



ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL

RLA/03/901

**TERCERA REUNIÓN TÉCNICO-
OPERACIONAL SOBRE LA IMPLANTACIÓN
DE LA NUEVA RED DIGITAL REDDIG II**

(RTO/3)

INFORME FINAL

(Bogotá , Colombia 28 al 29 de julio de 2014)

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RESEÑA DE LA REUNIÓN

ii-1 LUGAR Y DURACIÓN DE LA REUNIÓN

La Tercera Reunión Técnico-Operacional sobre la Implantación de la Nueva Red Digital REDDIG II (RTO/3), se llevó a cabo en el Salón de Audiovisuales (2do piso) y en el Laboratorio N° 209 del Centro de Gestión de Mercados Logística y Tecnologías de la Información (SENA) en Bogotá, Colombia, del 28 al 29 de julio de 2014.

ii-2 APERTURA

El señor Alfonso Lozano Ariza Subdirector General de la Unidad Administrativa Especial de Aviación Civil de Colombia (UAEAC), dio la bienvenida a los participantes, destacó los temas a tratar y deseó éxito en las deliberaciones. El señor Jaime Garcia Di-Motoli, Subdirector del Centro de Gestión de Mercados, Logística y TICs del Servicio Nacional de Aprendizaje – SENA procedió a saludar a los participantes y poner a disposición de los delegados las instalaciones del SENA para el evento programado así como otros que pudieran organizarse en un futuro. Finalmente el Señor Onofrio Smarrelli, Oficial CNS de la Oficina Regional Sudamericana de la OACI, en nombre del Director Regional de la Oficina Sudamericana de la OACI, agradeció a la UAEAC por el gran apoyo prestado en la realización de la RTO/3 y el Curso preparatorio de la REDDIG. Seguidamente el Sr Alfonso Lozano Ariza procedió a inaugurar la Reunión. La apertura de este evento se realizó en forma conjunta con el curso preparatorio de la REDDIG II (29 de julio al 1 de agosto de 2014)

ii-3 AGENDA

Cuestión 1 del orden del día:	Seguimiento de las actividades de implantación de la REDDIG II ejecutadas hasta la fecha
Cuestión 2 del Orden del día:	Revisión de las actividades realizadas por los Estados miembros de la REDDIG sobre los preparativos iniciales en la implantación de la REDDIG II
Cuestión 3 del orden del día:	Análisis de las actividades requeridas por los Estados miembros de la REDDIG para las próximas actividades de implantación de la REDDIG II
Cuestión 4 del orden del día:	Otros asuntos

ii-4 IDIOMAS DE TRABAJO

Los idiomas de trabajo de la Reunión fueron el español e inglés. La documentación se presentó en español e inglés.

ii-5 PARTICIPANTES Y ORGANIZACIÓN

Asistieron a la Reunión, 9 Estados miembros (Argentina, Bolivia ,Brasil, Chile, Colombia, Ecuador, Paraguay, Trinidad y Tobago y Uruguay), con un total de 19 participantes, incluidos los especialistas de la OACI.

Actuó como Secretario de la Reunión el Sr. Onofrio Smarrelli, Especialista Regional CNS de la Oficina Regional Sudamericana de la OACI, asistido por el Sr. Luis Alejos, Administrador de la REDDIG.

ii-6 LISTA DE CONCLUSIONES

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ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL
Oficina Regional Sudamericana

RLA/03/901 REDDIG

**Segunda Reunión Técnico/Operacional sobre la Implantación de la Nueva Red Digital REDDIG II
(RTO/3) y Curso Preparatorio de la REDDIG II
(Bogotá, Colombia, 28 de julio al 1 de agosto de 2014)**

LISTA DE PARTICIPANTES

ARGENTINA

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2. Juan Manuel Ló pez
3. Pedro César Britéz

BOLIVIA

4. Iver Mijael Vargas Ponce de Leon

BRASIL

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11. Raúl Avellán Oña
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13. Aldo Omar Pereira Alcaraz
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TRINIDAD & TABAGO

15. Shiraz Gopaul
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17. Miguel Vera

OACI / ICAO

18. Onofrio Smarrelli
19. Luis Alejos

Cuestión 1 del orden del día: Seguimiento de las actividades de implantación de la REDDIG II ejecutadas hasta la fecha

1.1 La Reunión procedió a analizar las siguientes actividades de implantación de la REDDIG II:

- Puntos focales de la REDDIG II
- Curso en fábrica de la REDDIG II
- Pruebas de aceptación en fábrica (FAT) de la REDDIG II
- Otras consideraciones REDDIG II

Puntos focales de la REDDIG II

1.2 La Reunión procedió a la actualización de la lista de puntos focales, la cual se presenta como **Apéndice A** de esta cuestión del orden día. De nuevo la Reunión consideró la importancia de que los Estados miembros del proyecto de implantación de la REDDIG II (RLA/03/901) informen sobre cualquier cambio en la lista con el fin de poderla tener actualizada.

Curso en fábrica de la REDDIG II

1.3 La Reunión tomó nota que el curso en fábrica, tal como estaba previsto, se llevó a cabo en Vélizy, Francia, del 21 de abril al 9 de mayo de 2014 y contó con la presencia de tres delegados de Brasil que trabajan en el NCC de Manaus, tres delegados de Argentina que trabajan en el NCC alterno de Ezeiza; y el Administrador de la REDDIG. El programa del curso se presenta como **Apéndice B** de esta cuestión del orden del día. El material del curso se ha colocado en la página web de la REDDIG II <http://www1.lima.icao.int/reddig/>.

1.4 La Reunión tomó nota que el curso fue desarrollado en forma normal, cumpliéndose todos los tópicos de acuerdo al programa del curso en fábrica. Los tópicos fueron teóricos y con ejercicios prácticos y de laboratorio donde eran aplicables.

1.5 La Reunión fue informada que como resultado del curso realizado en fábrica, se recomendó que en el curso teórico práctico a dictarse en Río de Janeiro del 11 al 22 de agosto de 2014 y del 25 de agosto al 5 de septiembre, INEO ampliara las horas de dictado del tópico referido al NMS de las estaciones, específicamente al software WhatsUp Gold.

1.6 En este sentido, la Reunión también consideró que la Décimo Octava Reunión del Comité de Coordinación de la REDDIG a realizarse en Lima en marzo del 2015 analizara la posibilidad de llevar a cabo dentro del programa de capacitación del proyecto RLA/03/901 un curso especializado sobre el manejo y operación del software WhatsUp Gold dirigido a los técnicos que atienden los nodos de la REDDIG a inicios del segundo semestre del 2015. A este respecto, la Reunión formuló la siguiente conclusión:

Conclusión RTO/3-1 Propuesta de realización de un curso sobre la aplicación WhatsUp Gold

Que el Décimo Octavo Comité de Coordinación del Proyecto RLA/03/901 (RCC/18) a efectuarse a finales del primer trimestre del 2015 en Lima, Perú analice la posibilidad de realizar

como parte del programa de capacitación, un curso completo sobre la aplicación WhatsUp Gold para finales del primer semestre del 2015.

Pruebas de aceptación en fábrica (FAT) de la REDDIG II

1.7 La Reunión tomó nota que del 12 al 16 de mayo de 2013 se llevaron a cabo las pruebas de aceptación en fábrica de la REDDIG II (FAT) en Vélizy, París en las instalaciones de INEO, en las que participaron representantes miembros del Proyecto RLA/03/901 de Argentina, Brasil, Paraguay y Perú y de la Gerencia del Proyecto de la REDDIG II.

1.8 La reunión fue informada que durante las pruebas de aceptación en fábrica se realizaron las siguientes actividades:

- Chequeo de las instalaciones del cableado y equipos en cada uno de los racks de la REDDIG II
- Verificación de los modelos y seriales de todos los equipos de la REDDIG II
- Pruebas de enlaces de comunicaciones entre los sitios en un ambiente simulado
- Pruebas en los equipos out door
- Pruebas en los equipos in door
- Pruebas en el sistema de monitoreo de la REDDIG II

Resultados de las pruebas de la FAT

1.9 La Reunión tomó nota de los resultados de las pruebas de la FAT, destacándose las siguientes observaciones y acciones:

Verificación de los diagramas de equipos y cableados en los racks

1.10 Los diagramas que describen el contenido de equipos y cableado en los racks que conforman los nodos de la REDDIG II presentan correcciones realizadas a mano, no contándose por lo tanto, durante la FAT con los diagramas finales de instalación, faltando los diagramas del nodo REDDIG II de Maiquetía, Venezuela.

1.11 Los diagramas no están identificados de acuerdo a su contenido y los mismos deben estar también identificados en el cuadro inferior derecho de la página del diagrama.

1.12 Los diagramas no representan en su totalidad las vistas de los gabinetes, faltando una vista lateral. Asimismo, en las vistas laterales de los gabinetes se deben representar todas las bandejas o escaleras donde pasan los cables y no está dibujado el UPS en la mayoría de los diagramas de los gabinetes (vista frontal).

1.13 En la vista posterior del diagrama de los gabinetes en algunas de las localidades, la representación gráfica de los breakers no coincide con lo que está instalado en los gabinetes. En la hoja donde se muestra el listado de conectores y equipos instalados en los gabinetes, se indica que hay un blank panel de 5U, pero en todos los gabinetes lo que está instalado es un blank panel de 3U.

1.14 Se indica en la misma hoja que hay 22 conectores RJ45 y 9 DB 25, pero se observó que en todos los gabinetes hay un número reducido de conectores diferentes al indicado; asimismo, se indica que los conectores DB 25 son M/M, pero los instalados son M/H; no se incluye en la hoja de listado de equipos el KVM Exender.

1.15 La Reunión tomó nota que en la página WEB del Proyecto RLA/03/901 www1.lima.icao.int/reddig se presentan en forma detallada todas las correcciones realizadas en los diagramas. El Consorcio INEO Level 3 deberá incluir todas las correcciones en los diagramas finales que serán enviados por el consorcio a cada uno de los nodos de la REDDIG II junto con el equipamiento a ser instalado,

1.16 A este respecto, la Reunión consideró que los puntos focales de la REDDIG II una vez recibido el documento con los nuevos diagramas, deben verificar que el Consorcio INEO & Level 3 haya completado y realizado todos los cambios indicados del párrafo 1.10 a 1.15 de esta cuestión del orden del día. En caso no lo haya realizado, los mismos se considerarán como observaciones en el proceso de aceptación provisional de los equipos en el sitio (PSAT).

1.17 Asimismo, la Reunión fue informada que el grupo procedió a comprobar el número de serie de todos los equipos instalados en cada uno de los racks que conforman los nodos de la REDDIG II, así como de algunos de los seriales de monitores, impresores y amplificadores que se encontraban en sus cajas, en vista que no se instalaron en la configuración montada para la realización de la FAT. En el **Apéndice C** de esta cuestión del orden del día se presenta la lista de todos los seriales de los equipos y las observaciones como resultado de la FAT.

1.18 A este respecto, la Reunión consideró que los puntos focales de la REDDIG II una vez recibida la lista final con todos los seriales de los equipos, deben verificar si se han efectuado los cambios y en caso que no se hayan efectuado, se considerará como observación en el proceso de aceptación provisional de los equipos en el sitio (PSAT).

Resultados de las pruebas de los equipos outdoor indoor y sistema NMS

1.19 La Reunión fue informada que las siguientes pruebas no pudieron realizarse en vista que no estaban disponibles los elementos necesarios para la realización de las mismas por parte del contratista:

- Todas las pruebas radar
- Las pruebas de teleconferencia se realizaron con aparatos telefónicos analógicos y solamente pudo probarse con el servidor de Manaos (1111). Por tal motivo, consideramos que aún cuando la teleconferencia está funcionando, la prueba total como requerida no se cumplió en vista que debería haberse realizado con teléfonos IP
- La prueba de BER en el AFTN
- La prueba SAT LOOP BER TEST
- Las pruebas en la sección REDUNDANCY TEST correspondientes al radar y el AFTN
- Las pruebas (user access control) de local user del Server Fileover de Ezeiza y el user server del Central Server de Manaos

1.20 Las siguientes pruebas no funcionaron. En el **Apéndice D** de esta cuestión del orden del día se presentan mayores detalles al respecto.

- La prueba 7.9 (página 92 y 93)
- La prueba de data base (Sección 7.10)
- Las pruebas de TEST CONNECTION THROUGH SERIAL PORT en el Failover server (página 98 y 99)

Observaciones adicionales durante la FAT

1.21 También la Reunión fue informada de las siguientes observaciones adicionales durante la FAT:

1.22 La utilización de conectores AC europeos en el UPS y el KVM en lugar del tipo americano indicado en las especificaciones técnicas de la REDDIG II, tomas AC que no estaban conectadas en las regletas AC instaladas en las partes laterales de los racks sino que las mismas estaban instaladas sobre una plancha metálica horizontal de una forma no estética (toma AC para el NETGEAR utilizado para acceso remoto INTERNET y el KVM que no es aceptable).

1.23 Equipos en los racks no identificados en la parte frontal de los gabinetes.

1.24 La gráfica de representación de los equipos en los nodos en el NMS debe mejorarse de forma tal que la imagen sea nítida y se pueda ver en forma detallada lo indicado. De la misma forma, la gráfica donde se muestran todos los nodos de la REDDIG II no es aceptable y debe incluirse en todas las partes del sistema de gestión el nodo de COCESNA.

