



International Civil Aviation Organization
South American Regional Office - Regional Project RLA/03/901
REDDIG Management System and Satellite Segment Administration
Third Meeting on the Technical-Operational Implementation of the New
REDDIG II Digital Network (RTO/3)
 Bogotá, Colombia, 28 to 29 July 2014

Agenda Item 1: Follow up on the REDDIG II implementation activities carried out to date

Follow up on the REDDIG II implementation activities

(Presented by the Secretariat)

SUMMARY

This working paper presents information related with the implementation activities of the new REDDIG II network since the Second Meeting on the Technical-Operational Implementation of the New REDDIG II Digital Network (RTO/2).

REFERENCES

- Second Meeting on the Technical-Operational Implementation of the New REDDIG II Digital Network (RTO/2).
- Report on the Reception Factory Tests (<http://ww1.lima.icao.int/reddig>)

ICAO strategic objective

A – Safety

B - Air navigation capacity and efficiency

1. Background

1.1 The RTO/2 Meeting analyzed the action plan for the implementation of the Phase II of the REDDIG II, updating the focal points list and took note of the progress in the preparation for the REDDIG II planned training, the acceptance tests in factory and additional considerations in the REDDIG II installation.

1.2 The updated schedule reviewed by the CRPP/2 is shown as **Appendix A** to this working paper.

2. Analysis

2.1 In order to follow up on the REDDIG II implementation activities, a description on the following items is shown hereunder:

- REDDIG II focal points
- REDDIG II course in factory
- REDDIG II factory acceptance test
- Other REDDIG II considerations

REDDIG II focal points

2.2 The RTO/2 Meeting updated the focal points list, which is shown as **Appendix B** to this working paper. The Meeting should report any change in this list with the aim to have it updated.

REDDIG II course in factory

2.3 The course in factory, as it was planned, was carried out in Vélizy, France, from 21 April to 9 May 2014. The course was addressed to personnel working at the Manaus and Ezeiza NCC; and was attended by three delegates from Brazil, three delegates from Argentina and by the REDDIG Administrator. The course program is attached as **Appendix C** to this working paper. The course material is available in the REDDIG II website www.limal.icao.int/reddig.

2.4 The course was developed in a normal way, being performed all the topics, according to the Factory Training program.

2.5 As a recommendation, it was considered that during the theoretical/practical course to be given in Rio de Janeiro from 11 to 22 August 2014 and from 25 August to 5 September, INEO extend the hours of dictation of the topic referred to NMS of the stations, specifically to the software WhatsUp Gold and that this possibility be explored in the next REDDIG coordination meeting.

REDDIG II Factory Acceptance tests (FAT)

2.6 The REDDIG II factory acceptance tests were carried out from 12 to 16 May 2013. They were performed in Vélizy, Paris in the INEO premises. Representative members of Project RLA/03/901 of Argentina, Brazil, Paraguay, and Peru and of the REDDIG II project Management, participated in these tests.

2.7 The following activities were performed during the factory acceptance tests:

- Checking of wiring installations and equipment in each of the REDDIG II racks
- Verification of the models and serials of all the REDDIG II equipments.
- Testing of communication links among the sites in a simulated environment.
- Testing in the out-door equipment
- Testing in the in-door equipment
- Testing in the REDDIG II monitoring system

2.8 For the testing, INEO mounted in their laboratory all the equipment, cables and connectors in the respective racks of all the REDDIG II nodes. For the connections among the nodes, coaxial cables were tended among the satellite modems using combiners and dividers. In page 6 of the document related to the FAT's results (see **Appendix D** to this working paper), the configuration on how the implementation of the satellite/terrestrial mixed implementation was simulated, is shown.

Results of the FAT tests

2.9 The diagrams that are part of the REDDIG II nodes were checked. The diagrams submitted showed corrections made by hand, not being available during the FAT, the final installation diagrams. Likewise, the REDDIG II node of Maiquetia-Venezuela diagrams, were missing.

2.10 As a result of the inspection of the installation diagrams of the REDDIG II nodes that contain racks configuration diagrams, electric wiring and of communications and its identifications and equipment to be installed, we have the following:

Important aspects found in the inspection of the REDDIG II installation diagrams

2.11 In the documents the word *folio* in Spanish, and *sheet* in English are used to identify the pages. In this regard, please use only one standard term for the identification. The configuration diagrams are not identified according to their content; they must also be identified in the chart located in the lower right of the page.

2.12 The view of cabinets is not represented in full; a side view is lacking inside the diagrams. Also, in the cabinet side views, all trays or ladders where cables pass, must be represented. The UPS is not drawn in most of the cabinet diagrams (front view)

2.13 In the back view of the cabinets diagram, in some of the localities, the breakers graphic representation does not match with what is installed in the cabinets. In the sheet where the list of connectors and installed equipment in the cabinet is shown, it is indicated that there is a blank panel of 5U, but what is installed in all the cabinets is a blank panel of 3U.

2.14 On the same sheet it is indicated that there are 22 connectors RJ45 and 9 DB 25, but it was noted that there is a small number of connectors different to the indicated in all the cabinets; likewise, the connectors DB 25 are M/M, but the installed are M/H; it is not included in the listing sheet the KVM Extender equipment.

2.15 All aforesaid observations will be included in each one of the final diagrams that INEO & Level 3 Consortium will send to each one of the nodes of the REDDIG II member States, together with the appropriate equipment to each of the nodes. Observations in each one of the diagrams during the FAT, are shown in the REDDIG II website www1.lima.icao.int/reddig.

2.16 The group verified the serial number in all the equipment installed in each of the racks forming the REDDIG II nodes, as well as some of the monitor serials, printers and amplifiers that were inside their boxes, because they were not installed in the configuration mounted in the FAT.

2.17 As a result of the review of the serials, it was observed that in most of the RSS-16 Dataprobe Slot 4U, the serial list indicates 1150102xxxxxxx, but when checking what is indicated in the equipment, we have 1150101xxxxxx. All CISCO routers serials have an S in front that does not correspond to what is indicated in the equipment serial which does not have such initial letter. In 2901 Cisco UC Bundle PDVM3-16 Lic of Chile, the serial is SFCZ 175092KT, and the serial in the equipment is SFCZ 175092K.

2.18 **Appendix E** to this working paper presents the list of all the equipment serials and the observations as a result of the FAT.

Results of the outdoor indoor equipment tests and NMS system

2.19 The following tests were not carried out in view that the necessary elements were not provided by the contractor for its performance:

- All the radar tests
- Teleconference tests were made with analog telephones and could only be tested with the Manaus server (1111). For that reason, we believe that even if the teleconference is running, the total test as required was not fulfilled in view that it should have been done with IP telephones.
- BER test in AFTN

- SAT LOOP BER test
- Tests in the REDUNDANCY TEST section for the radar and the AFTN
- Tests (user access control) of local user of Ezeiza Fileover Server, and the user server of Manaus Central Server

2.20 The following tests did not work (see references in **Appendix D** for details)

- Test 7.9 (page 92 and 93)
- Database test (Section 7.10)
- Test CONNECTION THROUGH SERIAL PORT in the Failover server (page 98 and 99)

2.21 The observations in all the tests carried out are presented in the FAT document shown in **Appendix D** to this working paper.

Other observations noted in the FAT

2.22 REDDIG II technical specifications indicates that the AC connectors must be American type, it was observed that there are AC European connectors in the UPS and in the KVM.

2.23 There are AC outlets that are not connected to the AC power strips installed in the side of the racks, they are installed on a horizontal metal sheet of a non-aesthetic form (AC outlet for the NETGEAR using INTERNET for remote access and KVM that is not acceptable). The equipment is not identified in the front part of the cabinets.

2.24 Graph representing the equipment in the nodes in the NMS, must be improved so that the image be sharp and could be seen in detail. Likewise, the graph where all the REDDIG II nodes are shown, is not acceptable. The COCESNA node should be included in all parts of the management system.

2.25 All native services in IP (unicast and multicast) should enter through a single port (supporting all VLANs) to RSS Switch baseband, since in case of failure of one of the NetGear Switch, all the services in IP (VLANs) would be commuted through RSS Switch to another NetGear Switch. Moreover, in this way, the use of the network addresses assigned to each country to subdivide them for each service in IP (AMHS, RADAR, AIDC, VoIP and future), could be optimized.

2.26 In case of failure of the Manaus NMS Central server, the backup server in Ezeiza should assume the complete functions of the NMS Central server with all the power to monitor and control of all network stations. According to the explanation provided by INEO E&S, in case of failure of the NMS Central server in Manaus, the backup server in Ezeiza will not assume the complete functions of the NMS Central server.

2.27 According to SDD document, all data services, serial or digital should be monitored in case of failures. During NMS practices, this was not included in the configured monitoring.

Conclusion FAT result

2.28 As a result of the FAT, the group accepted the FAT with all observations made above, which should be settled in full and will represent conditions for accepting PSAT testing in site.

2.29 After a coordination process among the REDDIG II provider, ICAO, and the States, the requirements for the internment in each of the REDDIG II member States were determined, as well as the address and name of the person whom the REDDIG II provider should send the equipment. **Appendix F** presents a table with the referred information.

2.30 Intelsat allocated the new REDDIG II frequencies, which are presented as **Appendix G** to this working paper. In this regard, REDDIG focal points should update the information recorded in national entities running the radio frequency spectrum.

3. **Suggested action**

3.1 The Meeting is invited to:

- a) take note of the information provided;
- b) review the activities described in Section 2 to this working paper and their corresponding appendices to be undertaken;
- c) analyse any other aspect deemed necessary regarding this Agenda Item.

- END -

APPENDIX B / APENDICE B

REDDIG II FOCAL POINTS / PUNTOS FOCALES REDDIG II

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APPENDIX C / APENDICE C

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning	1)- REDDIG II Architecture Introduction to IP 1) Ethernet interface 802.3: framing, MAC 2) IP Basics and address classes and sub-netting. 3) Routing: Static and Dynamic (RIP, OSPF and BGP). 4) QoS	3)- VSAT Station Components 1) Instruments and measurement units 2) IBUC main parameters: BW, Power, frequency 3) LNB main parameters and noise 4) Redundancy	5)- VSAT Networking SCPC Technologies TDMA technologies Impact of Networking on bandwidth consumption	7)- Network Design - Erlang calculation - TDMA simulation - Intelsat simulator	9)- Cisco configuration course
Afternoon	2)- IP advanced - multicast issues - Tunneling	4)- Outdoor equipments Laboratory	6)- SKYWAN: Satellite Access and Frames 1) Introduction to topologies 2) Master and slave 4) Frame Basics TPC and AGC 1) TPC and AGC 2) Power essential parameters	8)- Network Design Practical case.	10)- Cisco Laboratory
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning	11)- Cisco Laboratory	13)- Netgear equipments configuration and Lab	15)- Skywan - part 2 1) Line-up manager presentation 2) LUM laboratory	17)- SkyNMS tools 1) Database 2) MIB 3) Grapher	19)- Skywan / Cisco / Netgear Laboratory - integration - configuration
Afternoon	12)- Cisco Laboratory	14)- SKYWAN part 1 1) Introduction Cards description 2) Equipment operation: Normal, Loop and Diagnostic 3) Light indicators and LRU replacement 4) Basic troubleshooting SKYWAN Laboratory	16)- SKYNMS -configuration 1) IP: CTL, RT, NRT. 2) Transmit queues, management rules, fragmentation, and data packets rejection 3) Burst structure, payloads, QOS. 4) Traffic Modes: Stream, Stream Within Guarthr.	18)- SkyNMS - Laboratory 1) IDU (skywan) configuration 2) Network configuration 3) FR implementation	20)- NMS system - Part 1 1) console. 2) web interface. 3) Learn how to navigate through workspaces, how to create new workspace, add reports, ...

WEEK 3	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning	21)- NMS system - Part 2 4) Description of the groups and maps in WUG. Description of the animation for icons. 5) dynamic or static groups, filter 5) reports	23)- Redundancy system - theory and Lab - Equipment configuration - NMS based commutation	25)- MPLS theory Implementation of ground network Commutation between networks.	27)- Skywan / Cisco / Netgear Laboratory - integration - configuration	29)- Debrief - Additional questions / tasks
Afternoon	22)- NMS system - laboratory	24)- Redundancy system - Cisco Lab - Equipment configuration - NMS based commutation	26)- Exploitation et Maintenance 1) Software upgrade 2) Maintenance exercises 3) Fault finding exercises Failure prevention	28)- Skywan / Cisco / Netgear Laboratory - integration - configuration	30)- Debrief - Additional questions / tasks

APPENDIX D / APENDICE D

FACTORY ACCEPTANCE TEST

05



Factory Acceptance Test

Reference : **ICAO REQUEST FOR TENDER : ST-22501200**
 File : **FAT - NT 2022-2141168F rev D.doc**
 Project : **NEW TRANSPORTATION NETWORK OF THE REGIONAL AERONAUTICAL TELECOMMUNICATION NETWORK (REDDIG II)**
 Portion: **Factory Acceptance Test**

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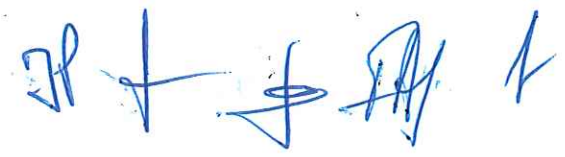
Adjunto a este documento
FAT se presenta:

- Rack / serial cubo nuevo de
serie (con los serial 2)
- Anexo A Serials
- Anexo B diagramas
- Anexo C Observaciones sobre
el FAT.



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Figure 23 - AMHS test cross matrix – chain B.....41

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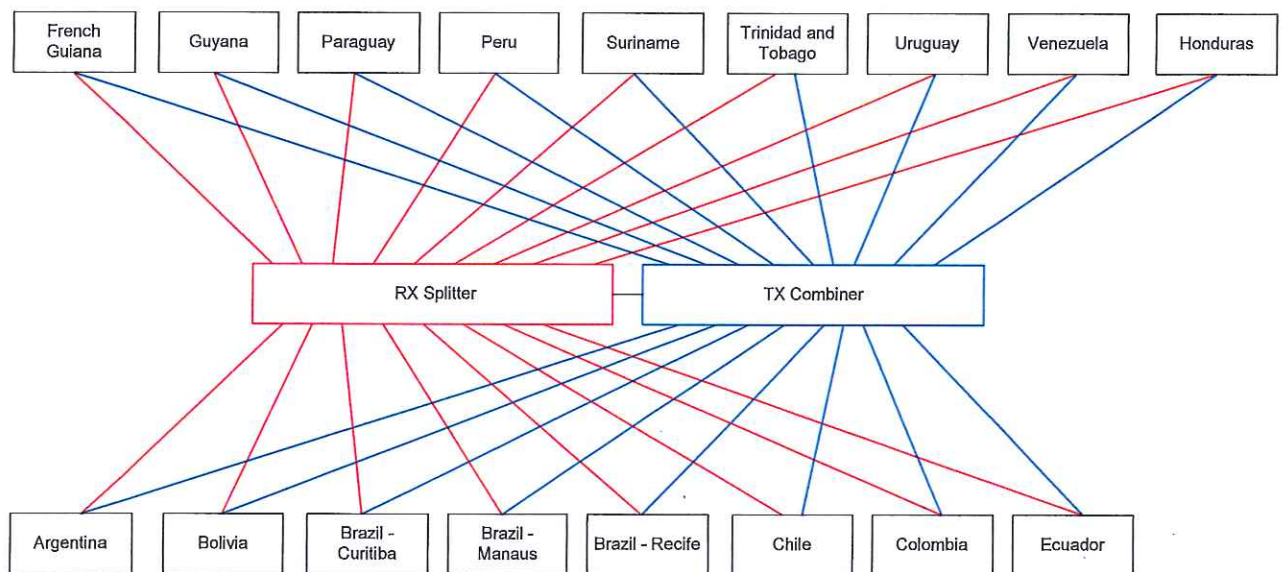




1 INTRODUCTION

This document presents the procedure for the Factory Acceptance Test of the REDDIG II network. The circuits that can be simulated will be tested during the FAT, as displayed in the cross matrix of this document. Not all the circuits will be tested, in order to respect FAT duration (one week), but they will be tested on a random base.

The stations are connected in a L-Band Loop (As described in the following drawing).



Tests will be processed as follows:

- Checking of the racks cabling and serial numbers
- Tests of communications links between the sites
- Tests of outdoor equipment capabilities (redundancy configuration).
- Tests of indoor equipment capabilities
- Tests of the monitoring system

The tests for outdoor and indoor equipment capabilities are to be done on a random sample in order to fit with the FAT duration.

For outdoor equipment, a set of equipment for one site will be tested.

For indoor equipment, the test will consist of testing one station to the others.



2 CABLING OF THE RACKS / SERIAL NUMBERS

- Check that the configuration of the racks are according to the drawings referenced below:

Vex Anexo

DESIGNATION	Number (fulfill on site)
Argentina Block diagram Rack layout	
Bolivia Block diagram Rack layout	
Brazil (Curitiba) Block diagram Rack layout	
Brazil (Manaus) Block diagram Rack layout	
Brazil (Recife) Block diagram Rack layout	
Chile Block diagram Rack layout	

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<p>Colombia Block diagram Rack layout</p>	
<p>Ecuador Block diagram Rack layout</p>	
<p>French Guiana Block diagram Rack layout</p>	
<p>Guyana Block diagram Rack layout</p>	
<p>Paraguay Block diagram Rack layout</p>	
<p>Peru Block diagram Rack layout</p>	
<p>Suriname Block diagram Rack layout</p>	
<p>Trinidad and Tobago Block diagram Rack layout</p>	
<p>Uruguay Block diagram Rack layout</p>	

Venezuela Block diagram Rack layout	
HONDURAS Block diagram	

Figure 1 - Plan list

- The delivery content and quantity will be checked and serial numbers for each single piece of equipment will be compared to the list that will be established (**full list delivered during the FAT, please see Annex 1 - SITES Serial number**).

se revisarón los diagramas de conexi3n así como los seriales de los equipos, los comentarios se anexan en hojas aparte a este documento
 Los seriales de los seriales se efectuó en el listado suministrado y los observaciones en los diagramas se detallaron en los diagramas de los modos de la REMDIB II




3 OUTDOOR UNITS TESTS

3.1 TX SWITCH *La Luz*

The IBUC (Intelligent Block Up Converter) are in a redundant configuration on every site. This test will validate the redundancy of the C-band power amplifiers.

On the demonstration IBUC system on the platform, check that there are no alarms this IBUC webpage. Disconnect one RF cable from the online IBUC and check that the standby transmit chain becomes active.

In order to test the switching is working both way, do the test for the other IBUC.

Test	Results (Ok/Nok)
IBUC A to B	<i>OK</i>
IBUC B to A	<i>OK</i>
Comments:	
<i>La conmutación se realizó con éxito</i>	

Figure 2 - TX switch test

3.2 RX SWITCH

The LNBS (Low Noise Block down-converter) are redundant on every site. This test will validate the redundancy of the low noise amplifiers (LNB).

On the demonstration LNB RX 1+1 system on the platform, check that there are no alarms this LNB RX 1+1. Disconnect the cable from the online LNB and check that the standby chain becomes active.

Do the test for the other LNB.

Test	Results (Ok/Nok)
LNB A to B	<i>OK</i>
LNB B to A	<i>OK</i>
Comments:	
<i>La conmutación se efectuó con éxito.</i>	

Figure 3 - RX switch test



4 COMMUNICATION TESTS

The communication tests will be achieved on both VSAT chain, A and B.

4.1 RADAR AND ASTERIX

There are two types of RADAR:

- Serial
- IP based.

Prueba no efectuada

4.1.1 Serial RADAR

For serial RADAR, the bandwidth will be already assigned, as it corresponds to existing systems. Bisync will not be tested, as this protocol is old and not supported by testers.

The serial RADAR is used between Chile, Argentina, and Uruguay:

RADAR	Argentina	Uruguay
Argentina	---	2 (TX, RX)
Uruguay	2 (TX, RX)	---


RADAR - chain A	Argentina	Uruguay
Argentina	---	
Uruguay		---

RADAR - chain B	Argentina	Uruguay
Argentina	---	
Uruguay		---

Figure 4- Serial RADAR tests

Prueba no efectuada







4.1.2 IP based RADAR and Asterix

The IP based RADAR and Asterix is configured for the transport, but almost no bandwidth will be assigned, in order not to waist bandwidth. For Asterix, no additional bandwidth is required, but this service will grow with RADAR installation. Those services are both PAMA, IP, Multicast, and thus will be tested during the same test.

The test will consist in selecting two sites, properly configured with demonstration IP Multicast address, with sufficient bandwidth and multicast a IP flow. The flow multicasted will be a MP3 streaming data, as it is closer in term of bandwidth and packet size than a video. The streaming software is VLC.

The following table shows the RADAR/Asterix cross matrix. When “R” is written, there is only a RADAR connection. When “A” is written, there is only an Asterix connection.

Prueba no efectuada

RADAR/Asterix	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	X		X			X					X				X		
Bolivia	X		X			X					X						
Brazil (Curitiba)	X	X									X						
Brazil (Manaus)	A	X					X			X						X	
Brazil (Recife)	X																
Chile																	
Colombia				X													
Ecuador							X										
French Guiana																	
Guyana																	
Paraguay	X	X	X														
Peru		X		X		X	X	X									
Suriname				X													
Trinidad and Tobago																	
Uruguay	X		A														
Venezuela				X			X			X							
Tegucigalpa																	

Figure 5 - RADAR / Asterix cross matrix

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	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
RADAR/Asterix	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Argentina	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Bolivia	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Curitiba)	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Manaus)	Dark Grey	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Recife)	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Chile	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Colombia	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Ecuador	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
French Guiana	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Guyana	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Paraguay	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Peru	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Suriname	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue
Trinidad and Tobago	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue
Uruguay	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue
Venezuela	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue
Tegucigalpa	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey

Figure 6 - RADAR / Asterix test cross matrix - Chain A

	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
RADAR/Asterix																	
Argentina																	
Bolivia																	
Brazil (Curitiba)																	
Brazil (Manaus)																	
Brazil (Recife)																	
Chile																	
Colombia																	
Ecuador																	
French Guiana																	
Guyana																	
Paraguay																	
Peru																	
Suriname																	
Trinidad and Tobago																	
Uruguay																	
Venezuela																	
Tegucigalpa																	

Figure 7 - RADAR / Asterix test cross matrix - Chain B

ant

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4.2 VOICE COMMUNICATIONS GENERALITIES

Two dial plans are used in this network. Dial plan 1 is for ATS circuits, with a general prefix of "1", added based by translation rules directly on the dialled number (see Annex 2 for Ezeiza example). Same concept is used with Admin and maintenance with prefix "2".

