



REDDIG RCC/30

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**RLA/03/901**

**THIRTIETH MEETING  
OF THE COORDINATION COMMITTEE  
(RCC/30)**

**FINAL REPORT**

**(Lima, Peru, 19 to 22 March 2024)**

*The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.*

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## HISTORY OF THE MEETING

### ii-1. PLACE AND DURATION OF THE MEETING

The Thirtieth Meeting of the Coordination Committee of Project RLA/03/901 -*REDDIG Management System and Satellite Segment Administration*, was carried out in Lima, Peru from 19 to 22 March 2024.

### ii-2. OPENING

Mr. Oscar Quesada, Deputy Regional Director of the ICAO South American Regional Office, welcomed the participants, pointing out the importance of the topics to be dealt with and wishing success in the deliberations. Thereafter, he inaugurated the meeting.

### ii-3. WORKING LANGUAGES

The meeting working languages for the discussions and documentation were Spanish, English and French. Documentation was presented in Spanish and English languages.

### ii-4. PARTICIPANTS AND ORGANIZATION

The Meeting was attended by 16 participants of 9 member States of REDDIG II (Bolivia, Brazil, Chile, France, Guiana, Panama, Peru, Trinidad & Tobago and Venezuela), COCESNA, and ICAO specialists. The list of participants is being presented in page iii-1.

Mr. Francisco Almeida, CNS Regional Officer acted as Secretary assisted by Mrs. Veronica Chavez, Technical Assistance Officer and by Mr. Javier Vittor, REDDIG Administrator.

### ii-5. LIST OF CONCLUSIONS

No.	Title	Page
RCC/30-1	APPROVAL OF REDDIG III TECHNICAL SPECIFICATIONS – PHASE 1	4-2
RCC/30-2	INSTALLATION OF CYBERSECURITY EQUIPMENT AND RENEWAL OF LICENSES	4-3
RCC/30-3	DEFINITION OF THE IMPROVEMENT IN THE REDDIG MANAGEMENT STRUCTURE	4-4
RCC/30-4	PREPARATION AND APPROVAL OF THE EXTENSION TO 2030 OF PROJECT RLA/03/901 REV "Y".	5-2

**LIST OF PARTICIPANTS****BOLIVIA**

1. Jose Alberto Riveros Salazar

**BRAZIL**

2. Renata Rodrigues Frias
3. Walter Dantas Bispo

**CHILE**

4. Christian Vergara

**FRANCE (French Guiana)**

5. Serge Cupoli

**GUIANA**

6. Sewchan Hemchan

**PANAMA**

7. Daniel De Ávila

**PERU**

8. Andrés Arango

**TRINIDAD & TOBAGO**

9. Naresh Seeparsad
10. Adam Kahn

**VENEZUELA**

11. Enrico Manganese
12. Willy Rojas

**COCESNA**

13. Roger Alberto Pérez

**ICAO**

14. Verónica Chávez
15. Francisco Almeida
16. Cristian Javier Vittor

**Agenda Item 1:           Approval of the agenda and meeting schedule**

1.1                   Under this agenda item, the Meeting adopted the agenda and schedule for the Meeting, as shown **Appendices A** and **B** to this part of the report.

– End –

**APPENDIX A****AGENDA**

- Agenda Item 1: Approval of the agenda and meeting schedule
- Agenda Item 2: Review of the report of the Twenty Ninth Meeting of the Coordination Committee (RCC/29)
- Agenda Item 3: Report of the activities carried out to date since the last meeting of the Coordination Committee
- Agenda Item 4: Work plan for 2024 and Implementation of REDDIG III – Phase 1
- Agenda Item 5: Financial situation of the project and approval of the budget
- Agenda Item 6: Annual project evaluation
- Agenda Item 7: Other matters

## **EXPLANATORY NOTES TO THE PROVISIONAL AGENDA**

### **Agenda Item 1: Approval of the agenda and meeting schedule**

The provisional Agenda and the Schedule proposed by the Secretariat for the Thirtieth Meeting will be presented for the consideration and approval of the Coordination Committee.

### **Agenda Item 2: Review of the report of the Twenty Ninth Meeting of the Coordination Committee (RCC/29)**

The Committee will review the report of its Twenty Ninth Meeting (RCC/29) held in Lima, from 13 to 17 March 2023. Likewise, the Committee will analyze the status of implementation of conclusions formulated during said meeting, as well as of conclusions in force from previous meetings.

### **Agenda Item 3: Report of the activities carried out to date since the last meeting of the Coordination Committee**

The Committee will analyze the activities carried out since its last meeting regarding:

- a) Follow-up to REDDIG II performance;
- b) REDDIG II training programme; and
- c) Summary of the RTO/10 Meeting.

### **Agenda Item 4: Work plan for 2024 and Implementation of REDDIG III – Phase 1**

The Committee will consider the work programme planned for 2024, which includes:

- a) Ad-hoc Cybersecurity Group to study and propose an advanced standard configuration for the firewall equipment (Conclusion RCC/29-1);
- b) REDDIG III Ad-hoc Group to evaluate the proposal to improve the management and administration structure of Project RLA/03/901 (Conclusion RCC/29-2); and,
- c) REDDIG III Ad-hoc Group to review the Technical Specifications for the implementation of REDDIG III – Phase 1 (Conclusion RCC/29-3).

### **Agenda Item 5: Financial situation of the project and approval of the budget**

The Committee will consider the status of the cost-sharing contributions to the project and a summary of the obligations assumed during 2023, as well as the project budget for 2024 for approval.

**Agenda Item 6: Annual evaluation of the project**

The Committee will take note of the project's situation at the end of the previous year, including the management and outputs indicators, as well as the monitoring and control of the project with regard to the approved work plan for 2023, shown in the corresponding forms, concluding with the review of the survey conducted among participant States concerning their annual project evaluation.

**Agenda Item 7: Other business**

Under this Agenda item, the Committee may examine any other related matter that it deems appropriate.

**APPENDIX B****MEETING SCHEDULE**

<b>HOUR</b>	<b>Tuesday</b> 19 March 2024	<b>HOUR</b>	<b>Wednesday</b> 20 March 2024	<b>Thursday</b> 21 March 2024	<b>Friday</b> 22 March 2024
08:30 09:00	Register of participants	08:30 10:30	Agenda Item 3	Agenda Item 4	Agenda Item 7
09:00 09:15	Opening				
09:15 09:30	<i>Coffee Break</i>	10:30 10:45	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
09:30 12:30	Agenda Item 1 and 2	10:45 12:30	Agenda Item 4	Agenda Item 5	Preparation of the Preliminary Report and Closing
12:30 13:30	<i>Lunch Break</i>	12:30 13:30	<i>Lunch Break</i>	<i>Lunch Break</i>	
13:30 15:00	Agenda Item 2	13:30 15:00	Agenda Item 4	Agenda Item 6	

**Agenda Item 2: Review of the report of the Twenty-Ninth Meeting of the Coordination Committee (RCC/29)**

2.1 Under this agenda item, the Meeting analysed the following working paper:

- WP/02 – *Review of the report of the last meeting of the REDDIG Coordination Committee* (presented by the Secretariat).

2.2 Under this agenda item, the Meeting analysed and approved the report of the Twenty-Ninth meeting of the REDDIG Coordination Committee (RCC/29), held in Lima, on 13-17 March 2023. The Meeting was attended by 32 participants from 13 REDDIG member States (Argentina, Brazil, Chile, Colombia, Ecuador, Guyana, Panama, Paraguay, Peru, Suriname, Trinidad & Tobago, Uruguay, and Venezuela) and COCESNA, 2 industry companies (Cirion and Frequentis) and ICAO experts.

2.3 The following conclusions were formulated by the RCC/29 meeting:

No.	Title
RCC/29-1	AD HOC GROUP TO STUDY AND PROPOSE AN ADVANCED STANDARD CONFIGURATION FOR THE FIREWALLS ACQUIRED
RCC/29-2	MANAGEMENT AND ADMINISTRATION OF REGIONAL PROJECT RLA/03/901 WITH THE IMPLEMENTATION OF REDDIG III
RCC/29-3	REDDIG III IMPLEMENTATION
RCC/29-4	APPROVAL OF THE BUDGET OF PROJECT RLA/03/901 REV "X"

2.4 After analysing the conclusions formulated at previous meetings, the participants of the RCC/30 Meeting considered that the following conclusions were still valid: 8-8, 22-4, 29-1, 29-2 and 29-3.

2.5 The following conclusions were considered finalised: 22-3, 24-3 and 29-4.

2.6 The **Appendix** to this part of the report contains the conclusions that are still valid, including those formulated by this Meeting.

## APPENDIX

## VALID CONCLUSIONS ADOPTED BY REDDIG COORDINATION MEETINGS AND THEIR STATUS OF IMPLEMENTATION

No.	Title	Content	Status	Remarks
8-8	REDDIG administration	That, until such time that the institutional aspects related to the management of multinational systems for the provision of air navigation services are more clearly defined, the States agree that, for the next two years, starting 15 October 2005, REDDIG will continue to be managed through the ICAO technical cooperation mechanism, as an extension of Regional Project RLA/03/901.	Valid	Taking into account that the establishment of the South American Air Navigation and Safety Organisation, a multinational system with the capacity to manage REDDIG, continues undefined, the RCC/28 meeting (Lima, Peru, 2-4 May 2022) approved Rev X of the RLA/03/901 project document, extending the management of REDDIG until 2026. During the RCC/30 Meeting, it was requested to initiate arrangements to extend the project until 2030.
22-3	Study to replace REDDIG II connectivity equipment and to update the IOS of network routers	That the REDDIG II Administrator: a) Coordinate the conduction of a study to replace connectivity equipment, mainly the NETGEAR switches, and also to update the IOS of network routers	Valid Finalized	All IOS of network routers were updated in 2019. Trials on the use of CISCO switches to replace Netgear switches are scheduled for 2020 in the Curitiba and Asuncion nodes.  The Netgear B switch will be replaced in each planned node with a Fortinet switch purchased together with the firewalls. Task to be performed during the year 2023.
22-4	Acquisition of firewall equipment for REDDIG II	That the Secretariat:  a) At the request of REDDIG member States, and together with the ICAO TCB, purchase firewall equipment for REDDIG II;  b) The initial budget assigned for this acquisition would be USD 375,000.00.	Valid	The bidding process was completed and training was provided. The SAM Office will be sending the purchased equipment to the respective nodes.

