1 0
	-	VACANTE	10.1.224.0 / 19	Primera	10 . 1 . 224 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 1 1	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 1 . 255 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 0 1 . 1 1 1	1 1 1 1 1 . 1 1 1 1 1 1 0
	-	VACANTE	10.2.0.0 / 19	Primera	10 . 2 . 0 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 1 0 . 0 0 0	0 0 0 0 0 . 0 0 0 0 0 0 1
				-	-	-	-	-
				Ultima	10 . 2 . 31 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	0 0 1 0 . 0 0 0	1 1 1 1 1 . 1 1 1 1 1 1 0
	-	-	-	-	-	-	-	-
				-	-	-	-	-
-				-	-	-	-	
-	-	-	-	-	-	-	-	
			-	-	-	-	-	
			-	-	-	-	-	
-	-	-	-	-	-	-	-	
			-	-	-	-	-	
			-	-	-	-	-	
128 (ULTIMA)	RESERVADA	10.15.224.0 / 19	Primera	10 . 15 . 224 . 1	0 0 0 0 1 0 1 0 . 0 0 0 0	1 1 1 1 . 1 1 1	0 0 0 0 0 . 0 0 0 0 0 0 1	
			-	-	-	-	-	
			Ultima	10 . 15 . 255 . 254	0 0 0 0 1 0 1 0 . 0 0 0 0	1 1 1 1 . 1 1 1	1 1 1 1 1 . 1 1 1 1 1 1 0	

SAM REGION INTER/INTRA REGIONAL LINKS
Enlaces Inter/Intra Regionales correspondientes a la Región SAM

Red	Enlace				
	Nro.	Subred	Extremos	Direcciones a utilizar	
10.15.224.0 / 19	1	10.15.224.0 / 30	Argentina-Bolivia	-	10 . 15 . 224 . 0 / 30
				Argentina	10 . 15 . 224 . 1 / 30
				Bolivia	10 . 15 . 224 . 2 / 30
				-	10 . 15 . 224 . 3 / 30
	2	10.15.224.4 / 30	Argentina-Chile	-	10 . 15 . 224 . 4 / 30
				Argentina	10 . 15 . 224 . 5 / 30
				Chile	10 . 15 . 224 . 6 / 30
				-	10 . 15 . 224 . 7 / 30
	3	10.15.224.8 / 30	Argentina-Paraguay	-	10 . 15 . 224 . 8 / 30
				Argentina	10 . 15 . 224 . 9 / 30
				Paraguay	10 . 15 . 224 . 10 / 30
				-	10 . 15 . 224 . 11 / 30
	4	10.15.224.12 / 30	Argentina-Peru	-	10 . 15 . 224 . 12 / 30
				Argentina	10 . 15 . 224 . 13 / 30
				Peru	10 . 15 . 224 . 14 / 30
				-	10 . 15 . 224 . 15 / 30
	5	10.15.224.16 / 30	Argentina-Uruguay	-	10 . 15 . 224 . 16 / 30
				Argentina	10 . 15 . 224 . 17 / 30
				Uruguay	10 . 15 . 224 . 18 / 30
				-	10 . 15 . 224 . 19 / 30
	6	10.15.224.20 / 30	Argentina-AFI	-	10 . 15 . 224 . 20 / 30
				Argentina	10 . 15 . 224 . 21 / 30
				AFI (Johannesburgo)	10 . 15 . 224 . 22 / 30
				-	10 . 15 . 224 . 23 / 30
	7	10.15.224.24 / 30	Brasil-Colombia	-	10 . 15 . 224 . 24 / 30
				Brasil	10 . 15 . 224 . 25 / 30
				Colombia	10 . 15 . 224 . 26 / 30
				-	10 . 15 . 224 . 27 / 30
	8	10.15.224.28 / 30	Brasil-Guyana	-	10 . 15 . 224 . 28 / 30
				Brasil	10 . 15 . 224 . 29 / 30
				Guyana	10 . 15 . 224 . 30 / 30
				-	10 . 15 . 224 . 31 / 30
	9	10.15.224.32 / 30	Brasil-Guyana Francesa	-	10 . 15 . 224 . 32 / 30
				Brasil	10 . 15 . 224 . 33 / 30
				Guyana Francesa	10 . 15 . 224 . 34 / 30
-				10 . 15 . 224 . 35 / 30	