1.25 Todos los servicios nativos en IP (unicast y multicast) deberían ingresar por un solo puerto (soportando todas las VLANs) al RSS Switch de banda base, puesto que en caso de falla de uno de los NetGear Switch, todos los servicios en IP (VLANs) serían conmutados a través del RSS Switch al otro NetGear Switch. Además, de esta forma se podrá optimizar la utilización de las direcciones de Red asignadas a cada país para subdividirlas por cada servicio en IP (AMHS, RADAR, AIDC, VoIP y otros futuros).

1.26 En caso de falla del Servidor Central NMS en Manaus, el Servidor de respaldo en Ezeiza debería asumir las funciones completas de Servidor Central NMS con todas las atribuciones de monitoría y control sobre todas las estaciones de la red. De acuerdo a la explicación proporcionada por INEO E&S, en caso de falla del Servidor Central NMS en Manaus, el servidor de respaldo en Ezeiza no asumirá las funciones completas de Servidor Central NMS.

1.27 De acuerdo al documento SDD, todos los servicios de datos, sean seriales o digitales, deberían ser monitoreados para casos de fallas. Durante las prácticas del NMS, esto no estaba incluido en el monitoreo configurado.

Conclusión resultado de la FAT

1.28 La Reunión tomó nota que como resultado de la FAT, el grupo de evaluación había procedido a la aceptación de la misma con todas las observaciones que se presentan en forma completa en esta cuestión del orden del día en la página web de la REDDIG II www1.lima.icao.int/reddig.

1.29 A este respecto, la Reunión consideró que todos los puntos focales de la REDDIG II deben tener en cuenta todas las observaciones detectadas en la FAT y verificar que todas éstas hayan sido consideradas por el consorcio durante la instalación de la REDDIG II. En caso que el consorcio no

solucione las observaciones realizadas durante la FAT, éstas serán determinantes en la aprobación de las pruebas de aceptación en el sitio PSAT a cargo de los puntos focales de la REDDIG.

1.30 A este respecto la Reunión formuló la siguiente conclusión:

Conclusión RTO/3-2 Implantación de las observaciones realizadas en la FAT

Que los puntos focales de la REDDIG II:

- tomen conocimiento de todas las observaciones realizadas durante la inspección en fábrica (FAT) que se presentan en esta cuestión del orden día y se detallan en la página web de la REDDIG www1.lima.icao.int/reddig;
- verifiquen que el consorcio INEO & Level 3 haya implantado las mismas durante las pruebas de aceptación provisional en los sitios (PSAT); y
- consideren el no cumplimiento de las observaciones como parte del proceso de la aceptación provisional en el sitio PSAT.

Otras consideraciones REDDIG II

Requisitos para el proceso de liberación de los equipos de la REDDIG II

1.31 La Reunión procedió a la actualización de los requisitos para el proceso de liberación de los equipos de la REDDIG II (custom clearance) en la aduana en cada uno de los Estados miembros de la REDDIG II. El **Apéndice E** de esta cuestión del orden del día presenta la información actualizada.

1.32 La Reunión fue informada que el consorcio INEO & Level 3 por inconvenientes con la aduana francesa, enviará a los Estados miembros los equipos de la REDDIG II para finales de la segunda semana de agosto 2014.

1.33 Para poder realizar el curso teórico práctico de la REDDIG II el consorcio INEO & Level 3 envió vía aérea los equipos necesarios a Río de Janeiro. Estos equipos son parte de los repuestos de la REDDIG II y al final del curso éstos se enviarán a la Oficina Regional Sudamericana de la OACI donde se encuentra el depósito de los repuestos de la REDDIG.

Nuevas frecuencias de la REDDIG

1.34 La Reunión fue informada que Intelsat procedió a la asignación de las nuevas frecuencias para la REDDIG II, las cuales se presentan como **Apéndice F** de esta cuestión del orden del día.

1.35 Al respecto, la Reunión consideró que los puntos focales de la REDDIG deberían proceder a actualizar la información registrada en las entidades nacionales que administran el espectro de radio frecuencia. Las nuevas frecuencias entrarían en operación una vez puesta en operación la REDDIG II. Por lo tanto, la Reunión consideró la siguiente conclusión:

Conclusión RTO/3-3 Registro de las nuevas frecuencias de la REDDIG II

Que los puntos focales de la REDDIG II procedan a la actualización de la información registrada en las entidades nacionales que administran el espectro de radio frecuencia con las nuevas frecuencias asignadas a la REDDIG II por INTELSAT, que se presentan como **Apéndice F** de esta cuestión del orden del día.

Instalación de router y switch para los servicios IP nativos que se conectará a la REDDIG II

1.36 Teniendo en consideración que:

- a) todos los servicios nativos en IP ingresarán por un solo puerto (soportando todas las VLANs del respectivo Nodo) al conmutador de banda base RSS Switch;
- b) se ha optimizado la utilización de las direcciones de red asignadas a cada Estado para subdividir las por cada servicio en IP (AMHS, RADAR, AIDC, VoIP y otros futuros);
- c) es necesario establecer una plataforma común de equipos de enrutamiento que garantice y soporte los actuales y también los futuros servicios en IP;

la Reunión consideró que los Estados procedan a instalar un “Router” redundante conjuntamente con un “Ethernet switch”, los cuales soportarán todas las “VLANs” de todos los servicios en IP, tanto actuales como futuros del respectivo nodo. A los Estados que ya disponen actualmente de algún servicio en IP operando a través de la actual REDDIG, se les insta a adecuarse a la presente recomendación. Por tal motivo, se formuló la siguiente conclusión:

Conclusión RTO/3-4 Instalación de un router y switch Ethernet redundante para los servicios IP nativos

Que los Estados miembros de la REDDIG que van a tener el servicio IP nativos en la REDDIG II (AMHS, radar, AIDC, VoIP), procedan a la instalación de un router y switch Ethernet redundante para poder soportar todas las “VLANs” de todos los servicios en IP, tanto actuales como futuros que entrarán por el puerto único del nodo de la REDDIG II.

APPENDIX A / APENDICE A

REDDIG II FOCAL POINTS / PUNTOS FOCALES REDDIG II

STATE / ESTADO	Name / Nombre	Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
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FRA	Michel Metzeldard, SNA-AG/Centre de Contrôle de Cayenne Félix Eboué	Chef de maintenance	michel.metzeldard@aviation-civile.gouv.fr	(594) 594-359317 (Tech room); (594) 594-359321 (Antenna station)	Aviation Civile, Aeroport de Cayenne Félix Eboué, 97351 Matoury, Guyane Francaise

STATE / ESTADO	Name / Nombre	Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
GUY	Mortimer Salisbury, Guyana Civil Aviation Authority	Supervisor - AN & T	mbsalisbury2000@yahoo.com	(592) 261-2569	Control Tower complex, Cheddi Jagan International Airport, Timehri, East Bank Demerara, Guyana
	Sewchan Hemchan, Guyana Civil Aviation Authority	Electrical Engineer	sewchan_hemchan@yahoo.com	(592) 261-2569	Control Tower complex, Cheddi Jagan International Airport, Timehri, East Bank Demerara, Guyana
PAR	Víctor Morán Maldonado, DINAC	Jefe Departamento Comunicaciones	moranchu@gmail.com	(595 21) 758 5208	Centro de Control Unificado, Gral. Artigas y Fernando de Mompox, Mariano Roque Alonso, Paraguay
	Aldo Pereira Alcaraz, DINAC	Jefe Sección Radiocomunicaciones	aldopereira26@gmail.com	(595 21) 758 5208	Centro de Control Unificado, Gral. Artigas y Fernando de Mompox, Mariano Roque Alonso, Paraguay
PER	Luis Silva Gárate, CORPAC	Jefe del Equipo encargado de la Operac. y Mantto. del Nodo REDDIG-Lima	lsilva@corpac.gob.pe	(51 1) 515-3015; (51 1) 414-1250	Aeropuerto Internacional Jorge Chávez, Av. Elmer Faucett s/n, Callao, Perú
SUR	Mitchell Themen Ministry of Transport, Communication and Tourism, Civil Aviation Department	CNS Technical Division	mickiano@live.com	(597) 325-123; (597) 325-172; (597) 497-143	J. A. Pengel International Airport, Zanderij, district Para, Zorg en Hoop Airport, Paramaribo
	Robby Venlo Ministry of Transport, Communication and Tourism, Civil Aviation Department	Acting Director	dca@cadsur.sr	(597) 498 898	J. A. Pengel International Airport, Zanderij, district Para, Zorg en Hoop Airport, Paramaribo
TTO	Rohan Garib, Civil Aviation Authority	Executive Manager Air Navigation Services	rgarib@caa.gov.tt	(1-868) 669-4806; (1-868) 669-4706	Trinidad and Tobago Civil Aviation Authority Complex, Caroni North Bank Road, Piarco
	Veronica Ramdath, Civil Aviation Authority	Manager Telecommunications and Electronics	vramdath@caa.gov.tt; vramdath@gmail.com	(1-868) 669-4806; (1-868) 669-4706; (1 868) 681-4407	

STATE / ESTADO	Name / Nombre	Cargo	E-Mail / Correo-e	Telephone / Teléfono	Address / Dirección
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VEN	Vicente FioreFedullo, INAC	Jefe Región Maiquetía-Venezuela	v.fiore@inac.gob.ve	(58 212) 355-2143; (58 212) 355-1412	Edificio ATC, 2do piso, Depto. De Comunica., Maiquetía, Edo. Vargas, Venezuela

Programa de Curso en Fábrica de la REDDIG II / REDDIG II Factory Training Programme

	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 C / APENDICE C

SERIAL NUMBER EQUIPMENTS / NÚMEROS DE SERIE /

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, PVDM3-16, UC License PAK, including:	u	6	SFCZ175092KT ✓		Cisco VSAT 1B	
			SFCZ1750C4TD ✓		Cisco VSAT 1A	
			SFCZ175092L9 ✓		Cisco VSAT 2A	
			SFCZ175092LS ✓		Cisco VSAT 2B	
			SFCZ175092M6 ✓		Cisco VSAT3A	
			SFCZ175092LW ✓		Cisco VSAT3B	
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/Async Serial HWIC	u	2	SFOC17427C65		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	SFOC174466SC		Cisco VSAT 1A	
			SFOC174466GUB		Cisco VSAT 1B	
Two-port Voice Interface Card - E and M	u	12	SFOC174781WD		Cisco VSAT 2A	
			SFOC174781VG		Cisco VSAT 2A	
			SFOC174781V3		Cisco VSAT 2B	
			SFOC174781XU		Cisco VSAT 2B	
			SFOC174781Z7		Cisco VSAT 3B	
			SFOC174781TX		Cisco VSAT 3B	
			SFOC174781TB		Cisco VSAT 3B	
			SFOC174781VK		Cisco VSAT 3B	
			SFOC174781Z2		Cisco VSAT 3A	
			SFOC174781X5	2	Cisco VSAT 3A	
			SFOC1747822J		Cisco VSAT 3A	
			SFOC174781U2		Cisco VSAT 3A	
Two-Port Voice Interface Card - FXS and DID	u	2	SFOC17440K5S		Cisco VSAT 1A	
			SFOC17440KDX		Cisco VSAT 1B	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	2	SFCZ175092M5 ✓		Cisco GBB 2	
			SFCZ175092LM ✓		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		Cisco GBB 1	
			SFOC17405CSK		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		Cisco GBB 2	
			SFOC174781UU		Cisco GBB 2	

SAEZ	Unit	Qty	S/N	(PN)	Name	License key
Two-Port Voice Interface Card - FXS and DID	u	1	SFOC1747822H		Cisco GBB 2	
	u	1	SFOC17412NKF		Cisco GBB 2	
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
Two (2) IDU 7000 Master 19" NS + PS AC including: <i>Special Discount on the second IDU 7000 Master</i>	set	1	730288 ✓		SAEZ-SKW-MASTER-A	0134F868A18706D27A4D18231665A86 9199DC582F570FE508F
	u	1	730290 ✓		SAEZ-SKW-B	01274BE36B2E87995BBBC0A5BA60973 92B4703E91E1B7670F7C
License OSPF	u	2				
Lic 8 PSK	u	2				
SkyNMSCD	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			
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				
Anitivirus	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			
	u	1	15110504/05278			
SIGNALTEKII	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			
IPC-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, PVDM3-16, UC License PAK	u	2	SFCZ175070CW SFCZ175060M2	Cisco VSAT A Cisco VSAT B		FCZ175070CW_201403130618 552080.lic
DATA license	u	2	PAK:3901J378D8F PAK:3901J6DA574	Cisco VSAT A Cisco VSAT B		FCZ175060M2_201403130624 000610.lic
4-Port Async/Sync Serial HWIC	u	2	SFOC17401WM1 SFOC17401WLQ	Cisco VSAT B 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, PVDM3-16, 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 BF9E47E7DFB150ECDE1ED0F 8C7
			00:40:71:F0:2C:3C ✓		SLLP-SKW-A	01642C6A34EA96D2EF7DBAE DBDCE6D12366E214E6382E1 A46E
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				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062214			