No.	Title	Content	Status	Remarks
24-3	Interconnection of regional IP networks	<p><del>That:</del></p> <p>a) <del>The Secretariat proceed with the necessary administrative procedures for carrying out a meeting in Lima, with the participation of ICAO officers and telecommunication providers of the APAC, EUR and SAM regional IP networks.</del></p> <p>b) <del>The participation of the Secretary of the Communications Panel (CP) be ensured using resources of Regional Project RLA/03/901 (air tickets and DSA)</del></p>	Valid Finalized	<p><del>Two teleconferences were held with the participants of the APAC regional IP network (CRV) on 21 January and 24 February 2021.</del></p> <p><del>Cirion representatives presented an interconnection proposal at RCC/29, which will be forwarded by the Secretariat to the APAC Office for review by CRV network participants.</del></p>
29-1	Ad hoc group to study and propose an advanced standard configuration for the acquired firewall equipment	<p>That:</p> <p>RLA/03/901 member States form an <i>ad hoc</i> group, with cybersecurity experts, to study and propose an advanced standard configuration for the firewall equipment acquired by Project RLA/03/901.</p>	Valid	<p>Ad hoc group created at RCC/29, with representatives of Argentina, Brazil, Chile, Colombia, Paraguay and Venezuela.</p> <p>The representative of Brazil will coordinate the activities of the group.</p>

No.	Title	Content	Status	Remarks
29-2	Management and administration of Regional Project RLA/03/901 with the implementation of REDDIG III	<p>That:</p> <p>a) The REDDIG III <i>Ad hoc</i> Group evaluate the proposal to improve the management and administration structure of the project, which includes as a possible core in its management and administration:</p> <ul style="list-style-type: none"> <li>✓ Project Manager: responsible for the management and administration of the Regional Project;</li> <li>✓ Administrative Assistant: responsible for the administrative support to the Project Manager; and</li> <li>✓ Network Administrator: responsible for the technical-operational management of the regional network.</li> </ul> <p>b) The REDDIG III <i>Ad hoc</i> Group must include in its proposal the functions and responsibilities of the personnel, as well as the budget required for the same. The proposal must be submitted for approval by the RLA/03/901 Project Coordination Committee prior to the implementation of REDDIG III.</p>	Valid	<p>The REDDIG III <i>Ad hoc</i> Group, made up of representatives from Argentina, Brazil, Chile, France (French Guiana), Paraguay and Venezuela, will evaluate the proposal to improve the management and administration structure of the network.</p> <p>The group will be coordinated by the representative of Chile.</p>
29-3	Implementation of REDDIG III	<p>That:</p> <p>The Meeting approved that the implementation of REDDIG III be in two phases:</p> <p>- Phase 1 WAN Infrastructure:</p> <p>Contracting of services, to start operations in January 2025, of a telecommunications service provider (MPLS) with redundancy of</p>	Valid	<p>The REDDIG III <i>Ad hoc</i> Group will prepare the technical specifications of REDDIG III (Phase 1), until 31 March, 2023.</p> <p>The <i>Ad hoc</i> Group will study and propose the activities for Phase 2 of REDDIG III implementation.</p> <p>The REDDIG III <i>Ad hoc</i> Group, made up of representatives of Argentina, Brazil, Chile, France (French Guiana), Paraguay and</p>

No.	Title	Content	Status	Remarks
		<p>last mile links, according to the approved technical specifications.</p> <p>- Phase 2 LAN Infrastructure:</p> <p>Modernisation of connectivity equipment, with the necessary interfaces for connection of existing aeronautical services at each node and adaptation of the cybersecurity equipment acquired to the new architecture of the LAN part of the regional network. This phase should be planned to start operations in January 2027.</p>		Venezuela, will be coordinated by the representative of Chile.
29-4	Approval of the budget of Project RLA/03/901 rev "X"	<p><del>That the Secretariat:</del></p> <p><del>a) Consult with Headquarters on the possibility of the use of Project RLA/03/901 for the procurement of telecommunication service (MPLS) with last mile link redundancy by 2025 and the approximate cost thereof.</del></p> <p><del>b) If the above conclusion is positive, before 1 July 2023, to include such procurement in the proposal for revision X of Project RLA/03/901. This proposal must be circulated to member States for their acceptance and subsequently initiate the approval process by ICAO Headquarters, for subsequent submission to REDDIG member States.</del></p> <p><del>e) If point a) cannot be met, take the pertinent actions to allow approval of the revision of Project RLA/03/901 by ICAO Headquarters, for its subsequent submission to REDDIG member States, which can be found in Appendix A to this part of the report.</del></p>	Valid Finalized	With letters SA7749, SA7750 and SA7752, Revision X of the project signed by Sec Gen on December 27, 2023 was circulated to the States.

No.	Title	Content	Status	Remarks
30-1	Approval of REDDIG III technical specifications – Phase 1	<p><b>What:</b></p> <p>In order to continue the procurement process of the MPLS service for REDDIG III – Phase 1, the participants of the RCC/30 Meeting request that the Secretariat:</p> <p>a) check with each State for the coordinates corresponding to the selected MPLS node.</p> <p>b) coordinate with CDI to review the technical specifications and thereby initiate the administrative arrangements for their procurement.</p> <p>c) if the revision of the technical specifications by the CDI generates significant changes to them, they should be circulated for the approval of the States.</p>	Valid	
30-2	Installation of cybersecurity equipment and renewal of licences	<p><b>What:</b></p> <p>The Secretariat:</p> <p>a) Provide for the installation of already distributed cybersecurity equipment, using a basic configuration, while the <i>Ad hoc</i> Cybersecurity Group develops an advanced configuration.</p> <p>b) Proceed with the automatic periodic renewal of cybersecurity equipment licences covering the useful life of the equipment.</p>	Valid	

30-3	Definition of improved REDDIG management structure	<p><b>What:</b></p> <p>a) The Secretariat provide the following information to the <i>Ad hoc</i> Group:</p> <ol style="list-style-type: none"> <li>1. A report describing in detail each management function currently performed by the Regional Office in charge of the management of the Project, as well as the functions currently performed by the Administrative Assistant, the Financial Assistant and the Technical Administrator of REDDIG, in relation to Project RLA/03/901, with the purpose of outlining the proposed functions of the Project Manager and the new Administrative-Financial Assistant to the Project Manager.</li> <li>2. A report on the categories used by ICAO for professional and administrative positions, and on staff recruitment timelines.</li> <li>3. An analysis and report on whether any changes would be required to the project MSA and its annexes if a new organisational structure is implemented.</li> </ol> <p>b) The <i>Ad hoc</i> Group, having obtained the above information, shall:</p> <ol style="list-style-type: none"> <li>1. Analyse the functions and propose the positions required to assume these functions, taking into account the new network configuration and the services that REDDIG III will have once consolidated.</li> <li>2. Regarding these new positions, coordinate with the Secretariat to secure the required budget for the proposed new organisational structure.</li> <li>3. In order to carry out the above tasks, the <i>Ad hoc</i> Group will meet online once all the information is available.</li> <li>4. Present the results at the next RCC or,</li> </ol>	Valid	<p><i>Ad hoc</i> Group made up of representatives of the following States: Argentina, Bolivia, Brasil, Chile, Colombia, Francia (Guyana Francesa), Guyana, Paraguay y Venezuela.</p> <p>The representative of Chile will coordinate the work of the <i>Ad hoc</i> Group.</p>
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No.	Title	Content	Status	Remarks
		if appropriate, request an extraordinary RCC.		
30-4	Preparation and approval of the extension to 2030 of Project RLA/03/901 Rev "Y".	<p><b>What:</b></p> <p>The Secretariat:</p> <p>a) Prepare a proposal to extend Project RLA/03/901 until 2030, considering the new telecommunication service (MPLS) with last-mile redundancy, and the satellite communication service until 2030 for budget calculation purposes.</p> <p>b) The draft revision Y of Project RLA/03/901 must be circulated to member States for their acceptance, and subsequently initiate the approval process by ICAO Headquarters, for subsequent submission to REDDIG member States.</p>	Valid	

**Agenda Item 3: Report of the activities carried out since the last meeting of the Coordination Committee**

3.1 Under this agenda item, the Meeting analyzed the following working paper:

- WP/03 – *Report of the activities carried out since the last meeting of the Coordination Committee* (presented by the Secretariat)

3.2 The Meeting reviewed the following activities agreed at the Twenty-ninth meeting of the Coordinating Committee (RCC/29):

- a) REDDIG II performance monitoring;
- b) REDDIG II training programme;
- a) Operation of REDDIG II and analysis of the implementation of new services.

REDDIG II PERFORMANCE MONITORING

*Network availability*

3.3 The Meeting took note that the availability of the network in 2023 had been 99.9918%. **Appendix A** to this part of the report presents the availability of the network until 2023.

3.4 It was noted that a report was sent every month to the Capacity Development and Implementation Bureau (CDI) with the availability of MPLS nodes in relation to service provision. It was noted that the provider was penalized for nodes that were below the required SLA (99.7%).

3.5 It is important to highlight that Contract No. 22502088 - Ground network services (MPLS based - 5/1 Mbps) for the SAM digital network (REDDIG II) is in force - 1 February 2021 to 31 December 2024.

3.6 **Appendix B** presents an annual summary of the amounts charged for non-availability of the service.

*Logistics*

3.7 **Appendix C** to this part of the report shows the logistics handled from the Regional Office in 2023.

3.8 Regarding the Fortigate, Forti Switch, Forti Manager and Forti Analyzer cybersecurity equipment, it was shipped and distributed to all network nodes. Currently, in some cases in particular, there are some administrative issues, specifically in two States, which are delaying the final reception of this equipment.

### *Satellite network spare parts*

3.9 Participants took note that the following items were pending receipt at the SAM Office: an 80W IBUC that was faulty in Maiquetía, a 1070 modem from the Guayaquil node and a 1070 modem from the Santiago node.