Enlaces Inter/Intra Regionales correspondientes a la Región SAM

Red	Enlace				
	Nro.	Subred	Extremos	Direcciones a utilizar	
10.15.224.0 / 19	10	10.15.224.36 / 30	Brasil-Peru	-	10 . 15 . 224 . 36 / 30
				Brasil	10 . 15 . 224 . 37 / 30
				Peru	10 . 15 . 224 . 38 / 30
				-	10 . 15 . 224 . 39 / 30
	11	10.15.224.40 / 30	Brasil-Surinam	-	10 . 15 . 224 . 40 / 30
				Brasil	10 . 15 . 224 . 41 / 30
				Surinam	10 . 15 . 224 . 42 / 30
				-	10 . 15 . 224 . 43 / 30
	12	10.15.224.44 / 30	Brasil-Venezuela	-	10 . 15 . 224 . 44 / 30
				Brasil	10 . 15 . 224 . 45 / 30
				Venezuela	10 . 15 . 224 . 46 / 30
				-	10 . 15 . 224 . 47 / 30
	13	10.15.224.48 / 30	Brasil-AFI (tentativo)	-	10 . 15 . 224 . 48 / 30
				Brasil	10 . 15 . 224 . 49 / 30
				AFI (Dakar)	10 . 15 . 224 . 50 / 30
				-	10 . 15 . 224 . 51 / 30
	14	10.15.224.52 / 30	Brasil-EUR (tentativo)	-	10 . 15 . 224 . 52 / 30
				Brasil	10 . 15 . 224 . 53 / 30
				EUR (Madrid)	10 . 15 . 224 . 54 / 30
				-	10 . 15 . 224 . 55 / 30
	15	10.15.224.56 / 30	Brasil-NAM	-	10 . 15 . 224 . 56 / 30
				Brasil	10 . 15 . 224 . 57 / 30
				NAM(Atlanta)	10 . 15 . 224 . 58 / 30
				-	10 . 15 . 224 . 59 / 30
	16	10.15.224.60 / 30	Brasil-Argentina	-	10 . 15 . 224 . 60 / 30
				Brasil	10 . 15 . 224 . 61 / 30
				Argentina	10 . 15 . 224 . 62 / 30
				-	10 . 15 . 224 . 63 / 30
	17	10.15.224.64 / 30	Brasil-Bolivia	-	10 . 15 . 224 . 64 / 30
				Brasil	10 . 15 . 224 . 65 / 30
				Bolivia	10 . 15 . 224 . 66 / 30
				-	10 . 15 . 224 . 67 / 30
	18	10.15.224.68 / 30	Brasil-Paraguay	-	10 . 15 . 224 . 68 / 30
				Brasil	10 . 15 . 224 . 69 / 30
				Paraguay	10 . 15 . 224 . 70 / 30
				-	10 . 15 . 224 . 71 / 30

Enlaces Inter/Intra Regionales correspondientes a la Región SAM

Red	Enlace				
	Nro.	Subred	Extremos	Direcciones a utilizar	
10.15.224.0 / 19	19	10.15.224.72 / 30	Brasil-Uruguay	-	10 . 15 . 224 . 72 / 30
				Brasil	10 . 15 . 224 . 73 / 30
				Uruguay	10 . 15 . 224 . 74 / 30
				-	10 . 15 . 224 . 75 / 30
	20	10.15.224.76 / 30	Chile-PAC	-	10 . 15 . 224 . 76 / 30
				Chile	10 . 15 . 224 . 77 / 30
				PAC(Christchurch)	10 . 15 . 224 . 78 / 30
				-	10 . 15 . 224 . 79 / 30
	21	10.15.224.80 / 30	Chile-Peru	-	10 . 15 . 224 . 80 / 30
				Chile	10 . 15 . 224 . 81 / 30
				Peru	10 . 15 . 224 . 82 / 30
				-	10 . 15 . 224 . 83 / 30
	22	10.15.224.84 / 30	Colombia-NAM	-	10 . 15 . 224 . 84 / 30
				Colombia	10 . 15 . 224 . 85 / 30
				NAM (Atlanta)	10 . 15 . 224 . 86 / 30
				-	10 . 15 . 224 . 87 / 30
	23	10.15.224.88 / 30	Colombia-Ecuador	-	10 . 15 . 224 . 88 / 30
				Colombia	10 . 15 . 224 . 89 / 30
				Ecuador	10 . 15 . 224 . 90 / 30
				-	10 . 15 . 224 . 91 / 30
	24	10.15.224.92 / 30	Colombia-Peru	-	10 . 15 . 224 . 92 / 30
				Colombia	10 . 15 . 224 . 93 / 30
				Peru	10 . 15 . 224 . 94 / 30
				-	10 . 15 . 224 . 95 / 30
	25	10.15.224.96 / 30	Colombia-Venezuela	-	10 . 15 . 224 . 96 / 30
				Colombia	10 . 15 . 224 . 97 / 30
				Venezuela	10 . 15 . 224 . 98 / 30
				-	10 . 15 . 224 . 99 / 30
	26	10.15.224.100 / 30	Ecuador-Peru	-	10 . 15 . 224 . 100 / 30
				Ecuador	10 . 15 . 224 . 101 / 30
Peru				10 . 15 . 224 . 102 / 30	
-				10 . 15 . 224 . 103 / 30	
27	10.15.224.104 / 30	Ecuador-Venezuela	-	10 . 15 . 224 . 104 / 30	
			Ecuador	10 . 15 . 224 . 105 / 30	
			Venezuela	10 . 15 . 224 . 106 / 30	
			-	10 . 15 . 224 . 107 / 30	