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"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00855			
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						
Horloge 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	PE020011200002000			
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
<u>Brazil - Curitiba</u>						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw <i>Box 2</i>	u	2	39223C5900333 ✓			
NETGEAR ProSafe VPN Dual WAN Gigabit <i>Box 3</i>	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
			111020000100635	A		
AB-2RJ8-R : Dual 8 Wire Mod. Jack A/B Card	u	4	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, PVDM3-16, 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:3901J5BF0C3		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				
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)	Name	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 E716AC793CAD3D64F1F92 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	TADBB1062216			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27" Samsung SyncMaster S27A550H	u	1	0293H4MDB01263			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222945 ✓			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D37190			
Eaton Rack	u	1	7063607151			
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

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 ✓			
	u	1	15610407/02000 ✓			
	u	1	15110504/05188 ✓			
Multimeter	u	1	102202			
Souris	u	1	1343HS02S529			
Clavier	u	1				

SOLA

SBMN	Unit	Qty	S/N	(PN)	Name	License key
<u>Brazil Manaus</u>						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5L00368 ✓			
			39223C5J00358 ✓			
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3X501B4 ✓		F. ALMEIDA	
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		
AB-D25-R : D25 A/B Card	u	6	111020000100580	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, PVD3-16, 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_20140403021603254.lic
		3901J3D3C09		Cisco - vsat - 2B	FCZ175092LR_20140403021844779.lic
Communication Manager Express or SRST - 25 seat license	u 2				
2-Port Async/Async 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, PVD3-16, UC License PAK, including:	u	1	SFCZ175060M0 ✓		Cisco GBB	FCZ175060M0_201404030
DATA LICENCE	u	1	PAK:3901J1FF7D7		Cisco GBB	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	
EVM-HD-8FXS/DID	u	1	FOC17442BK8		Cisco GBB	
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	
<i>Special Discount on the second IDU 7000 Master</i>	u	1	75014		Skywan B	
License OSPF	u	2				
Lic 8 PSK	u	2				
SkyNMSCD	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 CZJ340YZS		PC central	
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"	u	4	0293H4MDB01731		PC central	
Samsung SyncMaster S27A550H			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				
Anitivirus	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			
	u	1	15610106/02798			
	u	1	15110504/04822			
	u	1	15610407/01842			
	u	1	15110504/04762			
Multimeter	u	1		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, PVDM3-16, 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-	
			SFOC17444ZFY		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, PVDM3-16, 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			SBRE-CISCO-GBB	
			SFOC1747821Z			SBRE-CISCO-GBB	
EVM-8FXS	u	1	FOC17442BPA			SBRE-CISCO-GBB	
:	Unit Qty	S/N	(PN)	Name	License key		
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:C2 ✓				
			00:40:71:F0:52:34 ✓				
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	CZJ3460YZP				
Windows Server 2008 R2 Std + 5 CAL	u	1					
OEM HP							
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062219				
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	VNH4222872				
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
Anitivirus	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			
	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
Chile						
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	115010700300015	F ↙		
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				

SCEL		Unit	Qty	S/N	(PN)	Name	License key
Cisco	Unit	Qty	S/N	(PN)	Name	License key	
Cisco 2901 UC Bundle, PVD3-16, 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	SFOCI7427CG7		SCEL-CISCO-VSAT-1-A		
			SFOCI7427CCX		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	SFOCI74781ZX				
			SFOCI747827W				
			SFOCI74781XT				
			SFOCI747823H				
			SFOCI74781ZY				
			SFOCI74781VN				
			SFOCI747825K				
			SFOCI74781WL				
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	1	SFCZ175092KY ⁸				
DATA LICENCE	u	1					
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOCI7427CMW				
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	2	SFOC174781Y4 SFOC174782IP			
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.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00863			
Samsung SyncMaster S27A550H	u	1				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222946			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43413			
WhatsUp Gold Distributed Remote 25 Devices	u	1				
Anitivirus	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	36NI384010182			
			38NI39102385			
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			
	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 Tegú						
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	115010200300019 ✓			
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, PVDM3-16, 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.lic
					SKED-CISCO-VSAT-B	FCZ175092KG_201404090 95533347.lic
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, PVDM3-16, UC License PAK, including:	u	1	SFCZ175092LG ✓		SKED-CISCO-GBB	
DATA LICENCE	u	1			SKED-CISCO-GBB	FCZ175092LG_2014040909 5757064.lic

SKED		Unit	Qty	S/N	(PN)	Name	License key
4-Port Async/Sync Serial WAN Interface Card	u	1	SFOCI7401WM5		SKED-CISCO-GBB		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4					
1 port E1	u	1	SFOCI7451Q5J		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					
SkyNMSCD	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 PCI-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							
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				
Anitivirus	u	1				
SQL USER CAL USR CAL	u	1				
Terrasat	Unit	Qty	S/N	(PN)	Name	License key
IBUC 80W	u	2	TE5022345			
			TE5022353			
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				
	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
<u>Ecuador</u>						
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	1150100003000003 ✓			
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000107			
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, PVD3-16, 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 SFOC17427CM2		SEGU-CISCO-VSAT-1-A SEGU-CISCO-VSTA-2-B	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4				
1-port E1	u	2	SFOC17451H98 SFOC17451GXC		SEGU-CISCO-VSAT-1-A SEGU-CISCO-VSTA-2-B	
Cisco 2901 UC Bundle, PVDM3-16, 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				
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				

SEGU	Unit	Qty	S/N	(PN)	Name	License key
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062133			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00872			
Samsung SyncMaster S27A550H	u	1	VNH4222942			
HP LaserJet Pro 400 M401dn /33ppm	u	1	G030D43417			
Eaton Ellipse ECO 1200 FR USB	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	TE5022369 ✓			
			TE5022372			
Tx 1+1 switching system	u	1	TE6410589 ✓			
Rx 1+1 switching system	u	1	TE6010437			
LNB	u	2	38NI39102397			
			38NI39102380			
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				
	u	1	15610106/03115 ✓			
	u	1	15110504/05491 ✓			
SIGNALTEKII	u	1	15610407/02119 ✓			
	u	1	15110504/05428 ✓			
Multimeter	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 ✓				License key
			39223C5R0035E ✓				
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	2CH23A3E50150 ✓				
Dataprobe RSS							
RSS-16 : RSS 16 Slot 4U Chassis, including:	u	1	115010200300005		F ←		License key
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000109				
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				
Blanck 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, PVDM3-16, UC License PAK	u	2	SFCZ175092KP		SOCA-CISCO-VSAT-1-A	
DATA license	u	2	SFCZ175092LQ		SOCA-CISCO-VSAT-2-B	
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CED		SOCA-CISCO-VSAT-1-A	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4	SFOC17427CC0		SOCA-CISCO-VSAT-2-B	
2-port Voice Interface Card - FXS	u	2	SFOC17440K5A		SOCA-CISCO-VSAT-1-A	
4-port Voice Interface Card - FXS	u	2	SFOC17440K4L		SOCA-CISCO-VSAT-2-B	
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	1	SFOC174752SW		SOCA-CISCO-VSAT-1-A	
DATA LICENSE	u	1	SFOC1747525F		SOCA-CISCO-VSAT-2-B	
2-Port Async/Sync Serial WAN Interface Card	u	1	SFCZ175092M2		SOCA-CISCO-GBB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	1	SFOC17427CBV		SOCA-CISCO-GBB	
Four-port Voice Interface Card - FXS	u	1	SFOC174752SX		SOCA-CISCO-GBB	
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:51:14		Name	License key
License OSPF	u	2	00:40:71:F0:51:02			
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	TADBB1062209				
HP Hard Disk 300Go 3.5 SAS 15000 tours/min. 500 547D 9.24	u	2					
SAMSUNG screen LCD 27" Samsung SyncMaster S27A550H	u	1	0293H4MDB00870				
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222950				
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43401 ✓				
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 80W	u	2	TE5022357				
Tx 1+1 switching system	u	1	TE5022361				
Rx 1+1 switching system	u	1	TE6410579				
LNB	u	2	TE6010447				
Handheld Terminal	u	1	38N139102382 38N139102389				
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				
	u	1	15110504/05426				
Multimeter	u	1	168249				
Souris	u	1	1343HS02S5A9				
Clavier	u	1					

SYGC	Unit Qty	S/N	(PN)	Name	License key
<u>Guyana - Georgetown</u>					
Netgear	Unit Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u 2	39223C5R0037A ✓		SY6C-SWI-A	
NETGEAR ProSafe VPN Dual WAN Gigabit	u 1	39223C5E00370 ✓		SY6C-SWI-B	
Dataprobe RSS	Unit Qty	S/N	(PN)	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:	u 1	115010100300007			
K16-RPC-WRI, 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			
AB-D25-R : D25 A/B Card	u 7	111020200200941			
		111020200200900			
		111020200200901			
		111020200200902			
		111020200200903			
		111020000100603			
		111020000100604			
		111020000100598			
		111020000100597			
		111020000100596			
		111020000100560			
		111020000100561			
Blanck pannel	u 3				
Cisco	Unit Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u 2	FCZI75092LV ✓		SYGC-CISCO-VSAT-1-A	
DATA license	u 2	FCZI75092MO ✓		SYGC-CISCO-VSAT-1-B	FCZI75092LV_20140409101013084.lic
4-Port Async/Sync Serial HWIC	u 2	PAK:3901J7B7593		SYGC-CISCO-VSAT-1-C	FCZI75092MO_20140409101149085.lic
	u 2	PAK:3901J131B08		SYGC-CISCO-VSAT-1-D	
	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-CISCO-VSAT-1-	
			SFOC17440KAP		SY6C-CISCO-VSAT-2-	
Four-port Voice Interface Card - FXS	u	2	SFOC1747523G		SY6C-CISCO-VSAT-1-	
			SFOC174752QK		SY6C-CISCO-VSAT-2-	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	1	SFCZ175092LT		SY6C-CISCO-6BB	
DATA LICENCE	u	1	PAK:3901J32E68A		SY6C-CISCO-6BB	
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CDE		SY6C-CISCO-6BB	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	2				
Four-port Voice Interface Card - FXS	u	1	SFOC1747525E			
ND Satcom	Unit	Qty	S/N	(PN)	Name	License key
IDU 1070 19" NS + PS AC	u	2	00:40:71:F0:32:86	IDU1070B Type R-AC-NS		0170E57F38D2479CE64B0C089C999609D6BD60F14DCD0D70B7
			00:40:71:F0:32:68	IDU1070B Type R-AC-NS		01265E5515F24862D0C83DD74A7067B50F534B9ADEC9F0FF42
License OSPF	u	2				
Lic 8 PSK	u	2				
SkyNMSCD	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	TADBB1062120			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB00869			
Samsung SyncMaster S27A550H	u	1	VNH4222949			
HP LaserJet Pro 400 M401dn /33ppm	u	1				
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						
	u	1	15610106/03057			
SIGNALTEKII	u	1	15110504/05139			
	u	1	15610407/01954			
	u	1	15110504/05337			
Multimeter	u	1	108669			
Souris	u	1	1343HS025519			
Clavier	u	1				

SGAS	Unit	Qty	S/N	(PN)	Name	License key
<u>paraguay</u>						
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
Blank panel	u	3	4				
Cisco	Unit	Qty	S/N	(PN)	Name	License key	
Cisco 2901 UC Bundle, PVDM3-16, 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, PVDM3-16, UC License PAK, including:	u	1	SFCZ175092KK		SGAS-CISCO-GBB		
DATA LICENSE	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: Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1	CZJ330005C ✓				
Card PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062173				
HP Hard Disk 300Go 3.5 SAS 15000 ⁵⁰⁰ _{SATA} 7.2K _{7.2K} tours/min.	u	2					
SAMSUNG screen LCD 27"	u	1	0293H4MDB01256				
Samsung SyncMaster S27A550H	u	1	VNH6G35521				
HP LaserJet Pro 400 M401dn /33ppm	u	1	G030D43411 ✓				
Eaton Ellipse ECO 1200 FR USB	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	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			
	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
<u>peru</u>						
Netgear	Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw	u	2	39223C5C00360 ✓		SPIM-SWT-A	
NETGEAR ProSafe VPN Dual WAN Gigabit	u	1	39223C5S0035F ✓		SPIM-SWT-B	
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			
Blanc pannel	u	(4) 16					
Cisco	Unit	Qty	S/N	(PN)	Name	License key	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK	u	2	FCZ175092KU		SPTM-CTISCO-VSAT-1-A		
			FCZ175092L3		SPTM-CTISCO-VSAT-1-B		
DATA license	u	2	PAK:3901J75C330F		SPTM-CTISCO-VSAT-1-A	FCZ175092KU_20140409100040067.lic	
			PAK:3901J7CDFE9C		SPTM-CTISCO-VSAT-1-B	FCZ175092L3_20140409100218355.lic	
8port A/S	u	2	SFOC17446GUP		SPTM-CTISCO-VSAT-1-A		
			SFOC17446GU9		SPTM-CTISCO-VSAT-2-B		
Cable	u	2					
1 port E1	u	2	SFOC17451GSA		SPTM-CTISCO-VSAT-1-A		
			SFOC17351Z7N		SPTM-CTISCO-VSAT-2-B		
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	1	FCZ175092L0		SPTM-CTISCO-GBB		
DATA LICENSE	u	1	PAK:3901J7CFAF4		SPTM-CTISCO-GBB	FCZ175092L0_20140409100403357.lic	
2-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17427CGP		SPTM-CTISCO-GBB		
4-Port Async/Sync Serial WAN Interface Card	u	1	SFOC17405CPP		SPTM-CTISCO-GBB		
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	5					
1 port E1	u	1	SFOC17451GTD		SPTM-CTISCO-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			017A9E5A2C0675C75E43DF7FB81AC66AB3BF636B184EFA3D1E	
			00:40:71:F0:51:D4			01A3C26672E6ED77D31D0E95A1B504653413F68F0116A1B1CA	
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	CZJ34500JT				