For a complete site by site number overview, please refer to Annex 3 - Dial peer numbers.

4.3 ATS/DS CIRCUITS

All ATS/DS calls are auto-dialed. The communication is established after the user hangs the phone.

The test will consist of connecting a telephone on the desired line at the back of the rack, pick-up the phone make the call to the other end of the circuit.

For E1 based circuits, to be connected to a VCS, this cannot be achieved nor simulated.

The black cells in the following matrix represent those cases.

The numbers auto dialed are the same as REDDIG I (990X), and are translated into the internal dial plan.

Telefono Managua -> Ezeiza - La Paz

Se establecieron conexiones directas (lineas colgadas) entre:

- Managua - Ezeiza y Ezeiza Managua
- Managua La Paz y La Paz Managua
- Ezeiza La Paz y La Paz Ezeiza

Se establecieron las pruebas con éxito.

ATHS Hot line	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Bolivia	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Brazil (Curitiba)	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey	Grey	Blue	Grey	Grey
Brazil (Manaus)	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Brazil (Recife)	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Chile	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Colombia	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Ecuador	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
French Guiana	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Guyana	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Paraguay	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Peru	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Suriname	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey
Trinidad and Tobago	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Grey	Grey

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ATHS Hot line	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Light Blue	Dark Grey	Dark Grey
Bolivia	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Curitiba)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Manaus)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Recife)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Chile	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Colombia	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Ecuador	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
French Guiana	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Guyana	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Paraguay	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Peru	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Suriname	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey

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4.4 ATS SWITCHED CIRCUITS

ATS switched calls are dialed. The communication is established after the user hangs up the phone and dials the remote dial number.

The test will consist of connecting a telephone on the desired line at the back of the rack, pickup the phone and dial a remote number in order to call the other end of the circuit. For E1 based circuits, connected to a VCS, this cannot be achieved nor simulated. The black cells in the following example represent this case.

The MEVA II interconnection cannot be simulated either, as we do not have any CX multiplexor.

The users will dial 4 digits in all the site except Argentina. Here "7" is used as a prefix digit.

The dial plan used is in Annex 2 - dial plan file. Updated version will be given at the FAT and if a modified version is required after the FAT it will be published. For the ATS service, the dial plan used is number 1.

*Manaos
Ezeiza
La Paz*

*(3612)
(553)*

*se simulasen circuitos ATS conmutados
entre Manaos, Ezeiza y La Paz
usando el plan de numeración telefónica
de la REDDIG II y los prefijos de los
de los paises fueron estos.*

[Signature]

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[Handwritten signatures]

ATS switched	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
<i>[Signature]</i>																	
Argentina																	
Bolivia																	
Brazil (Curitiba)																	
Brazil (Manaus)																	
Brazil (Recife)																	
Chile																	
Colombia																	
Ecuador																	
French Guiana																	
Guyana																	
Paraguay																	
Peru																	
Suriname																	
Trinidad and Tobago																	

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ATS switched	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Bolivia		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Brazil (Curitiba)			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Brazil (Manaus)				█	█	█	█	█	█	█	█	█	█	█	█	█	█
Brazil (Recife)					█	█	█	█	█	█	█	█	█	█	█	█	█
Chile						█	█	█	█	█	█	█	█	█	█	█	█
Colombia							█	█	█	█	█	█	█	█	█	█	█
Ecuador								█	█	█	█	█	█	█	█	█	█
French Guiana									█	█	█	█	█	█	█	█	█
Guyana										█	█	█	█	█	█	█	█
Paraguay											█	█	█	█	█	█	█
Peru												█	█	█	█	█	█
Suriname													█	█	█	█	█
Trinidad and Tobago														█	█	█	█

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4.5 ADMINISTRATIVE VOICE

The administrative voice is a closed network, that is only able to call a remote administrative voice and the local ATS phone.

The test will consist in selecting a site and try several connections to a remote administrative voice and local ATS.

3601
2501

se realizaran pruebas de comunicaciones de voz con centros administrativos entre el modo ~~Reddy II~~ simulado de

computre



Administrative	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Bolivia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Curitiba)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Manaus)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Recife)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Chile	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Colombia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Ecuador	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
French Guiana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Guyana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Paraguay	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Peru	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Suriname	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Trinidad and Tobago	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded

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Handwritten signatures in blue ink.

Administrative	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded																
Bolivia		Shaded															
Brazil (Curitiba)			Shaded														
Brazil (Manaus)				Shaded													
Brazil (Recife)					Shaded												
Chile						Shaded											
Colombia							Shaded										
Ecuador								Shaded									
French Guiana									Shaded								
Guyana										Shaded							
Paraguay											Shaded						
Peru												Shaded					
Suriname													Shaded				
Trinidad and Tobago														Shaded			

4.6 TELECONFERENCE

Teleconference service will be achieved using Cisco's Communication Manager with 25 users license. The teleconference will be centralized from Manaus and Ezeiza. Those sites will be the only ones to have the 25 seats license. The other stations will be "clients" to this service, which means that a permanent dial number will be present for the organization of conference call (it will be different between Ezeiza and Manaus), and states will join the conference call dialing this number. The maximum number of participants for one DSP is 16.

Teleconference proposed numbers are:

- 1121 in Ezeiza
- 1111 in Manaus

** Faltó prueba -*
OK

Establish a conference with at least 3 members.

Teleconference Manaus (1111)	OK/KO	Comment
<p>Sites participating: se realizaron teleconferencias con participaciones de tres no dos</p>	<p>OK</p>	<p>Las pruebas se realizaron con teléfonos analogos.</p>
<p>Comments</p>		

Figure 14 - Teleconference - chain A

*Los teléfonos en que se hicieron las pruebas fueron analógicos y no en IP como está establecido en los especificos técnicos.
Faltó prueba con los teléfonos IP*

Handwritten signature

Handwritten signatures and marks

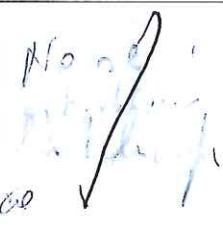
Teleconference <i>Figuras 1121</i>	OK/KO	Comment
<u>Sites participating:</u> <i>152 5 cables telecopiers</i> <i>con cables usuarios</i>	<i>NO OK</i>	<i>No OK</i> 
Comments	<i>No se estableció la telecopier con el 121 la</i>	

Figure 15 - Teleconference - chain B

manera no establecida

[Handwritten signatures and scribbles]

[Handwritten signature]

OK

4.7 AFTN CIRCUITS

The test will consist of connecting a PC to the AFTN port at the back of the rack (with the right speed and configuration 8/N/1) and close the serial interface at the other end of the circuit (loop). With the PC launch Hyperterminal, with local display of characters (to see what you write). With the PC launch the *winssd* program and start the BER test. Run the test for 5 minutes and check that there are only a few errors. *(previous) problem on BER*

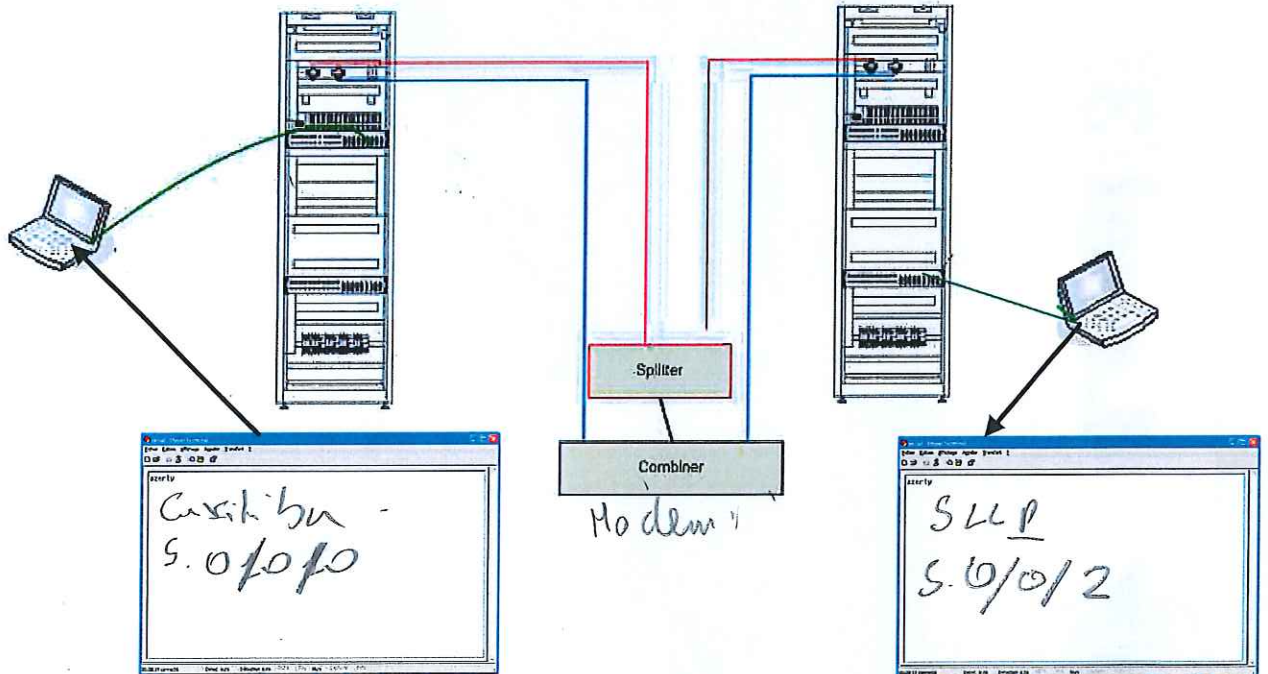


Figure 16 - AFTN test mounting

BSTUN has been used in order to separate AFTN tunnels and deliver a performant redundant, which could not be achieved with UDP Tunnel. The lines are configured with a dispatch character "Enter" (carrier return) and a dispatch timeout of 1s:

```
line 0/0/0 0/0/2
modem InOut
no activation-character
dispatch-timeout 1000
dispatch-character 13
speed 2400
```

Those parameters can be reduced for a better reactivity.

*La puebas AFTN
trabajó sin problemas
en ambas direcciones entre
las localidades
- No se corrió la AFTN
por unos minutos*

No se realizó prueba BER

AFTN	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	2					1					2	2 (3)			1		
Bolivia	2											1					
Brazil (Curitiba)	1	1									1				1		
Brazil (Manaus)							2										
Brazil (Recife)																	
Chile	1																
Colombia								1									
Ecuador							1										
French Guiana																	
Guyana																	
Paraguay	2																
Peru	2 (3)	1					2	1									
Suriname																	
Trinidad and Tobago																	
Uruguay	1																
Venezuela							1	1	1	1		1					
Tegucigalpa																	

Figure 17 - AFTN interfaces

AFTN	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Bolivia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Curitiba)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Manaus)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Recife)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Chile	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Colombia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Ecuador	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
French Guiana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Guyana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Paraguay	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Peru	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Suriname	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Trinidad and Tobago	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Uruguay	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Venezuela	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Tegucigalpa	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded

Figure 18 - AFTN tests results - chain A



AFTN	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded																
Bolivia		Shaded															
Brazil (Curitiba)			Shaded														
Brazil (Manaus)				Shaded													
Brazil (Recife)					Shaded												
Chile						Shaded											
Colombia							Shaded										
Ecuador								Shaded									
French Guiana									Shaded								
Guyana										Shaded							
Paraguay											Shaded						
Peru												Shaded					
Suriname													Shaded				
Trinidad and Tobago														Shaded			
Uruguay															Shaded		
Venezuela																Shaded	
Tegucigalpa																	Shaded

Handwritten signatures and initials in blue ink at the bottom of the page.

Figure 19 - AFTN tests results -- chain B

4.8 AMHS AND AIDC

AMHS service is TCP/IP based. To test it, two devices, a computer host and a server (being a computer or a device), will be used, and a TCP session will be opened and used.

A web page, a telnet session or a TFTP file transfer can be achieved to perform the test.

For AIDC, this service will be carried over AFTN, AMHS or directly in IP. As the AMHS system is IP based, then there are only few connections remaining.

A dedicated VLAN is used for each service (VLAN 100 for AMHS, and 110 for AIDC). Obviously, when the AIDC is transported over AMHS, it will be on the same VLAN and IP plan.

- Prueba que se realizó simultánea interconexión en tres localidades: Argentina, Chile y Venezuela. Se envió archivo de Venezuela a Argentina y Venezuela a Chile, Chile a Argentina, y Argentina a Chile.
- Por la prueba se evidencian los resultados para el AIDC. La transferencia del Archivo se realizó con éxito.



AMHS	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	1																
Bolivia		1															
Brazil (Curitiba)			1														
Brazil (Manaus)				1													
Brazil (Recife)					1												
Chile						1											
Colombia							1										
Ecuador								1									
French Guiana									1								
Guyana										1							
Paraguay											1						
Peru												1					
Suriname													1				
Trinidad and Tobago														1			
Uruguay															1		
Venezuela																1	
Tegucigalpa																	1

Figure 21 - AMHS cross matrix



AMHS	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Bolivia	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Curitiba)	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Manaus)	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Brazil (Recife)	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Chile	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Colombia	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Ecuador	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
French Guiana	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Guyana	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Paraguay	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Peru	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Suriname	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue	Light Blue
Trinidad and Tobago	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue	Light Blue
Uruguay	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue	Light Blue
Venezuela	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey	Light Blue
Tegucigalpa	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Dark Grey

Handwritten signatures and initials in blue ink.

Figure 22 - AMHS test cross matrix – chain A

AMHS	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Bolivia	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Curitiba)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Manaus)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Brazil (Recife)	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Chile	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Colombia	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Ecuador	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
French Guiana	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Guyana	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Paraguay	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Peru	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Suriname	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Trinidad and Tobago	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Uruguay	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Venezuela	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey
Tegucigalpa	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey	Dark Grey

Figure 23 - AMHS test cross matrix - chain B

	Site network
Argentina	10.110.20.0
Bolivia	10.110.25.0
Brazil (Curitiba)	10.110.30.0
Brazil (Manaus)	10.110.36.0
Brazil (Recife)	10.110.38.0
Chile	10.110.40.0
Colombia	10.110.45.0
Ecuador	10.110.50.0
French Guiana	10.110.92.0
Guyana	10.110.90.0
Paraguay	10.110.55.0
Peru	10.110.60.0
Suriname	10.110.94.0
Trinidad and Tobago	10.110.91.0
Uruguay	10.110.65.0
Venezuela	10.110.80.0
Honduras	10.110.21.0

Figure 24 - AIDC IP Plan

The gateway used is .254, the LAN ip addresses are .101, .102 and .121.

[Handwritten signature]

AIDC	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	X																
Bolivia	X	X															
Brazil (Curitiba)	X	X	X														
Brazil (Manaus)		X		X													
Brazil (Recife)					X												
Chile	X					X											
Colombia							X										
Ecuador							X	X									
French Guiana									X								
Guyana										X							
Paraguay	X	X	X								X						
Peru		X		X		X	X	X									
Suriname				X					X	X							
Trinidad and Tobago									X	X			X				
Uruguay	X		X						X	X			X				
Venezuela				X			X			X				X			
Tegucigalpa																	

Figure 25 - AIDC cross matrix

[Handwritten signatures and initials in blue ink]

AIDC	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded																
Bolivia		Shaded															
Brazil (Curitiba)			Shaded														
Brazil (Manaus)				Shaded													
Brazil (Recife)					Shaded												
Chile						Shaded											
Colombia							Shaded										
Ecuador								Shaded									
French Guiana									Shaded								
Guyana										Shaded							
Paraguay											Shaded						
Peru												Shaded					
Suriname													Shaded				
Trinidad and Tobago														Shaded			
Uruguay															Shaded		
Venezuela																Shaded	
Tegucigalpa																	Shaded

Figure 26 - AIDC test cross matrix - chain A

Handwritten signatures and initials in blue ink at the bottom of the page.

AIDC	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Bolivia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Curitiba)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Manaus)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Brazil (Recife)	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Chile	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Colombia	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Ecuador	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
French Guiana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Guyana	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Paraguay	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Peru	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Suriname	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Trinidad and Tobago	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Uruguay	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Venezuela	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Tegucigalpa	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded

Figure 27 - AIDC test cross matrix - chain B

4.9 SAT LOOP BER TEST

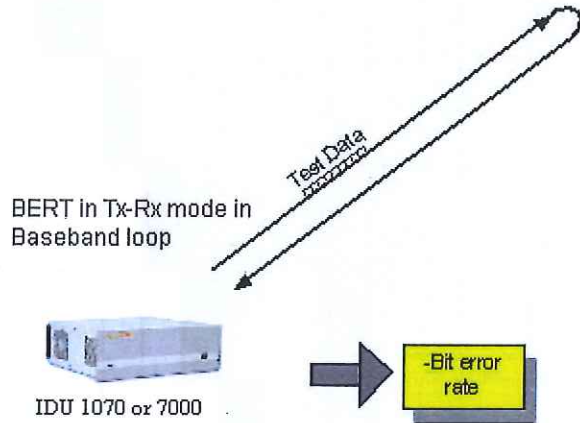


Figure 28 - Sat loop principle

SAT Loop BER Test					
<i>Purpose:</i> To check the correct operation of internal BERT test in IF-loop					
<i>Test:</i> Start the station using modem test mode "BERT in Tx-Rx mode". Let the BER Test run for 30 min, or more if the test can be achieved from one day to another. Observe the BER measurement by the station (with Line-up Manager). Write down the results in the record sheet below.					
<i>Expected Results:</i> Bit errors occur within expected small range.					
Results					
Serial No/IDU No	E_B/N_0 [dB]	BER	Time Interval	Pass	Fail
Comments					
No se efectuó por problemas del BERT					

Figure 29 - Sat loop test table

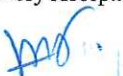
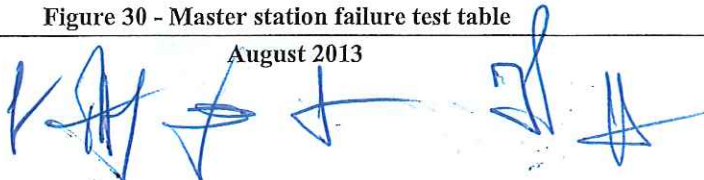
5 REDUNDANCY TESTS

The aim of this section of tests is to validate the redundant components. To improve the duration of the FAT, only one complete site and the master modems will be tested.

5.1 MASTER STATION FAILURE TEST

Master Station Failure Test	
<i>Purpose:</i> To check that the backup master takes over correctly the master role in case of master failure.	
<i>Test:</i> On the test network, set up IP data (ping) connections. ✓ Check which station is running as a master (telnet screen or LEDs on the FPG board). Reset the active master. Check on that the former backup master switches over to master operation. Check that the connections are still running.	
<i>Expected Results:</i> The backup master takes over the master role. The connections are still up. All IDUs are still operational in the network. ✓	
Results	
Site A (Master)	Site B (Backup master)
Station # <u>Egriq A</u>	Station # <u>Manan</u>
Stop the master operation.	Wait until the backup master takes over the master role.
Has the switch-over from the master to backup master been performed correctly?	<input checked="" type="radio"/> Y/N/Comments <u>Compteur de Realys 2011</u> <u>Probleme</u>
Are there all IDUs still operational in the network?	<input checked="" type="radio"/> Y/N/Comments
Are the voice connections still set up?	<input checked="" type="radio"/> Y/N/Comments
Are the IP connections still up and running?	<input checked="" type="radio"/> Y/N/Comments
Comments:	

Figure 30 - Master station failure test table

5.2 EQUIPMENT FAILURE

The system must be in primary mode (Skywan A and Cisco A active) for each test. Check that the NMS detects the failure and present it to the user ("Supervision" test).

5.2.1 Cisco failure

Switch off one of the active Cisco. After life-time timeout of the SLA, the system commutes into backup mode (transmission over chain B and gateway is set to chain B).

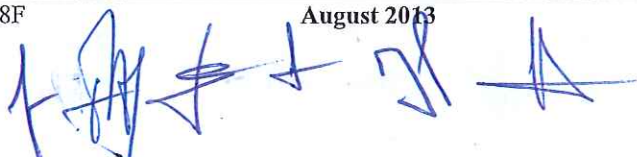
Verify that the gateway is now on the chain B and that the communications are re-established following this procedure

Después de 43 seg pasó a B

Previous verifications		Results	
Gateway check		<i>Presente en B</i>	
RSS position		<i>Presente en B</i>	
Service on chain B	Test	OK	NOK
RADAR	Multicast flow check with wireshark		
Supervision	Visualisation of the state on the NMS	<i>OK</i>	
AFTN	async hyperterminal test		
AMHS	ping	<i>OK</i>	
ATS	phone call	<i>OK</i>	
Maintenance	phone call	<i>OK</i>	
Comments	<i>No se pudo probar AFTN</i>		

Figure 31 - Cisco redundancy test table

La información AMHS entran en 46 seg.



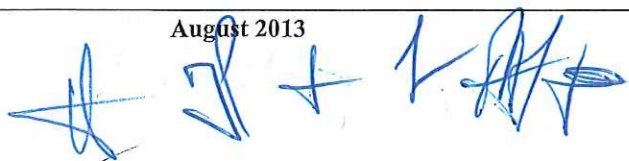
AMHS

Switch on the Cisco A.
Once its reboot is finished, go into normal mode verify that the services are functional .

Previous verifications		Results	
Gateway check		Pass A	
RSS position		Pass A	
Service on chain A	Test	OK	NOK
RADAR	Multicast flow check with wireshark	✗	
Supervision	Visualisation of the state on the NMS	OK	
AFTN	async hyperterminal test	✗	
AMHS	ping	OK	
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments	No results prebaiting AFTN in EAD		

Figure 32 - Cisco redundancy test table – going to normal

Write down the time needed to go back to normal operation to Chain A

5.2.2 SkyWAN failure

(Ezerza Modem printout (A))

Switch off the active SkyWAN. After life-time timeout and OSPF updates, the system uses Skywan B (OSPF dynamic routing).