Enlaces Inter/Intra Regionales correspondientes a la Región SAM

Red	Enlace				
	Nro.	Subred	Extremos	Direcciones a utilizar	
10.15.224.0 / 19	28	10.15.224.108 / 30	Guyana Francesa-Surinam	-	10 . 15 . 224 . 108 / 30
				Guyana Francesa	10 . 15 . 224 . 109 / 30
				Surinam	10 . 15 . 224 . 110 / 30
				-	10 . 15 . 224 . 111 / 30
	29	10.15.224.112 / 30	Guyana-C-CAR	-	10 . 15 . 224 . 112 / 30
				Guyana	10 . 15 . 224 . 113 / 30
				C-CAR (Piarco)	10 . 15 . 224 . 114 / 30
				-	10 . 15 . 224 . 115 / 30
	30	10.15.224.116 / 30	Guyana-Surinam	-	10 . 15 . 224 . 116 / 30
				Guyana	10 . 15 . 224 . 117 / 30
				Surinam	10 . 15 . 224 . 118 / 30
				-	10 . 15 . 224 . 119 / 30
	31	10.15.224.120 / 30	Guyana-Venezuela	-	10 . 15 . 224 . 120 / 30
				Guyana	10 . 15 . 224 . 121 / 30
				Venezuela	10 . 15 . 224 . 122 / 30
				-	10 . 15 . 224 . 123 / 30
	32	10.15.224.124 / 30	Peru-NAM	-	10 . 15 . 224 . 124 / 30
				Peru	10 . 15 . 224 . 125 / 30
				NAM (Atlanta)	10 . 15 . 224 . 126 / 30
				-	10 . 15 . 224 . 127 / 30
	33	10.15.224.128 / 30	Peru-Bolivia	-	10 . 15 . 224 . 128 / 30
				Peru	10 . 15 . 224 . 129 / 30
				Bolivia	10 . 15 . 224 . 130 / 30
				-	10 . 15 . 224 . 131 / 30
	34	10.15.224.132 / 30	Peru-Colombia	-	10 . 15 . 224 . 132 / 30
				Peru	10 . 15 . 224 . 133 / 30
				Colombia	10 . 15 . 224 . 134 / 30
				-	10 . 15 . 224 . 135 / 30
	35	10.15.224.136 / 30	Peru-Venezuela	-	10 . 15 . 224 . 136 / 30
				Peru	10 . 15 . 224 . 137 / 30
				Venezuela	10 . 15 . 224 . 138 / 30
				-	10 . 15 . 224 . 139 / 30
	36	10.15.224.140 / 30	Surinam-Venezuela	-	10 . 15 . 224 . 140 / 30
				Surinam	10 . 15 . 224 . 141 / 30
				Venezuela	10 . 15 . 224 . 142 / 30
				-	10 . 15 . 224 . 143 / 30

Enlaces Inter/Intra Regionales correspondientes a la Región SAM

Red	Enlace				
	Nro.	Subred	Extremos	Direcciones a utilizar	
10.15.224.0 / 19	37	10.15.224.144 / 30	Venezuela-CAM	-	10 . 15 . 224 . 144 / 30
				Venezuela	10 . 15 . 224 . 145 / 30
				CAM (San Juan)	10 . 15 . 224 . 146 / 30
				-	10 . 15 . 224 . 147 / 30
	38	10.15.224.148 / 30	Venezuela-EUR	-	10 . 15 . 224 . 148 / 30
				Venezuela	10 . 15 . 224 . 149 / 30
				EUR (Madrid)	10 . 15 . 224 . 150 / 30
				-	10 . 15 . 224 . 151 / 30
	39	10.15.224.152 / 30	Venezuela-Trinidad y Tobago	-	10 . 15 . 224 . 152 / 30
				Venezuela	10 . 15 . 224 . 153 / 30
				Trinidad y Tobago	10 . 15 . 224 . 154 / 30
				-	10 . 15 . 224 . 155 / 30
	40	10.15.224.156 / 30	VACANTE	-	10 . 15 . 224 . 156 / 30
				-	10 . 15 . 224 . 157 / 30
				-	10 . 15 . 224 . 158 / 30
				-	10 . 15 . 224 . 159 / 30
	41	10.15.224.160 / 30	VACANTE	-	10 . 15 . 224 . 160 / 30
				-	10 . 15 . 224 . 161 / 30
				-	10 . 15 . 224 . 162 / 30
				-	10 . 15 . 224 . 163 / 30
	42	10.15.224.164 / 30	VACANTE	-	10 . 15 . 224 . 164 / 30
				-	10 . 15 . 224 . 165 / 30
				-	10 . 15 . 224 . 166 / 30
				-	10 . 15 . 224 . 167 / 30
	-	-	-	-	-
				-	-
				-	-
				-	-
-	-	-	-	-	
			-	-	
			-	-	
			-	-	
2048 (última)	10.15.31.252 / 30	VACANTE	-	10 . 15 . 31 . 252 / 30	
			-	10 . 15 . 31 . 253 / 30	
			-	10 . 15 . 31 . 254 / 30	
			-	10 . 15 . 31 . 255 / 30	