SPIM	Unit	Qty	S/N	(PN)	Name	License key
Windows Server 2008 R2 Std + 5 CAL OEM HP	u	1				
Card PC-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062217			
HP Hard Disk 300Go 3.5 SAS 15000- tours/min. <i>500 5710 7326</i>	u	2				
SAMSUNG screen LCD 27"						
Samsung SyncMaster S27A550H	u	1	0293H4MDB00868			
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222948			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D43415	✓		
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				
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
Multimeter	u	1	15110504/05537			
Souris	u	1	108633			
Clavier	u	1	1343H50255J9			
	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
Blank panel	u	3					
Cisco	Unit	Qty	S/N	(PN)	Name	License key	
Cisco 2901 UC Bundle, PVDM3-16, 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, PVDM3-16, UC License PAK, including:	u	1	✓ SFCZ175092L7		SMPM-CISCO-GBB		
DATA LICENSE	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					

SMPM	Unit	Qty	S/N	(PN)	Name	License key
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 PCI-Express 1X 8 ports series RS232 Std and Low Profile	u	1	TADBB1062117			
HP Hard Disk 300Go 3.5 SAS 15000 tours/min.	u	2				
SAMSUNG screen LCD 27"	u	1	0293H4MDB01230			
Samsung SyncMaster S27A550H						
HP LaserJet Pro 400 M401dn /33ppm	u	1	VNH4222947			
Eaton Ellipse ECO 1200 FR USB	u	1	G030D37160			
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 80W	u	2	TE5022359			
			TE5022366			
Tx 1+1 switching system	u	1	TE6410582			
Rx 1+1 switching system	u	1	TE6010443			
LNB	u	2	38N139102395			
			38N139102396			
Handheld Terminal	u	1	700-10544-0001			
Equipment: Ancillaries / Others						

SMPM	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			
	u	1	15110504/05207			
Multimeter	u	1	108617			
Souris	u	1	1343HS02S569			
Clavier	u	1				

TTZP		Unit	Qty	S/N	(PN)	Name	License key
Trinidad							
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:	u	1	11501000300002				
K16-RPC-WRI, 100-240 VAC, Mini : PWR MODULE, 1 Slot Redundant	u	1	193008400000106				
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			
Blank pannel	u	6					
Cisco		Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVD3M3-16, 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
2-Port Async/Sync Serial HWIC	u	2	SFOC17427CQL		TTZP-CISCO-VSAT-1-B	FCZ175092L4_20140409084609785.lic
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	4	SFOC17427CBT		TTZP-CISCO-VSAT-1-A	
Two-port Voice Interface Card - FXS	u	2	SFOC17440KBW		TTZP-CISCO-VSAT-1-A	
Two-port Voice Interface Card - FXS	u	2	SFOC17440KB8		TTZP-CISCO-VSAT-2-B	
Four-port Voice Interface Card - FXS	u	2	SFOC1747529F		TTZP-CISCO-VSAT-1-A	
Four-port Voice Interface Card - FXS	u	2	SFOC1747523E		TTZP-CISCO-VSAT-2-B	
Cisco 2901 UC Bundle, PVD3-16, UC License PAK, including:	u	1	SFOC1747523E		TTZP-CISCO-GBB	
DATA LICENCE	u	1	SFOC1747523E		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	TADBB1062129				
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	6030D43414				
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	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 TEK II

TTZP	Unit	Qty	S/N	(PN)	Name	License key
	u	1	15610407/02060			
	u	1	15110504/05210			
Multimeter	u	1	168350			
Souris	u	1	1343HS02S5D9			
Clavier	u	1				

SUMU	Unit	Qty	S/N	(PN)	Name	License key
<u>Uruguay</u>						
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	115010200300020			
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
Blank panel	u	3	111020000100631			
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2911 UC Bundle, PVDM3-16, UC License PAK	u	2	SFCZ175060M5		SUMU-CISCO-VSAT-1-A	
DATA license	u	2	SFCZ175070CZ		SUMU-CISCO-VSAT-2-	
4-Port Async/Sync Serial HWIC	u	2	SFOC17401WL3		SUMU-CISCO-VSAT-1-A	
RS-232 Cable, DCE Female to Smart Serial, 10 Feet	u	8	SFOC17401WLB		SUMU-CISCO-VSAT-2-	
Four-port Voice Interface Card - FXS	u	2	SFOC174752YD		SUMU-CISCO-VSAT-1-A	
EVM 3FXS / 4 FXO	u	2	SFOC174752ST		SUMU-CISCO-VSAT-1-B	
8FXS	u	2	SFOC17443E0L		SUMU-CISCO-VSAT-1-A	
	u	2	SFOC17443E0C		SUMU-CISCO-VSAT-1-B	
	u	2	FOC180475A4		SUMU-CISCO-VSAT-1-A	
	u	2	FOC17442BP8		SUMU-CISCO-VSAT-1-B	
Cisco 2901 UC Bundle, PVDM3-16, 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:F0:52:0A			

SUMU	Unit	Qty	S/N	(PN)	Name	License key
			00:40:71:F0:51:56			
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				
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"	u	1	0293H4MDB00879			
Samsung SyncMaster S27A550H						
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	138185			
GPS antenna	u	1	138380			
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	182951			
Souris	u	1	1343HS02S5B9			
Clavier	u	1				

SVMII		Unit	Qty	S/N	(PN)	Name	License key
<u>Venezuela</u>							
Netgear		Unit	Qty	S/N	(PN)	Name	License key
NETGEAR SW F/E Stackable Managed Sw		u	2	39223C5H00365 ✓		SVMI-SWI-A	
NETGEAR ProSafe VPN Dual WAN Gigabit		u	1	39223C5G00364 ✓		SVMI-SWI-B	
Dataprobe RSS		Unit	Qty	S/N	SLOT	Name	License key
RSS-16 : RSS 16 Slot 4U Chassis, including:		u	1	115010200300008	A ✓		
K16-RPC-WRI, 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		
AB-D25-R : D25 A/B Card		u	10	111020200200907	A		
				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-WRI, 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, PVD3-16, UC License PAK	u	4	SFCZ175092KV		SVMI-CISCO-VSAT-1-A	
			SFCZ175092KH		SVMI-CISCO-VSAT-2-A	
			SFCZ175092KJ		SVMI-CISCO-VSAT-1-B	
			SFCZ175092KN		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	u	8	SFOC17461BJJ		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	
			SFOC1747823I		SVMI-CISCO-VSAT-2-B	
			SFOC174781U0		SVMI-CISCO-VSAT-2-B	
4 PORT FXS	u	2	SFOC174751EH		SVMI-CISCO-VSAT-1-A	

SVMI	Unit	Qty	S/N	(PN)	Name	License key
4-port Voice Interface Card - FXO	u	2	SFOC174751LU		SVMI-CISCO-VSAT-1-B	
			SFOC17463533		SVMI-CISCO-VSAT-1-A	
			SFOC17468336		SVMI-CISCO-VSAT-1-B	
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK, including:	u	2	FCZ175092LD ✓		SVMI-CISCO-GBB-1	
			FCZ175092LC ✓		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	SFOC173628BS		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	SFOC17440KDV		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 ✓			015C49D9C0A5629B8656B7CC7ED681FCEC154D0E035A7B2F45
			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	CZJ34500K5 ✓			
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	0293H4MDOB01257			
Samsung SyncMaster S27A550H						

SVMI	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				
Anitivirus	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 ✓			
Tx 1+1 switching system	u	1	TE6410577 ✓			
Rx 1+1 switching system	u	1	TE6010444 ✓			
LNB	u	2	38N139102377			
			38N139102400			
Handheld Terminal	u	1	700-10544-0001			
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			
	u	1	15110504/05116			
	u	1	15610407/01958			
	u	1	15110504/05285			
Multimeter	u	1		102442		
Souris	u	1	1343HS02S599			
Clavier	u	1				

<u>Spare</u>	Unit	Qty	S/N	(PN)	Name	License key
<u>Spare</u>						
<u>Spare</u>						
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			

<u>Spare</u>	Unit	Qty	S/N	(PN)	Name	License key
			111020000100643			
			111020000100667			
Cisco	Unit	Qty	S/N	(PN)	Name	License key
Cisco 2901 UC Bundle, PVDM3-16, UC License PAK	u	3	SFCZ175092L8			
			SFCZ175092KM			
			SFCZ175092LK			
Cisco 2911 UC Bundle, PVDM3-16, 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			

<u>Spare</u>	Unit	Qty	S/N	(PN)	Name	License key
			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	VNH4222944			
HP LaserJet Pro 400 M401dn /33ppm	u	1	G030D43420			
Eaton Ellipse ECO 1200 FR USB	u	1				
Anitivirus	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				

APPENDIX D / APÉNDICE D

FACTORY ACCEPTANCE TEST / PRUEBAS DE ACEPTACIÓN EN FÁBRICA

OS



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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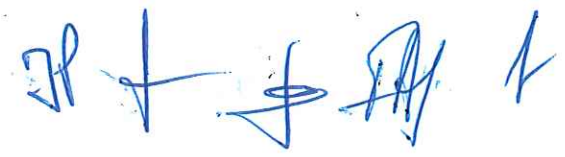
Adjunto a este documento
FAT se presenta:

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



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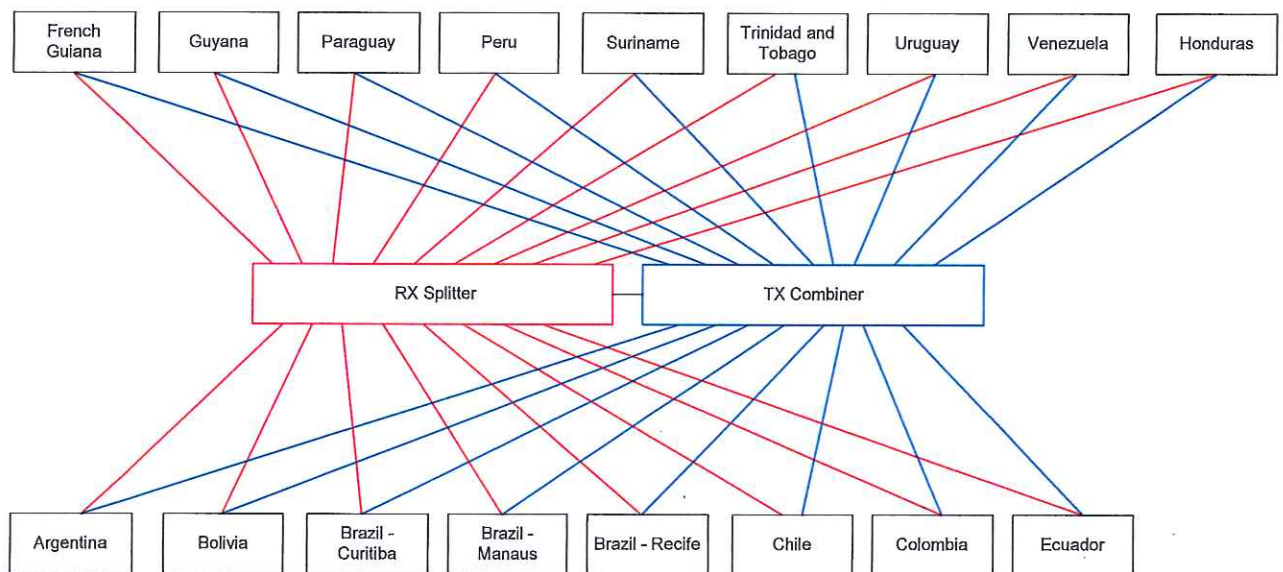
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1 INTRODUCTION

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 conexión 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



no.

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

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

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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.

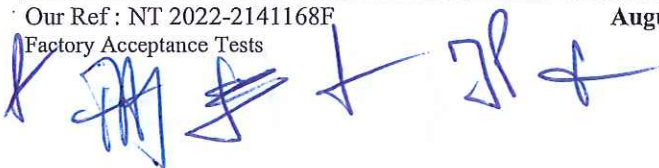
The numbers auto dialed are the same as REDDIG I (990X), and are translated into the internal dial plan.

Telefono Manantles - Ezeiza - La Paz

Se establecieron conexiones directas (lineas colgadas) entre:

- Manantles - Ezeiza y Ezeiza Manantles*
- Manantles La Paz y La Paz Manantles*
- 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	Blue	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	Black	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

Handwritten signature

Handwritten signature

Large handwritten signature

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	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

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Handwritten signature

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 (0205)*

*(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 telefónicos
de los paises fueron estos.*

[Signature]

[Handwritten mark]

[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																	

[Handwritten signatures and initials in blue ink]

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	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█

Handwritten signatures and initials in blue ink.

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

Handwritten signature

Handwritten signature

Handwritten signature

100.