Verify that the communications are re-established following this procedure

Previous verifications		Results	
Gateway check		Se malheur A	
RSS position		Se malheur A	
Service on chain A	Test	OK	NOK
RADAR	Multicast flow check with wireshark	OK	
Supervision	Visualisation of the state on the NMS	OK	
AFTN	async hyperterminal test	OK	
AMHS	ping	OK	
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments		* AFTN Radar, AFTN plus sealer zone p. 2/2/2013	

Figure 33 - Skywan redundancy test table

Switch on the equipment and go back to normal. Write down the time needed to all services to be re-established after going to normal SkyWAN A. Verify that the services are re-established with those tests:

Previous verifications		Results	
Gateway check		Machin B	
RSS position		Machin B	
Service on chain A	Test	OK	NOK
RADAR	Multicast flow check with wireshark		
Supervision	Visualisation of the state on the NMS		
AFTN	async hyperterminal test		
AMHS	ping		
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments		* AMHS Radar, AFTN plus sealer zone p. 2/2/2013	

Figure 34 - Skywan redundancy test table – going to normal

(Handwritten signatures and marks)

5.2.3 IP switch failures

Switch off the IP switch of chain A. IP connections to this switch become naturally inactive. Verify that legacy and voice applications are re established, and that the system goes to B.

452gub

Previous verifications		Results	
Gateway check		<i>color B</i>	
RSS position		<i>color B</i>	
Service on chain B	Test	OK	NOK
RADAR (if not connected to switch A)	Multicast flow check with wireshark	<i>*</i>	
Supervision (if not connected to switch A)	Visualisation of the state on the NMS	<i>OK</i>	
AFTN	async hyperterminal test	<i>*</i>	
AMHS (if not connected to switch A)	ping	<i>*</i>	
ATS	phone call	<i>OK</i>	
Maintenance	phone call	<i>OK</i>	
Comments		<i>* NO se realiza pruebas AMHS, ni Radar y AFTN</i>	

Figure 35 - IP switch A failure test

The IP switch B carries the NMS and the equipments of chain B, so the chain B is still working. Normalize the situation on chain A. Check that the services are fine.

1:20 (mhr.)

Previous verifications		Results	
Gateway check			
RSS position			
Service on chain A	Test	OK	NOK
RADAR	Multicast flow check with wireshark	<i>*</i>	
Supervision	Visualisation of the state on the NMS	<i>OK</i>	
AFTN	async hyperterminal test	<i>*</i>	
AMHS	ping	<i>*</i>	
ATS	phone call	<i>OK</i>	
Maintenance	phone call	<i>OK</i>	
Comments		<i>* No se realiza pruebas Radar, AFTN y AMHS</i>	

*OK
72002
72501*

mo.

[Handwritten signatures]



Switch off the switch of chain B. The system remains on chain A. Check that the services are fine.

Previous verifications		Results	
Gateway check		Plane on A	
RSS position		Presence A	
Service on chain A	Test	OK	NOK
RADAR (if not connected to switch B)	Multicast flow check with wireshark		
AFTN	async hyperterminal test	OK	
AMHS (if not connected to switch B)	ping		
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments			

When switch B recovers, the system can switch to B, as the monitoring system (which takes the decision to switch from A to B) as no communication to chain A and can detect this situation as chain B failure.



5.2.4 RSS switch failures

Switch off the power supply. Verify that the RSS stood still and that the communications are not affected:

Previous verifications		Results	
Gateway check		/	
RSS position			
Service	Test	OK	NOK
RADAR	Multicast flow check with wireshark		
Supervision	Visualisation of the state on the NMS		
AFTN	async hyperterminal test		
AMHS	ping		
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments			

Figure 36 - RSS failure test table

6 GROUND BACKBONE TEST

Some Level 3 routers are present for the tests (not for all the sites hence). Please consider one of the available sites to perform those tests.

*La red terrestre se simula con routers Cisco de serie 1900
red para Uruguay, Venezuela, Argentina
y Bolivia.*

6.1 BACKUP TEST

Switch of both Skywan modems or disconnect their TX and RX cables.

After dynamic routing process and routing re-establishment (this process takes several minutes), the services are re-routed to the ground backbone.

Verify that the services are operational, inside the leased bandwidth and that the other sites remain on VSAT as main link (only the services associated to the "down" station goes through the ground backbone).

For each service, verify with wireshark that the DSCP fields are correct.

Previous verifications		Results	
Gateway check			
RSS position			
Service	Test	OK	NOK
RADAR	Multicast flow check with wireshark		
	DSCP field AF41		
Supervision	Visualisation of the state on the NMS		
	AFTN		
AMHS	async hyperterminal test		
	DSCP field AF31		
ATS	ping		
	DSCP field AF31		
Maintenance	phone call		
	DSCP field EF	OK	
	phone call	OK	
	DSCP field EF	OK	
Comments			

Figure 37 - Backup test

For each service, verify with wireshark that the DSCP fields are correct. Write down the time needed to all services to be re-routed to the ground backbone and in normal operation.

Se chequeó que la voz viene con el campo EF

[Handwritten signatures and initials]

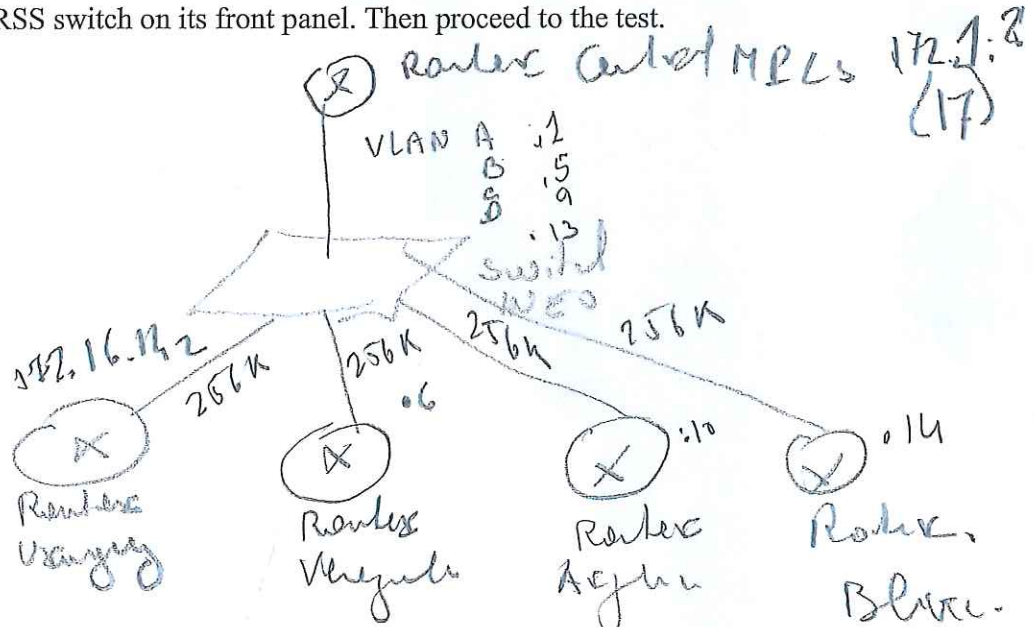
Service	DSCP	ToS
RADAR and ADS	AF41	PAMA
Asterix	AF41	PAMA
Voice	EF	DAMA real time dynamic
AFTN	AF31	DAMA
AMHS	AF31	DAMA
AIDC	AF31	DAMA
NMS	AF21	DAMA

6.2 DEDICATED LINKS

The dedicated links are AFTN and switched voice.

6.2.1 AFTN

The AFTN devices connected to the GBB router are the same as the VSAT backbone, but in restricted quantity. Only some of them are present. To activate those interfaces, press the "B" button of the RSS switch on its front panel. Then proceed to the test.



AFTN	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	1																
Bolivia	1																
Brazil (Curitiba)	1																
Brazil (Manaus)																	
Brazil (Recife)																	
Chile	1																
Colombia				1													
Ecuador							1										
French Guiana																	
Guyana																	
Paraguay	1																
Peru	1	1		1			1										
Suriname																	
Trinidad and Tobago																	
Uruguay	1		1														
Venezuela					1		1		1				1	1			
Tegucigalpa																	

Handwritten signatures and initials in blue ink.

AFTN	Argentina	Bolivia	Brazil (Curitiba)	Brazil (Manaus)	Brazil (Recife)	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Suriname	Trinidad and Tobago	Uruguay	Venezuela	Tegucigalpa
Argentina	Shaded																
Bolivia	Shaded																
Brazil (Curitiba)	Shaded																
Brazil (Manaus)																	
Brazil (Recife)																	
Chile																	
Colombia																	
Ecuador																	
French Guiana																	
Guyana																	
Paraguay																	
Peru																	
Suriname																	
Trinidad and Tobago																	
Uruguay																	
Venezuela																	
Tegucigalpa																	

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6.2.2 Voice

The dialed switched voice of the GBB router are dedicated to the GBB. They are used as emergency interfaces.

Se realizó la
prueba con
éxito del
servicio de
voz conmutado
a través
del switch
del Backbone
terrestre y
trabajó con
éxito.
La prueba se
realizó a los
ASG y
Venezuela.
Así como al
número 08099
y Venezuela al
02099

ATS switched	Dialled number
Argentina	2099
Bolivia	2599
Brazil (Curitiba)	3099
Brazil (Manaus)	3699
Brazil (Recife)	3899
Chile	4099
Colombia	4599
Ecuador	5099
French Guiana	9299
Guyana	9099
Paraguay	5599
Peru	6099
Suriname	9499
Trinidad and Tobago	9199
Uruguay	6599
Venezuela	0 8099
Tegucigalpa	NA

08099

02099

A telephone must be manually connected to this interface.

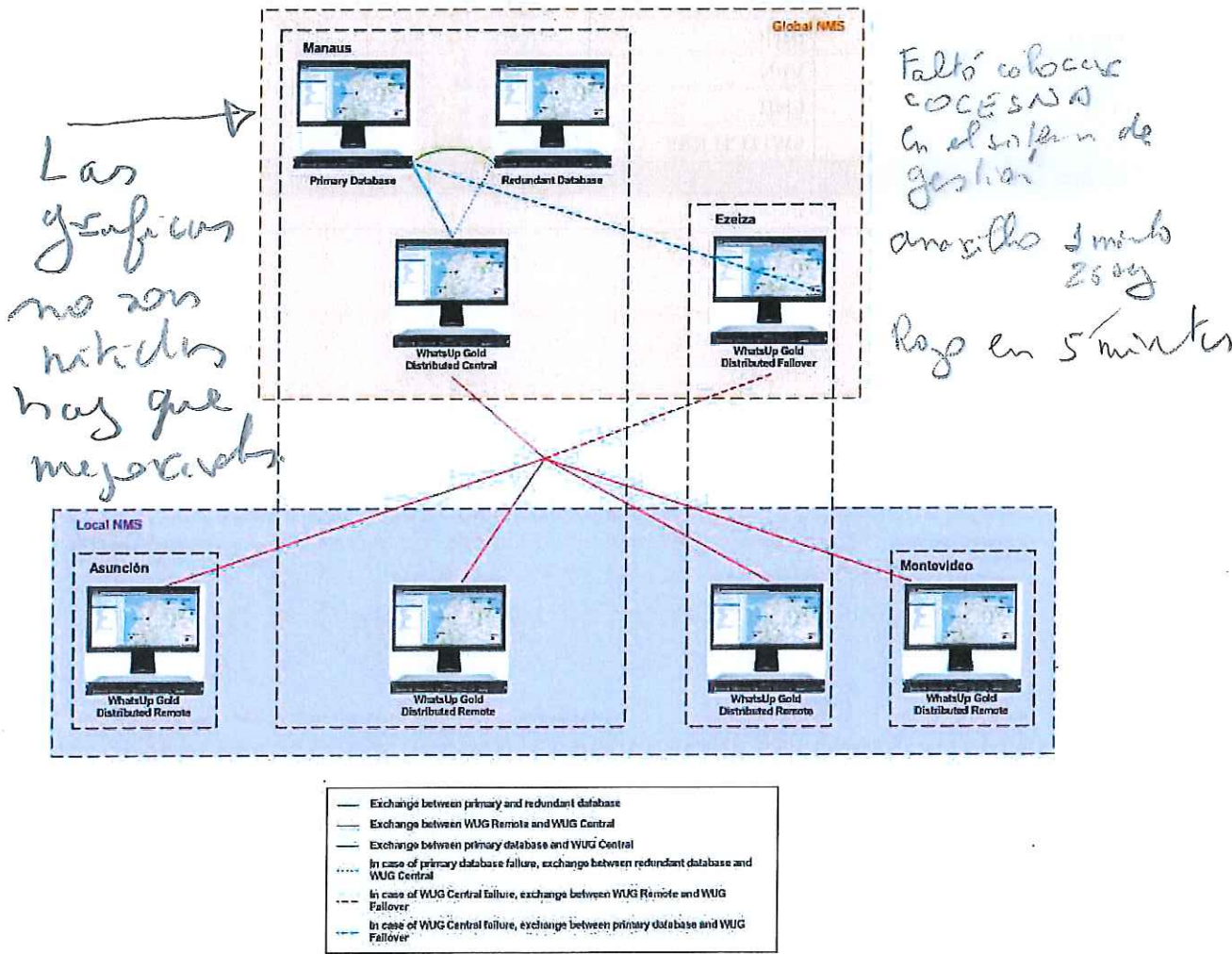
7 NETWORK MANAGEMENT STATIONS (NMS) TESTS

7.1 SUBMAP CONTENT CONFIGURATION

The purpose of this test is to check the submap configuration. Write down the time needed to the alarm to appear (RED) and the time needed to go to normal (GREEN)

Tests description:

From the thin client, connect to VSATWUG, and open WUG console, and within each submap check device color is green.
For each device, unplug ethernet cable to test alarm, device goes in with red color.



[Handwritten signatures and initials]

7.1.1 Ezeiza

Local NMS

Device name	Description	IP Address	Results		Alarm test	
			OK	NOK	OK	NOK
#Ezeiza						
Cisco A ✓	CISCO	20.101.	OK			
Cisco B ✓	CISCO	109	OK			
Switch A	SWITCH	20.51	OK			
Switch B	SWITCH	20.52	OK			
Skywan A	SKYWAN	20.31	OK			
Skywan B	SKYWAN	20.32	OK			
Ground Backbone	CISCO	20.121	OK			
Ibuc A	IBUC	20.21			OK	
Ibuc B	IBUC	20.42			OK	
VPN	VPN	20.60	OK			
LNB	LNB	20.43	OK		OK	
Switch AB	SWITCH RSS ✓	20.71	OK			
Comments:						



no.

7.1.2 Manaus

Local NMS

Device name	Description	IP Address	Results		Alarm test	
			OK	NOK	OK	NOK
#Manaus						
Cisco A	CISCO					
Cisco B	CISCO					
Switch A	SWITCH					
Switch B	SWITCH					
Skywan A	SKYWAN					
Skywan B	SKYWAN					
Ground Backbone	CISCO					
Ibuc A	IBUC					
Ibuc B	IBUC					
VPN	VPN					
LNB	LNB					
Switch AB	SWITCH RSS					
Comments:						

7.1.3 Remote site 1

Select one remote site, and check that the equipments are correctly configured:

Local NMS

Device name	Description	IP Address	Results		Alarm test	
			OK	NOK	OK	NOK
#La Paz						
Cisco A	CISCO					
Cisco B	CISCO					
Switch A	SWITCH					
Switch B	SWITCH					
Skywan A	SKYWAN					
Skywan B	SKYWAN					
Ground Backbone	CISCO					
Ibuc A	IBUC					
Ibuc B	IBUC					
VPN	VPN					
LNB	LNB					
Switch AB	SWITCH RSS					
Comments:						

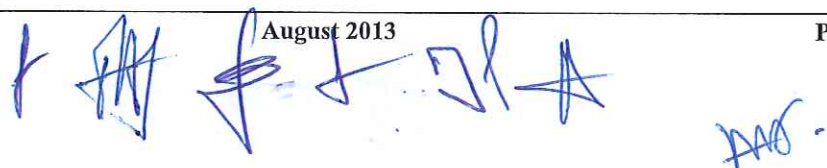
Handwritten signature

Handwritten signatures and initials

7.1.4 Remote site 2

Select another remote site, and check that the equipments are correctly configured:
Local NMS

Device name	Description	IP Address	Results		Alarm test	
			OK	NOK	OK	NOK
#La Paz						
Cisco A	CISCO					
Cisco B	CISCO					
Switch A	SWITCH					
Switch B	SWITCH					
Skywan A	SKYWAN					
Skywan B	SKYWAN					
Ground Backbone	CISCO					
Ibuc A	IBUC					
Ibuc B	IBUC					
VPN	VPN					
LNB	LNB					
Switch AB	SWITCH RSS					
Comments:						



7.2 NMS EQUIPMENT – SERIAL NUMBER

The purpose of this test is to check the presence and the serial number of each NMS equipment.

Tests description:

Check the serial number of the following equipment.

7.2.1 Ezeiza

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

Failover Server

Equipment	Test	Results	
		OK	NOK
Failover Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Storage NAS	Serial Number:		
Comments:			

Handwritten notes: check serial numbers

Handwritten signatures and initials in blue ink.

7.2.2 La Paz

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			


7.2.3 Manaus

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

Central NMS

Equipment	Test	Results	
		OK	NOK
Central Server	Serial Number:		
Screen for central server	Serial Number:		
Printer	Serial Number:		
Remote KVM for central server	Serial Number:		
750W UPS for central server	Serial Number:		
Database Server 1	Serial Number:		
Screen for Database server 1	Serial Number:		
Remote KVM for Database server 1	Serial Number:		
750W UPS for Database server 1	Serial Number:		
Database Server 2	Serial Number:		
Screen for Database server 2	Serial Number:		



Remote KVM for Database server 2	Serial Number:		
750W UPS for Database server 2	Serial Number:		
Storage NAS	Serial Number:		
Comments:			

7.2.4 Recife

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.5 Curitiba

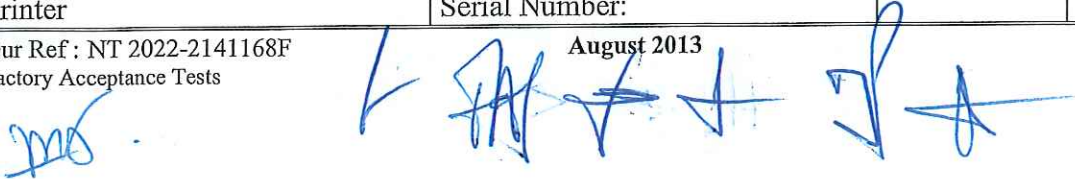
Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.6 Santiago

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		





Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.7 Bogota

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.8 Guayaquil

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.9 Georgetown

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		



750W UPS	Serial Number:		
Comments:			

7.2.10 Cayenne

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.11 Asuncion

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.12 Lima

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		

Comments:

7.2.13 Paramaribo

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.14 Piarco

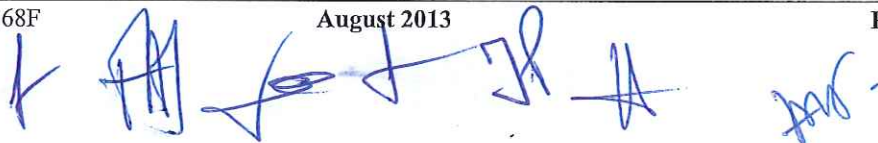
Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.2.15 Montevideo

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		



Comments:

7.2.16 Maiquetia

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	Serial Number:		
Screen	Serial Number:		
Printer	Serial Number:		
Remote KVM	Serial Number:		
750W UPS	Serial Number:		
Comments:			

7.3 IP ADDRESS

The purpose of this test is to check network configuration of NMS equipment.

Tests description:

Check IP address, Network Mask and Gateway for all NMS equipment.

7.3.1 Ezeiza

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	IP Address: 20.100.20.20 Mask: 255.255.255.0 Gateway: 100.100.20.254	OK	
Printer	IP Address: Mask: NO entry Gateway: NO entry		-
Comments:			

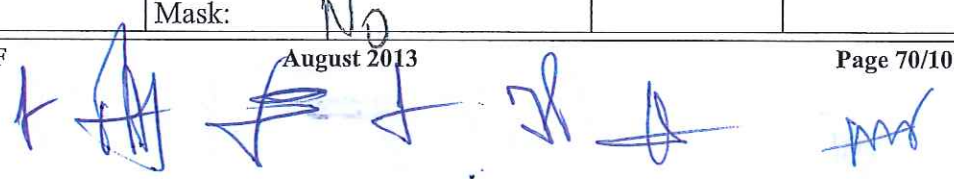
Failover Server

Equipment	Test	Results	
		OK	NOK
Failover Server	IP Address: 10.100.20.11 Mask: 255.255.255.0 Gateway: 10.100.20.254	OK	
Comments:			

7.3.2 Manaus

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	IP Address: 10.100.36.10 Mask: 255.255.255.0/24 Gateway: 10.100.36.254	OK	
Printer	IP Address: Mask: NO		



Gateway:

Comments:

Central Server

Equipment	Test	Results	
		OK	NOK
Central Server	IP Address: 10.100.36.11 Mask: 255.255.255.0 Gateway: 10.100.36.254	OK	
Database Server 1	IP Address: 10.100.36.12 Mask: 255.255.255.0 Gateway: (254)	OK	
Database Server 2	IP Address: 13 Mask: 24 Gateway: 255	OK	
Storage NAS	IP Address: Mask: (Private) Gateway:		
Comments:			

7.3.3 Asuncion

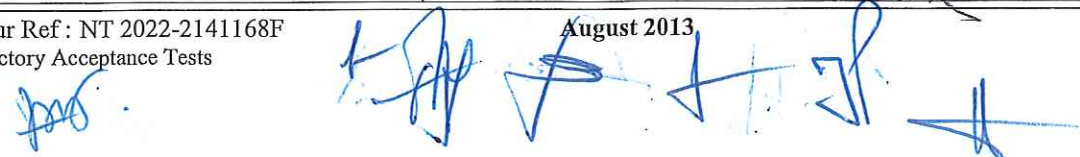
Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	IP Address: 10.100.55.10 Mask: 24 Gateway: 254	OK	
Printer	IP Address: Mask: Gateway:		
Comments:			

7.3.4 Montevideo

Local NMS

Equipment	Test	Results	
		OK	NOK
NMS Server	IP Address: 10.100.56.510 Mask:	OK	



	Gateway:		
Printer	IP Address:		
	Mask:	✓	No ed a
	Gateway:		
Comments:			
Printer no se conectó			

7.4 ACTIVE MONITORING

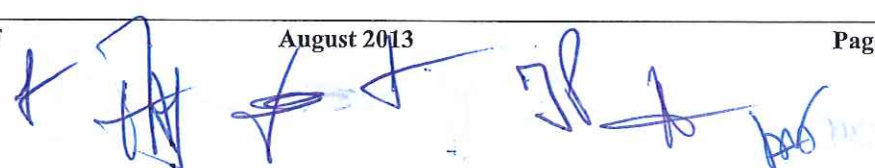
Tests description:

Monitorizar el status de nivel

Connect to WhatsUp Gold web console. Following test will be done:

- Skywan
 - ✓ Wan State: disconnecting wan cable,
 - ✓ TDMA Frame Synchronization: disconnecting cable
- CISCO
 - ✓ Fan status: same as state displayed in equipment console
 - ✓ Temperature state: same as state displayed in equipment console
 - Serial port operational status: same as state displayed in equipment console
 - Digital port operational status: same as state displayed in equipment console
 - Analogical voice card status: same as state displayed in equipment console
 - DSP state: same as state displayed in equipment console
- RSS Switch
 - ✓ Power supply status: same as state displayed in equipment console
- IBUC
 - Switch fault: same as state displayed in equipment console
 - Alarm temperature state: same as state displayed in equipment console
 - ✓ Input level high: same as state displayed in equipment console
 - Output level high: same as state displayed in equipment console
 - Input level low: disconnecting cable
 - Output level low: disconnecting cable
- LNB
 - Current Level High on A position: same as state displayed in equipment console
 - Current Level Low on A position: same as state displayed in equipment console
 - ✓ Voltage Level High on A position: same as state displayed in equipment console
 - Voltage Level Low on A position: same as state displayed in equipment console
 - Input Level Low on A position: disconnecting cable
 - Current Level High on B position: same as state displayed in equipment console
 - Current Level Low on B position: same as state displayed in equipment console
 - Voltage Level High on B position: same as state displayed in equipment console
 - Voltage Level Low on B position: same as state displayed in equipment console
 - Input Level Low on B position: disconnecting cable

NO





On the device detail view, verify that information displayed is correct.