3.10 According to the REDDIG II Manual, States that have received replacement equipment but have not yet sent the original faulty equipment for factory maintenance may not request another replacement item until they have completed the procedure stipulated in the aforementioned conclusion.

3.11 **Appendix D** to this part of the report contains the inventory of spare parts in stock at the Regional Office storeroom.

### *Status of the nodes*

3.12 **Appendix E** to this part of the report shows 2023 statistics on requests fulfilled and breakdowns.

3.13 The Meeting took note of the current REDDIG II topology, with the following distribution of nodes, by access type:

- **Satellite and MPLS:** Ezeiza, Montevideo, Curitiba, Asunción, La Paz, Santiago, Lima, Brasilia, Manaus, Recife, Guayaquil, Cayenne, Georgetown, Paramaribo, Piarco, Maiquetía, and Bogota. **Subtotal: 17**

- **Only MPLS:** Rio de Janeiro, Ilopango, Cochabamba, Salt Lake City, Atlanta, ICAO SAM, Aireon, ARSAT (Buenos Aires, Madrid, Panama, and Johannesburg). **Subtotal: 11**

- **Only satellite:** Tegucigalpa (MEVA antenna). **Subtotal: 1**

- **MPLS in process of being installed:** San Juan (Puerto Rico). **Subtotal: 1**

- **MPLS planned:** SITA. **Subtotal: 1**

**Total: 31    Total operational: 29    In process: 1    Planned: 1**

3.14 **Appendix F** to this part of the report illustrates the current topology of REDDIG II.

### *Transfer of the REDDIG II node of Bogota*

3.15 The Secretariat reported that the relocation of the Bogota node to the new facilities at the El Dorado airport had been completed in late February 2023. The REDDIG II node in Bogota was operating normally through the two network segments (ground and satellite).

3.16 The new geographical coordinates of the Bogota node are: **04°42'23" N** and **74° 9'10" W**.

### *Node configuration back-up*

3.17 In 2023, back-ups were made of network equipment configurations, for each station, which are stored and available at the Manaus NCC.

### *Security*

3.18 The Meeting was informed that the Capacity Development and Implementation (CDI) Bureau had carried out the firewall procurement process as per Conclusion RCC/22-4 of the Coordination Committee of Regional Project RLA/03/901. It should be noted that the purpose of the firewalls is to provide security, standardize the equipment and eventually replace the border routers in each node.

3.19 The planned distribution of FortiNet devices is shown in **Appendix G** to this part of the report.

3.20 **Appendix H** to this part of the report shows the licenses of the purchased FortiNet equipment that already need to be renewed.

3.21 It is also worth mentioning that passwords for node routers and switches are changed every year in order to maintain active the security and integrity measures of processes and equipment configurations. These measures will be reinforced when the purchased firewalls and switches are installed.

## REDDIG II TRAINING PROGRAMME

3.22 The Meeting noted that, in view of the pandemic and other factors, the following training courses had been scheduled in 2023:

- a) **Recurrent training on REDDIG operation and maintenance:**  
It is a regular task for the REDDIG Administrator to carry out this training during his annual visits to the nodes. During 2023, this type of training was delivered in Piarco (Trinidad & Tobago) and Guayaquil (Ecuador); and
- b) **Training for the Manaus NCC staff on IP packet analysis using *sniffer* (RADAR, AMHS, etc.):**  
Some concepts were discussed at the RTO/10, but the possibility of conducting specific training during 2024, subject to approval by RCC/30, must be considered.

## OPERATION OF REDDIG II AND ANALYSIS OF THE IMPLEMENTATION OF NEW SERVICES

### *Alternating operation of the NCCs and REDDIG management centre*

3.23 During 2023, there was no changeover of the operation of the NCCs and the REDDIG management centre from Manaus to the Ezeiza NCC.

3.24 It was noted that, during short periods of solar conjunction and events, only the reference carrier had been temporarily switched from the Manaus NCC to the Ezeiza NCC.

*Coordination improvements*

3.25 During 2023, it was requested once again that the REDDIG Administration and the nodes involved be informed of technological changes, breakdowns or configurations made in the systems of the States and that affected the services provided through the REDDIG (PABX, *Voice Switching*, MTA, automated systems, surveillance data exchange, etc.). This request was reiterated at this Meeting.

3.26 The Secretariat noted that the Brazilian administration has provided a mobile phone (No. +55 92 8412-6738) to the technical staff of the NCC, which also gave access to messaging (WhatsApp, Signal, Telegram, etc.), a tool that had greatly facilitated coordination. Currently, all NCC staff use this supplementary means, and the network Administrator uses his own mobile phone service to meet the requirement for immediate communication.

*Antivirus software in NMS servers*

3.27 As is done annually, the antivirus in 23 NMS servers was renewed, with a 1-year license. The renewal must be effective 31 December each year. The antivirus update was carried out by NCC Manaus staff during the month of January 2024.

*Corrective maintenance*

3.28 Although different tasks related to this item were carried out, the work in the Recife node stands out, with the resolution of a issue with the antenna guide in the satellite station.

*Preventive maintenance*

3.29 The same work plan applied since 2018 was followed. Special attention was placed on the RF part of each station. In general, physical maintenance was done at the software level and by remote access.

*Visit to the nodes*

3.30 Three missions were carried out by the REDDIG Administrator in 2023: one to Bogota, at the request of the Colombian Administration, and related to the relocation of the node; a mission to Piarco, Trinidad & Tobago, and another to Guayaquil, Ecuador. The latter two were planned by the Project as part of the annual technical visits.

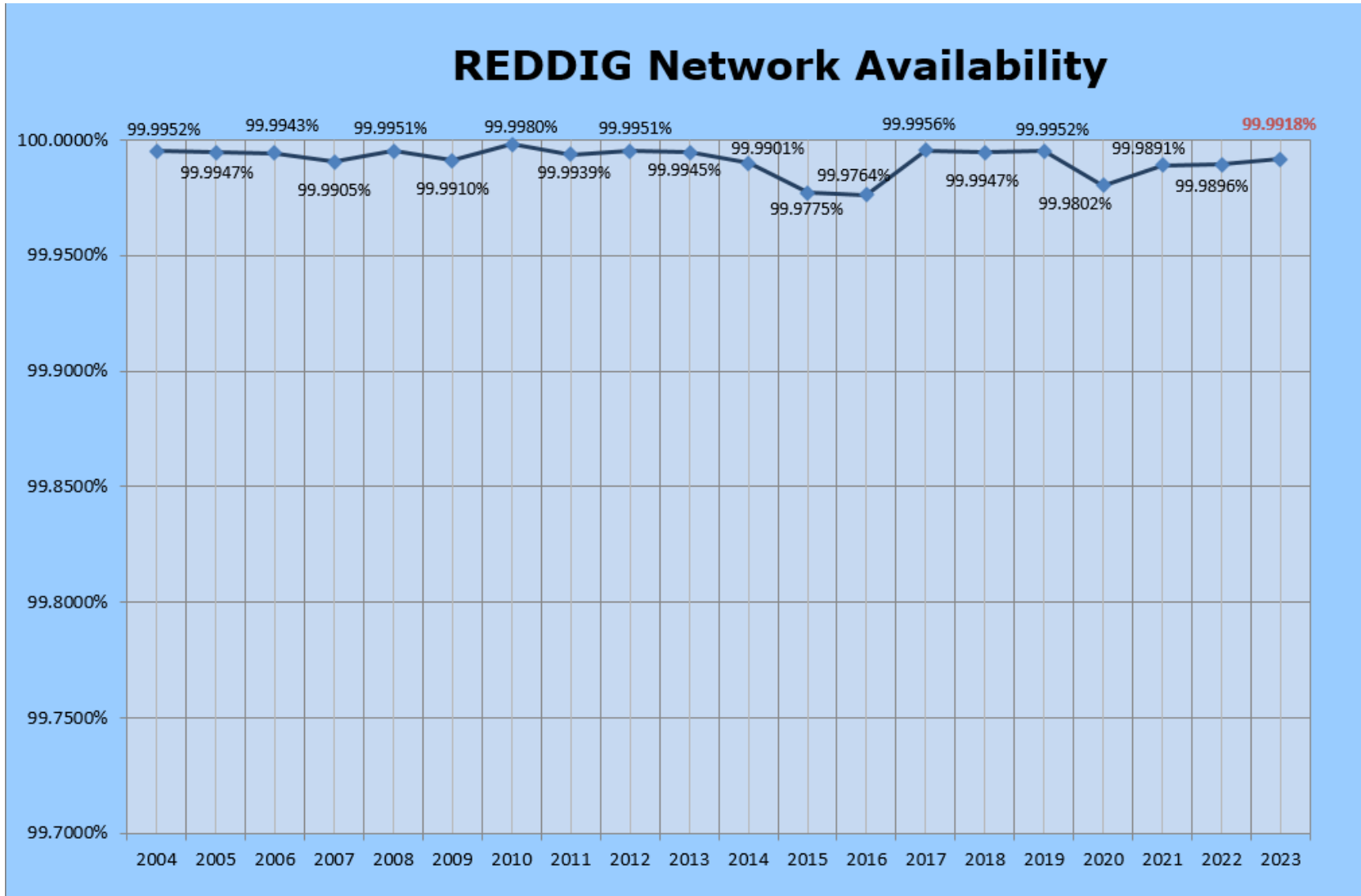
*Analysis of REDDIG performance improvement requirements*

3.31 The Meeting noted that issues related to security, the addition of nodes inside and outside the Region, the inclusion of new services, the interconnection between Regions, the useful life of the equipment of the current REDDIG and possible actions, as well as network migration, continued to be analyzed during 2023.

3.32 In this sense, and considering that the ground network performed better with regards to parameters critical for traffic exchange (cost/benefit, *delay*, *jitter*, *throughput*, latency, error rate, interaction of factors, etc.), it was decided that all services would be mainly carried over this network.