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 realizar teleconferencia con participacion de tres no dos</p>	<p>OK</p>	<p>Las pruebas se realizaron con telefonos analogos.</p>
<p>Comments</p>		

Figure 14 - Teleconference - chain A

*Los telefonos en que se hicieron las pruebas fueron analogicos y no en IP como esta establecido en los especificos técnicos.
Faltó prueba con los telefonos IP*

[Handwritten signatures and marks]

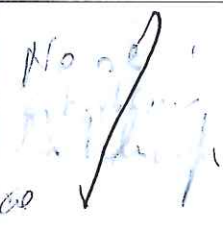
Teleconference <i>Figura 1121</i>	OK/KO	Comment
<u>Sites participating:</u> <i>152 5000 telecopiers</i> <i>con todos usuarios</i>	<i>NO OK</i>	<i>No OK</i> 
Comments	<i>No se estableció la</i> <i>telecopier con el 121 la</i>	

Figure 15 - Teleconference - chain B

no se estableció

[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*

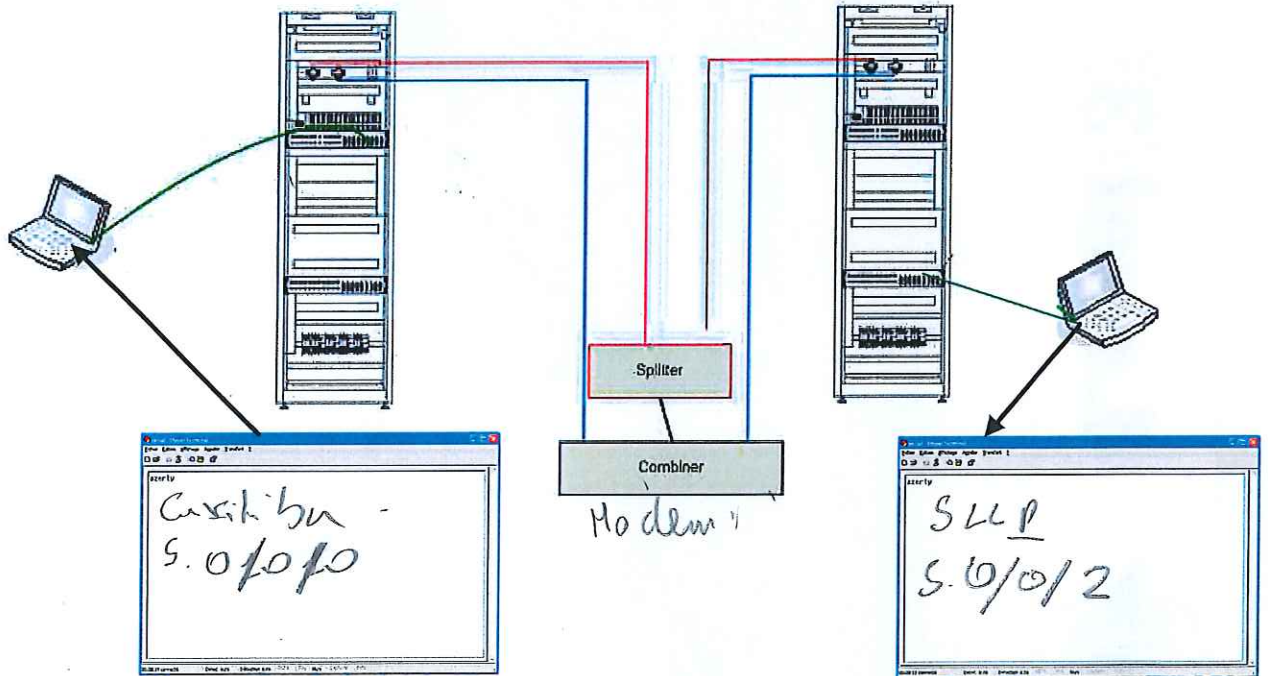


Figure 16 - AFTN test mounting

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

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 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	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					
Suriname				X					X				X				
Trinidad and Tobago									X				X				
Uruguay	X		X						X	X			X				
Venezuela							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

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

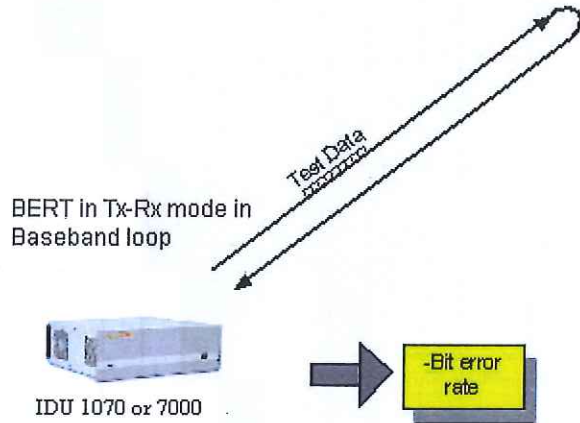


Figure 28 - Sat loop principle

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 l'analyse 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.

[Handwritten signature]

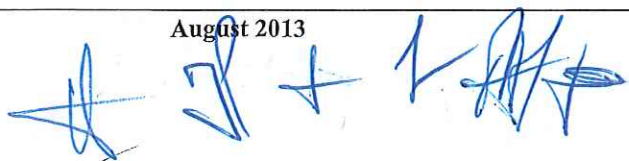
[Handwritten initials]

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 readi...		

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	X	
Supervision	Visualisation of the state on the NMS	OK	
AFTN	async hyperterminal test	X	
AMHS	ping	X	
ATS	phone call	OK	
Maintenance	phone call	OK	
Comments		<i>* AFTN Raduc, AFTN plus sealer zone p. 2/2/2013</i>	

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		<i>* AMHS Raduc AFTN plus sealer zone p. 2/2/2013</i>	

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 2900
 para hacer los tests, Venezuela, Argentina
 y Brasil.*

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]

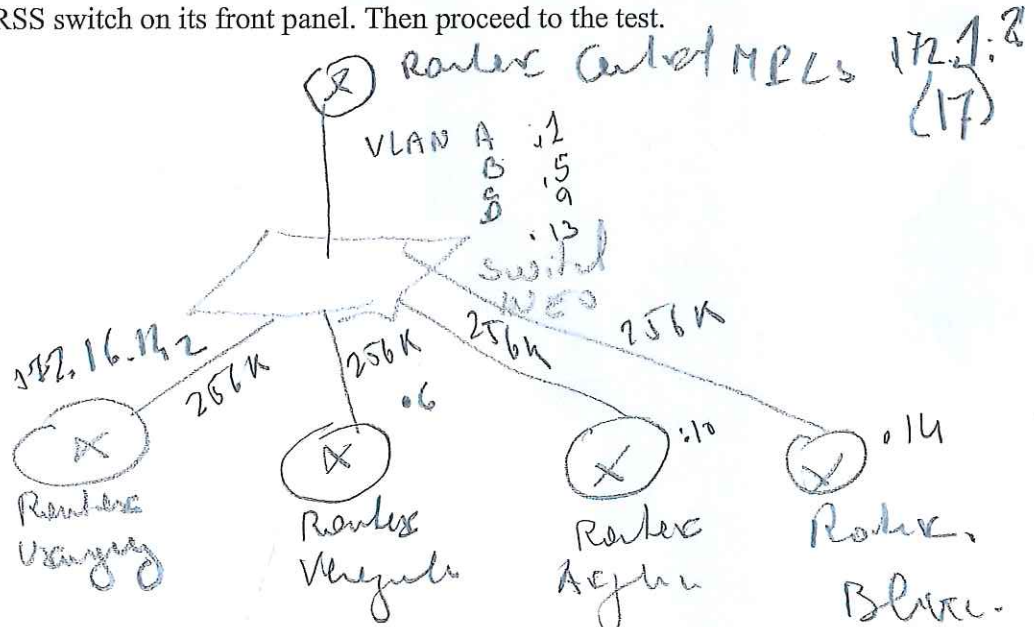
Service	DSCP	ToS
RADAR and ADS	AF41	PAMA
Asterix	AF41	PAMA
Voice	EF	DAMA real time dynamic
AFTN	AF31	DAMA
AMHS	AF31	DAMA
AIDC	AF31	DAMA
NMS	AF21	DAMA

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
trabaja 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

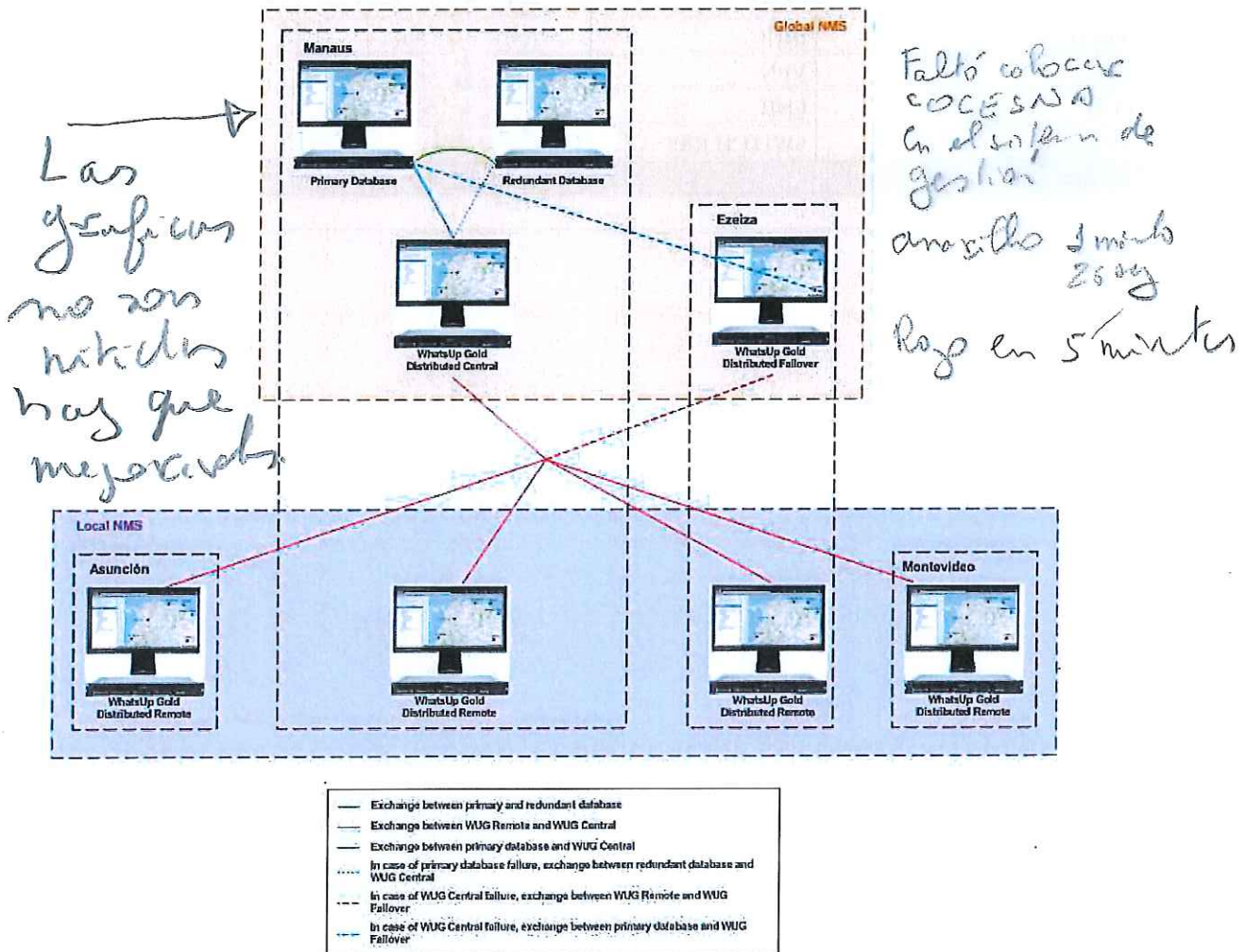
7.1 SUBMAP CONTENT CONFIGURATION

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.



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:						



Handwritten initials in blue ink

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:						

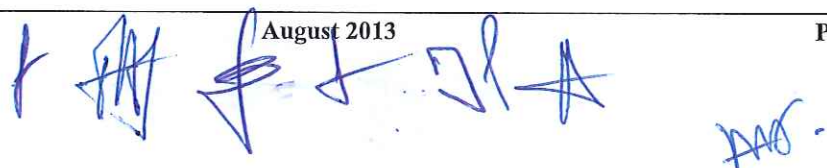
Handwritten signature

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 number"

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

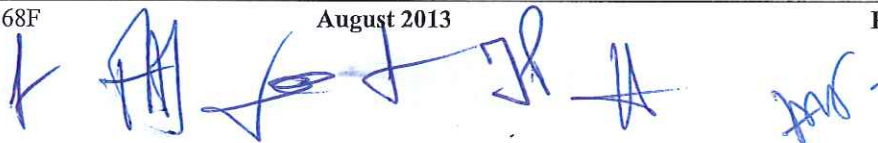
Local NMS

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:			

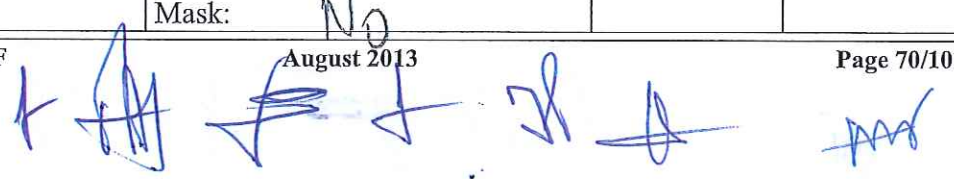
Failover Server

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

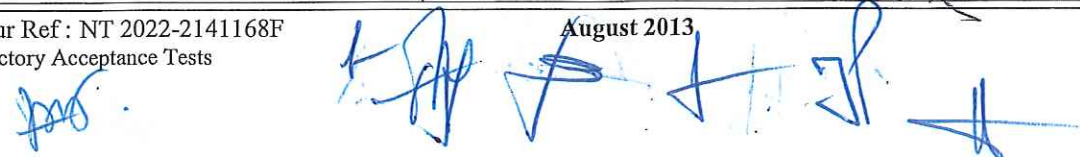
Local NMS

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: 10.100.516.510 Mask:	OK	



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

7.4 ACTIVE MONITORING

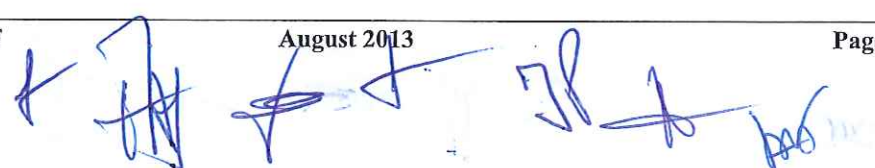
Tests description:

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'.