A handwritten signature in blue ink, appearing to be 'mef'.

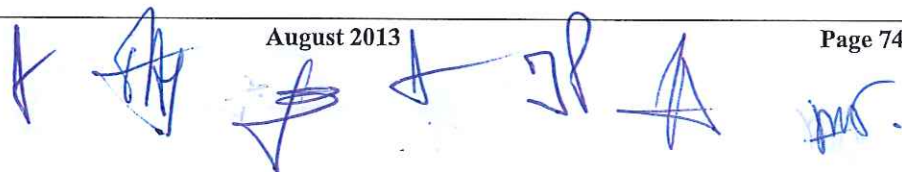
A series of handwritten signatures in blue ink, including 'K. H.', 'J.', 'J.P.', and 'A'.

7.4.1 Site 1

Chose a site and proceed to the test:
Local NMS

La Paz

Interface tested	Results	
	OK	NOK
Skywan A		
• Wan state in red		
• TDMA Frame synchronization in red		
Skywan B		
• Wan state in red		
CISCO A		
• FAN State same state as displayed		
• Temperature State same state as displayed		
• Serial port same state as displayed on console		
• Digital port same state as displayed on console		
• Analogical voice card status same state as displayed on console		
• DSP state same state as displayed		
CISCO B		
• FAN State same state as displayed		
• Temperature State same state as displayed		
• Serial port operational status in red		
• Digital port operational status in red		
• Analogical voice card status same state as displayed		
• DSP state same state as displayed		
RSS Switch		
• Power supply state same state as displayed		
IBUC A		
• Switch fault same state as displayed	✓	
• Alarm temperature same state as displayed		
• Input level high same state as displayed		
• Output level high same state as displayed		
• Input level low in red		
• Output level low in red		
IBUC B		
• Switch fault same state as displayed		
• Alarm temperature same state as displayed		
• Input level high same state as displayed		
• Output level high same state as displayed		



Interface tested	Results	
	OK	NOK
<ul style="list-style-type: none"> Input level low in red Output level low in red 		
LNB		
<ul style="list-style-type: none"> Current Level High (A) same state as displayed Current Level Low (A) same state as displayed Voltage level high (A) same state as displayed Voltage level low (A) same state as displayed Input level low (A) in red Current Level High (B) same state as displayed Current Level Low (B) same state as displayed Voltage level high (B) same state as displayed Voltage level low (B) same state as displayed Input level low (B) in red 	OK ✓	
Comments:		

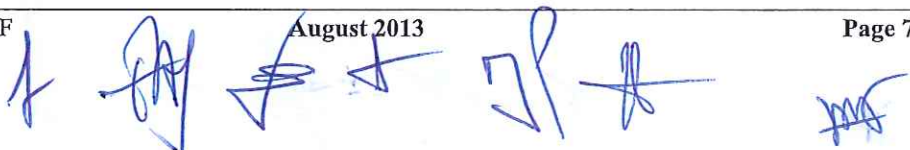
7.4.2 Site 2

Chose a site and proceed to the test:

Local NMS

Interface tested	Results	
	OK	NOK
Skywan A		
<ul style="list-style-type: none"> Wan state in red TDMA Frame synchronization in red 		
Skywan B		
<ul style="list-style-type: none"> Wan state in red 		
CISCO A		
<ul style="list-style-type: none"> FAN State same status same state as displayed on console Temperature State same status same state as displayed on console Serial port operational status same state as displayed on console Digital port operational status same state as displayed on console Analogical voice card status same state as displayed on console DSP state same state as displayed 		
CISCO B		

Interface tested	Results	
	OK	NOK
<ul style="list-style-type: none"> FAN State same status same state as displayed on console 		
<ul style="list-style-type: none"> Temperature State same status same state as displayed on console 		
<ul style="list-style-type: none"> Serial port operational status same state as displayed on console 		
<ul style="list-style-type: none"> Digital port operational status same state as displayed on console 		
<ul style="list-style-type: none"> Analogical voice card status same state as displayed on console 		
<ul style="list-style-type: none"> DSP state same state as displayed 		
RSS Switch		
<ul style="list-style-type: none"> Power supply state same state as displayed 		
IBUC A		
<ul style="list-style-type: none"> Switch fault same state as displayed 		
<ul style="list-style-type: none"> Alarm temperature same state as displayed 		
<ul style="list-style-type: none"> Input level high same state as displayed 		
<ul style="list-style-type: none"> Output level high same state as displayed 		
<ul style="list-style-type: none"> Input level low in red 		
<ul style="list-style-type: none"> Output level low in red 		
IBUC B		
<ul style="list-style-type: none"> Switch fault same state as displayed 		
<ul style="list-style-type: none"> Alarm temperature same state as displayed 		
<ul style="list-style-type: none"> Input level high same state as displayed 		
<ul style="list-style-type: none"> Output level high same state as displayed 		
<ul style="list-style-type: none"> Input level low in red 		
<ul style="list-style-type: none"> Output level low in red 		
LNB		
<ul style="list-style-type: none"> Current Level High (A) same state as displayed 		
<ul style="list-style-type: none"> Current Level Low (A) same state as displayed 		
<ul style="list-style-type: none"> Voltage level high (A) same state as displayed 		
<ul style="list-style-type: none"> Voltage level low (A) same state as displayed 		
<ul style="list-style-type: none"> Input level low (A) in red 		
<ul style="list-style-type: none"> Current Level High (B) same state as displayed 		
<ul style="list-style-type: none"> Current Level Low (B) same state as displayed 		
<ul style="list-style-type: none"> Voltage level high (B) same state as displayed 		
<ul style="list-style-type: none"> Voltage level low (B) same state as displayed 		
<ul style="list-style-type: none"> Input level low (B) in red 		
Comments:		



7.5 PERFORMANCE MONITOR

Tests description:

Connect to WhatsUp Gold web console. Following test will be done:

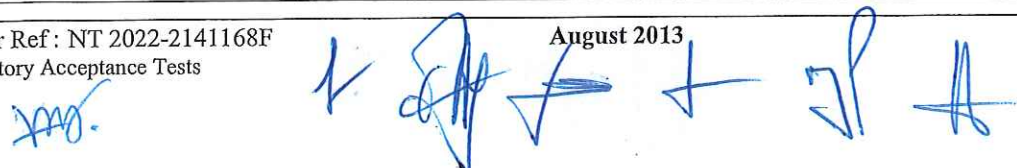
- Skywan
 - TDMA Frame Utilization Chanel 1 (on master station) *OK*
 - TDMA Frame Utilization Chanel 2 (on master station)
 - TDMA Frame Utilization Chanel 3 (on master station)
 - TDMA Es/No Own
- IBUC
 - Input Level *-24.06*
 - Output Level *-3.9*
 - Position of the waveguide switch *(en A)*
- LNB
 - Current on A position *2.28 Amperes*
 - Input Level on A position *-16.2*
 - Current on B position *-26.2*
 - Input Level on B position
- Switch A/B
 - Cards positions

On the device detail view, verify that information displayed is the same that the one displayed in equipment interface.

7.5.1 Ezeiza

Local NMS

Interface tested	Results	
	OK	NOK
Skywan A		
• TDMA Frame Utilization Chanel 1		
• TDMA Frame Utilization Chanel 2		
• TDMA Frame Utilization Chanel 3		
• TDMA Es/No own		
Skywan B		
• TDMA Es/No own		
IBUC A		
• Input Level		
• Output Level		
• Postion of the waveguide switch		



Interface tested	Results	
	OK	NOK
IBUC B		
• Input Level		
• Output Level		
• Position of the waveguide switch		
LNB		
• Current Level High (A) same state as displayed		
• Current Level Low (A) same state as displayed		
• Voltage level high (A) same state as displayed		
• Voltage level low (A) same state as displayed		
• Input level low (A) in red		
• Current Level High (B) same state as displayed		
• Current Level Low (B) same state as displayed		
• Voltage level high (B) same state as displayed		
• Voltage level low (B) same state as displayed		
• Input level low (B) in red		
Switch A/B		
• Each card position		
Comments:		

7.5.2 Remote site 1

Local NMS

Interface tested	Results	
	OK	NOK
Skywan A		
• TDMA Es/No own		
Skywan B		
• TDMA Es/No own		
IBUC A		
• Input Level		
• Output Level		
• Position of the waveguide switch		
IBUC B		
• Input Level		
• Output Level		
• Position of the waveguide switch		
LNB		
• Current Level High (A) same state as displayed		
• Current Level Low (A) same state as displayed		
• Voltage level high (A) same state as displayed		
• Voltage level low (A) same state as displayed		
• Input level low (A) in red		
• Current Level High (B) same state as displayed		
• Current Level Low (B) same state as displayed		
• Voltage level high (B) same state as displayed		
• Voltage level low (B) same state as displayed		
• Input level low (B) in red		
Switch A/B		
• Each card position		
Comments:		

7.6 SWITCHING FROM CHAIN A TO CHAIN B

Tests description:

Connect to WhatsUp Gold web console. Be sure that Switch A/B is on chain A for all services. Following test will be done:

- Chain A Skywan
 - Ethernet state: disconnection Ethernet cable
 - Wan State: disconnecting wan cable,
 - TDMA Frame Synchronization: disconnecting cable
- Chain A CISCO
 - Ethernet state down: disconnection Ethernet cable
 - Power off
- Chain A IP Switch
 - Ethernet state down: disconnection Ethernet cable

For each state, verify that Switch A/B is switching from chain A to chain B and go back to chain manually after each test.

7.6.1 Site 1

Local NMS

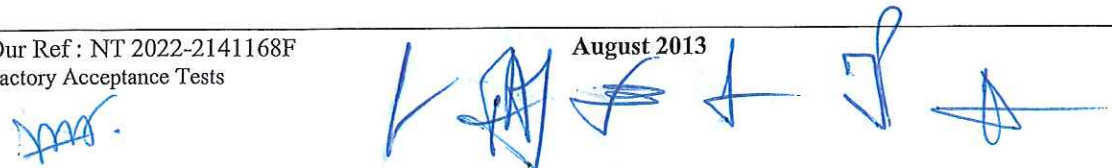
Interface tested	Results	
	OK	NOK
Skywan A		
• Ethernet state down		
• Wan state down		
• Synchronization state down for 2 minutes		
CISCO A		
• Ethernet state down		
• Power off		
Chain A IP Switch		
• Ethernet state down		
Comments:		



7.6.2 Site 2

Local NMS

Interface tested	Results	
	OK	NOK
Skywan A		
• Ethernet state down		
• Wan state down		
• Synchronization state down for 2 minutes		
CISCO A		
• Ethernet state down		
• Power off		
Chain A IP Switch		
• Ethernet state down		
Comments:		





7.7 USER ACCESS CONTROL

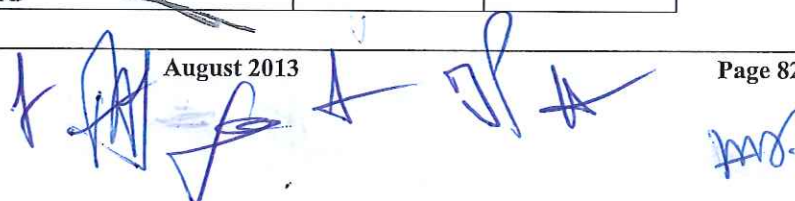
Tests description:

Test the right of users.

7.7.1 Ezeiza

Local NMS

Test	Results		
	OK	NOK	
LocalUser			
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK		
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	OK		
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 			
<ul style="list-style-type: none"> User can't change password 			
<ul style="list-style-type: none"> User can't add/remove user 			
GlobalUser			
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 			
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 			
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 			
<ul style="list-style-type: none"> User can't change password 			
<ul style="list-style-type: none"> User can't add/remove user 			
LocalAdmin			
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK		
<ul style="list-style-type: none"> User can add/remove device of monitors on device 			
<ul style="list-style-type: none"> User can add dashboard or modify dashboard 			
<ul style="list-style-type: none"> User can change password 			
<ul style="list-style-type: none"> User can add/remove user 			
LocalAdmin			
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 			
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 			
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 			
<ul style="list-style-type: none"> User can't change password 			



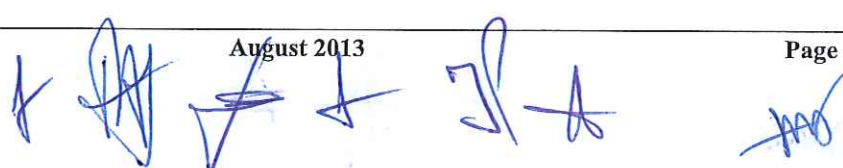
Test	Results	
	OK	NOK
<ul style="list-style-type: none"> User can't add/remove user 		
Comments:		

Failover Server

Test	Results	
	OK	NOK
LocalUser		
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 		
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 		
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
GlobalUser		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
LocalAdmin		
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
LocalAdmin		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK	

Possibly problem with admin

Test	Results	
	OK	NOK
• User can add/remove device of monitors on device	↓	
• User can add dashboard or modify dashboard		
• User can change password		
• User can add/remove user		
Comments:		

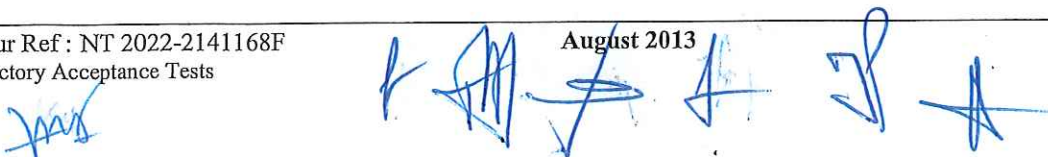


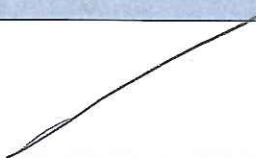
7.7.2 Manaus

Local NMS

Test	Results	
	OK	NOK
LocalUser		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard <i>and export data</i> 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
GlobalUser		
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
LocalAdmin		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can change password 		
<ul style="list-style-type: none"> User can add/remove user 		
LocalAdmin Global Admin		
<ul style="list-style-type: none"> User can't <i>can</i> access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't <i>can</i> add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't <i>can</i> add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't <i>can</i> change password 		
<ul style="list-style-type: none"> User can't <i>can</i> add/remove user 		

can can



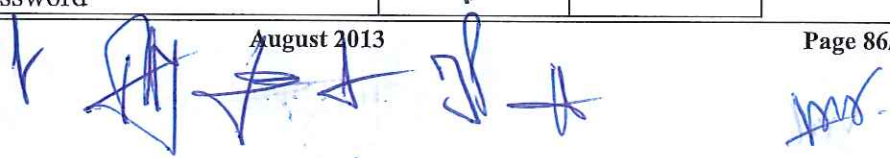
Test	Results	
	OK	NOK
Comments:		
		

Central Server

Test	Results	
	OK	NOK
LocalUser/		
• User can't access device view, device details view and dashboard		
• User can't add/remove device of monitors on device		
• User can't add dashboard or modify dashboard		
• User can't change password		
• User can't add/remove user		
GlobalUser		
• User can access device view, device details view and dashboard <i>and export data</i>	OK	
• User can't add/remove device of monitors on device	↓	
• User can't add dashboard or modify dashboard	↓	
• User can't change password	↓	
• User can't add/remove user	↓	
LocalAdmin <i>can</i>		
• User can't access device view, device details view and dashboard	OK	
• User can't add/remove device of monitors on device	↓	
• User can't add dashboard or modify dashboard	↓	
• User can't change password	↓	
• User can't add/remove user	↓	
LocalAdmin <i>can</i>		
• User can access device view, device details view and dashboard	OK	
• User can add/remove device of monitors on device	↓	
• User can add dashboard or modify dashboard	↓	
• User can change password	↓	

No

Global



Test	Results	
	OK	NOK
<ul style="list-style-type: none"> User can add/remove user 		
Comments:		

7.7.3 Remote site 1

Local NMS

Test	Results	
	OK	NOK
LocalUser		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
GlobalUser		
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
LocalAdmin		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 	OK	
<ul style="list-style-type: none"> User can add/remove device of monitors on device 	↓	
<ul style="list-style-type: none"> User can add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can change password 		
<ul style="list-style-type: none"> User can add/remove user 		
LocalAdmin (Handwritten)		OK
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 	↓	
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 		

Test	Results	
	OK	NOK
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 	↓	
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
Comments:		

7.7.4 Remote site 2

Local NMS

Test	Results	
	OK	NOK
LocalUser		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 		
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 		
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
GlobalUser		
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 		
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 		
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
LocalAdmin		
<ul style="list-style-type: none"> User can access device view, device details view and dashboard 		
<ul style="list-style-type: none"> User can add/remove device of monitors on device 		
<ul style="list-style-type: none"> User can add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can change password 		
<ul style="list-style-type: none"> User can add/remove user 		
LocalAdmin		

Test	Results	
	OK	NOK
<ul style="list-style-type: none"> User can't access device view, device details view and dashboard 		
<ul style="list-style-type: none"> User can't add/remove device of monitors on device 		
<ul style="list-style-type: none"> User can't add dashboard or modify dashboard 		
<ul style="list-style-type: none"> User can't change password 		
<ul style="list-style-type: none"> User can't add/remove user 		
Comments:		



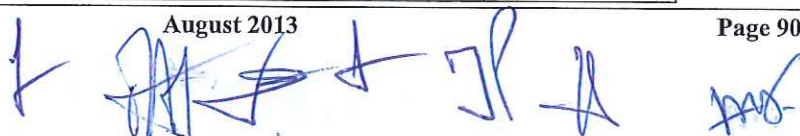

7.8 CENTRAL SERVER

Tests description:

Test information displayed in Central server (Manaus).

Verify that all equipment and information are available in central server NMS and that the states or values displayed are the same that in each local NMS.

Test	Results	
	OK	NOK
#Ezeiza	OK	
• Cisco A	↓	
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Manaus		OK
• Cisco A	↓	
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Remote site 1 <i>CSLCL</i>		
• Cisco A	OK	
• Cisco B	OK	
• Switch A	OK	
• Switch B	OK	
• Skywan A	OK	



Test	Results	
	OK	NOK
• Skywan B	OK	
• Ground Backbone	-	
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Remote site 2 - (La Bus)	OK	
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
Comments:		
<p><i>See remote site 2 - (La Bus)</i></p>		

Handwritten signature

Handwritten signatures and arrows

7.9 FAILOVER SERVER

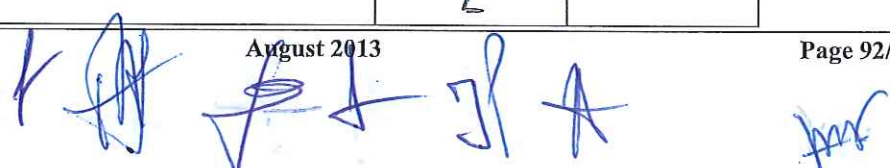
Tests description:

Test information displayed in Failover server (Ezeiza).

Disconnect the central server of the network. Verify that all equipment and information are available in central server NMS and that the states or values displayed are the same that in each local NMS.

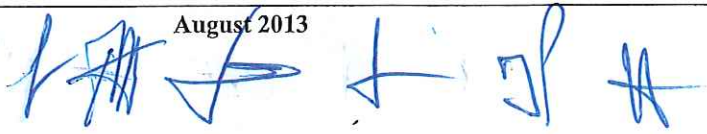
No failure

Test	Results	
	OK	NOK
#Ezeiza		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Manaus		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Remote site 1 (Lima)		
• Cisco A	OK	
• Cisco B		
• Switch A		



Test	Results	
	OK	NOK
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
#Remote site 2		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Ibuc A		
• Ibuc B		
• VPN		
• LNB		
• Switch AB		
Comments:		
<p>NO se actualiza la información del estado de ensamblaje de los estuivales.</p>		

No firmar

7.10 DATABASE >

7.10.1 Database redundancy

Disconnect the database server 1 from the network. Verify that all equipment and information are still available in central server NMS.