### APPÉNDIX A

#### REDDIG Availability



**APPENDIX B**

**AVAILABILITY CIRION DURING THE YEAR 2023**

Cirion\_Unavailability Credits\_2023

	Jan-23		Feb-23		Mar-23		Apr-23		May-23		Jun-23		Jul-23		Aug-23		Sep-23		Oct-23		Nov-23		Dec-23		TOTAL
	Availabili ty	USD Credit	Availab ility	USD Credit	Availab ility	USD Credit	Availab ility	USD Credit	Availab ility	USD Credit	Availabi lity	USD Credit	Availabi lity	USD Credit	Availab ility	USD Credit	Availab ility	USD Credit	Availab ility	USD Credit	Availabi lity	USD Credit	Availabi lity	USD Credit	
1 SAEZ																									0.00
2 SBBR																									0.00
3 SBCT																	97.35%	16.57							16.57
4 SBMN							95.35%	32.42			99.33%	2.75						99.53%	1.22	96.21%	25.96			62.35	
5 SBRF	95.12%	32.29	98.23%	10.39	96.91%	19.67					99.63%	0.51	99.19%	3.57	99.48%	1.54	99.33%	2.58	99.06%	4.5	98.56%	8.01	98.90%	5.58	88.64
6 SCEL																									0.00
7 SEGU																									0.00
8 SGAS									97.30%	40.08	98.23%	24.57													64.65
9 SKED					99.58%	0.11													99.49%	1.43	99.48%	1.57	99.44%	1.8	4.91
10 SLLP									95.97%	88.03	98.47%	29.05													117.08
11 SMPM											98.66%	36.4	98.62%	37.77			98.47%	29.1							103.27
12 SOCA													97.58%	50.14	99.69%	0.28	95.00%	111.20							161.62
13 SPIM																	99.67%	0.2							0.20
14 SUMU																									0.00
15 SVMI									94.41%	134.84	92.75%	177.23													312.07
16 SYGC											99.53%	7.11					99.12%	24.29	98.71%	41.47			99.58%	5.14	78.01
17 TTZP					97.33%	18.82			99.39%	2.49			97.61%	16.62	99.39%	2.46									40.39
18 ARSAT															99.04%	9.02									9.02
19 SBRJ																									0.00
20 SLCB							96.75%	59.55									97.22%	50.02							109.57
21 FAOR									98.59%	8.36	0.00%	750			88.80%	81.78	98.65%	7.91	98.77%	6.97					855.02
22 MPTO																									0.00
23 LEEE											94.56%	38.55													38.55
24 MSLP																									0.00
25 ICAO																									0.00
		32.29		10.39		38.6		91.97		273.8		1066.17		108.1		95.08		241.87		55.59		35.54		12.52	
														2061.92											

Note: SLA-Availability for all nodes: 99.70%

USD 2061.92

**APPENDIX C****Logistic Movements****EQUIPMENT SHIPPED FOR FACTORY REPAIR DURING 2023**

<b>MODEM SKYWAN 1070</b>		
<b>EQUIP.</b>	<b>S.N.</b>	<b>NODO / NODE</b>
IDU 1070B	#00:40:71:F0:50:FC	Paramaribo (Surinam)
IDU 1070B	#00:40:71:F0:51:26	Paramaribo (Surinam)
IDU 1070B	#00:40:71:F0:50:AE	Curitiba (Brasil)
IDU 1070B	#00:40:71:F0:50:E4	Asunción (Paraguay)

<b>EQUIPOS RF TERRASAT / TERRASAT RF EQUIPMENT</b>		
IBUC 80W	TE 5022339/59	Paramaribo (Surinam)
IBUC 80W	TE 5022357	Paramaribo (Surinam)

**EQUIPMENT SHIPPED TO THE RESPECTIVE NODES DURING 2023**

<b>MODEM SKYWAN 1070</b>		
<b>EQUIP.</b>	<b>S.N.</b>	<b>NODO / NODE</b>
IDU 1070B	#00:40:71:F0:51:02	Cayena (Francia)
IDU 1070B	#00:40:71:F0:52:22	Maiquetia (Venezuela)
IDU 1070B	#00:40:71:F0:51:C2	Recife (Brasil)
IDU 1070B	#00:40:71:F0:51:C2	spare (OACI)
IDU 1070B	#00:40:71:F0:2C:3C	La Paz (Bolivia)
IDU 1070B	#00:40:71:F0:2C:3C	La Paz (Bolivia)

<b>EQUIPOS RF TERRASAT / TERRASAT RF EQUIPMENT</b>		
IBUC 80W	TE 5022353	Bogotá (Colombia)
IBUC 80W	TE 5022357	Cayena (Francia)
IBUC 80W	TE 5022342	Recife (Brasil)
RX 1+1	TE 6010447	Cayena (Francia)
RX 1+1	TE 6010441	La Paz (Bolivia)

## APPENDIX D

### REDDIG II Spare Parts

Description	Qty	Unit Price USD	Total Price USD
<b>INDOOR Equipment</b>			
— IDU 1070 19" NS + PS AC	1	20,664.00	20,664.00
— License Key Mesh Topology		included	
<b>GORGY TIMING Equipment</b>			
GPS Master Clock— RT9s including on outdoor GPS	1	3,289.00	3,289.00
Antenna and cable			
GPS standalone outdoor Antenna for RT9s (without cable)	1	937.00	937.00
<b>LAN Port Server</b>			
NPORT 5610-8	1	1,230.00	1,230.00
<b>10 MHz Redundancy Equipment</b>			
BIAS-T switch (10MHz redundancy system)	1	2,125.00	2,125.00
Passive DC-Block (Power injector 10MHz pass)	4	542.00	2,168.00
Passive DC-Block (RF Bandwidth)	4	130.00	520.00
Passive Splitter (2 Port RF Bandwidth)	2	265.00	530.00
<b>Spare Parts for HPE PROLIANT DL160 Server</b>			
Fans for HPE PROLIANT DL160 Server	5 2	124.00	1,240.00
Hot-Plug HP Midline HDD 500GB 7.2K SATA	2	405.00	810.00
<b>OUTDOOR Equipment</b>			
<b>RF Equipment</b>			
— IBUC 80W	1	18,653.00	18,653.00
— Tx 1+1 switching system	1	8707.00	8707.00
— Rx 1+1 switching system	1	9,523.00	9,523.00
Waveguide Switch (CPRG flange) + Control cable	1	3,528.00	3,528.00
LNB with external 10MHz reference	1	804.00	804.00
RF filter (for LNB path)	1	676.00	676.00

N-Female Type coaxial connector (for CNT/LMR-400 Type coaxial cable)	4	45.00	180.00
N-Male Type coaxial connector (for CNT/LMR-400 Type coaxial cable)	4	44.00	176.00
N-Male Type coaxial connector (for CNT/LMR-600 Type coaxial cable)	4	67.00	268.00
<b>EQUIPOS Y PIEZAS DE REPUESTO EN GENERAL</b>			
Modem Satelital	1		
Cable de energia	1		
Tarjeta MOD	1		
Tarjeta SIC/DEMOM	1		
Tarjeta FPG	1		
Tarjeta UIM	1		
Cable de consola	1		
Cable de RF N-SMA Macho	1		
<del>ROUTER Cisco 2901</del>	<del>1</del>		
Two port Async-Sync Serial WAN interface card	1		
Two port Async-Sync Serial WAN interface card	1		
<del>two port voice interface card FXS</del>	<del>1</del>		
<del>ROUTER Cisco 2911</del>	<del>1</del>		
24 PORT RJ45 PATCH PANEL	1		
01 TARJETA EVM-HD TELEFONICO	1		
Cable serial CISCO V.24 DTE DB25	1		
Cable serial CISCO V.24 DCE DB25	1		
Cable telefonico RJ11 cross over	1		
High density 8 port analog and digital extension module	1		
<del>ROUTER Cisco 2901</del>	<del>1</del>		
Two port Async-Sync Serial WAN interface card	1		
<del>two port voice interface card FXS</del>	<del>1</del>		
Cable serial CISCO V.24 DCE DB25	1		
<del>Rx 1+1</del>	<del>1</del>		
Handheld Terminal with 2 m cable	1		
Accesorios para RX 1+1	1		
Cables de energia	2		
Cable Coaxial de RF con conectores tipo N 6m.	1		
Cable de Gestion para LNB	1		

<del>Cable Coaxial de RF con conectores tipo N 30 cm.</del>	2		
Wave Guide Switch for LNB	1		
LNB Banda C	1		
LNB Banda C	1		
<del>Switch Netgear de 26 Puertos</del>	<del>1</del>		
Cable USB	1		
<del>Switch Netgear de 26 Puertos</del>	<del>1</del>		
<del>IBUC 40W</del>	<del>1</del>		
<del>IBUC 40W</del>	<del>1</del>		
1+1 Interface	1		
Switch de Guia de Onda	1		
Cable Coaxial con conectores tipo N 30cm	2		
Cables de gestión con conector tipo Militar	2		
Cable de gestión tipo ethernet	1		
Cable de Energía	2		
Manuales de Curso de Rio de Janeiro			
Documentos Oficiales REDDIG II			
Manuales REDIG II			
Documentos Oficiales REDDIG II			
<del>IBUC Terrasat 80 W</del>	<del>1</del>		
<del>IBUC Terrasat 80 W</del>	<del>1</del>		
Tarjeta Serial MOXA de 8 Puertos RS-232 PCI	1		
Disco Duro Externo IOMEGA NAS 2 Tb	1		
Fuente para Disco Duro	1		
Manuales	1		
UPS Eaton Eclipse ECO 1200 VA	1		
Cable Multipuerto Moxa 8 puertos	1		
Cable Cisco V.24 DTE	5		
Cable Cisco V.24 DCE	11		
Cable DB25 Male-Female	6		
Cable Patch Cord ethernet RJ45	6		
Cable Multiple Cisco 8 puertos ethernet con adaptadores a DB25	2		
Two port Async-Sync Serial WAN interface card	1		

Four port Async-Sync Serial HWIC	1		
Four port Async-Sync Serial HWIC	1		
Eight port Async interface card	1		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
<del>Two Port Voice Interface Card FXS.</del>	<del>1</del>		
Four Port Voice Interface Card FXS	1		
Four Port Voice Interface Card FXS	1		
Four Port Voice Interface Card FXS	1		
Four Port Voice Interface Card FXO	1		
One Port 2nd Gen Multiflex trunks Voice Wan Interface Card E1/T1	1		
High Density voice/fax external Module	1		
Two Port 2nd Gen Multiflex trunks Voice Wan Interface Card E1/T1	1		
Eight port Async-Sync interface card	1		
Module Adapter for SM Slot on CI	1		
Module Adapter for SM Slot on CI	1		
Impresora Laser Jet Pro 400 M401dn	1		
Cables de Energía	1		
8 Port Device Server 10/100 eth	1		
<del>RSS 16-SLOT 4U Chasis</del>	<del>1</del>		
Power Module	1		
Network Control Card	1		
Dual 8 wire Module Jack A/B card	1		
Dual 8 wire Module Jack A/B card	1		
D25 A/B Card	1		
D25 A/B Card	1		