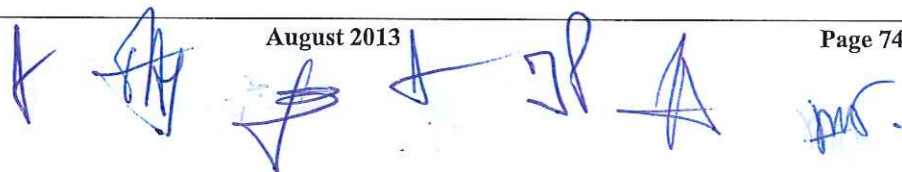
A series of handwritten signatures in blue ink, including 'K. H.', 'J.', 'J.P.', and 'A'.

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:		

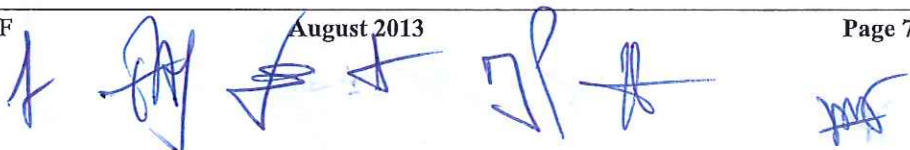
7.4.2 Site 2

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:

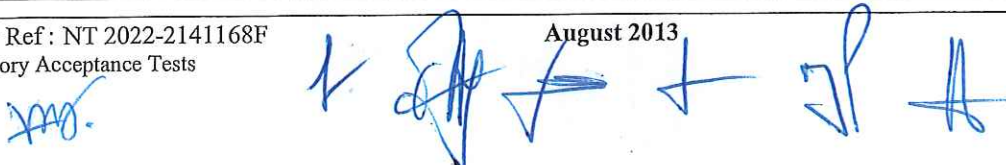
- Skywan
 - TDMA Frame Utilization Chanel 1 (on master station) *OK*
 - TDMA Frame Utilization Chanel 2 (on master station)
 - TDMA Frame Utilization Chanel 3 (on master station)
 - TDMA Es/No Own
- IBUC
 - Input Level *-24.06*
 - Output Level *-3.9*
 - Position of the waveguide switch *(en A)*
- LNB
 - 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 			

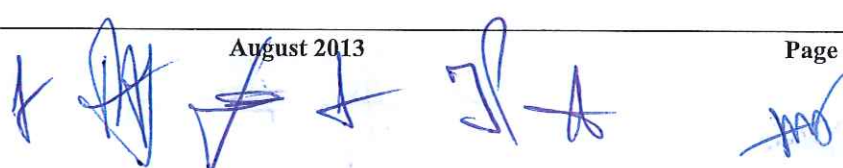
Test	Results	
	OK	NOK
<ul style="list-style-type: none"> User can't add/remove user 		
Comments:		

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:		

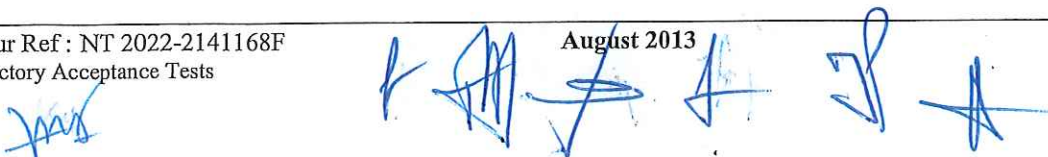


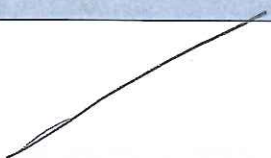
7.7.2 Manaus

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 		
Local Admin <i>Global</i>		OK
<ul style="list-style-type: none"> User can't <i>can</i> access device view, device details view and dashboard 	↓	
<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



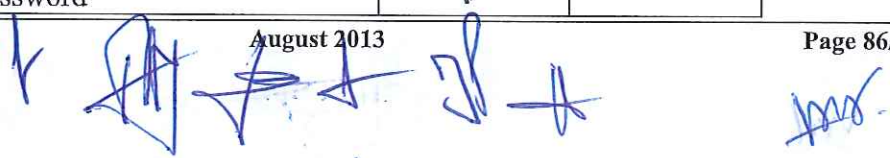
Test	Results	
	OK	NOK
Comments:		
		

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 <i>can</i> access device view, device details view and dashboard	OK	
• User can't <i>can</i> add/remove device of monitors on device	↓	
• User can't <i>can</i> add dashboard or modify dashboard	↓	
• User can't <i>can</i> change password	↓	
• User can't <i>can</i> 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		



Handwritten initials in blue ink

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:		

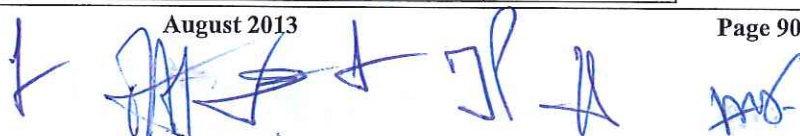
7.8 CENTRAL SERVER

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:

[Faint handwritten text in the comments section]

[Handwritten signature]

[Handwritten signatures and arrows]

7.9 FAILOVER SERVER

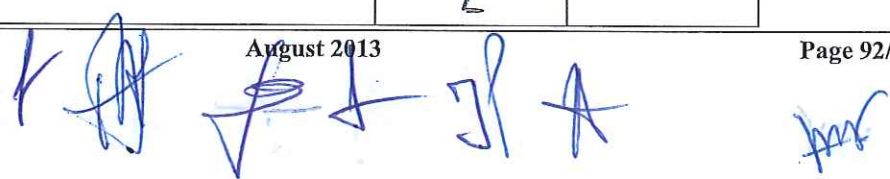
Tests description:

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.

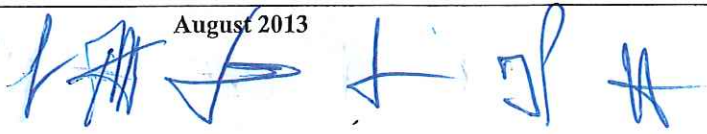
No failure

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 (Paramaribo)		
• 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 estueros.</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.

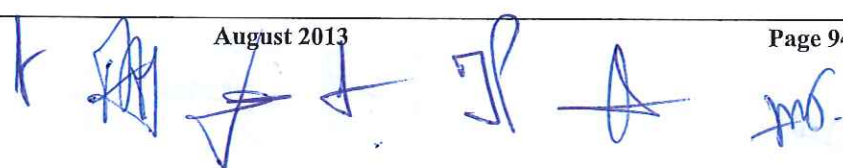
Test	Results	
	OK	NOK
Database redundancy Server 2		X
Comments:		
No opero in intervian		

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		X
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

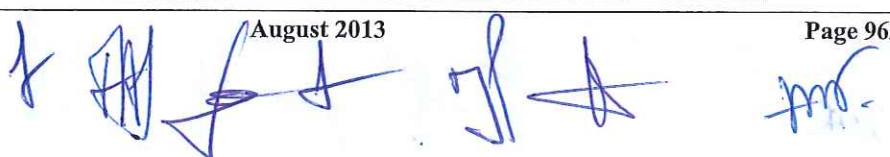
Test	Results	
	OK	NOK
#Ezeiza		
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		
• Switch A		
• Switch B		
• Skywan A		
• Skywan B		
• Ground Backbone		
• Switch AB		
#Manaus		
• Cisco A1		
• Cisco A2		
• Cisco A3		
• Cisco B1		
• Cisco B2		
• Cisco B3		

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		

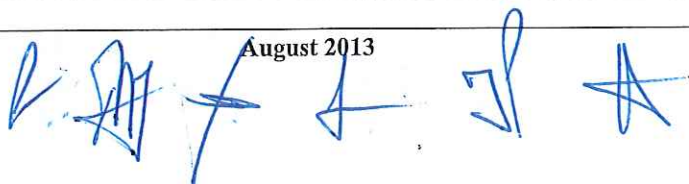
Central Server

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		

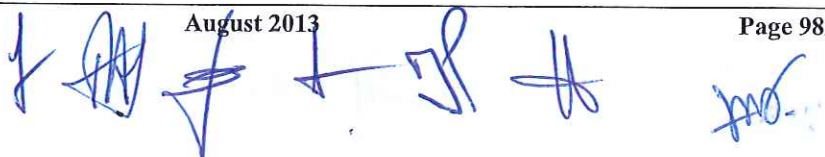



Test	Results	
	OK	NOK
<ul style="list-style-type: none"> Switch AB 		
Comments:		
<p><i>Consideramos que con una prueba fue suficiente</i></p>		

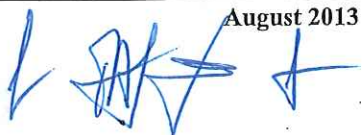

Failover Server

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	[Signature]
ICAO	Smarrre Pli Onfriv	Administración REDD 6	[Signature]
ARGENTINA	OMAR GOARNALUSSE	JEFE DEPARTAMENTO PROYECTO - IECETA	[Signature]
Argentina	GUSTAVO A. CHIRI	Jefe departamento Planificación - IECETA	[Signature]
PERU	JOSE LUIS PAREDES D.	COORD. PROJ. RESAF	[Signature]
Paraguay	Aldo Omar Pereira	Jefe sección Radiocomunicaciones DINAL	[Signature]
BRAZIL	FRANCISCO ALMEIDA DA SILVA	JEFE DIVISION DE COORDINACION TECNICA	[Signature]
ICAO	LUIS ALEJOS	Administración REDD 6	[Signature]

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)

**ACTUALIZACIÓN NOMBRE Y DIRECCIÓN PARA ENVÍO DE EQUIPOS Y REQUERIMIENTOS
REQUERIDOS PARA LOS TRÁMITES ADUANEROS**
**UPDATE OF NAME AND ADDRESS FOR THE SHIPPING OF EQUIPMENT AND REQUIREMENTS
FOR CUSTOMS CLEARANCE**

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
<p>1. Argentina</p> <p>Datos ratificados mediante Nota ANAC N° 336/2014 del 14/5/14</p> <p>Data ratified through Letter ANAC N° 336/2014 dated 14/5/14</p>	FUERZA AEREA ARGENTINA	PEDRO ZANNI 250 C1104AXJ CIUDAD AUTONOMA DE BUENOS AIRES ARGENTINA CONTRATO OACI 22501200	<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 <i>ship to</i> 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>-----</p> <p><i>To minimize the periods of time for the customs clearance, we need (in the indicated temporal sequence:</i></p> <p><i>a) As soon as possible, the part numbers, according to the shipment breakdown.</i></p> <p><i>b) Before the actual shipment, by e-mail, the documents required in 9.9 of the contract, and with the "ship to" indicated below. Likewise, should indicate the data of the local company where to pick up the original airway bill.</i></p> <p><i>c) Re. the definite shipment, the required documentation in paragraph 9.9 of the contract, where the "ship to" should say: FUERZA AEREA ARGENTINA PEDRO ZANNI 250 C1104AXJ CIUDAD AUTONOMA DE BUENOS AIRES, ARGENTINA ICAO CONTRACT 2250120</i></p>
2. Bolivia	Cnl DAEN Raul Velasco Ramos DIRECTOR GENERAL	Calle Reyes Oriz N° 74 Esp. Federico Suazo Edif. FEDEPETROL	1) La documentación de la REDDIG II se debe remitir a nombre de:

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
	EJECUTIVO AASANA	La Paz -Bolivia	<p>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 trámites de desaduanización, requerimos factura comercial (original) y el Packing list.</p> <p>----- <i>REDDIG II documentation should be sent in the name of:</i> Cnl DAEN Raul Velasco Ramos DIRECTOR GENERAL EJECUTIVO AASANA Calle Reyes Oriz N° 74 Esp. Federico Suazo Edif. FEDEPETROL La Paz –Bolivia <i>The shipment should be sent to:</i> ADUANA LA PAZ de AEROPUERTO INTERNACIONAL EL ALTO. <i>For the customs clearance arrangements, we need a commercial invoice (original) and packing list.</i></p>
<p>3. Brasil/Brazil</p> <p>Solicitud de enmienda mediante MSJ N° 097/CERNAI/2014</p> <p>Ítem 6) corregido</p> <p><i>Request of amendment through MSJ N° 097/cernai/2014</i></p> <p><i>Item 6) amended</i></p>	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.	<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 nossa autorização, o embarque deve ocorrer. (IMPORTANTE)</p> <p>2) Na Invoice (Fatura), deverão conter os seguintes dados: - Nome e endereço do Exportador - Nome e endereço do Fabricante</p> <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</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>CNPJ 00.394.429/0048-74.</p> <ul style="list-style-type: none"> - Nº 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 nº 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. <p>4) Primeiramente, o exportador deverá encaminhar a Invoice e Packing List para análise. Somente depois de aprovados, deverá encaminhar o AWB ou BL. (IMPORTANTE)</p> <p>5) Conhecimento de Embarque (AWB - Air Way Bill ou BL - Bill of Lading)</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>- Emitido pela companhia aérea ou marítima ou pelo agente de carga. Contém os dados do embarque (migrados da Invoice/Packing List).</p> <p>6) Despesas na Importação —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) —Taxas administrativas para liberação dos conhecimentos de embarque originais no Brasil (INEO) —Quando Importação Marítima, armazenagem no Porto (INEO) 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 desembarço alfandegário Regio Marcos de Abreu Cel R1 marcosabreu@ciscea.gov.br ----- Invoice, packing list and Bill of Lading (AWB or BL). 1) These documents must be sent to us for a previous revision (CISCEA), and only after our authorization, the shipment will be made (IMPORTANT). 2)The invoice must contain the following data :</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>- Name and address of exporter - Name and address of manufacturer</p> <p>Name and address of Importer : 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. (IMPORTANT)</p> <p>- N° of Contract - Incoterm - Equipment data : Description (see note below), part number, Quantity, Serial Number (if any), unit and total value, liquid weight and tariff classification of the exporting country - Packing data: type, quantity and boxes' dimensions and gross weight. - Airport or port of destination - Terms of payment.</p> <p><i>NOTE: The supply should be listed as defined in the contract with its respective price, or listed as a greater supply (the whole) or listed as parts. Examples of higher supply: Radar of Aeronautical use, Telecommunication Station, Flight Inspection System, Earth/Air Communication System, New Regional Aeronautical Telecommunication Network (REDDIG II), etc. (IMPORTANT)</i></p> <p>3) Packing list It should contain all the components of the bigger supply, with their descriptions, PN, Qty, SN and the number of the box where they are packaged. - In case of an Invoice with parts, Packing List must repeat all the items, and identify in which case they are.</p> <p>4) First, the exporter must submit the Invoice and Packing List for analysis. Only after approval, shall</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p><i>send the AWB or BL. (IMPORTANT)</i></p> <p><i>5) Bill of Lading (AWB-Air Way Bill or BL – Bill of Lading)</i></p> <p><i>- Issued by the airline or shipping company or he cargo agent. Contains shipment data (migrated from the Invoice/Packing List)</i></p> <p><i>item 6 – the administrative charges rate for clearance of the bills of lading are of responsibility of the Brazilian Administration-DECEA. In addition, the person responsible for the REDDIG issues in the DECEA's Technical Sub-Department (SDTE) is Cel Esp Com FRANCISCO ALMEIDA DA SILVA, e-mail: dcte@decea.gov.br, and telephone (55 21) 2101-6230.</i></p> <p><i>7) The exporter will have to use treated wood in their containers (preferably with the explicit stamp on their boxes: HT - Heat Treatment (fumigation).</i></p> <p><i>8) Responsible for customs clearance Regio Marcos de Abreu Cel R1 marcosabreu@ciscea.gov.br</i></p>
<p>4. Chile</p> <p>Datos ratificados mediante carta DGAC N° 04/3/311/3251 del 22/5/14</p> <p><i>Data ratified through Letter DGAC N° 04/3/311/3251 dated 22/5/14</i></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 prepagado) 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>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<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>-----</p> <p><i>1. The merchandise should be shipped by the supplier with prepaid freight consigned to:</i></p> <p><i>Dirección General de Aeronáutica Civil</i> <i>Avda. Miguel Claro 1314</i> <i>Providencia - Santiago</i> <i>Chile</i> <i>Att: Lorena Castillo</i> <i>E-Mail: lcastillo@dgac.gob.cl</i> <i>Phone (562) 24392712</i></p> <p><i>Once the shipment is made, please send the documents by e-mail (lcastillo@dgac.gob.cl) the shipping documents (Air Way Bill, Invoice, Packing List, and Insurance Policy .</i></p> <p><i>3. When the cargo arrives in the country, and the original shipping documents are available, DGAC together with the Customs Agent, with which we maintain a contract, will go ahead with the customs clearance arrangements, prior payment of import IVA.</i></p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
5. Colombia	Sr. Gabriel Enrique Guzmán Pachon Jefe Grupo Sistemas de Comunicación (Punto Focal de la REDDIG)	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>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>----- <i>Company responsible for the nationalization of the equipment in Colombia:</i> <i>GRUPO ALCOMEX - Air Cargo</i> <i>Contact: Campo Elías Rodríguez Camargo, Cell: (57) 3153669963</i> <i>Address: Depósito Aduanero ALCOMEZ S.A., Carrera 103 N° 25B-86, Departamento Comercial, Bogotá, Colombia</i> <i>Tel: (57-1) 596-1666, Ext. 2192, 2129 y 2123</i> <i>E-mails:</i> <i>crodriguez@grupoalcomex.com;</i> <i>areacomercial@grupoalcomex.com</i></p>
6. Ecuador	DGAC Atención: Raúl Alfredo Avellán Oña E-mail: ravellan1@hotmail.com ; raul.avellan@aviacioncivil.gob.ec Tel. 593-4-2925495 Cel. 0995302735	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	<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 <p>-----</p> <ul style="list-style-type: none"> • <i>Project document</i> • <i>Contract in Spanish</i> • <i>Packing List corresponding to Ecuador (with values)</i> • <i>Commercial Invoice of equipment to be admitted.</i>
7. French Guyana / Guyana Francesa	Attn Mr Michel METZELARD or Alain BURTI	Centre de Contrôle de Cayenne-Félix Eboué Service Maintenance Aéroport de Cayenne Félix Eboué 97351 MATOURY	<ul style="list-style-type: none"> 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 <p>-----</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>a) <i>BL o AWB: 1 original y 2 copias.</i></p> <p>b) <i>Factura comercial: 2 copias</i></p> <p>c) <i>Certificado de origen: 1 original</i></p> <p>d) <i>Certificado de seguro: 1 copia</i></p> <p>e) <i>Contrato de REDDIG II</i></p>
3. Guyana	<p>Director General Control Tower Complex Cheddi Jagan International Airport Timehri Attention: Mortimer Salisbury Tel: 592-261-2569 Mobile: 592-625-7669</p>	<p>Control Tower Complex Cheddi Jagan International Airport Timehri East Bank Demerara - Guyana</p>	
9. Paraguay	<p>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.</p>	<p>Aeropuerto internacional Silvio Pettrossi</p>	<p>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.</p> <p>Se sugiere además la factibilidad de obtener copias o datos del embarque de los equipos por parte de la empresa.</p> <p>-----</p> <p><i>Regarding the shipping of cargo (equipment and parts) the documents such as Invoice, AWB and others required by the airline, must be in the name of DINAC and to the attention of the Telecommunications and Electronics, to facilitate the cargo identification.</i></p> <p><i>The feasibility of obtaining copies or data of the equipment shipment, by the company, is also suggested.</i></p>
10. Perú / Peru	<p>Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A "Material Para Uso Aeronáutico"</p>		<p>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.</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>2. Señalar claramente la modalidad de la adquisición teniendo en cuenta las condiciones de entrega de los bienes, considerando el Incoterms 2010.</p> <p>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).</p> <p>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 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. 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), más el importe del flete pagado e importe del seguro. - <u>Lista de Contenido</u> (Packing list) - Consignado a nombre de Corporación Peruana de

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>Aeropuertos y Aviación Comercial - CORPAC S.A. 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. 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>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> Pago de handling (por la entrega de conocimiento de embarque y volante de Almacén). - <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>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>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<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> <ul style="list-style-type: none"> - <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. - <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>Desconsolidación de la carga y manifiesto por el Almacén Aéreo. 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</p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>destino, de acuerdo a lo estipulado en el contrato.</p> <p>-----</p> <p><i>1. Clearly state if the goods to be acquired are within the classification of Aeronautical material, according to Annex B of Supreme Decree N° 064-2001-EF.</i></p> <p><i>2. Clearly indicate the acquisition mode, taking into account the terms of delivery of the goods, considering Incoterms 2010.</i></p> <p><i>3. In case of an acquisition under conditions of delivery DAP, this should indicate if its entry is benefited as Material for Aeronautical Use (RIN 486).</i></p> <p><i>4. Take into consideration that the time set by customs for the formalities for Aeronautical Material is of 30 calendar days from the arrival of the cargo; after this date the charge is considered legally abandoned.</i></p> <p><i>5. Considering the above paragraphs, the following documentation is required:</i></p> <p><i>6. Bill of Lading (B/L and/or AWB). Consigned in the name of Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A.</i> <i>Item content must indicate in the first paragraph that it is "Material for Aeronautical Use"</i> <i>FOB Value of Freight</i> - <u>Commercial Invoice</u> - <i>Consigned in the name of Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A.</i> <i>Item content must indicate in the first paragraph that it is "Material for Aeronautical Use" and subsequently its contents. FOB value and/or detailed, considering the merchandise value (FOB) and/or detailed, plus the amount of</i></p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p><i>the freight paid and amount of insurance.</i></p> <ul style="list-style-type: none"> - <u>Packing List</u> - <i>Consigned in the name of</i> - <i>Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A.</i> <p><i>Item content must indicate in first order that it is “Material for Aeronautical Use” and subsequently its contents detailed per package and/or equipment, noting at least the brand, model, part and serial number.</i></p> <ul style="list-style-type: none"> - <u>Certificate of Insurance</u> - <i>Consigned in the name of</i> - <i>Corporación Peruana de Aeropuertos y Aviación Comercial - CORPAC S.A.</i> <p><i>Item content must indicate in the first paragraph that it is “Material for Aeronautical Use” and subsequently the generic detail. Coverage and premium value to testify.</i></p> <p><i>7. Taking into consideration the type of shipment, the supplier has to previously do the following:</i></p> <ul style="list-style-type: none"> - <u>Air Shipment</u> <p><i>Payment of handling (for delivery of bill of lading and warehouse flyer).</i></p> <ul style="list-style-type: none"> - <u>Ocean Shipment</u> <p><i>Payment of handling (for delivery of bill of lading)</i></p> <p><i>Payment of approvals in shipping and port agents.</i></p> <p><i>Payment of fees to stay, demurrage and refund in case of containers.</i></p> <p><i>With these documents CORPAC SA customs office requests maritime flyer to the warehouse.</i></p> <p><i>8. Any mistake in some of the documents cited by the supplier may cause (payment of adjustment fare) delay in the processing, causing detriment in the shipment of the Material for Aeronautical Use.</i></p>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p><u>CUSTOMS ARRANGEMENTS BY CORPAC S.A.</u></p> <p><i>1. Upon receipt of the documentation properly sanitized by the supplier, the customs office of CORPAC S.A. will perform the following arrangements:</i></p> <p><i>- Air Shipment (Management in 5 working days at the most, as stipulated in the contract)</i></p> <p><i>Previous capacity</i></p> <p><i>Clearance of numbering of</i></p> <p><i>Statement of customs entrance</i></p> <p><i>Physical capacity</i></p> <p><i>Pick up of cargo with customs support to our DMA warehouse.</i></p> <p><i>Delivery of cargo to the user.</i></p> <p><i>- Ocean Shipment (Management in 10 working days at the most, as stipulated in the contract)</i></p> <p><i>Delivery process for entrance flyer to the maritime warehouse.</i></p> <p><i>Liquidation and numbering of the transfer request from the Maritime Customs to the Air Customs.</i></p> <p><i>Process before the warehouse office for the transfer of cargo from the Maritime Warehouse to the Air Warehouse with customs diligence.</i></p> <p><i>Deconsolidation of cargo and manifest by the Air Warehouse.</i></p> <p><i>Reception of new cargo flyer</i></p> <p><i>Previous capacity</i></p> <p><i>Clearance of numbering of</i></p> <p><i>Statement of customs entrance</i></p> <p><i>Physical capacity</i></p> <p><i>Pick up of cargo with customs support to our DMA warehouse.</i></p> <p><i>Delivery of cargo to the user.</i></p> <p><i>Being a DAP mode, the supplier shall take over payments for storage and merchandise transport to our DMA warehouse and/or final destination, according to the terms of the contract.</i></p>
11. Suriname / Surinam	Ministry of Transport, Communication and Tourism. DeDepartment of Civil Aviation Suriname Att: Robby Venlo	Coesewijnestraat #1, Zorg & Hoop Airport.	Custom clearance requirement in Suriname: On this respect , the Consortium INEO Level 3 is going to supply the following information: a) BL original and 2 copies