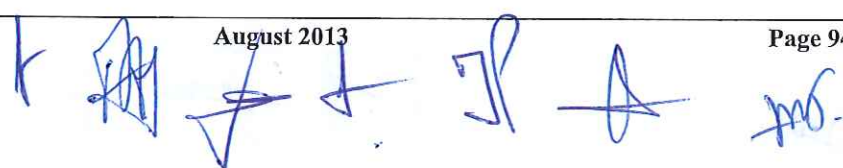
Test	Results	
	OK	NOK
Database redundancy Server 2		✗
Comments:		
No opero in intervian		

Connect the database server 1 on the network and wait 10 minutes.
Then disconnect the database server 2 from the network. Verify that all equipment and information are still available in central server NMS.

Test	Results	
	OK	NOK
Database redundancy Server 1		✗
Comments:		

Remove one hard disk (hot swap) of the NAS and observe the operation of the NMS
Write down the time needed to wait for reinstall de same hard disk.

Reinstall the hard disk removed and observe the operation of the NMS
Write down the time needed to NMS – NAS going to normal.





7.10.2 Database backup

Verify that a database backup is available on NAS storage and that the backup file has been modified today or yesterday (depending of the time when the database backup is done).

Test	Results	
	OK	NOK
Database backup	OK	
Comments:		

7.11 TEST OF CONNECTION THROUGH SERIAL PORT

Tests description:

Test the connection to equipment native console through serial port.

Local NMS

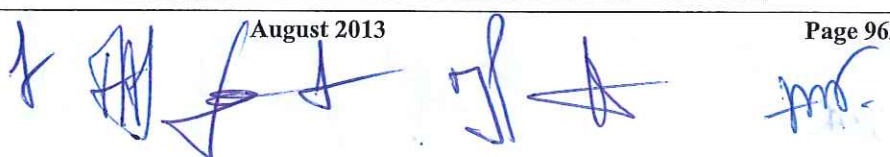
Test	Results	
	OK	NOK
#Ezeiza		
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Manaus		
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		

Test	Results	
	OK	NOK
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Asuncion <i>Santiago</i>		
• Cisco A	OK	
• Cisco B	OK	
• Switch A	OK	
• Switch B	OK	
• Skywan A		
• Skywan B		
• Ground Backbone	↓	
• Switch AB	OK	
#Montevideo		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
Comments:		
OK		

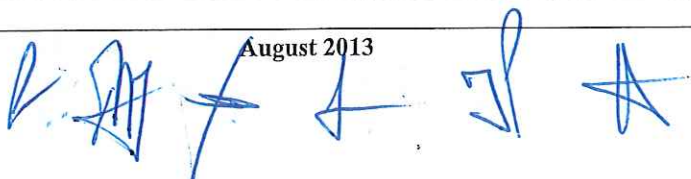
Central Server

Use terminal services to connect to local NMS and test the connection to equipment native console through serial port.

Test	Results	
	OK	NOK
#Ezeiza		



Test	Results	
	OK	NOK
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Manaus		
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Asuncion		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Montevideo		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		

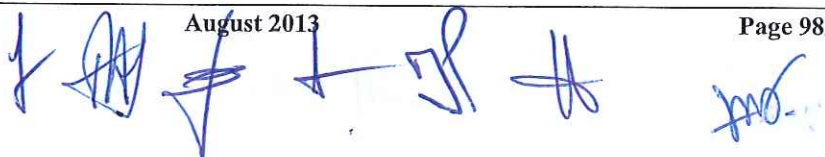



Test	Results	
	OK	NOK
<ul style="list-style-type: none"> Switch AB 		
Comments:		
<p><i>Consideramos que con una prueba fue suficiente</i></p>		

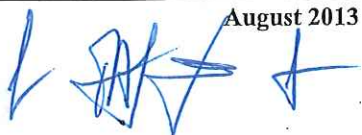

Failover Server

Use terminal services to connect to local NMS and test the connection to equipment native console through serial port.

Test	Results	
	OK	NOK
#Ezeiza		
<ul style="list-style-type: none"> Cisco A1 Cisco A2 Cisco A3 Cisco B1 Cisco B2 Cisco B3 Switch A Switch B Skywan A Skywan B Ground Backbone Switch AB 		
#Manaus		
<ul style="list-style-type: none"> Cisco A1 Cisco A2 Cisco A3 Cisco B1 Cisco B2 Cisco B3 Switch A Switch B Skywan A Skywan B 		



Test	Results	
	OK	NOK
• Ground Backbone		
• Switch AB		
#Asuncion		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Montevideo		
• Cisco A		
• Cisco B		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
Comments:		

INEO
GDF SUEZ



Level(3)[®]

Two handwritten signatures in blue ink are located at the bottom right of the page. The first signature is a stylized 'A' shape, and the second is a more complex, cursive signature.

8 LIST OF PARTICIPANTS

16-5-2014

ENTERPRISE	NAME	RESPONSABILITY	SIGNATURE
INEO	HEBERTO	Project Manager	
ICAO	Smarrre Pli Onfriv	Administración REDD 6	
ARGENTINA	OMAR GOUARNALUSSE	JEFE DEPARTAMENTO PROYECTO - IECSTA	
Argentina	GUSTAVO A. CHIRI	Jefe departamento Planificación - IECSTA	
PERU	JOSE WIS PAREDES D.	COORD. PROJ. RESAF	
Paraguay	Aldo Omar Pereira	Jefe sección Radiocomunicaciones DINAL	
BRAZIL	FRANCISCO ALMEIDA DA SILVA	JEFE DIVISION DE COORDINACION TECNICA	
ICAO	WIS ALEJOS	Administración REDD 6	

Acceptamos la FAT con los observaciones indicadas en este documento y los anexos correspondientes los cuales debe van ser resueltos

En su totalidad por el contratista y representaran con el consentimiento necesario para la aceptación de los pruebas ensayos (PSAT)

Level 2



INC

2

2

APPENDIX E / APENDICE E

NÚMEROS DE SERIE / SERIAL NUMBER EQUIPMENT

SAEZ	Unit	Qty	S/N	(PN)	Name	License key
Argentina (Ezeiza)						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5K00359			
			39223C5P00379			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3P50183			
Dataprobe RSS	Unit	Qty	S/N	SLOT	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	2	115010100300017	SLOT A		
			115010100300022	SLOT B		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2	193008400000121	A		
			193008400000126	B		
IPC-16-R : Network Control Card - 16	u	2	134006500400086	A		
			134006500400091	B		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3	111020200200960	A		
			111020200200961	A		
			111020200200962	A		
AB-D25-R : D25 A/B Card	u	11	111020000100620	A		
			111020000100621	A		
			111020000100622	A		
			111020000100623	A		
			111020000100624	A		
			111020000100625	A		
			111020000100570	A		
			111020000100571	A		
			111020000100572	A		
			111020000100573	A		
			111020000100574	A		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	10	111020200200990	B		
			111020200200991	B		
			111020200200992	B		
			111020200200993	B		

SAEZ	Unit	Qty	S/N	(PN)	Name	License key
			111020200200904	B		
			111020200200905	B		
			111020200200963	B		
			111020200200964	B		
			111020200200965	B		
			111020200200994	B		
AB-D25-R : D25 A/B Card	u	6	111020000100655	B		
			111020000100654	B		
			111020000100651	B		
			111020000100650	B		
			111020000100653	B		
			111020000100652	B		
FP-AB-RSS : Blank Panel for unused slots	u	4	OK	A		
			OK	A		
			OK	A		
			OK	B		
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	6	SFCZ175092KT		Cisco VSAT 1B	
			SFCZ1750C4TD		Cisco VSAT 1A	
			SFCZ175092L9		Cisco VSAT 2A	
			SFCZ175092LS		Cisco VSAT 2B	
			SFCZ175092M6		Cisco VSAT 3A	
			SFCZ175092LW		Cisco VSAT 3B	
DATA license	u	2	PAK:3901J20E4A4			FCZ1750C4TD_20140413235723383.lic
			PAK:3901J7A6091			FCZ175092KT_20140413235916463.lic
Communication Manager Express or SRST - 25 seat license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427C6S		Cisco VSAT 1A	
			SFOC17427CDM		Cisco VSAT 1B	

SAEZ	Unit	Qty	S/N	(PN)	Name	License Key
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
High Density 8-port Async Cable w/ 8 DB-25 Modem Connectors	u	2				
8-Port Async/Sync Serial HWIC, EIA-232	u	2	SFOC17446GSC SFOC17446GUB		Cisco VSAT 1A Cisco VSAT 1B	
Two-port Voice Interface Card - E and M	u	12	SFOC174781WD SFOC174781VG SFOC174781V3 SFOC174781XU SFOC174781XZ SFOC174781TX SFOC174781TB SFOC174781VK SFOC174781Z2 SFOC174781X5 SFOC1747822J SFOC174781U2		Cisco VSAT 2A Cisco VSAT 2A Cisco VSAT 2B Cisco VSAT 2A Cisco VSAT 2B Cisco VSAT 2B Cisco VSAT 3B Cisco VSAT 3B Cisco VSAT 3B Cisco VSAT 3B Cisco VSAT 3B Cisco VSAT 3B Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 3A Cisco VSAT 1A Cisco VSAT 1B	
Two-Port Voice Interface Card - FXS and DID	u	2	SFOC17440K5S SFOC17440KDX		Cisco VSAT 1A Cisco VSAT 1B	
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	2	SFCZ175092M5 SFCZ175092LM		Cisco GBB 2 Cisco GBB 1	
DATA LICENCE	u	1	PAK:3901J53447B		FCZ175092LM_2014041 4000148473.lic	
Communication Manager Express or SRST - 25 seat license	u	1				
4-Port Async/Sync Serial HWIC	u	2	SFOC17405CPQ SFOC17405CSK		Cisco GBB 1 Cisco GBB 1	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6				
Two-port Voice Interface Card - E and M	u	3	SFOC1747823V SFOC174781UU		Cisco GBB 2 Cisco GBB 2	

SAEZ	Unit	Qty	S/N	(PN)	Name	License key
Two-Port Voice Interface Card - FXS and DID	u	1	SFOC1747822H SFOC17412NKF		Cisco GBB 2 Cisco GBB 2	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
Two (2) IDU 7000 Master 19" NS + PS AC including:	set	1	730288		SAEZ-SKW-MASTER-A	0134F868A18706D27A4D18231665A869199DC582F570FE508F
Special Discount on the second IDU 7000 Master	u	1	730290		SAEZ-SKW-B	01274BE36B2E87995BBCC0A5BA6097392B4703E91E1B7670F7C
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNNMSCD	u	1				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	2				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	2				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062159			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	3				
SAMSUNG screen LCD 27" Samsung SyncMaster S27A550H	u	2	0293H4MDB01251 0293H4MDB01259			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222952			
Eaton Ellipse ECO 1200 FR USB	u	2	6030D37191			
WhatsUp Gold Distributed Central 25 Devices	u	1				
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	2				

SAEZ	Unit	Qty	S/N	(PN)	Name	License key
SQL USER CAL USR CAL	u	1				
IP to serial converter	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022360 TE5022371			
Tx 1+1 switching system	u	1	TE6410584			
Rx 1+1 switching system	u	1	TE6010448			
LNB	u	2	38N139102283 38N139102279			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1	138175			
GPS antenna	u	1	138390			
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	5	PE02001120001999			
			PE02001120001999			
			PE02001120001994			
			PE02001120001998			
			PE02001120001993			
Moxa Nport	u	1	TADAE1011384			
	u	1	15610106/03055			
SIGNALTEKII	u	1	15110504/05278			
	u	1	15610407/02037			
	u	1	15110504/05321			
Multimeter	u	1	102427			
Souris	u	1	1343HS02S559			
Clavier	u	1				

SLLP	Unit	Qty	S/N	(PN)	Name	License Key
Bolivia(La Paz)						
Netgear	Unit	Qty	S/N	(PN)	Name	License Key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5E00362 ✓			
			39223C5U0037F ✓			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3Y501B5 ✓			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License Key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300010 ✓			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000114			
I/PC-16-R : Network Control Card - 16	u	1	134006500400079			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8	111020200200947			
			111020200200948			
			111020200200918			
			111020200200919			
			111020200200920			
			111020200200921			
			111020200200922			
			111020200200923			
AB-D25-R : D25 A/B Card	u	6	111020000100649			
			111020000100585			
			111020000100586			
			111020000100587			
			111020000100588			

SLLP	Unit	Qty	S/N	(PN)	Name	License key
			111020000100589			
Blanck pannel	u	2				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2911 UC Bundle, PVD3M3-16, UC License PAK	u	2	SFCZ175070CW	Cisco VSAT A		
			SFCZ175060M2	Cisco VSAT B		
DATA license	u	2	PAK:3901J378D8F	Cisco VSAT A		FCZ175070CW_201403130618 552080.lic
			PAK:3901J6DA574	Cisco VSAT B		FCZ175060M2_201403130624 000610.lic
4-Port Async/Sync Serial HWIC	u	2	SFOC17401WM1	Cisco VSAT B		
			SFOC17401WLQ	Cisco VSAT A		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8				
Two-port Voice Interface Card - E and M	u	4	SFOC1747825E	Cisco VSAT B		
			SFOC174781TP	Cisco VSAT B		
			SFOC17461BLF	Cisco VSAT A		
			SFOC174781W5	Cisco VSAT A		
EVM-HD-8FXS/DID	u	2	SFOC17442BMJ			
			SFOC17442BLK			
Cisco 2901 UC Bundle, PVD3M3-16, UC License PAK, including:	u	1	SFCZ175092LE	Cisco GBB		
DATA LICENCE	u	1	3901J4F297A	Cisco GBB		FCZ175092LE_201404030859 160080.lic
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CQK	Cisco GBB		

SLLP		Unit	Qty	S/N	(PN)	Name	License key
RS-232 Cable, DCE Female to Smart Serial, 10 Feet		u	2				
Two-port Voice Interface Card - E and M		u	1	SFOC17478214	Cisco GBB		
Two-Port Voice Interface Card - FXS and DID		u	1	SFOC17440JZQ	Cisco GBB		
Network Module Adapter for SM Slot on Ci		u	2	FOC17516V1E FOC17516UYT			
ND Satcom		Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC		u	2	00:40:71:F0:50:C6 ✓		SLLP-SKW-B	0186B0B500C4B524BCFBEE3 BF9E47E7DFB150ECD1ED0F 8C7
				00:40:71:F0:2C:3C ✓		SLLP-SKW-A	01642C6A34EA96D2EF7DBAE DBDCE6D12366E214E6382E1 A46E
License OSPF		u	2				
Lic 8 PSK		u	2				
SKYMNMSCD		u	0				
Lic TCP-A		u	2				
Equipment: Network Management System		Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:		u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP		u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile		u	1	TADDBB1062214			

SLLP	Unit	Qty	S/N	(PN)	Name	License key
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00855			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222939			
Eaton Ellipse ECO 1200 FR USB	u	1				
Eaton Rack	u	1				
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Anitivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022375			
			TE5022376			
Tx 1+1 switching system	u	1	TE6410585			
Rx 1+1 switching system	u	1	TE6010441			
LNB	u	2	36N1384010191			
			36N1384010196			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Hortoge RT CP 09	u	1	138179			
GPS antenna	u	1	138388			
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120002000			
Moxa Nport	u	1				

SLLP	Unit	Qty	S/N	(PN)	Name	License key
SIGNALTEKII	u	1	15610106/03096			
	u	1	15110504/05372			
	u	1	15610407/02143			
	u	1	15110504/05431			
Multimeter	u	1		109537		
Souris	u	1	1343HS02QGv9			
Clavier	u	1				

SBCT	Unit	Qty	S/N	(PN)	Name	License key
Brazil - Curitiba						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5900333	✓		
			39223C5E00338	✓		
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3H50153	✓		
Dataprobe RSS	Unit	Qty	S/N	SLOT	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	2	115010200300014	A		
			115010200300012	B		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2	193008400000118	A		
			193008400000116	B		
IPC-16-R : Network Control Card - 16	u	2	134006500400083	A		
			134006500400081	B		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7	111020200200942	A		
			111020200200943	A		
			111020200200944	A		
			111020200200908	A		
			111020200200909	A		
			111020200200910	A		
			111020200200911	A		
AB-D25-R : D25 A/B Card	u	4	111020000100632	A		
			111020000100633	A		
			111020000100634	A		

SBCT	Unit	Qty	S/N	(PN)	Name	License key
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4	111020000100635	A		
			111020200200954	B		
			111020200200955	B		
			111020200200956	B		
			111020200200945	B		
AB-D25-R : D25 A/B Card	u	2	111020000100636	B		
			111020000100637	B		
FP-AB-RSS : Blank Panel for unused slots	u	15				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	4	SFCZ175092LL		SBCT-CISCO-VSAT-1-A	
			SFCZ175092KQ		SBCT-CISCO-VSAT-1-B	
			SFCZ175092MB		SBCT-CISCO-VSAT-2-A	
			SFCZ175092LJ		SBCT-CISCO-VSAT-2-B	
DATA license	u	2	PAK:3901J7933B2		SBCT-CISCO-VSAT-1-A	FCZ175092LL_2014031306 02582470.lic
			PAK:3901J5BFOC3		SBCT-CISCO-VSAT-1-B	FCZ175092KQ_201403130 557152420.lic
4-Port Async/Sync Serial HWIC	u	2	SFOC173628A0		SBCT-CISCO-VSAT-1-A	
					SBCT-CISCO-VSAT-1-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8			SBCT-CISCO-VSAT-2-A	
Two-port Voice Interface Card - E and M	u	6	SFOC174781WE		SBCT-CISCO-VSAT-2-A	
			SFOC1747822L		SBCT-CISCO-VSAT-2-A	

SBCT	Unit	Qty	S/N	(PN)	Name	License key
			SFOC1747825H		SBCT-CISCO-VSAT-2-A	
			SFOC174781XM		SBCT-CISCO-VSAT-2-B	
			SFOC174781TU		SBCT-CISCO-VSAT-2-B	
			SFOC174781YY		SBCT-CISCO-VSAT-2-B	
Two-port Voice Interface Card - FXS	u	2	SFOC17440KDE		SBCT-CISCO-VSAT-1-A	
			SFOC17440K34		SBCT-CISCO-VSAT-1-B	
Two-port Voice Interface Card - FXO	u	2	SFOC1746838D		SBCT-CISCO-VSAT-1-A	
			SFOC174682M9		SBCT-CISCO-VSAT-1-B	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	2	SFCZ175092M4 ✓		SBCT-CISCO-GBB-1	
			SFCZ175092M1 ✓		SBCT-CISCO-GBB-2	
DATA LICENCE	u	1	PAK:3901J2DC8F7		SBCT-CISCO-GBB-1	FCZ175092M4_201403130 614263580.lic
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CD0		SBCT-CISCO-GBB-1	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Two-port Voice Interface Card - E and M	u	2	SFOC17461BK8		SBCT-CISCO-GBB-1	
			SFOC174781WW		SBCT-CISCO-GBB-1	
Two-port Voice Interface Card - FXS	u	1	SFOC17440KBX		SBCT-CISCO-GBB-2	
Two-port Voice Interface Card - FXO	u	1	SFOC174682C5		SBCT-CISCO-GBB-2	
ND Satcom	Unit	Qty	S/N	(PN)	Nome	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:50:AE ✓		SBCT-SWK-B	014F2C410E325D920E5CF7 3DD8BDD36099BF7E13322 BD8187B

SBCT	Unit	Qty	S/N	(PN)	Name	License key
			00:40:71:F0:50:9C ✓		SBCT-SWK-A	0106B902ED27224EBC63A E716ACT93CAD3D64F1F92 1A11DB49
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP Proliant DL160 Gen8 Base - Server, including:	u	1	CZJ3460YZF ✓			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADDBB1062216			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB01263			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222945 ✓			
Eaton Ellipse ECO 1200 FR USB	u	1				
Eaton Rack	u	1	G030D37190 7063607151			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key

SBCT	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022370 ✓ TE5022374 ✓			
Tx 1+1 switching system	u	1	TE6410586 ✓			
Rx 1+1 switching system	u	1	TE6010436 ✓			
LNB	u	2	38N139102399 38N139102384			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1			138178	
GPS antenna	u	1			138378	
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001991 ✓			
Moxa Nport	u	1	TADAE1011460			
	u	1	15610106/02991 ✓			
	u	1	15110504/05267 ✓			
SIGNALTEKII <i>SOVA</i>	u	1	15610407/02000 ✓			
	u	1	15110504/05188 ✓			
Multimeter	u	1			102202	
Souris	u	1	1343HS02S529			
Clavier	u	1				

SBMIN	Unit	Qty	S/N	(PN)	Name	License key
Brazil Manaus						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5L00368 ✓			
			39223C5J00358 ✓		<i>F. Almeida</i>	
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3X501B4 ✓			
Dataprobe RSS	Unit	Qty	S/N	SLOT	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, Including:	u	2		A		
				B		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2		A		
				B		
IPC-16-R : Network Control Card - 16	u	2		A		
				B		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	9	111020200200912	A		
			111020200200913	A		
			111020200200914	A		
			111020200200915	A		
			111020200200916	A		
			111020200200917	A		
			111020200200930	A		
			111020200200931	A		
			111020200200932	A		
			111020000100580	A		
AB-D25-R : D25 A/B Card	u	6		A		

SBMN	Unit	Qty	S/N	(PN)	Name	License Key
			111020000100581	A		
			111020000100582	A		
			111020000100583	A		
			111020000100584	A		
			111020000100595	A		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4	111020200200936	B		
			111020200200937	B		
			111020200200938	B		
			111020200200939	B		
AB-D25-R : D25 A/B Card	u	3	111020000100600	B		
			111020000100601	B		
			111020000100602	B		
FP-AB-RSS : Blank Panel for unused slots	u	10				
Cisco	Unit	Qty	S/N	(PN)	Name	License Key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	4	SFCZ175092L5 ✓		Cisco - vsat - 1A	
			SFCZ175092LP ✓		Cisco - vsat - 1B	
			SFCZ175092M3 ✓		Cisco - vsat - 2A	
			SFCZ175092LR ✓		Cisco - vsat - 2B	
DATA license	u	2	3901J5B05E4		Cisco - vsat - 2A	FCZ175092M3_201404030 21603254.lic
			3901J3D3C09		Cisco - vsat - 2B	FCZ175092LR_2014040302 1844779.lic
Communication Manager Express or SRST - 25 seat license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOCI7427CCM		Cisco - vsat - 2A	