D25 A/B Card	1		
D25 A/B Card	1		
<del>RSS 16 SLOT 4U Chasis</del>	<del>1</del>		
<del>Power Module</del>	<del>1</del>		
<del>Network Control Card</del>	<del>1</del>		
<del>Dual 8 wire Module Jack A/B card</del>	<del>1</del>		
<del>Dual 8 wire Module Jack A/B card</del>	<del>1</del>		
<del>D25 A/B Card</del>	<del>1</del>		
<del>D25 A/B Card</del>	<del>1</del>		
<del>High density 8 port analog and digital extension module</del>	<del>1</del>		
<del>High density 8 port analog and digital extension module</del>	<del>1</del>		
Cable de consola de Cisco	2		
KVM Extender	1		
Convertidor USB – Serial	1		
Telefono IP DEPAEPE	1		
Mouse Optico USB Negro	1		
Regleta electrica con 05 tomas	2		
Teclado Estandar K120	1		
Filtro RF	1		
Filtro RF	1		
Barras de Anclaje de acero	3		
Bloques de anclaje de plastico negro	6		
Tornillos de sujecion de acero	20		
Blank panel para RSS	3		
Regleta electrica con 05 tomas	2		
Adaptadores Cambia genero DB25	15		
Pantalla LCD 27"	1		
HP ProLiant DL160 Gen8 Base – Server	1		
<del>NTP Time Server Master Clock</del>	<del>1</del>		
GPS Antenna + Cable	1		
Router Cisco 2901	1		
Router Cisco 2901	1		
Router Cisco 2901	1		

<del>IBUC Terrasat 80 W</del>	<del>1</del>		
Firewall NETGEAR Prosafe VPN Dual Wan Gigabit	1		
<del>VSAT Terminal IDU SkyWan 1070 19"</del>	<del>1</del>		
Forti Gate S124EFTQ22002383	1		
Forti Gate S124EFTQ22002389	1		
Forti Gate S124EFTQ22002625	1		
Forti Gate S124EFTQ22002418	1		
<b>REPUESTOS REDDIG I</b>			
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Fuente de Poder para CX950	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Dual Analog Voice Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
Fast Ethernet 10/100 Card	1		
10 Base-T Ethernet Card	1		
10 Base-T Ethernet Card	1		
ISDN Card	1		

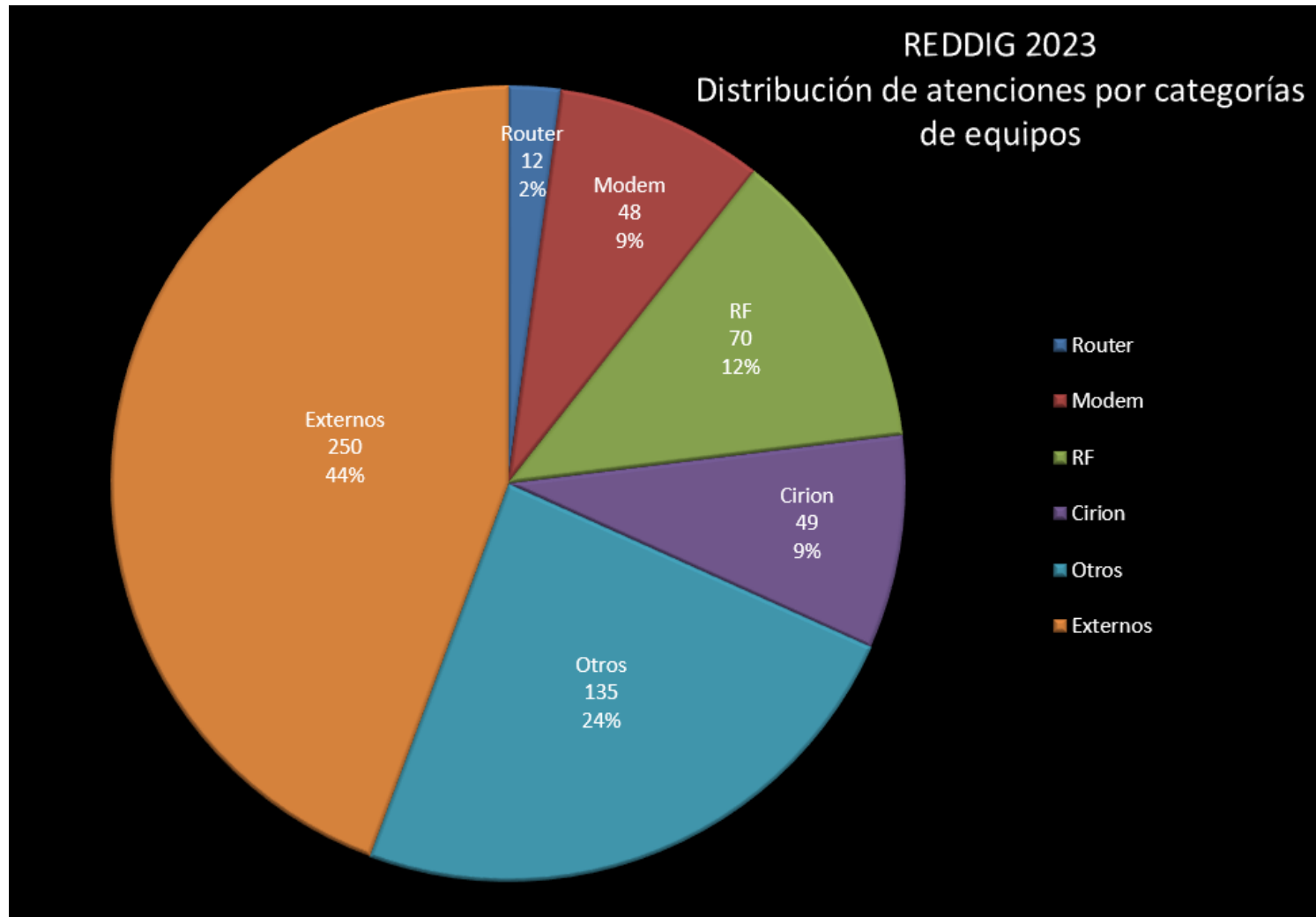
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
Digital Voice Processor	1		
E1 Expansion	1		
V.35 H	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Multi I/O V.24	1		
Modulo Ram 32 MB	1		
Modulo Ram 32 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Modulo Ram 64 MB	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
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Slim Card E&M	1		
Slim Card E&M	1		
Slim Card E&M	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		
Universal I/O	1		

Universal I/O	1		
Universal I/O	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Ring Generator	1		
Chasis CX950	1		
Multiplexor CX950e Chasis+Placa Madre	1		
Multiplexor CX950e Chasis+Placa Madre	1		
Modem Linkway 2100	1		
Tarjeta MODEM	1		
Tarjeta Ethernet	1		
FR TIA	1		
Fax CANON H12130	1		
Telefono analogico CONAIRPHONE	1		
SSPA 40 W	1		
SSPA 40 W	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Fuente para Modem Linkway	1		
Rollo de cable ASSy 3 x 2.5 50 m	1		
Rollo de cable Multipar 50 m	1		
Rollo de cable Multipar 50 m	1		

LNB Banda C	1		
Cables Patch Cord Ethernet 3m	1		
Cables DB9-DB25 3m	1		
Rollo de Cable Coaxial 50R 50m	1		
SSPA 40 W	9		
GPS Datum	2		
Cable de consola Cisco	1		
Cable de Gestion SSPA Paradise	1		
Conectores Tipo N 50R sin ensamblar	1		
Pulsera anti estatica	1		
Paquete de Placas vacias para equipos Memotec.	1		
Combinador-Divisor de RF	4		
Convertidos RS232-RS485	1		
Paquete de instalacion SUN SOLARIS	1		
Tarjeta Multipuerto Serial	1		
Cable multipuerto DB25 para Multi I/O Memotec	1		
Cable Patch Cord Ethernet RJ45 5m	2		
Cable de consola Memotec	1		
Adaptador DB9-DB25	2		
Adaptador DB25-M34	2		
Cable de energía	1		
Cable RF Coaxial N-SMA Male	2		