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>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 According to customs these documents are enough.</p> <p><i>Requerimientos de Aduana de Surinam:</i> <i>En este sentido, el Consorcio INEO/Level 3 va a proporcionar la siguiente información:</i> a) <i>BL original y 2 copias</i> b) <i>Factura comercial: 2 copias</i> c) <i>Lista de embalaje: 1 original y 2 copias</i> d) <i>Certificado de origen: 1 original,</i> e) <i>Certificado de seguro: 1 copia</i> f) <i>Contrato de REDDIG II</i> <i>De acuerdo a la Aduana, estos documentos son suficientes</i></p>
12. Trinidad & Tobago / Trinidad & Tabago	Trinidad and Tobago Civil Aviation Authority Attention: Director General Tel: 868 669 4706/4302/4806 Mobile: 868 681 4407	Caroni North Bank Road Piarco Trinidad	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. 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. 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. ----- <i>Factura comercial. La factura comercial debe incluir CIF (costo, seguro y flete). Si el equipo es enviado vía aérea, entonces también se requiere la Guía Aérea. Si el equipo es enviado por mar, se requiere el Conocimiento de embarque.</i> <i>Los artículos enviados por vía aérea podrán ser liberados en dos (2) días a su llegada, si el AWB es enviado por adelantado, Una copia</i>

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<i>escaneada puede ser útil. Los artículos enviados por mar podrán ser liberados en cinco (5) días a su llegada si el BL es enviado por adelantado. Una copia escaneada puede ser útil.</i>
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 ----- <i>Same as indicated in the Conclusion RCC17/3</i>
14. Venezuela Datos ratificados mediante carta N° PRE-ORI- GRO 2778/2014 del 26/5/14 Correo-e corregido Data ratified through letter N° PRE-ORI- GRO 2778/2014 dated 26/5/14 E-mail amended	<i>Instituto Nacional de Aeronáutica Civil (INAC) Lic. Aquiles Mentado; Coordinador de Aduanas; Cel 0416-6079309 y 0414- 1359277; email: aquiles.siciliani@inac.gov.ve aquiles.siciliani@inac.gob.ve</i>	Torre Británica de Seguros, Av José Félix Sosa con Av Luis Roche, Urb Altamira, Piso 6, Caracas, DTTO CAPITAL ZONA POSTAL 1060, Venezuela.	Factura Comercial, Pro-forma de factura o documento sustitutivo de esta donde se contemple el Costo de las Mercancías. Contrato, Orden de Compra, Convenio o cualquier otro documento que acredite la propiedad de los bienes. 1. 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. 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. 3. El proveedor deberá consignar junto con lo requerido en los puntos 1y2, una relación detallada de los bienes describiendo: Parte o Componente, serial, peso neto, peso bruto, puerto o aeropuerto de llegada, valor CIF y valor FOB 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.

ESTADO/STATE	NOMBRE/NAME	DIRECCIÓN/ADDRESS	REQUERIMIENTOS DE ADUANAS /CUSTOMS REQUIREMENTS
			<p>-----</p> <p><i>Commercial Invoice, Pro-forma invoice or its substitute document where the merchandise cost could be seen.</i></p> <p><i>Contract, Purchase Order Agreement or any other document proving the ownership of the goods.</i></p> <p><i>A copy of the Pro-forma Invoice with the FOB value is required, duly stamped by the seller; in order to manage the Transient failure Production Certificate at the Ministry of Popular Power for Industries.</i></p> <p><i>2. Copy of the pro-forma invoice CIF value is required, for the full exemption process of the charges and fees given by the legal regime applicable before the SENIAT.</i></p> <p><i>3. The supplier must provide along with the requirements in points 1 y 2, a detailed list of the goods describing: Part or Component, serial, net weight, gross weight, port or airport of arrival, CIF and FOB value.</i></p> <p><i>4. No shipping should not be done without permission of this Institute. This will be generated immediately after having the pre-named licenses and exemptions.</i></p>

APPENDIX F / APÉNDICE F

INTELSAT

REDDIG II FREQUENCIES / FRECUENCIAS REDDIG II

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

**Cuestión 2 del
orden del día:****Revisión de las actividades realizadas por los Estados miembros de la
REDDIG sobre los preparativos iniciales en la implantación de la REDDIG II**

2.1 Los temas relacionados a esta cuestión del orden del día, fueron tratados en la cuestión 1 y cuestión 3 del orden del día.

Cuestión 3 del orden del día: Actividades requeridas a los Estados miembros de la REDDIG en la implantación de la REDDIG II

3.1 Aún cuando el contrato para la implementación y puesta en operación de la REDDIG II es un contrato “llave en mano” (*Turnkey contract*), hay actividades que se requieren de parte de los Estados miembros de la REDDIG para la ejecución y cumplimiento de parte del Consorcio INEO & Level 3 de las tareas indicadas en el cronograma recibido de la implementación del Contrato N° 22501200. A este respecto, la Reunión fue informada de un retraso estimado en tres semanas para el despacho de los equipos de parte de INEO.

3.2 Estas actividades se clasifican en:

- a) Administrativo/Logísticas; y
- b) Técnicas.

3.3 Actividades administrativo/logísticas

- a) Para la elaboración de los documentos de embarque de los bienes (equipos y partes), los cuales son de responsabilidad del Consorcio INEO & Level 3, cada uno de los Estados miembros de la REDDIG y COCESNA deberá enviar a la Oficina Regional Sudamericana de la OACI, a la brevedad posible y antes del 15 de abril de 2014, la información del “SHIP TO”, así como cualquier otra información relevante, que debiera incluirse en los documentos de embarque (commercial invoice, packing list, AWB, B/L) para el correcto proceso de desaduanaje e importación de los bienes.
Actividad cumplida.
- b) Para obtener la información del “SHIP TO”, se recomendó que los puntos focales de la REDDIG II consulten y soliciten dicha información a las áreas responsables en sus respectivos Estados, explicándoles la importancia de dicha información y su entrega dentro de la fecha límite.
Actividad cumplida.
- c) La Oficina Regional Sudamericana de la OACI consolidó la información “SHIP TO” recibida de todos los Estados y COCESNA y la enviará al Consorcio INEO & Level 3
Actividad cumplida.
- d) De acuerdo al cronograma presentado por INEO, Tareas del No.53 al 68, INEO tiene estimado 45 días (del 7 de setiembre al 22 de octubre de 2014) para el proceso de desaduanaje e importación de los bienes en cada uno de los Estados y COCESNA. Por tanto, de acuerdo a lo anterior, los bienes deberán arribar y cada Estado y COCESNA deberán recibir los documentos completos de embarque a más tardar el 6 de setiembre de 2014.
- e) Todos los Estados y COCESNA, una vez que reciban los documentos completos de embarque, los revisarán y verificarán que estén conformes para iniciar de inmediato el proceso de desaduanaje e importación de los bienes. Caso que la información contenida en los documentos de embarque no esté conforme con lo que se había enviado en la actividad a) se comunicará de inmediato a la Oficina SAM de la OACI para que ésta lo notifique a INEO para su rectificación respectiva.

- f) Todos los Estados y COCESNA tendrán, una vez cumplida la actividad e), 45 días para el desaduanaje e importación de los bienes y traslado local hasta el sitio de la instalación respectiva. La fecha límite es el 22 de octubre de 2014.
- g) A fin de cumplir con la actividad f), se solicitó a los Estados y COCESNA realizar las gestiones previas (envío de cartas explicativas, reuniones de coordinación) necesarias para que las instituciones y autoridades responsables del proceso de desaduanaje e importación de los bienes y transporte local en cada Estado, brinden el apoyo y soporte adecuado con el objetivo de completar dicho proceso en el plazo máximo de 45 días.

3.4

Actividades técnicas

- a) Mantenimiento de la antena. Se solicitó realizar la limpieza general y mantenimiento de la antena de cada una de las estaciones de la REDDIG, siguiendo el siguiente cronograma:

		<i>Actividad cumplida</i>
SAEZ	16 julio 2014	
SBCT	10 setiembre 2014	
SBMN	26 setiembre 2014	
SBRF	11 setiembre 2014	
SCEL	12 setiembre 2014	
SEGU	22 setiembre 2014	
SGAS	16 setiembre 2014	
SKED	17 setiembre 2014	
SLLP	18 setiembre 2014	
SMPM	19 setiembre 2014	
SOCA	04 agosto 2014	
SPIM	15 setiembre 2014	
SUMU	23 setiembre 2014	
SVMI	24 setiembre 2014	
SYGC	25 setiembre 2014	
TTZP	07 agosto 2014	

- b) Se solicitó proceder con la actualización de la información registrada en las entidades nacionales que administran el espectro de radio frecuencia sobre los nuevos equipos y frecuencias que conforman la REDDIG II. Las nuevas frecuencias para la REDDIG II se presentan en el **Apéndice F** de la Cuestión 1 del orden del día.
- c) De acuerdo al cronograma presentado por INEO, Tareas No. 78 al 93, INEO tiene estimado para el día 23 de octubre de 2014 iniciar la instalación en todos los nodos. Por lo tanto, es responsabilidad de cada Estado que en cada uno de los 16 nodos de la REDDIG se tenga disponible, en el lugar designado para la instalación del nuevo 'rack', el cableado conectorizado como corresponde, de todos los servicios (voz y datos) que se especifican y detallan en los documentos aprobados de diseño final de la REDDIG II. Para aquellos nodos que tienen distinto el lugar designado para la instalación que el que se emplea actualmente, deberán tener en paralelo hasta el nuevo lugar designado para la instalación del nuevo 'rack, el cableado conectorizado como corresponde, de todos los servicios (voz y datos). La fecha límite es el 22 de octubre de 2014.

- d) Ground Backbone Commissioning, Tareas No. 97 y 99 del cronograma presentado por INEO.
Es de responsabilidad de cada Estado la verificación que todos y cada uno de los servicios (voz y datos) estén operando normalmente en la red terrestre (Ground Backbone) con todas sus contrapartes respectivas. Se remarcó que la actual red satelital REDDIG I sólo se desactivará, para iniciar con la instalación de la nueva red satelital REDDIG II, cuando todos los servicios de todos los 16 nodos estén operando normalmente en la red terrestre (Ground Backbone).
- e) Commissioning, Tareas No. 100, 101 y 102 del cronograma presentado por INEO.
Es de responsabilidad de cada Estado la verificación del cumplimiento, de parte del consorcio INEO & Level 3, de los requisitos previos al inicio de las pruebas PSAT, como es la ejecución de las nueve (9) fases de la instalación, tal como se indica en el documento SDD, VSAT, Parte 3, incluyendo las pruebas ('Pol Alignment' y 'Downlink Adjustment') para los dos (2) SSPA, las cuales deberán estar aprobadas por Intelsat para cada estación. Se solicitó informar a la Oficina Regional SAM de la OACI, en caso hubiese una observación negativa.
- f) Montaje e instalación de equipos en COCESNA.
La Oficina Regional SAM de la OACI enviará un técnico especializado hasta el nodo de COCESNA en Tegucigalpa, Honduras del 7 al 10 de noviembre de 2014 para realizar el montaje de los equipos ('router' más modem satelital) empleando los actuales combinadores/divisores de banda L tipo N (F). Se tendrá en consideración el cableado (tipo, longitud y conectores) a ser empleado entre los equipos 'router' y modem satelital, así como entre el modem satelital y los combinadores/divisores de banda L. También se debe tener en cuenta la frecuencia del oscilador local del actual amplificador de RF de la estación.
Es de responsabilidad de INEO la puesta en operación del nodo COCESNA en la REDDIG II una vez que se haya realizado el montaje de los equipos arriba mencionados. Para esto, INEO deberá proporcionar anticipadamente los archivos de configuración operacional para el 'router' y el modem satelital a fin de que sean 'cargados' localmente en el nodo de COCESNA por el técnico enviado por la Oficina SAM de la OACI. Realizado esto, se efectuarán todas las pruebas correspondientes indicadas en el cronograma.
- g) Pruebas PSAT/NAT, Tareas No. 103 y 104 del cronograma presentado por INEO.
Es de responsabilidad de cada Estado la verificación de la ejecución y cumplimiento de los protocolos de las pruebas PSAT así como la validación de las pruebas PSAT y, luego, bajo la coordinación de la Oficina Regional SAM de la OACI, las respectivas pruebas NAT.
La Oficina Regional SAM de la OACI verificará que todas las observaciones indicadas en la FAT estén resueltas en su totalidad, siendo esto una condición para la aceptación de las pruebas PSAT.
- h) Pruebas FNAT, Tareas No. 106 y 107 del cronograma presentado por INEO.
La Oficina Regional SAM de la OACI, en conjunto y en coordinación con cada uno de los Estados, verificarán que el Consorcio INEO & Level 3 cumpla satisfactoriamente todas las pruebas que no hubiesen pasado las pruebas PSAT/NAT y evaluarán el rendimiento (performance) de las redes satelital y terrestre durante el período denominado "Operational Readiness Demonstration" (ORD). Cumplido a

satisfacción todo lo indicado anteriormente, se procederá a firmar el certificado de la aceptación final, a partir del cual se iniciará el período de garantía de dos (2) años.

**Cuestión 4 del
orden del día: Otros Asuntos**

4.1 La Reunión consideró la necesidad de efectuar, en caso de ser necesario, una cuarta reunión técnica operacional, una vez completada la instalación de la REDDIG II. La fecha estimada para la operación de la REDDIG II es a fines del mes de octubre de 2014, por consiguiente, ésta se llevaría a cabo durante el mes de noviembre o a principios de diciembre de 2014.