SBMN	Unit	Qty	S/N	(PN)	Name	License key
			SFOC17427CLW		Cisco - vsat - 2B	
4-Port Async/Sync Serial HWIC	u	2	SFOC17405CR6		Cisco - vsat - 2A	
			SFOC17405CPM		Cisco - vsat - 2B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	12				
Two-port Voice Interface Card - E and M	u	8	SFOC1747826S		Cisco - vsat - 1A	
			SFOC174781TG		Cisco - vsat - 1A	
			SFOC174781ZN		Cisco - vsat - 1A	
			SFOC1747821D		Cisco - vsat - 1A	
			SFOC174781V7		Cisco - vsat - 1B	
			SFOC174781W8		Cisco - vsat - 1B	
			SFOC1747821C		Cisco - vsat - 1B	
			SFOC17478215		Cisco - vsat - 1B	
Two-Port Voice Interface Card - FXS and DID	u	2	SFOC17440K5X		Cisco - vsat - 2A	
			SFOC17440KD5		Cisco - vsat - 2B	
Four-Port Voice Interface Card - FXS and DID	u	2	SFOC1747521B		Cisco - vsat - 2A	
			SFOC1747519Y		Cisco - vsat - 2B	
Cisco 2911 UC Bundle, PVDWM3-16, UC License PAK, including:	u	1	SFCZ175060M0 ✓		Cisco GBB	
DATA LICENCE	u	1	PAK:3901J1FF7D7		Cisco GBB	FCZ175060M0_201404030 24206795.lic
Communication Manager Express or SRST - 25 seat license	u	1				
4-Port Async/Sync Serial HWIC	u	1	SFOC17401WJ3			
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	3				

SBMN	Unit	Qty	S/N	(PN)	Name	License key
Two-port Voice Interface Card - E and M	u	2	SFOC174781X7 SFOC1747825G		Cisco GBB Cisco GBB	
EVM-HD-8FXS/DID	u	1	FOC17442BK8			
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
Two (2) IDU 7000 Master 19" NS + PS AC including:	set	1	730286		Skywan master A	
Special Discount on the second IDU 7000 Master	u	1	75014		Skywan B	
License OSPF	u	2				
Lic 8 PSK	u	2				
SKVNMSCD	u	1				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	4	CZJ3460YZQ CZJ3460YZ4 CZJ3460YZ8		PC central	
			C2J340YZS			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	4				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062109			

SBMN	Unit	Qty	S/N	(PN)	Name	License key
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	8				
KVM extender ATEN	u				PC central	
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	4	0293H4MDB01731		PC central	
			0293H4MDB00873			
			0293H4MDB00875			
			0293H4MDB00706			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222940			
Eaton Ellipse ECO 1200 FR USB	u	4	G030D43400			
			G030D43418			
			G030D37192			
			G030D37194			
WhatsUp Gold Distributed Central 25 Devices	u	1				
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	3				
SQL USER CAL	u	1				

SBMN	Unit	Qty	S/N	(PN)	Name	License key
IP to serial converter	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W	u	2	TE5022364 TE5022368			
Tx 1+1 switching system	u	1	TE6410587			
Rx 1+1 switching system	u	1	TE6010432			
LNB	u	2	38N139102282 38N139102284			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1		138187		
GPS antenna	u	1		138389		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001992			
Moxa Nport	u	1	TADAE1011561			
SIGNALTEKII	u	1	15610106/02798			
	u	1	15110504/04822			
	u	1	15610407/01842			
Multimeter	u	1	15110504/04762			
			109553			
Souris	u	1	1343HS02S589			
Clavier	u	1				

SBRE	Unit	Qty	S/N	(PN)	Name	License key
Brazil - Recife						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5F00371			
			39223C5H00373			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3G50152			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010100300006	✓		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000110			
IPC-16-R : Network Control Card - 16	u	1	134006500400075			
AB-D25-R : D25 A/B Card	u	2	111020000100565			
			111020000100566			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	10	111020200200894			
			111020200200895			
			111020200200896			
			111020200200897			
			111020200200898			
			111020200200899			
			111020200200995			
			111020200200996			
			111020200200997			
			111020200200998			

SBRE	Unit	Qty	S/N	(PN)	Name	License key
FP-AB-RSS : Blank Panel for unused slots	u	4				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	4	SFCZ175092MA		SBRE-CISCO-VSAT-1-A	
			SFCZ175092M7		SBRE-CISCO-VSAT-1-B	
			SFCZ175092M8		SBRE-CISCO-VSAT-2-	
			SFCZ175092LU		SBRE-CISCO-VSAT-2-	
DATA license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CFC		SBRE-CISCO-VSAT-1-A	
			SFOC17427CLM		SBRE-CISCO-VSAT-1-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Two-port Voice Interface Card - E and M	u	8	SFOC1747824X		SBRE-CISCO-VSAT-2-	
			SFOC1747821F		SBRE-CISCO-VSAT-2-	
			SFOC17444ZFV		SBRE-CISCO-VSAT-2-	
			SFOC17461BKD		SBRE-CISCO-VSAT-2-	
			SFOC174781VW		SBRE-CISCO-VSAT-2-	
			SFOC174781VX		SBRE-CISCO-VSAT-2-	
			SFOC174781V1		SBRE-CISCO-VSAT-2-	
			SFOC1747825S		SBRE-CISCO-VSAT-2-	
Two-port Voice Interface Card - FXS	u	2	SFOC17440KB7		SBRE-CISCO-VSAT-1-A	
			SFOC17440KC5		SBRE-CISCO-VSAT-1-B	
Cisco 2911 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175070D1		SBRE-CISCO-GBB	
DATA LICENCE	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CNS		SBRE-CISCO-GBB	

SBRE	Unit	Qty	S/N	(PN)	Name	License key
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1				
Two-port Voice Interface Card - E and M	u	2	SFOC174781Z4 SFOC1747821Z		SBRE-CISCO-GBB SBRE-CISCO-GBB	
EVM-8FXS	u	1	FOC17442BPA		SBRE-CISCO-GBB	
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:C2 00:40:71:F0:52:34	✓ ✓		License key License key
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP Proliant DL160 Gen8 Base - Server, including:	u	1	CZJ3460Y2P			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBBB1062219			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27" Samsung SyncMaster S27A550H	u	1	0293H4MDB00710			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH42222872			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43419			
WhatsUp Gold Distributed Remote 25 Devices	u	1				

SBRE	Unit	Qty	S/N	(PN)	Name	License key
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W	u	2	TE5022342			
			TE5022351			
Tx 1+1 switching system	u	1	TE6410573			
Rx 1+1 switching system	u	1	TE6010435			
LNB	u	2	38N139102290			
			38N139102285			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1		138181		
GPS antenna	u	1		138375		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001997			
Moxa Nport	u	1	TADAE1011409			
	u	1	15610106/02823			
	u	1	15110504/04833			
SIGNALTEKI	u	1	15610407/01762			
	u	1	15110504/04672			
Multimeter	u	1		109543		
Souris	u	1	1343HS02S569			
Clavier	u	1				

SCEL	Unit	Qty	S/N	(PN)	Name	License key
<u>Chile</u>						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5900341	✓		
			39223C5B00351	✓		
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3J50154	✓		
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300015	← →		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000119			
IPC-16-R : Network Control Card - 16	u	1	134006500400084			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8	111020200200876			
			111020200200877			
			111020200200878			
			111020200200879			
			111020200200880			
			111020200200881			
			111020200200999			
			111020200201000			
AB-D25-R : D25 A/B Card	u	4	111020000100550			
			111020000100551			
			111020000100552			
			111020000100553			
Blanck pannel	u	4				

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SCEL	Unit	Qty	S/N	(PN)	Name	License key
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	4	SFCZ175092L6		SCEL-CISCO-VSAT-1-A	
			SFCZ175092KL	✓	SCEL-CISCO-VSAT-1-B	
			SFCZ175092KF	✓		
			SFCZ175092KX	✓		
DATA license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427C67		SCEL-CISCO-VSAT-1-A	
			SFOC17427CCX		SCEL-CISCO-VSAT-1-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
Two-port Voice Interface Card - E and M	u	8	SFOC174781ZX			
			SFOC1747827W			
			SFOC174781XT			
			SFOC1747823H			
			SFOC174781ZY			
			SFOC174781VN			
			SFOC1747825K			
			SFOC174781WL			
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175092KY	8 F		
DATA LICENSE	u	1				
2-Port Async/Sync Serial W/AN Interface Card	u	1	SFOC17427CMW			
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1				

SCEL	Unit	Qty	S/N	(PN)	Name	License Key
Two-port Voice Interface Card - E and M	u	1	SFOC174781Y4 SFOC1747821P			
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:FO:32:2C 00:40:71:FO:32:38			
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP Proliant DL160 Gen8 Base - Server, including:	u	1	CZJ3460Y26			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062134			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min. <i>5000 9.2K</i>	u	2				
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00863			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH42222946			
Eaton Ellipse ECO 1200 FR USB	u	1	6030D43413			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				

SCEL		Unit	Qty	S/N	(PN)	Name	License key
SQL USER CAL USR CAL		u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key	
IBUC 40W	u	2	TE5022354 TE5022358				
Tx 1+1 switching system	u	1	TE6410588				
Rx 1+1 switching system	u	1	TE6010439				
LNB	u	2	36N1384010182 38N139102385				
Handheld Terminal	u	1	700-10544-0001				
Equipment: Ancillaries / Others							
Horloge RT CP 09	u	1		138180	✓		
GPS antenna	u	1		138377			
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001719				
Moxa Nport	u	1	TADBE1011140	✓			
	u	1	15610106/03000				
SIGNALTEKI	u	1	15110504/05317				
	u	1	15610407/02094				
	u	1	15110504/05105				
Multimeter	u	1		102201			
Souris	u	1	1343HS02S4Z9				
Clavier	u	1					

SKED	Unit	Qty	S/N	(PN)	Name	License key
Colombia y Tegu						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5K0034B ✓			
			39223C5N0034E ✓			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3J50182 ✓			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010000300019 ✓			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000123			
IPC-16-R : Network Control Card - 16	u	1	134006500400088			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4	111020200201001			
			111020200201002			
			111020200201003			
			111020200201004			
AB-D25-R : D25 A/B Card	u	11	111020000100656			
			111020000100657			
			111020000100658			
			111020000100659			
			111020000100660			
			111020000100661			
			111020000100662			
			111020000100663			
			111020000100664			

SKED	Unit	Qty	S/N	(PN)	Name	License key
			111020000100665			
			111020000100666			
Blanck pannel	u	1				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVD3M3-16, UC License PAK	u	3	SFCZ175092KE ✓		SKED-CISCO-VSAT-A	
			SFCZ175092KG ✓		SKED-CISCO-VSAT-B	
			SFCZ175092KZ		TEGU	
DATA license	u	2			SKED-CISCO-VSAT-A	FCZ175092KE_2014040909 5336384.ilc
					SKED-CISCO-VSAT-B	FCZ175092KG_2014040909 95533347.ilc
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CMK		SKED-CISCO-VSAT-A	
			SFOC17427CEH		SKED-CISCO-VSAT-B	
4-Port Async/Sync Serial HWIC	u	2	SFOC17405CSC		SKED-CISCO-VSAT-A	
			SFOC17401WLX		SKED-CISCO-VSAT-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	10				
2-port E1	u	2	SFOC17479NZR		SKED-CISCO-VSAT-A	
Four-Port Voice Interface Card - FXS and DID	u	1	SFOC174751CJ		TEGU	
			SFOC17479P03		SKED-CISCO-VSAT-B	
Cisco 2901 UC Bundle, PVD3M3-16, UC License PAK, including:	u	1	SFCZ175092LG ✓		SKED-CISCO-GBB	
DATA LICENCE	u	1			SKED-CISCO-GBB	FCZ175092LG_2014040909 5757064.ilc

SKED	Unit	Qty	S/N	(PN)	Name	License key
4-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17401WM5		SKED-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
1 port E1	u	1	SFOC17451Q5J		SKED-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:2C			
			00:40:71:F0:51:1A			
License OSPF	u	3				
Lic 8 PSK	u	3				
SKYNNMSCD	u	0				
Lic TCP-A	u	3				
Equipment: Network Management System						
HP Proliant DL160 Gen8 Base - Server, including:	u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCL-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062119			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00877			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222941			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43421			

SKED	Unit	Qty	S/N	(PN)	Name	License Key
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License Key
IBUC 80W	u	2	TE50222345 TE50222353			
Tx 1+1 switching system	u	1	TE6410576			
Rx 1+1 switching system	u	1	TE6010434			
LNB	u	2	38N139102379 38N139102392			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1		138177		
GPS antenna	u	1		138379		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001996			
Moxa Nport	u	1				
SIGNALTEKII	u	1	15610106/03077			
	u	1	15110504/05078			
	u	1	15610407/02033			
	u	1	15110504/05327			
Multimeter	u	1		102464		
Souris	u	1	1343HS02S539			
Clavier	u	1				

SEGU	Unit	Qty	S/N	(PN)	Name	License key
Ecuador						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5H00357 ✓			
			39223C5N0035C ✓			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A305017E ✓			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010000300003 ✓	4		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	1930084000000107			
IPC-16-R : Network Control Card - 16	u	1	134006500400072			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4	111020200200985			
			111020200200986			
			111020200200987			
			111020200200988			
AB-D25-R : D25 A/B Card	u	4	111020000100554			
			111020000100567			
			111020000100568			
			111020000100569			
Blanck pannel	u	8				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVD3M-3-16, UC License PAK	u	2	SFCZ175092LZ ✓		SEGU-CISCO-VSAT-1-A	
			SFCZ175092LX ✓		SEGU-CISCO-VSTA-2-B	

SEGU	Unit	Qty	S/N	(PN)	Name	License key
DATA license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CKU		SEGU-CISCO-VSAT-1-A	
			SFOC17427CM2		SEGU-CISCO-VSTA-2-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
1-port E1	u	2	SFOC17451H98		SEGU-CISCO-VSAT-1-A	
			SFOC17451GXC		SEGU-CISCO-VSTA-2-B	
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175072LY		SEGU-CISCO-GBB	
DATA LICENCE	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CPA		SEGU-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
1 port E1	u	1	SFOC17451H8L		SEGU-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:08			
			00:40:71:F0:51:5C			
License OSPF	u	2				
Lic 8 PSK	u	2				
SKY/MSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP Proliant DL160 Gen8 Base - Server, including:	u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				

SEGU	Unit	Qty	S/N	(PN)	Name	License key
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADDB1062133			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00872			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222942			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43417			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Anitivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022369 ✓			
			TE5022372			
Tx 1+1 switching system	u	1	TE6410589 ✓			
Rx 1+1 switching system	u	1	TE6010437			
LNB	u	2	38N139102397			
			38N139102380			
Handheld Terminal	u	1	700-10544-0001 ✓			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1	138172			
GPS antenna	u	1	138383			
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001711 ✓			

SEGU	Unit	Qty	S/N	(PN)	Name	License key
Moxa Nport	u	1				
SIGNALTEKII	u	1	15610106/03115			
	u	1	15110504/05491			
	u	1	15610407/02119			
Multimeter	u	1	15110504/05428			
	u	1		109538		
Souris	u	1	1343HS02S509			
Clavier	u	1				

SOCA		Unit	Qty	S/N	(PN)	Name	License key
French Guyana - Cayenne							
Netgear							
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5H0031F	✓			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3E50150	✓			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key	
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300005	F ←			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	1930084000000109				
IPC-16-R : Network Control Card - 16	u	1	134006500400074				
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7	111020200200888				
			111020200200924				
			111020200200925				
			111020200200926				
			111020200200927				
			111020200200928				
			111020200200929				
AB-D25-R : D25 A/B Card	u	3	111020000100626				
			111020000100627				
			111020000100628				
Blanc pannel	u	6					
Cisco	Unit	Qty	S/N	(PN)	Name	License key	

SOCA		Unit	Qty	S/N	(PN)	Name	License Key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	2	SFCZ175092KP		SOCA-CISCO-VSAT-1-A		
			SFCZ175092LQ		SOCA-CISCO-VSAT-2-B		
DATA license	u	2					
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CED		SOCA-CISCO-VSAT-1-A		
			SFOC17427CC0		SOCA-CISCO-VSAT-2-B		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4					
2-port Voice Interface Card - FXS	u	2	SFOC17440K5A		SOCA-CISCO-VSAT-1-A		
			SFOC17440K4L		SOCA-CISCO-VSAT-2-B		
4-port Voice Interface Card - FXS	u	2	SFOC174752SW		SOCA-CISCO-VSAT-1-A		
			SFOC1747525F		SOCA-CISCO-VSAT-2-B		
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175092M2		SOCA-CISCO-GBB		
DATA LICENCE	u	1					
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CBV		SOCA-CISCO-GBB		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1					
Four-port Voice Interface Card - FXS	u	1	SFOC174752SX		SOCA-CISCO-GBB		
ND Satcom	Unit	Qty	S/N	(PN)	Name	License Key	
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:14				
			00:40:71:F0:51:02				
License OSPF	u	2					
Lic 8 PSK	u	2					
SKYNMSCD	u	0					
Lic TCP-A	u	2					

SOCA		Unit	Qty	S/N	(PN)	Name	License key
Equipment: Network Management System		Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:		u	1	CZJ3450C31 ✓			
Windows Server 2008 R2 Std + 5 CAL OEM HP		u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile		u	1	TADDBB1062209			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min. 500 \$470 9.2k		u	2				
SAMSUNG screen LCD 27"							
Samsung SyncMaster S27A550H		u	1	0293H4MDB00870			
HP LaserJet Pro 400 M401dn /33ppm		u	1	VNH42222950			
Eaton Ellipse ECO 1200 FR USB		u	1	G030D43401 ✓			
WhatsUp Gold Distributed Remote 25 Devices		u	1				
Antivirus		u	1				
SQL USER CAL USR CAL		u	1				
Terrasat		Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W		u	2	TE5022357			
				TE5022361			
Tx 1+1 switching system		u	1	TE6410579			
Rx 1+1 switching system		u	1	TE6010447			
LNB		u	2	38N139102382			
				38N139102389			
Handheld Terminal		u	1	700-10544-0001			
Equipment: Ancillaries / Others							

SOCA		Unit	Qty	S/N	(PN)	Name	License key
Horloge RT CP 09	u	1		138174	✓		
GPS antenna	u	1		138376			
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1		PE02001120001720			
NPORT							
SIGNALTEKII	u	1		15610106/03139			
	u	1		15110504/05429			
	u	1		15610407/02112			
Multimeter	u	1		15110504/05426			
	u	1		168249			
Souris	u	1		1343H502S5A9			
Clavier	u	1					

SYGC	Unit	Qty	S/N	(PN)	Name	License key
Guyana - Georgetown						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5R0037A ✓		SYGC-SWT-A	
			39223C5E00370 ✓		SYGC-SWT-B	
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3V501B2 ✓			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, Including:	u	1	115010100300007			
K16-RPC-W/RI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000111			
IPC-16-R : Network Control Card - 16	u	1	134006500400076			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	6	111020200200940			
			111020200200941			
			111020200200900			
			111020200200901			
			111020200200902			
			111020200200903			
AB-D25-R : D25 A/B Card	u	7	111020000100603			
			111020000100604			
			111020000100598			
			111020000100597			
			111020000100596			
			111020000100560			
			111020000100561			
Blank pannel	u	3				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	2	FCZ175092LV ✓		SYGC-CISCO-VSAT-1-A	
			FCZ175092MO		SYGC-CISCO-VSAT-1-B	
DATA license	u	2	PAK:3901J7B7593		SYGC-CISCO-VSAT-1-C	FCZ175092LV_20140409101013084.lic
			PAK:3901J131B08		SYGC-CISCO-VSAT-1-D	FCZ175092MO_20140409101149085.lic
4-Port Async/Sync Serial HWIC	u	2	SFOC17405CRP		SYGC-CISCO-VSAT-1-E	
			SFOC173628C3		SYGC-CISCO-VSAT-2-	

SYGC	Unit	Qty	S/N	(PN)	Name	License key
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	6				
Two-port Voice Interface Card - FXS	u	2	SFOC17440K67		SY6C-CTISCO-VSAT-1-	
			SFOC17440KAP		SY6C-CTISCO-VSAT-2-	
			SFOC17475236		SY6C-CTISCO-VSAT-1-	
			SFOC17475236		SY6C-CTISCO-VSAT-1-	
			SFOC17475236		SY6C-CTISCO-VSAT-2-	
Four-port Voice Interface Card - FXS	u	2	SFOC17475236		SY6C-CTISCO-VSAT-2-	
			SFOC17475236		SY6C-CTISCO-VSAT-1-	
			SFOC17475236		SY6C-CTISCO-VSAT-1-	
			SFOC17475236		SY6C-CTISCO-VSAT-2-	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	1	SFCZ175092LT		SY6C-CTISCO-6BB	
DATA LICENSE	u	1	PAK:3901J32E68A		SY6C-CTISCO-6BB	
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CDE		SY6C-CTISCO-6BB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Four-port Voice Interface Card - FXS	u	1	SFOC17475236			
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:FO:32:86	IDU1070B Type R-AC-NS		0170E57F38D2479CE64B0C089C999609D68BD60F14DCD0D70B7
			00:40:71:FO:32:68	IDU1070B Type R-AC-NS		01265E5515F24862D0C83DD74A7067B50F534B9ADECF0FF42
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNSMCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System			S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1	CZJ34500JV			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADB81062120			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H44MDB00869			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222949			
Eaton Ellipse ECO 1200 FR USB	u	1	6030D43227			

SYGC	Unit	Qty	S/N	(PN)	Name	License key
Eaton Rack	u	1	730-80344-00P			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Anitivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022365 TE5022367			
Tx 1+1 switching system	u	1	TE6410581			
Rx 1+1 switching system	u	1	TE6010445			
LNB	u	2	38N139102391 38N139102378			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others			S/N	(PN)	Name	License key
Horloge RT CP 09	u	1		138183		
GPS antenna	u	1		138387		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001712			
NPORT						
SIGNALTEKI	u	1	15610106/03057			
	u	1	15110504/05139			
	u	1	15610407/01954			
Multimeter	u	1	15110504/05337			
	u	1		108669		
Souris	u	1	1343HS025519			
Clavier	u	1				