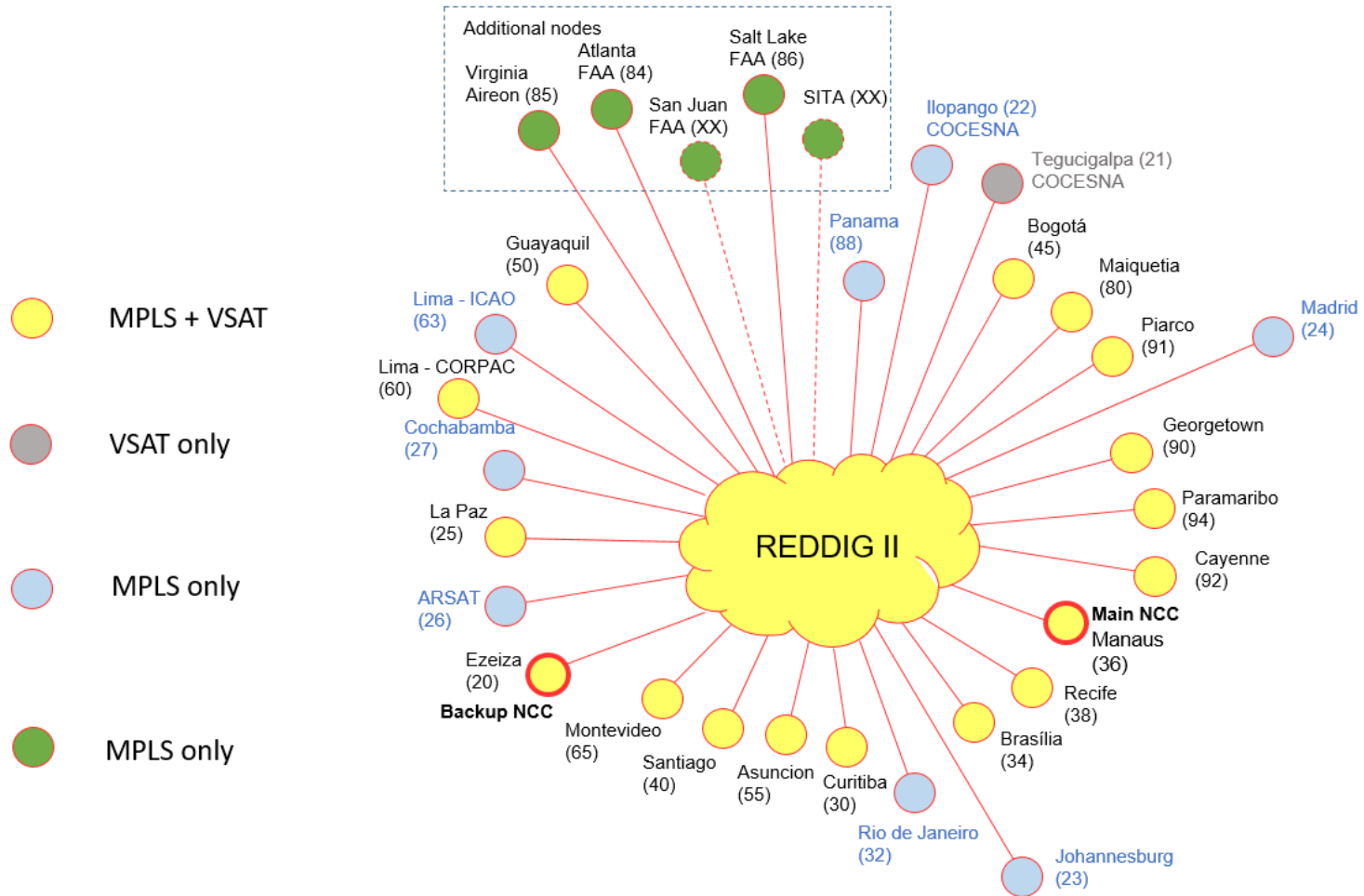
### APPENDIX E

#### Attentions



### APPENDIX F

#### REDDIG II Topology



APPENDIX G

Fortinet equipment distribution

País	Localidad	Station	Code	XX	IP	Fortigate A Lumen	Fortigate B Estado	FortiSwitch	FortiAnalyzer	FortiManager	Mask	Gateway			
						10.100.xx.130	Nro. Serie	10.100.xx.131	Nro. Serie	10.100.xx.140	Nro. Serie	10.100.xx.150	Nro. Serie	10.100.xx.160	255.255.255.0
1	Brasil	Manaus	SBMN	36		SBMN-FORTI-FG-A	FGT61FTK21012948	SBMN-FORTI-FG-B	FGT61FTK21013420	SBMN-FORTI-FS-A	S124EFTQ22002370	SBMN-FORTI-FAN	FAZ3HGTA220007	SBMN-FORTI-FMG	FMG2HGTA22000266
2	Argentina	Ezeiza	SAEZ	20		SAEZ-FORTI-FG-A	FGT61FTK21012486	SAEZ-FORTI-FG-B	FGT61FTK21012851	SAEZ-FORTI-FS-A	S124EFTQ22002376				
3	Brasil	Curitiba	SBCT	30		SBCT-FORTI-FG-A	FGT61FTK21012472	SBCT-FORTI-FG-B	FGT61FTK21012919	SBCT-FORTI-FS-A	S124EFTQ22002427				
4	Chile	Santiago	SCEL	40		SCEL-FORTI-FG-A	FGT61FTK21012479	SCEL-FORTI-FG-B	FGT61FTK21012609	SCEL-FORTI-FS-A	S124EFTQ22002458				
5	Uruguay	Montevideo	SUMU	65		SUMU-FORTI-FG-A	FGT61FTK21014558	SUMU-FORTI-FG-B	FGT61FTK21012992	SUMU-FORTI-FS-A	S124EFTQ22002464				
6	Bolivia	La Paz	SLLP	25		SLLP-FORTI-FG-A	FGT61FTK21014533	SLLP-FORTI-FG-B	FGT61FTK21014448	SLLP-FORTI-FS-A	S124EFTQ22002630				
7	Colombia	Bogotá	SKED	45		SKED-FORTI-FG-A	FGT61FTK21014399	SKED-FORTI-FG-B	FGT61FTK21014768	SKED-FORTI-FS-A	S124EFTQ22002617				
8	Ecuador	Guayaquil	SEGU	50		SEGU-FORTI-FG-A	FGT61FTK21012420	SEGU-FORTI-FG-B	FGT61FTK21011243	SEGU-FORTI-FS-A	S124EFTQ22002619				
9	Paraguay	Asunción	SGAS	55		SGAS-FORTI-FG-A	FGT61FTK21013141	SGAS-FORTI-FG-B	FGT61FTK21014824	SGAS-FORTI-FS-A	S124EFTQ22002377				
10	Perú	Lima	SPIM	60		SPIM-FORTI-FG-A	FGT61FTK21014241	SPIM-FORTI-FG-B	FGT61FTK21013222	SPIM-FORTI-FS-A	S124EFTQ22002629				
11	Brasil	Recife	SBRF	38		SBRF-FORTI-FG-A	FGT61FTK21012961	SBRF-FORTI-FG-B	FGT61FTK21014260	SBRF-FORTI-FS-A	S124EFTQ22002635				
12	Guyana	Cayena	SOCA	92		SOCA-FORTI-FG-A	FGT61FTK21014551	SOCA-FORTI-FG-B	FGT61FTK21012456	SOCA-FORTI-FS-A	S124EFTQ22002413				
13	Guyana	Georgetown	SYGC	90		SYGC-FORTI-FG-A	FGT61FTK21015068	SYGC-FORTI-FG-B	FGT61FTK21014782	SYGC-FORTI-FS-A	S124EFTQ22002415				
14	Surinam	Paramaribo	SMPM	94		SMPM-FORTI-FG-A	FGT61FTK21013226	SMPM-FORTI-FG-B	FGT61FTK21012911	SMPM-FORTI-FS-A	S124EFTQ22002419				
15	Trinidad	Piarco	TT2P	91		TT2P-FORTI-FG-A	FGT61FTK21014583	TT2P-FORTI-FG-B	FGT61FTK21014901	TT2P-FORTI-FS-A	S124EFTQ22002420				
16	Venezuela	Maiquetia	SVM1	80		SVM1-FORTI-FG-A	FGT61FTK21013041	SVM1-FORTI-FG-B	FGT61FTK21010597	SVM1-FORTI-FS-A	S124EFTQ22002840				
17	Brasil	Brasilia	SBBR	34		SBBR-FORTI-FG-A	FGT61FTK21014571	SBBR-FORTI-FG-B	FGT61FTK21013443	SBBR-FORTI-FS-A	S124EFTQ22002371				
18	Panamá	Panamá	MPTD	88		MPTD-FORTI-FG-A	FGT61FTK21014935	MPTD-FORTI-FG-B	FGT61FTK21014515	MPTD-FORTI-FS-A	S124EFTQ22002381				
19	OACI	Lima	OACI	63		OACI-FORTI-FG-A	FGT61FTK21013176								
20	Brasil	Río de Janeiro	SBRJ	32		SBRJ-FORTI-FG-A	FGT61FTK21013002								
21	Argentina	ARSAT	ARST	22		ARST-FORTI-FG-A	FGT61FTK21013395								
22	Bolivia	Cochabamba	SLCB	27		SLCB-FORTI-FG-A	FGT61FTK21012861								

S124EFTQ22002383	Spare
S124EFTQ22002389	
S124EFTQ22002418	
S124EFTQ22002625	

**APPENDIX H****Fortinet equipment Licenses**

	Serial Number	Product Model	Description	Unit Expiration Date	Registration Date
1	FAZ3HGTA22000721	FortiAnalyzer 300G	ICAO SAM	2024-12-12	2022-12-13
2	FCTEMS8822008827	FortiClient EMS	FortiClient EMS Cloud	2023-12-14	2022-12-14
3	FGT61FTK21010597	FortiGate 61F	ICAO SAM	2023-12-03	2022-12-11
4	FGT61FTK21011243	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
5	FGT61FTK21012420	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
6	FGT61FTK21012456	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
7	FGT61FTK21012472	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-08
8	FGT61FTK21012479	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
9	FGT61FTK21012486	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
10	FGT61FTK21012609	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
11	FGT61FTK21012851	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
12	FGT61FTK21012861	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
13	FGT61FTK21012911	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
14	FGT61FTK21012919	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
15	FGT61FTK21012948	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-08
16	FGT61FTK21012961	FortiGate 61F	ICAO SAM	2023-12-04	2023-03-13
17	FGT61FTK21012992	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
18	FGT61FTK21013002	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
19	FGT61FTK21013041	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
20	FGT61FTK21013141	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
21	FGT61FTK21013176	FortiGate 61F	ICAO SAM	2023-12-04	2023-03-13
22	FGT61FTK21013222	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
23	FGT61FTK21013226	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
24	FGT61FTK21013385	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
25	FGT61FTK21013420	FortiGate 61F	ICAO SAM	2024-12-03	2022-12-11
26	FGT61FTK21013443	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
27	FGT61FTK21014241	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
28	FGT61FTK21014260	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
29	FGT61FTK21014399	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
30	FGT61FTK21014448	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
31	FGT61FTK21014515	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
32	FGT61FTK21014533	FortiGate 61F	ICAO SAM	2023-11-25	2022-11-25
33	FGT61FTK21014551	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
34	FGT61FTK21014558	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
35	FGT61FTK21014571	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
36	FGT61FTK21014583	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
37	FGT61FTK21014768	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
38	FGT61FTK21014782	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
39	FGT61FTK21014824	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
40	FGT61FTK21014901	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11

41	FGT61FTK21014935	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-09
42	FGT61FTK21015068	FortiGate 61F	ICAO SAM	2023-12-04	2022-12-11
43	FMG2HGTA22000266	FortiManager 200G	ICAO SAM	2024-12-15	2022-12-16
44	S124EFTQ22002370	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
45	S124EFTQ22002371	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
46	S124EFTQ22002376	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
47	S124EFTQ22002377	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-13
48	S124EFTQ22002381	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
49	S124EFTQ22002383	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
50	S124EFTQ22002389	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
51	S124EFTQ22002413	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
52	S124EFTQ22002415	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
53	S124EFTQ22002418	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
54	S124EFTQ22002419	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
55	S124EFTQ22002420	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
56	S124EFTQ22002427	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
57	S124EFTQ22002458	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
58	S124EFTQ22002464	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
59	S124EFTQ22002617	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
60	S124EFTQ22002619	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
61	S124EFTQ22002625	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
62	S124EFTQ22002629	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
63	S124EFTQ22002630	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-13
64	S124EFTQ22002635	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14
65	S124EFTQ22002840	FortiSwitch 124E FPOE	ICAO SAM	2023-12-05	2023-03-14

**Agenda Item 4: Work plan for 2024 and implementation of REDDIG III – Phase 1**

4.1 Under this agenda item, the following working paper was presented:

- WP/04 – *Activities foreseen for 2024* (presented by the Secretariat).