SGAS	Unit	Qty	S/N	(PN)	Name	License Key
paraguay						
Netgear	Unit	Qty	S/N	(PN)	Name	License Key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5F00347	✓		
			39223C5D00345	✓		
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3L50156	✓		
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License Key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010100300023	F		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000127			
IPC-16-R : Network Control Card - 16	u	1	134006500400092			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8	111020200200966			
			111020200200967			
			111020200200968			
			111020200200969			
			111020200200970			
			111020200200971			
			111020200200972			
			111020200200973			
AB-D25-R : D25 A/B Card	u	5	111020000100610			
			111020000100611			
			111020000100612			
			111020000100613			
			111020000100614			

SGAS	Unit	Qty	S/N	(PN)	Name	License Key
Blanck pannel	u	3	4			
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	2	SFCZ175092KR		SGAS-CISCO-VSAT-1-A	
			SFCZ175092L2		SGAS-CISCO-VSAT-2-B	
DATA license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CH2		SGAS-CISCO-VSAT-1-A	
			SFOC17427CCT		SGAS-CISCO-VSAT-2-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
Four-port Voice Interface Card - FXS	u	2	SFOC174752R2		SGAS-CISCO-VSAT-1-A	
			SFOC174752YC		SGAS-CISCO-VSAT-2-B	
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175092KK	✓	SGAS-CISCO-GBB	
DATA LICENCE	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CDR		SGAS-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Two-port Voice Interface Card - FXS	u	1	SFOC17440KCS		SGAS-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:50:E4	✓		
			00:40:71:F0:51:32	✓		
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				

SGAS		Unit	Qty	S/N	(PN)	Name	License key
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key	
HP ProLiant DL160 Gen8 Base - Server, including:	u	1	CZJ330005C ✓				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1					
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062173				
HP Hard Disk 300Go 3.5 SAS 15000 tours/min. <i>500 SPTs 7.2K</i>	u	2					
SAMSUNG screen LCD 27"							
Samsung SyncMaster S27A550H	u	1	0293H4MDB01256				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH6635521				
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43411 ✓				
WhatsUp Gold Distributed Remote 25 Devices	u	1					
Antivirus	u	1					
SQL USER CAL USR CAL	u	1					
Terrasat	Unit	Qty	S/N	(PN)	Name	License key	
IBUC 40W	u	2	TE5022363				
			TE5022362				
Tx 1+1 switching system	u	1	TE6410580				
Rx 1+1 switching system	u	1	TE6010433				
LNB	u	2	38N139102387				
			38N139102376				
Handheld Terminal	u	1	700-10544-0001				
Wave guide coax	u	1	570-10514-0001				

SGAS	Unit	Qty	S/N	(PN)	Name	License key
			570-10514-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1		138186 ✓		
GPS antenna	u	1		138385		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001713			
NPORT						
	u	1	15610106/03127			
SIGNALTEKII	u	1	15110504/05377			
	u	1	15610407/02139			
	u	1	15110504/05437			
Multimeter	u	1		168238		
Souris	u	1	1343HS02S5H9			
Clavier	u	1				

SPIM	Unit	Qty	S/N	(PN)	Name	License key
peru						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5C00360		SPIW-SWT-A	
			39223C5S0035F		SPIW-SWT-B	
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3K50155		SPIW-VPN	
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300016	A F		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000120	A		
IPC-16-R : Network Control Card - 16	u	1	134006500400085	A		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3	111020200200957	A		
			111020200200958	A		
			111020200200959	A		
AB-D25-R : D25 A/B Card	u	9	111020000100615	A		
			111020000100616	A		
			111020000100617	A		
			111020000100618	A		
			111020000100619	A		
			111020000100562	A		
			111020000100563	A		
			111020000100564	A		
			111020000100599	A		
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300021	B F		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000125	B		
IPC-16-R : Network Control Card - 16	u	1	134006500400090	B		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	1	111020200200984	B		
AB-D25-R : D25 A/B Card	u	5	111020000100644	B		
			111020000100645	B		

SPIM	Unit	Qty	S/N	(PN)	Name	License key
			111020000100646 B			
			111020000100647 B			
			111020000100648 B			
Blank pannel	u	14				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVD3M3-16, UC License PAK	u	2	SFCZ175092KU		SPTM-CISCO-VSAT-1-A	
			SFCZ175092L3		SPTM-CISCO-VSAT-1-B	
DATA license	u	2	PAK:3901J5C330F		SPTM-CISCO-VSAT-1-A	FCZ175092KU_20140409100040067.lic
			PAK:3901JCDFE9C		SPTM-CISCO-VSAT-1-B	FCZ175092L3_20140409100218355.lic
8port AIS	u	2	SFOCI7446GUP		SPTM-CISCO-VSAT-1-A	
			SFOCI7446GUP		SPTM-CISCO-VSAT-2-B	
Cable	u	2	SFOCI7451GSA		SPTM-CISCO-VSAT-1-A	
1 port E1	u	2	SFOCI7351Z7N		SPTM-CISCO-VSAT-2-B	
Cisco 2901 UC Bundle, PVD3M3-16, UC License PAK, including:	u	1	SFCZ175092L0		SPTM-CISCO-GBB	
DATA LICENSE	u	1	PAK:3901J7CF4F4		SPTM-CISCO-GBB	FCZ175092L0_20140409100403357.lic
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOCI7427CGP		SPTM-CISCO-GBB	
4-Port Async/Sync Serial WAN Interface Card	u	1	SFOCI7405CPP		SPTM-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	5				
1 port E1	u	1	SFOCI7451GTD		SPTM-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:32:4A			017A9E5A2C06775C75E43DF7FB81AC66AB3BF636B184EFA3D1E
			00:40:71:F0:51:D4			01A3C26672E6ED77D31D0E95A1B504653413F6BF0116A1B1CA
License OSPF	u	2				
Lic 8 PSK	u	2				
SKVNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1	CZJ34500JT			

SPIM	Unit	Qty	S/N	(PN)	Name	License key
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADB81062217			
HP Hard Disk 800Go 3.5 SAS 15000- 500 5470 92E tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00868			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222948			
Eaton Elipse ECO 1200 FR USB	u	1	G030D43415	✓		
Eaton Rack	u	1	730-80344-00P			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
IP to serial	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022343			
			TE5022346			
Tx 1+1 switching system	u	1	TE6410575	✓		
Rx 1+1 switching system	u	1	TE6010442	✓		
LNB	u	2	38N139102390	✓		
			38N139102388	✓		
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others	Unit	Qty	S/N	(PN)	Name	License key
Horloge RT CP 09	u	1		138171 ✓		
GPS antenna	u	1		138171		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001716	✓		
NPORT	u	1	TADAE1011417			
	u	1	15610106/03111	✓		
	u	1	15110504/05417			
SIGNALTEKII	u	1	15610407/02134	✓		

SPIM	Unit	Qty	S/N	(PN)	Name	License key
	u	1	15110504/05537			
Multimeter	u	1		108633		
Sours	u	1	1343HS02S5T9			
Clavier	u	1				

SMPM	Unit	Qty	S/N	(PN)	Name	License key
Suriname						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5D00361			
			39223C5P0035D			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3M50181			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300018			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000122			
IPC-16-R : Network Control Card - 16	u	1	134006500400087			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8	111020200200948			
			111020200200949			
			111020200200950			
			111020200200951			
			111020200200952			
			111020200200953			
			111020200200974			
			111020200200975			
AB-D25-R : D25 A/B Card	u	5	111020000100545			
			111020000100546			
			111020000100547			
			111020000100548			
			111020000100549			

SMPM		Unit	Qty	S/N	(PN)	Name	License key
Blanck pannel	u	3					
Cisco	Unit	Qty	S/N	(PN)	Name	License key	
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	2	SFCZ175092KY		SMPM-CISCO-VSAT-1-A		
			SFCZ175092KW		SMPM-CISCO-VSAT-2-B		
DATA license	u	2					
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CC1		SMPM-CISCO-VSAT-1-A		
			SFOC17427CEA		SMPM-CISCO-VSAT-2-B		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4					
Four-port Voice Interface Card - FXS	u	2	SFOC174752R8		SMPM-CISCO-VSAT-1-A		
			SFOC1747524K		SMPM-CISCO-VSAT-2-B		
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175092L		SMPM-CISCO-GBB		
DATA LICENCE	u	1					
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CCL		SMPM-CISCO-GBB		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2					
Two-port Voice Interface Card - FXS	u	1	SFOC17440K2L		SMPM-CISCO-GBB		
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key	
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:50:FC				
			00:40:71:F0:51:26				
License OSPF	u	2					
Lic 8 PSK	u	2					
SKYNMSCD	u	0					
Lic TCP-A	u	2					

Equipment: Network Management System	SMPM	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:		u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP		u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile		u	1	TADBBI062117			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.		u	2				
SAMSUNG screen LCD 27"		u	1	0293H4MDB01230			
Samsung SyncMaster S27A550H		u	1	6030D37160			
HP LaserJet Pro 400 M401dn /33ppm		u	1	VN44222947			
Eaton Ellipse ECO 1200 FR USB		u	1				
WhatsUp Gold Distributed Remote 25 Devices		u	1				
Antivirus		u	1				
SQL USER CAL USR CAL		u	1				
Terrasat		Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W		u	2	TE50223359			
Tx 1+1 switching system		u	1	TE50223366			
Rx 1+1 switching system		u	1	TE6410582			
LNB		u	2	TE6010443			
Handheld Terminal		u	1	38N139102395			
Handheld Terminal		u	1	38N139102396			
Handheld Terminal		u	1	700-10544-0001			
Equipment: Ancillaries / Others							

SMPPM		Unit	Qty	S/N	(PN)	Name	License key
Horloge RT CP 09		u	1		138173		
GPS antenna		u	1		138382		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)		u	1	PE02001120001718			
NPORT							
SIGNALTEKII		u	1	15610106/02961			
		u	1	15110504/05204			
		u	1	15610407/02019			
Multimeter		u	1	15110504/05207			
		u	1		108617		
Souris		u	1	1343HS025569			
Clavier		u	1				

TTZP	Unit	Qty	S/N	(PN)	Name	License Key
<u>Trinidad</u>						
Netgear	Unit	Qty	S/N	(PN)	Name	License Key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5L0035A			
			39223C5S0036D			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3L50180			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License Key
RSS-16 : RSS 16 Slot 4U Chassis, including: K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	115010000300002			
IPC-16-R : Network Control Card - 16	u	1	134006500400071			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	7	111020200200978			
			111020200200979			
			111020200200980			
			111020200200981			
			111020200200982			
			111020200200983			
			111020200200989			
AB-D25-R : D25 A/B Card	u	3	111020000100590			
			111020000100591			
			111020000100592			
Blanck pannel	u	6				
Cisco	Unit	Qty	S/N	(PN)	Name	License Key
Cisco 2901 UC Bundle, PVD/M3-16, UC License PAK	u	2	SFCZ175092KS		TTZP-CISCO-VSAT-1-A	
			SFCZ175092L4		TTZP-CISCO-VSAT-1-B	

TTZP	Unit	Qty	S/N	(PN)	Name	License key
DATA license	u	2			TTZP-CISCO-VSAT-1-A	FCZ175092KS_20140409083436968.lic
					TTZP-CISCO-VSAT-1-B	FCZ175092L4_20140409084609785.lic
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CQL		TTZP-CISCO-VSAT-1-A	
			SFOC17427CBT		TTZP-CISCO-VSAT-2-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
Two-port Voice Interface Card - FXS	u	2	SFOC17440KBW		TTZP-CISCO-VSAT-1-A	
			SFOC17440KB8		TTZP-CISCO-VSAT-2-B	
Four-port Voice Interface Card - FXS	u	2	SFOC1747529F		TTZP-CISCO-VSAT-1-A	
			SFOC1747523E		TTZP-CISCO-VSAT-2-B	
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	6FCZ175092LH		TTZP-CISCO-GBB	
DATA LICENCE	u	1			TTZP-CISCO-GBB	FCZ175092LH_20140409090553959.lic
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CNZ		TTZP-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1				
4-port Voice Interface Card - FXS	u	1	SFOC174751L0		TTZP-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:0E		A	
			00:40:71:F0:51:20		B	
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				

TTZP	Unit	Qty	S/N	(PN)	Name	License key
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADB81062129			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00704			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222943			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43414			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022349 TE5022356			
Tx 1+1 switching system	u	1	TE6410578			
Rx 1+1 switching system	u	1	TE6010438			
LNB	u	2	38N139102383 38N139102398			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1		138184		
GPS antenna	u	1		138391		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001714			
NPORT						
	u	1	15610106/02971			
	u	1	15110504/05195			

SIGNAL TERKII

TTZP		Unit	Qty	S/N	(PN)	Name	License key
MULTIMETER		U	1	15610407/02060			
		U	1	15110504/05210			
Multimeter		U	1		168350		
Souris		U	1	1343H50255D9			
Clavier		U	1				

SUMU	Unit	Qty	S/N	(PN)	Name	License key
Uruguay						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5M00377			
			39223C5U0037D			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3L5017D			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010P00300020	←		
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000124			
IPC-16-R : Network Control Card - 16	u	1	134006500400089			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	8	111020200200870			
			111020200200871			
			111020200200872			
			111020200200873			
			111020200200874			
			111020200200875			
			111020200200976			
			111020200200977			
AB-D25-R : D25 A/B Card	u	6	111020000100638			
			111020000100639			
			111020000100640			
			111020000100641			
			111020000100642			

SUMU	Unit	Qty	S/N	(PN)	Name	License key
			111020000100631			
Blanck pannel	u	3				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2911 UC Bundle, PVDMM3-16, UC License PAK	u	2	SFCZ175060M5		SUMU-CISCO-VSAT-1-A	
			SFCZ175070CZ		SUMU-CISCO-VSAT-2-	
DATA license	u	2				
4-Port Async/Sync Serial HWIC	u	2	SFOC17401WL3		SUMU-CISCO-VSAT-1-A	
			SFOC17401WLB		SUMU-CISCO-VSAT-2-	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8				
Four-port Voice Interface Card - FXS	u	2	SFOC174752YD		SUMU-CISCO-VSAT-1-A	
			SFOC174752ST		SUMU-CISCO-VSAT-1-B	
EVM 3FXS / 4 FXO	u	2	SFOC17443E0L		SUMU-CISCO-VSAT-1-A	
			SFOC17443E0C		SUMU-CISCO-VSAT-1-B	
8FXS			FOC180475A4		SUMU-CISCO-VSAT-1-A	
			FOC17442BP8		SUMU-CISCO-VSAT-1-B	
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK, including:	u	1	SFCZ175092L1		SUMU-CISCO-GBB	
DATA LICENCE	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CF6		SUMU-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Two-port Voice Interface Card - FXO	u	1	SFOC17412NKE		SUMU-CISCO-GBB	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:FO:52:0A			

SUMU	Unit	Qty	S/N	(PN)	Name	License key
License OSPF	u	2	00:40:71:F0:51:56			
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062121			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00879			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222953			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43416			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Anitivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022373			
			TE5022377			
			TE6410583			
Tx 1+1 switching system	u	1				

SUMU	Unit	Qty	S/N	(PN)	Name	License key
Rx 1+1 switching system	u	1	TE6010446			
LNB	u	2	38N139102394 38N139102393			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1				
GPS antenna	u	1				
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001715			
NPORT						
SIGNALTEKII	u	1	15610106/02988			
	u	1	15110504/05353			
	u	1	15610407/01969			
	u	1	15110504/05253			
Multimeter	u	1				
Souris	u	1	1343HS0255B9			
Clavier	u	1				

SVMI	Unit	Qty	S/N	(PN)	Name	License key
Venezuela						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5H00365 ✓		SVMI-SWT-A	
			39223C5G00364 ✓		SVMI-SWT-B	
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A325018E		SVMI-VPN	
Dataprobe RSS	Unit	Qty	S/N	SLOT	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010B00300008	A		
K16-RPC-WR1, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000112	A		
IPC-16-R : Network Control Card - 16	u	1	134006500400077	A		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2	111020200200906	A		
			111020200200907	A		
AB-D25-R : D25 A/B Card	u	10	111020000100575	A		
			111020000100576	A		
			111020000100577	A		
			111020000100578	A		
			111020000100579	A		
			111020000100605	A		
			111020000100606	A		
			111020000100607	A		
			111020000100608	A		
			111020000100609	A		
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300004	B		
K16-RPC-WR1, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000108	B		
IPC-16-R : Network Control Card - 16	u	1	134006500400073	B		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	9	111020200200882	B		
			111020200200883	B		
			111020200200884	B		

SVMI	Unit	Qty	S/N	(PN)	Name	License key
			111020200200885	B		
			111020200200886	B		
			111020200200887	B		
			111020200200933	B		
			111020200200934	B		
			111020200200935	B		
AB-D25-R : D25 A/B Card	u	5	111020000100555	B		
			111020000100556	B		
			111020000100557	B		
			111020000100558	B		
			111020000100559	B		
FP-AB-RSS : Blank Panel for unused slots	u	6				
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	4	SFGZ175092KV		SVMI-CISCO-VSAT-1-A	
			SFGZ175092KH		SVMI-CISCO-VSAT-2-A	
			SFGZ175092KJ		SVMI-CISCO-VSAT-1-B	
			SFGZ175092KN		SVMI-CISCO-VSAT-2-B	
DATA license	u	2				
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CPY		SVMI-CISCO-VSAT-1-A	
			SFOC17427CH4		SVMI-CISCO-VSAT-1-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
8-Port Async	u	2	SFOC174673XU		SVMI-CISCO-VSAT-1-A	
			SFOC17432HRL		SVMI-CISCO-VSAT-1-B	
2-port Voice Interface Card - / M	E	8	SFOC17461BJT		SVMI-CISCO-VSAT-2-A	
			SFOC174781UE		SVMI-CISCO-VSAT-2-A	
			SFOC174781WT		SVMI-CISCO-VSAT-2-A	
			SFOC174781WV		SVMI-CISCO-VSAT-2-A	
			SFOC1747825R		SVMI-CISCO-VSAT-2-B	
			SFOC1747820X		SVMI-CISCO-VSAT-2-B	
			SFOC17478231		SVMI-CISCO-VSAT-2-B	
			SFOC174781U0		SVMI-CISCO-VSAT-2-B	
			SFOC174751EH		SVMI-CISCO-VSAT-1-A	
4 PORT FXS	u	2				

SVMI	Unit	Qty	S/N	(PN)	Name	License key
4-port Voice Interface Card - FXO	u	2	SFOC17463S33		SVMI-CISCO-VSAT-1-B	
			SFOC17463S33		SVMI-CISCO-VSAT-1-A	
			SFOC17468336		SVMI-CISCO-VSAT-1-B	
Cisco 2901 UC Bundle, P/VDM3-16, UC License PAK, including:	u	2	SFCZ175092LD ✓		SVMI-CISCO-GBB-1	
			SFCZ175092LC ✓		SVMI-CISCO-GBB-2	
DATA LICENCE	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CJ3		SVMI-CISCO-GBB-1	
4-Port Async/Sync Serial WAN Interface Card	u	1	SFOC173628B5		SVMI-CISCO-GBB-1	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	5				
2-port Voice Interface Card - E/M	u	2	SFOC174781XD		SVMI-CISCO-GBB-2	
			SFOC1747827X		SVMI-CISCO-GBB-2	
Two-port Voice Interface Card FXS	u	1	SFOC17440KD ✓		SVMI-CISCO-GBB-2	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:52:3A ✓			015C49D9C0A5629B8656B7C7ED681FCEC154D0E035A7B2F45
			00:40:71:F0:52:22			011CA48B38A825E8DE00FAAE4E56E8589673A19B32B532E8EB
License OSPF	u	2				
Lic 8 PSK	u	2				
SKYNMSCD	u	0				
Lic TCP-A	u	2				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1	CZT34500K5 ✓			
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062215			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB01257			
Samsung SynclMaster S27A550H						

SVMII	Unit	Qty	S/N	(PN)	Name	License key
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222951			
Eaton Ellipse ECO 1200 FR USB	u	1	6030D43225			
Eaton Rack	u	1	730-80344-00P			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Antivirus	u	1				
SQL USER CAL USR CAL	u	1				
IP to serial	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W	u	2	TE5022339 ✓			
			TE5022348 ✓			
			TE6410577 ✓			
Tx 1+1 switching system	u	1	TE6010444 ✓			
Rx 1+1 switching system	u	1	38N139102377			
LNB	u	2	38N139102400			
			700-10544-0001			
Handheld Terminal	u	1				
Equipment: Ancillaries / Others	Unit	Qty	S/N	(PN)	Name	License key
Horloge RT CP 09	u	1		138182		
GPS antenna	u	1		138386		
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001717			
NPORT	u	1	TADAE1011418			
	u	1	15610106/02974			
SIGNALTEKII	u	1	15110504/05116			
	u	1	15610407/01958			
	u	1	15110504/05285			
Multimeter	u	1		102442		
Souris	u	1	1343HS02S599			
Clavier	u	1				

Spare	Unit	Qty	S/N	(PN)	Name	License key
Spare						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5N00378			
			39223C5U0036F			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3W501B3			
Dataprobe RSS	Unit	Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	2	115010200300024			
			115010200300011			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	2	193008400000128			
			193008400000115			
IPC-16-R : Network Control Card - 16	u	2	134006500400093			
			134006500400080			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	3	111020200200889			
			111020200200890			
			111020200200891			
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	2	111020200200892			
			111020200200893			
AB-D25-R : D25 A/B Card	u	3	111020000100629			
			111020000100630			
AB-D25-R : D25 A/B Card	u	4	111020000100593			
			111020000100594			

	Unit	Qty	S/N	(PN)	Name	License key
Spare			111020000100643			
			111020000100667			
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDMM3-16, UC License PAK	u	3	SFCZ175092L8			
			SFCZ175092KM			
			SFCZ175092LK			
Cisco 2911 UC Bundle, PVDMM3-16, UC License PAK	u	1				
DATA license	u	3				
SRST-25	u	1				
2-Port Async/Sync Serial WAN Interface Card	u	4	SFOC17427CQP			
			SFOC17427CCS			
4-Port Async/Sync Serial HWIC	u	2	SFOC17506CG2			
			SFOC17405CTK			
8-Port Async HWIC	u	1	SFOC174673WU			
8-Port Async/Sync Serial HWIC, EIA-232	u	1	SFOC17446GYD			
Two-port Voice Interface Card - E and M	u	10	SFOC1747821Q			
			SFOC174781UF			
			SFOC18073ZCY			
			SFOC18073ZJL			
			SFOC1747823M			

	Unit	Qty	S/N	(PN)	Name	License key
Spare			SFOC17461BL9			
Two-Port Voice Interface Card - FXS and DID	u	2				
Four-Port Voice Interface Card - FXS and DID	u	1	SFOC1747523F			
			SFOC174751RP			
Four-port Voice Interface Card - FXO	u	1	SFOC17463S0V			
1 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1	SFOC17451Q66			
2 Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1	u	1	SFOC17479P39			
EVM-HD-8FXS/DID	u	1	SFOC180475BH			
EM-HDA-3FXS/4FXO	u	1	SFOC17443E08			
RS 232 cab	u	17				
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 7000 master	u	1				
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:50:F0			
			00:40:71:F0:50:F6			
License OSPF	u	3				
Lic 8 PSK	u	3				
SkyNMSCD	u	0				
Lic TCP-A	u	3				
Equipment: Network Management System	Unit	Qty	S/N	(PN)	Name	License key

Spare	Unit	Qty	S/N	(PN)	Name	License key
HP ProLiant DL160 Gen8 Base - Server, including:	u	1				
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062386			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00709			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222944			
Eaton Elipse ECO 1200 FR USB	u	1	G030D43420			
Antivirus	u	1				
Ip to seria	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 40W	u	2	TE5022340			
			TE5022352			
IBUC 80W	u	1	TE5022355			
Tx 1+1 switching system	u	1	TE6410574			
Rx 1+1 switching system	u	1	TE6010431			
LNB	u	2	38N139102386			
			38N139102381			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						
Horloge RT CP 09	u	1			138176	
GPS antenna	u	1			138384	

<u>Spare</u>	Unit	Qty	S/N	(PN)	Name	License key
IP telephone set to implement the teleconference in the REDDIG II network (including installation in the technical room and configuration)	u	1	PE02001120001826			
NPORT	u	1	TADAE1011113			
SIGNALTEKII	u	0				
	u	0				
	u	0				
	u	0				
Multimeter	u	0				
Souris	u	1				
Clavier	u	1				

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ACTUALIZACIÓN NOMBRE Y DIRECCIÓN PARA ENVÍO DE EQUIPOS Y REQUERIMIENTOS REQUERIDOS PARA LOS TRÁMITES ADUANEROS

ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
<p>1. Argentina</p> <p>Datos ratificados mediante Nota ANAC N° 336/2014 del 14/5/14</p>	<p>FUERZA AEREA ARGENTINA</p>	<p>PEDRO ZANNI 250 C1104AXJ CIUDAD AUTONOMA DE BUENOS AIRES ARGENTINA CONTRATO OACI 22501200</p>	<p>Para minimizar los tiempos de desaduanaje, necesitamos (en la secuencia temporal indicada):</p> <p>a) Lo antes posible, <i>los números de parte</i>, de acuerdo a como se desglosará el embarque.</p> <p>b) Antes del embarque efectivo, <i>por email</i>, los documentos requeridos en 9.9 del contrato, y con el ship to indicado más abajo. Asimismo, deberá indicar los datos de la compañía local donde retirar la guía de carga aérea original.</p> <p>c) Al embarque definitivo, la documentación requerida en el párrafo 9.9 del contrato, donde el "ship to" debe decir: FUERZA AEREA ARGENTINA PEDRO ZANNI 250 C1104AXJ CIUDAD AUTONOMA DE BUENOS AIRES ARGENTINA CONTRATO OACI 2250120</p>
<p>2. Bolivia</p>	<p>Cnl DAEN Raul Velasco Ramos DIRECTOR GENERAL EJECUTIVO AASANA</p>	<p>Calle Reyes Oriz N° 74 Esp. Federico Suazo Edif. FEDEPETROL La Paz -Bolivia</p>	<p>1) La documentación de la REDDIG II se debe remitir a nombre de: Cnl DAEN Raul Velasco Ramos DIRECTOR GENERAL EJECUTIVO AASANA Calle Reyes Oriz N° 74 Esp. Federico Suazo Edif. FEDEPETROL La Paz –Bolivia</p> <p>2) El equipamiento se debe enviar a: ADUANA LA PAZ de AEROPUERTO INTERNACIONAL EL ALTO.</p> <p>3) Para los tramites de desaduanización requerimos factura comercial (original) y el Packing list.</p>
<p>3. Brasil</p> <p>Solicitud de enmienda mediante MSJ N°</p>	<p>Comando da Aeronáutica - DECEA. Departamento de Controle do Espaço Aéreo</p>	<p>Av. General Justo 160, Centro, Rio de Janeiro, Brasil, CEP 20021-130 e CNPJ 00.394.429/0048-74.</p>	<p>Invoice, Packing List e Conhecimento de Embarque (AWB ou BL).</p> <p>1) Estes documentos deverão ser encaminhados para nossa Análise prévia (CISCEA), e somente após a</p>

ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
<p>097/CERNAI/2014</p> <p>Ítem 6) corregido</p>			<p>nossa autorização, o embarque deve ocorrer. (IMPORTANTE)</p> <p>2) Na Invoice (Fatura), deverão conter os seguintes dados:</p> <ul style="list-style-type: none"> - Nome e endereço do Exportador - Nome e endereço do Fabricante <p>Nome e endereço do Importador: Comando da Aeronáutica - DECEA. Departamento de Controle do Espaço Aéreo, Av. General Justo 160, Centro, Rio de Janeiro, Brasil, CEP 20021-130 e CNPJ 00.394.429/0048-74. (IMPORTANTE)</p> <ul style="list-style-type: none"> - N° do Contrato - Incoterm - Dados dos equipamentos: Descrição (ver OBS abaixo), Part Number, Quantidade, Serial Number (se houver), valor unitário e total, peso líquido e classificação tarifária do país exportador. - Dados de embalagem: Tipo, quantidade e dimensões das caixas e peso bruto total. - Aeroporto ou Porto de Destino - Condições de pagamento. <p>OBS: Deverá ser listado o fornecimento como definido em contrato e seu respectivo preço. Ou lista-se como fornecimento maior (o todo) ou lista-se como sobressalentes. Exemplos de fornecimento maior: Radar de Uso Aeronáutico, Estação de Telecomunicação, Sistema de Inspeção em Vôo, Sistema de Comunicação Terra/Ar, Nova Rede Regional de Telecomunicação Aeronáutica (REDDIG II), etc. (IMPORTANTE)</p> <p>3) Packing List</p> <ul style="list-style-type: none"> - É o Romaneio da carga. Deverá conter todos os componentes do fornecimento maior, com suas respectivas descrições, PN, Qtde, SN e o n° da caixa onde estão embalados. - No caso de uma Invoice com sobressalentes, o Packing List deverá repetir todos os itens, e identificar em que caixa se encontram.

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ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
			<p>4) Primeiramente, o exportador deverá encaminhar a Invoice e Packing List para análise. Somente depois de aprovados, deverá encaminhar o AWB ou BL. (MPORTANTE)</p> <p>5) Conhecimento de Embarque (AWB - Air Way Bill ou BL - Bill of Lading)</p> <p>- Emitido pela cia aérea ou marítima ou pelo agente de carga. Contém os dados do embarque (migrados da Invoice/Packing List).</p> <p>6) Despesas na Importação</p> <p>Taxa de Utilização do SISCOMEX (valor mínimo de R\$ 214,50 a ser paga via SIAFI pelo DECEA quando do Registro da Declaração de Importação)</p> <p>Taxas administrativas para liberação dos conhecimentos de embarque originais no Brasil (INEO)</p> <p>Quando Importação Marítima, armazenagem no Porto (INEO)</p> <p>ítem 6 – las tasas administrativas para liberación de los conocimientos de embarque son de responsabilidad de la Administración brasileña – DECEA. Además, el responsable por los asuntos REDDIG en el Subdepartamento Técnico (SDTE) del DECEA es el Cel Esp Com FRANCISCO ALMEIDA DA SILVA, correo dcte@decea.gov.br y teléfono (55 21) 2101-6230.</p> <p>7) Caberá ao Exportador utilizar madeira tratada em suas embalagens (preferencialmente com o carimbo explícito em suas caixas: HT - Heat Treatment (Fumigação)).</p> <p>8) Responsáveis pelo desembaraço alfandegário</p> <p>Regio Marcos de Abreu Cel R1 marcosabreu@ciscea.gov.br</p>

ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
<p>4. Chile</p> <p>Datos ratificados mediante carta DGAC N° 04/3/311/3251 del 22/5/14</p>	<p>Dirección General de Aeronáutica Civil Atención: Lorena Castillo E-Mail: lcastillo@dgac.gob.cl Fono (562) 24392712</p>	<p>Avda. Miguel Claro 1314 Providencia - Santiago Chile</p>	<p>1. Las mercancías deben ser embarcadas por el proveedor con flete prepaid (flete prepago) consignadas a: Dirección General de Aeronáutica Civil Avda. Miguel Claro 1314 Providencia - Santiago Chile Atención: Lorena Castillo E-Mail: lcastillo@dgac.gob.cl Fono (562) 24392712</p> <p>2. Una vez efectuado el embarque enviar por correo electrónico (lcastillo@dgac.gob.cl) los documentos de embarque (Air Way Bill, factura, packing List y póliza de seguro)</p> <p>3. Cuando la carga se encuentra en el país, y se disponga de los documentos de embarque originales la DGAC en conjunto con el Agente de Aduana, con el cual mantenemos contrato, procede a la tramitación aduanera para liberar la mercancía desde Aduana, previa cancelación del IVA importación.</p>
<p>5. Colombia</p>	<p>Sr. Gabriel Enrique Guzmán Pachon Jefe Grupo Sistemas de Comunicación (Punto Focal de la REDDIG)</p>	<p>Aeropuerto El Dorado, primer piso Centro Nacional de Aeronavegación Dirección de Telecomunicaciones Tel: (57-1) 296-2224, 296-2225, 296-2940 y 425-1000 Cel: (57) 3176561202</p>	<p>Empresa encargada de la nacionalización de los equipos en Colombia: GRUPO ALCOMEX - Carga Aérea Contacto: Campo Elías Rodríguez Camargo Cel: (57) 3153669963 Dirección: Depósito Aduanero ALCOMEZ S.A., Carrera 103 N° 25B-86, Departamento Comercial, Bogotá, Colombia Tel: (57-1) 596-1666, Ext. 2192, 2129 y 2123 E-mails: crodriguez@grupoalcomex.com; areacomercial@grupoalcomex.com</p>
<p>6. Ecuador</p>	<p>DGAC Atención: Raúl Alfredo Avellán Oña E-mail: ravellan1@hotmail.com; raul.avellan@aviacioncivil.gob.ec Tel. 593-4-2925495 Cel. 0995302735</p>	<p>Dirección General de Aviación Civil (RUC N° 1768014410001) Edificio Servicios Para la Navegación Aérea-SNA Guayaquil-Ecuador Ave. De Las Américas Aeropuerto José Joaquín de Olmedo</p>	<ul style="list-style-type: none"> • Documento del Proyecto • Contrato en español • Packing List correspondiente a Ecuador (con valores) • Factura Comercial del equipamiento a ser internado

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ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
7.French Guyana	Attn Mr Michel METZELARD or Alain BURTI	Centre de Contrôle de Cayenne-Félix Eboué Service Maintenance Aéroport de Cayenne Félix Eboué 97351 MATOURY	a) BL or AWB: 1 original and 2 copies b) Commercial invoice: 2 copies c) Certificate of origin: 1 original d) Certificate of insurance: 1 copy e) REDDIG II contract
8.Guyana	Director General Control Tower Complex Cheddi Jagan International Airport Timehri Attention: Mortimer Salisbury Tel: 592-261-2569 Mobile: 592-625-7669	Control Tower Complex Cheddi Jagan International Airport Timehri East Bank Demerara - Guyana	
9. Paraguay	DINAC, en la atención a la Gerencia de Telecomunicaciones y Electrónica, además se puede poner la atención a nombre de Victor Moran y/o Aldo Pereira Y Gerente de Telecomunicaciones y Electronica el Sr. Jorge Szwako - 0985-893-689.	Aeropuerto internacional Silvio Pettirossi	Al respecto de envío de cargas (equipos y partes) informan que los documentos tales como Factura, Guía Aérea y otros exigidos por la compañía aérea, deben estar a nombre de la DINAC y a la atención de la Gerencia de Telecomunicaciones y Electrónica, a fin de facilitar la identificación de la carga. Se sugiere además la factibilidad de obtener copias o datos del embarque de los equipos por parte de la empresa.
10.Perú	Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A "Material Para Uso Aeronáutico"		1. Establecer claramente si los bienes a adquirir se encuentran dentro de la clasificación de material Aeronáutico según el anexo B del Decreto Supremo N° 064-2004-EF. 2. Señalar claramente la modalidad de la adquisición teniendo en cuenta las condiciones de entrega de los bienes, considerando el Incoterms 2010. 3. De tratarse de una adquisición bajo condiciones de entrega DAP, esta deberá señalar si su ingreso es con beneficio de Material para uso Aeronáutico (RIN 486). 4. Tener en consideración que el Plazo fijado por aduanas para los trámites de Material Aeronáutico es de 30 días calendario desde la llegada de la carga, después de esta fecha la carga es considerada en abandono

ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
			<p>legal.</p> <p>5. Teniendo en consideración los párrafos anteriores es necesario, la siguiente documentación</p> <p>6. Documento de Embarque (B/L y/o AWB). Consignado a nombre de Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A. Rubro contenido indique en su primer párrafo que es "Material Para Uso Aeronáutico" Valor FOB del Flete.</p> <ul style="list-style-type: none"> - <u>Factura Comercial</u> - Consignado a nombre de Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A. <p>Rubro contenido indique en su primer párrafo que es "Material Para Uso Aeronáutico" y posteriormente su contenido. Valor FOB y/o detallado, considerando valor de mercadería (FOB), mas el importe del flete pagado e importe del seguro.</p> <ul style="list-style-type: none"> - <u>Lista de Contenido</u> (Packing list) - Consignado a nombre de Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A. <p>Rubro contenido indique en primer orden que es "Material Para Uso Aeronáutico" y posteriormente su contenido detallado por bulto y /o equipo, señalando como mínimo; marca, modelo, número de parte y serie.</p> <ul style="list-style-type: none"> - <u>Certificado de Seguro</u> - Consignado a nombre de Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A. <p>Rubro contenido indique en su primer párrafo que es "Material Para Uso Aeronáutico" y posteriormente detalle genérico. Valor de cobertura y prima a declarar.</p> <p>7. Teniendo en consideración el tipo de embarque, el proveedor tiene que realizar previamente lo siguiente:</p> <ul style="list-style-type: none"> - <u>Embarque Aéreo</u> <p>Pago de handling (por la entrega de</p>

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ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
			<p>conocimiento de embarque y volante de Almacén).</p> <p>- <u>Embarque Marítimo</u> Pago de handling (por la entrega de conocimiento de embarque) Pago de vistos buenos en navieras y agentes portuarios. Pago por derecho de estadía, sobreestadía y devolución en caso de contenedores. Con estos documentos la oficina de aduanas CORPAC S.A. solicita el volante marítimo al almacén.</p> <p>8. Cualquier error en algunos de los documentos citados por parte del proveedor podría ocasionar (pago de tasa rectificaciones) demora en los trámites, perjudicando el despacho del Material para Uso Aeronáutico.</p> <p><u>GESTIONES ADUANERAS POR PARTE DE CORPAC S.A.</u></p> <p>1. Con la recepción de la documentación debidamente saneada por el proveedor, la oficina de aduanas de CORPAC S.A. realiza las siguientes gestiones:</p> <p>- <u>Embarque Aéreo</u> (Gestión en 5 días útiles como máximo, de acuerdo a lo estipulado en el contrato) Aforo previo Liquidación numeración de declaración de Ingreso de aduanas Aforo Físico Retiro de carga con acompañamiento aduanero a nuestro almacén DMA.. Entrega de carga al usuario.</p> <p>- <u>Embarque Marítimo</u> (Gestión en 10 días útiles como máximo, de acuerdo a lo estipulado en el contrato) Tramite la entrega del Volante de ingreso del almacén marítimo. Liquidación y numeración de solicitud de traslado de Aduana Marítima a la Aduana Aérea. Tramite ante oficina de resguardo para el traslado de carga del Almacén Marítimo al Almacén Aéreo con diligencia aduanera.</p> <p>Desconsolidación de la carga y manifiesto por el Almacén Aéreo.</p>

ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
			<p>Recepción de nuevo volante de carga. Aforo previo Liquidación numeración de declaración de Ingreso en Aduanas Aforo Físico Retiro de carga con acompañamiento aduanero a nuestro almacén DMA.. Entrega de carga al usuario.</p> <p>Al tratarse de una modalidad DAP, corresponde al proveedor asumir los pagos de almacenaje y transporte de la mercadería hasta nuestro almacén DMA y/o último destino, de acuerdo a lo estipulado en el contrato.</p>
11.Surinam	Ministry of Transport, Communication and Tourism. DeDepartment of Civil Aviation Suriname Att: Robby Venlo	Coesewijnestraat #1, Zorg & Hoop Airport.	<p>Custom clearance requirement in Surinam: On this respect , the Consortium INEO Level 3 is going to supply the following information:</p> <ul style="list-style-type: none"> a) BL original and 2 copies b) Commercial invoice: 2 copies c) Packing list: 1 original and 2 copies d) Certificate of origin: 1 original e) Certificate of insurance: 1 copy f) REDDIG II contract <p>According to customs these documents are enough.</p>
12 Trinidad & Tobago	Trinidad and Tobago Civil Aviation Authority Attention: Director General Tel: 868 669 470/4302/4806 Mobile: 868 681 4407	Caroni North Bank Road Piarco Trinidad	<p>Commercial Invoice. The Commercial Invoice must include CIF (Cost, Insurance and Freight). If the equipment is shipped by air then the Airway Bill is also needed. If the equipment is shipped by sea then the Bill of Lading is needed.</p> <p>Items shipped by air can be cleared in two (2) days upon arrival, once the Airway Bill is sent in advance. A scanned copy can work.</p> <p>Items shipped by sea can be cleared in five (5) days upon arrival once the Bill of Lading is sent in advance. A scanned copy can work.</p>
13. Uruguay	Dirección Nacional de Aviación Civil e Infraestructura Aeronáutica Proyecto RLA/03/901 – OACI - PNUD Atención Marco Vignolo	Avda. de la Industrias Wilson Ferreira Aldunate (Ex. Cno. Carrasco) 551 Paso Carrasco – Canelones – República Oriental del Uruguay C.P.: 14002	Mismos que lo indicado en la Conclusión RCC17/3

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ESTADO	NOMBRE	DIRECCIÓN	REQUERIMIENTOS DE ADUANAS
<p>14. Venezuela</p> <p>Datos ratificados mediante carta N° PRE-ORIGRO 2778/2014 del 26/5/14</p> <p>Correo-e corregido</p>	<p>Instituto Nacional de Aeronáutica Civil (INAC) <i>Lic. Aquiles Mentado;</i> <i>Coordinador de Aduanas; Cel 0416-6079309 y 0414-1359277; email: aquiles.siciliani@inac.gov.ve</i> aquiles.siciliani@inac.gov.ve</p>	<p>Torre Británica de Seguros, Av José Fèlix Sosa con Av Luis Roche, Urb Altamira, Piso 6, Caracas, DTTO CAPITAL ZONA POSTAL 1060, Venezuela.</p>	<p><i>Factura Comercial, Pro-forma de factura o documento sustitutivo de esta donde se contemple el Costo de las Mercancías</i></p> <p><i>Contrato, Orden de Compra, Convenio o cualquier otro documento que acredite la propiedad de los bienes.</i></p> <p>Deben enviarnos copia de la factura pro-forma con el valor FOB , debidamente sellada por el vendedor; a fin, de gestionar el Certificado de Insuficiencia Transitoria de Producción, ante el Ministerio del Poder Popular para las Industrias.</p> <p>2. Deben enviarnos copia de la factura pro-forma valor CIF, para tramitar la exención total de Gravámenes y Tasas por Determinación del Régimen Legal aplicable ante el SENIAT.</p> <p>3. El proveedor deberá consignar junto con lo requerido en los puntos 1y2, una relacion detallada de los bienes describiendo: Parte o Componente, serial, peso neto, peso bruto, puerto o aeropuerto de llegada, valor CIF y valor FOB.</p> <p>4. No, debe realizarse ningún envío sin la debida autorización de este Instituto. Esta se generará inmediatamente luego de contar con las prenombradas licencias y exenciones.</p>

APPENDIX G / APENDICE G

INTELSAT

FRECUENCIAS REDDIG II / REDDIG II FREQUENCIES

Satellite	Intelsat 14/315
Transponder	A28CV/A28CV
Beam	AMCV/AMCV
Polarization	V/V
Lease Assignment	6013.62/3788.62 - 6018.02/3793.02
Lease Resource	4.40 MHz



The following carriers will be activated:

Carrier ID		TX Freq MHz	RX Freq MHz	Modulation	IR (Kbps)	Coding	Bandwidth MHz	U/L EIRP dBW	D/L EIRP dBW (B.C.)	OBO dB
18663197		6014.49600	3789.49600	DIGITAL-8PHASE-PSK	2432	DIG*FEC=2/3*RS=1/1	1.45910	49.47	25.68	-18.01
18663200		6015.89350	3790.89350	DIGITAL-8PHASE-PSK	2216	DIG*FEC=2/3*RS=1/1	1.32950	49.12	25.32	-18.37
18663203		6017.18700	3792.18700	DIGITAL-8PHASE-PSK	2080	DIG*FEC=2/3*RS=1/1	1.24790	48.62	24.82	-18.87

The following carriers will be discontinued:

Carrier ID		TX Freq. MHz	RX Freq MHz	Modulation	IR (Kbps)	Coding	Bandwidth MHz
9794660		6014.49600	3789.49600	DIGITAL-4PHASE-QPSK	1144	BSN*FEC=1/2*RS=216/236	1.75000
9794663		6016.24600	3791.24600	DIGITAL-4PHASE-QPSK	1144	BSN*FEC=1/2*RS=216/236	1.75000
9794666		6017.56200	3792.56200	DIGITAL-4PHASE-QPSK	572	BSN*FEC=1/2*RS=216/236	0.87500