**2024 WORK PLAN**

4.2 The Meeting reviewed the following activities to be conducted in 2024:

- a) Network planning and management activities; and
- b) 2024 training programme

**NETWORK PLANNING AND MANAGEMENT ACTIVITIES*****REDDIG III***

4.3 The participants took note that the last Coordination Committee Meeting (RCC/29 - Lima, 13-17 March 2023) had been presented with a working paper (WP/07) proposing the concept for version 3 of the regional network (REDDIG III) and the improvement of the management and administration of Regional Technical Cooperation Project RLA/03/901.

4.4 RCC/29-WP/07 is available at:

[https://www.icao.int/SAM/Documents/2023-RLA03901-RCC29/REDDIG\\_RCC29%20NE07%20REDDIG%20III.pdf](https://www.icao.int/SAM/Documents/2023-RLA03901-RCC29/REDDIG_RCC29%20NE07%20REDDIG%20III.pdf)

4.5 The deployment of a highly redundant MPLS network is expected to start operating no later than January 1, 2025. In this regard, work is being done with two well-defined objectives. One is to maximise the operation of the current satellite network, which is intended to remain in operation until December 2025, demanding a greater effort related to preventive and corrective maintenance tasks. The second is to start the bidding process for the new MPLS network during 2024.

4.6 The Secretariat reported that the contract with the space segment provider (Intelsat) of the REDDIG II satellite communication network (VSAT) had been renewed until 31 December 2025.

4.7 It was estimated that a ground network with two MPLS accesses through different last-mile physical pathways would be operational by January 2025. By 2026, network equipment in each node would be in the process of being replaced, subject to the work of the *Ad hoc* group created for this purpose at the RCC-29.

***REDDIG III implementation phases***

4.8 After reviewing the information contained in the WP/07, the RCC/29 meeting agreed to implement REDDIG III in two phases. The first phase consisted in working on the WAN part of the network, hiring the services of a telecommunication provider (MPLS), with last-mile redundancy. The second phase consisted in working on the LAN part of the network, upgrading the connectivity equipment, the necessary interfaces to connect the existing aeronautical services in each node and adapting the cybersecurity equipment acquired to the new architecture of the LAN part of the network.

4.9 The participants of the RCC/29 meeting also agreed that the REDDIG III *Ad hoc* group would conduct the necessary analyses and develop the technical specifications to implement Phase 2 of the network.

*Technical specifications of REDDIG III – Phase 1*

4.10 The Meeting undertook the detailed review of the draft technical specification for REDDIG III that had already been presented during RCC/29. During the review, there was (remote) participation of a representative of CDI (Montreal) who, subsequently, indicated the possibility of carrying out a Sole Source process, for Phase 1 of the implementation of REDDIG III (contracting of the MPLS service with redundant links).

4.11 As a result of this review, it was considered that the specifications developed were in accordance with what was required, leaving the verification of the coordinates of each of the nodes, which had to be reported to the Administrator; after that, it would coordinate with the CDI for the review of the same and, if there is a significant change, circulate it among the States. In this regard, the Meeting agreed on:

<b>Conclusion</b> <b>RCC/30-1</b>		<b>APPROVAL OF REDDIG III TECHNICAL SPECIFICATIONS – PHASE 1</b>	
<b>What:</b>		<b>Expected impact:</b>	
<p>In order to continue the procurement process of the MPLS service for REDDIG III – Phase 1, the participants of the RCC/30 Meeting request that the Secretariat:</p> <ul style="list-style-type: none"> <li>a) check with each State for the coordinates corresponding to the selected MPLS node.</li> <li>b) coordinate with CDI to review the technical specifications and thereby initiate the administrative arrangements for their procurement.</li> <li>c) if the revision of the technical specifications by the CDI generates significant changes to them, they should be circulated for the approval of the States.</li> </ul>		<ul style="list-style-type: none"> <li><input type="checkbox"/> Political / Global</li> <li><input type="checkbox"/> Interregional</li> <li><input checked="" type="checkbox"/> Economic</li> <li><input type="checkbox"/> Environmental</li> <li><input checked="" type="checkbox"/> Technical/Operational</li> </ul>	
<b>Why:</b>			
To start the process of acquiring the MPLS service of REDDIG III – Phase 1.			
<b>When:</b>		<b>Status:</b>	
Starting April 2024.		In process.	
<b>Who:</b>			
The Secretariat of Regional Technical Cooperation Project RLA/03/901.			

4.12 In this sense, regardless of the process that will be chosen (Bidding or Sole Source), the States participating in Project RLA/03/901 must make, as soon as possible, the deposits of the extraordinary fees for the contracting of the MPLS service for REDDIG III, as of January 2025.

4.13 **Appendix A** of this part of the Report presents the list of network nodes with corresponding coordinates.

*Addition of firewalls to the network*

4.14 Regarding the firewall equipment purchased, the Secretariat informed that the equipment had already been sent to the network nodes, with the exception of two States in the SAM Region, which had had difficulties with customs clearance.

4.15 It was also noted that the *Ad hoc* Cybersecurity Group to study and propose a more optimised configuration, taking better advantage of the functionalities of the purchased equipment and providing more resilience against potential attacks, had not yet completed its work.

4.16 Another aspect mentioned by the Secretariat was the renewal of cybersecurity equipment licences, which needed to be updated periodically.

4.17 The participants of the RCC/30 Meeting discussed these issues and formulated the following conclusion:

<b>Conclusion</b> RCC/30-2		<b>INSTALLATION OF CYBERSECURITY EQUIPMENT AND RENEWAL OF LICENCES</b>	
<b>What:</b>  The Secretariat:  a) Provide for the installation of already distributed cybersecurity equipment, using a basic configuration, while the <i>Ad hoc</i> Cybersecurity Group develops an advanced configuration.  b) Proceed with the automatic periodic renewal of cybersecurity equipment licences covering the useful life of the equipment.		<b>Expected impact:</b>  <input type="checkbox"/> Political / Global <input type="checkbox"/> Interregional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Technical/Operational	
<b>Why:</b> To increase network resilience against cyberattacks.			
<b>When:</b> Starting April 2024.		<b>Status:</b> In process.	
<b>Who:</b> The Secretariat of Regional Technical Cooperation Project RLA/03/901.			

*Management and Administration of Project RLA/03/901*

4.18 Under this agenda item, the Meeting analysed the proposal contained in Conclusion RCC/29-2 *Management and administration of Regional Project RLA/03/901 with the implementation of REDDIG III.*

4.19 Following a discussion about the information required, the information presented by the Secretariat, the REDDIG III implementation timeline, and the need for efficient management and administration of the regional network, the following conclusion was formulated:

<b>Conclusion RCC/30-3</b>		<b>DEFINITION OF IMPROVED REDDIG MANAGEMENT STRUCTURE</b>
<b>What:</b>	<b>Expected impact:</b>	
<p>a) The Secretariat submits the following information to the Ad Hoc Group:</p> <ol style="list-style-type: none"> <li>1. A report describing in detail each management function currently performed by the Regional Office, currently in charge of the management of the Project, as well as the functions currently performed by the Administrative Assistant, the Financial Assistant and the Technical Administrator of REDDIG, in relation to Project RLA/03/901, with the purpose of outlining the proposed functions of the Project Manager and the new Administrative-Financial Assistant to the Project Manager.</li> <li>2. A report on the categories used by ICAO for professional and administrative positions, and on staff recruitment timelines.</li> <li>3. An analysis and report on whether any changes would be required to the project MSA and its annexes if a new organisational structure is implemented.</li> </ol> <p>b) The <i>Ad hoc</i> Group, having obtained the above information, shall:</p> <ol style="list-style-type: none"> <li>1. Analyse the functions and propose the positions required to assume these functions, taking into account the new network configuration and the services that REDDIG III will have once consolidated.</li> <li>2. Regarding these new positions, coordinate with the Secretariat to secure the required budget for the proposed new organisational structure.</li> <li>3. In order to carry out the above tasks, the <i>Ad hoc</i> Group will meet online once all the information is available.</li> </ol>	<p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Interregional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Technical/Operational</p>	

4. Present the results at the next RCC or, if appropriate, request an extraordinary RCC.	
<b>Why:</b> To define the changes required in the organisational structure for the proper management of REDDIG, taking into account the changes that will take place with the implementation of REDDIG III.	
<b>When:</b> Starting in 2024.	<b>Status:</b> In process
<b>Who:</b> The Secretariat and representatives of the REDDIG III <i>Ad hoc</i> Group.	

4.20 The REDDIG III *Ad hoc* Group for the conduction of these activities will now be made up by representatives of the following States, coordinated by the representative of Chile: Argentina, Bolivia, Brasil, Chile, Colombia, Francia (Guyana Francesa), Guyana, Paraguay y Venezuela.

*Eleventh Technical-Operational Meeting of REDDIG (RTO/11)*

4.21 The Secretariat informed the Meeting that the Administration of Paraguay had informed that it would not be possible to hold the Eleventh Technical-Operational Meeting (RTO-11) in the city of Asunción, capital of Paraguay, due to administrative and other issues.

4.22 In this regard, the Secretariat will circulate a letter asking the States/Organisations participating in the network about their interest in hosting the event.

*Preventive maintenance scheduling*

4.23 In 2024, the REDDIG Administration would do preventive maintenance on all equipment of all REDDIG nodes. **Appendix B** to this working paper details the preventive maintenance schedule for 2024.

*Visit to REDDIG nodes*

4.24 In this regard, the Meeting considered visiting the nodes of Montevideo (Uruguay) and Paramaribo (Suriname) in 2024. The Secretariat was requested to obtain from the States concerned the approval of the visits, since there were no participants from the two States at the RCC/30 Meeting.

4.25 The objective was to carry out a complete assessment of the node and to provide recurrent training to the personnel in charge of node maintenance. In both cases, the visit would last one week.

*Alternating operation of the NCCs and the REDDIG management centre*

4.26 In this regard, the Secretariat would study the possibility of alternating the operation of the NCCs in 2024, with the presence of the Network Administrator in the Ezeiza node for a period of 5 days, conditions permitting.

4.27 During the short periods of solar conjunction and events, only the reference carrier would be temporarily switched from Manaus to Ezeiza, and *vice versa*.

*REDDIG telephone directory*

4.28 The Secretariat encouraged participating States/Organisations of the network to update or ratify the REDDIG telephone directory (ATS and administrative) on an annual basis.

4.29 In this regard, it was noted that this information was subject to operational documents/letters of agreement between the States and that any modification, in addition to being informed and coordinated with the REDDIG administration, had to be incorporated into the official documentation of the States and communicated through the official channels.

**REDDIG II TRAINING PROGRAMME***Recurrent training on REDDIG operation and maintenance*

4.30 This is an activity carried out every year during the scheduled visits of the Administrator to the nodes.

4.31 As mentioned in paragraph 4.23, this training activity shall be carried out during the scheduled visits to the Montevideo and Paramaribo nodes, if approved by the Administrations of Uruguay and Suriname.

*Course on security policies and firewall configuration*

4.32 The Meeting considered the possibility of providing further training on the purchased cybersecurity equipment (Fortinet), as several States had not attended the training course delivered at the SAM Regional Office in 2022.

4.33 In this regard, the Secretariat noted that, due to the implementation of Phase 1 of REDDIG III, it would not be possible to commit any part of the budget to contracting additional training in 2024.

4.34 One possibility suggested was for States with experience with the manufacturer's products (Fortinet) to share their knowledge in virtual workshops, to be coordinated with the Secretariat.

4.35 The representative of Peru noted that, during the training course delivered in Lima, a CORPAC participant had made video recordings of the sessions. He noted that the recordings were not of the best quality, but could be used as a guide for a refresher course (online), to be coordinated with the Secretariat.

4.37 The recorded material will be evaluated by the network administration, in order to be adapted for future training.

– End –

**APÉNDICE A / APPENDIX A****Nodos REDDIG III / REDDIG III nodes**

<b>Country</b>	<b>Node</b>	<b>Call Sign</b>	<b>Latitude</b>	<b>Longitude</b>
Argentina	Benavides	ARSAT	34° 24' 36" S	58° 43' 9.47" W
	Ezeiza	SAEZ	34° 49' 25" S	58° 31' 43" W
Bolivia	La Paz	SLLP	16° 30' 29" S	68° 11' 24" W
	Cochabamba	SLCB	17° 25' 14" S	66° 10' 8" W
Brazil	Brasilia	SBBR	15° 51' 27" S	47° 54' 12" W
	Curitiba	SBCW	25° 31' 43" S	49° 10' 33" W
	Manaus	SBMN	03° 02' 19" S	60° 02' 59" W
	Recife	SBRE	08° 07' 36" S	34° 55' 23" W
	Rio de Janeiro	SBRJ	22° 54' 34" S	43° 10' 02" W
Chile	Santiago	SCEL	33° 26' 38" S	70° 44' 52" W
Colombia	Bogotá	SKED	4°42'23" N	74° 9'10" W
Ecuador	Guayaquil	SEGU	02° 09' 29" S	79° 53' 02" W
El Salvador	Ilopango	MSSS	13° 41' 54" N	89° 06' 55" W
French Guiana	Cayenne	SOCA	04° 49' 11" N	52° 21' 38" W
Guyana	Georgetown	SYGC	06° 29' 56" N	58° 15' 16" W
Panama	Panama City	MPPC	8° 58' 16.66" N	79° 33' 40.60" W
Paraguay	Asunción	SGAS	25° 14' 24" S	57° 31' 09" W
Peru	Lima	SPIM	12° 01' 19" S	77° 06' 52" W
		ICAO	12° 05' 46" S	77° 02' 13" W
South Africa	Johannesburg	FAOR	26° 08' 14" S	28° 14' 59" E
Spain	Madrid	LEEE	40° 28' 22.63" N	3° 27' 03.99" W
Suriname	Paramaribo	SMPM	05° 27' 10" N	55° 11' 16" W
Trinidad and Tobago	Piarco	TTZP	10° 37' 48" N	61° 31' 12" W
Uruguay	Montevideo	SUMU	34° 50' 15" S	56° 01' 49" W
Venezuela	Maiquetía	SVMI	10° 36' 12" N	66° 59' 26" W

**APPENDIX B****Schedule Preventive Maintenance REDDIG 2024****Diagramación tareas  
REDDIG para 2024**

Jan 15, 2024

**Administración REDDIG -  
CNS - ICAO SAM**<http://icao.int>**Project manager****Project dates**

Apr 3, 2024 - Dec 4, 2024

**Tasks**

76

**Resources**

0

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Tareas programadas para ser desarrolladas durante el año 2024 en NCCs y estaciones de la REDDIG.

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## Diagramación tareas REDDIG para 2024

Jan 15, 2024

### Tasks

2

Name	Begin date	End date
NCC	4/3/24	12/3/24
Routers	4/3/24	6/4/24
Backup configuraciones // Backup configurations	4/3/24	4/23/24
Verificar configuraciones // Verify configurations	4/24/24	5/14/24
Verificar diagramas y cableado // Verify diagrams and cabling	5/15/24	6/4/24
Verificar identificaciones // Verify identifications	5/15/24	6/4/24
Capacitación // Training	4/3/24	12/3/24
VERIFICAR NROS DE SERIE DE EQUIPOS Y ESTADO DE INVENTARIO // Verify serial numbers of equipment and inventory status	4/3/24	6/3/24
Switches	6/5/24	6/25/24
Backup configuraciones // Backup configurations	6/5/24	6/11/24
Verificar configuraciones // Verify configurations	6/12/24	6/18/24
Verificar diagramas y cableado // Verify diagrams and cabling	6/19/24	6/25/24
Verificar identificaciones // Verify identifications	6/19/24	6/25/24
AMHS -AFTN - AIDC Check	6/26/24	7/2/24
ATS - ADMIN - MANT Check	7/3/24	7/9/24
Verificar WUG // Verify WUG	7/10/24	7/16/24
Externos (ADS-C, otros) // External (ADS-C, others)	7/17/24	7/23/24
VERIFICACIÓN EQUIPOS INDOOR // Indoor equipment verification	7/24/24	8/6/24
Registro fotográfico // Photographic record	7/24/24	8/6/24
Cotejo de diagramas // Compare diagrams	7/24/24	8/6/24
Backup	8/1/24	8/6/24
Servers Local y Global	8/7/24	8/13/24
GPS	8/14/24	8/20/24
MODEM SKWAN A	8/21/24	8/27/24
MODEM SKYWAN B	8/28/24	9/3/24
LINE-UP-MANAGER	9/4/24	9/10/24
ANTENA	9/11/24	11/5/24
Registro fotográfico // Photographic record	9/11/24	9/17/24
Cotejo de diagramas // Compare Diagrams	9/18/24	9/24/24
Backup	9/18/24	9/24/24
LNB A	9/25/24	10/1/24

## Diagramación tareas REDDIG para 2024

Jan 15, 2024

### Tasks

3

Name	Begin date	End date
LNB B	10/2/24	10/8/24
RX 1+1	10/9/24	10/15/24
IBUC A	10/16/24	10/22/24
IBUC B	10/23/24	10/29/24
TX 1+1	10/30/24	11/5/24
CIRION	11/6/24	11/12/24
Identificar equipos // Equipment identification	11/6/24	11/12/24
Verificar cableado // Verify cabling	11/6/24	11/12/24
Nodos // Nodes	4/3/24	11/5/24
Routers	4/3/24	4/30/24
Verificar Configuraciones físicas y lógicas // Verify physical and logical configurations	4/3/24	4/9/24
Verificar Diagramas y cableado // Verify diagrams an cabling	4/3/24	4/16/24
Verificar Identificaciones // Verify identifications	4/17/24	4/30/24
VERIFICACIÓN EQUIPOS INDOOR // Indoor equipment verification	4/3/24	4/30/24
Registro Fotográfico // Photographic record	4/3/24	4/9/24
Cotejo de diagramas // Compare diagrams	4/3/24	4/16/24
BackUp	4/17/24	4/30/24
MODEM B	4/17/24	4/23/24
SWITCHES	5/1/24	5/28/24
Verificar Configuraciones físicas y lógicas // Verify physical and logical configurations	5/1/24	5/7/24
Verificar Diagramas y Cableado // Verify diagram and cabling	5/3/24	5/21/24
Verificar Identificaciones // Verify identifications	5/22/24	5/28/24
ATS -ADMIN - MANT	5/29/24	6/4/24
AMHS - AFTN - AIDC Check	6/5/24	6/11/24
Verificar WUG // Verify WUG	6/12/24	6/18/24
Externos // External	6/19/24	6/25/24
Server NMS Local	6/26/24	7/2/24
GPS	7/3/24	7/9/24
MODEM A	7/10/24	7/16/24
LINE-UP-MANAGER	7/24/24	7/30/24
CIRION	7/31/24	8/13/24
Identificar equipos // Equipment identification	7/31/24	8/6/24
Verificar cableado // Verify cabling	8/7/24	8/13/24

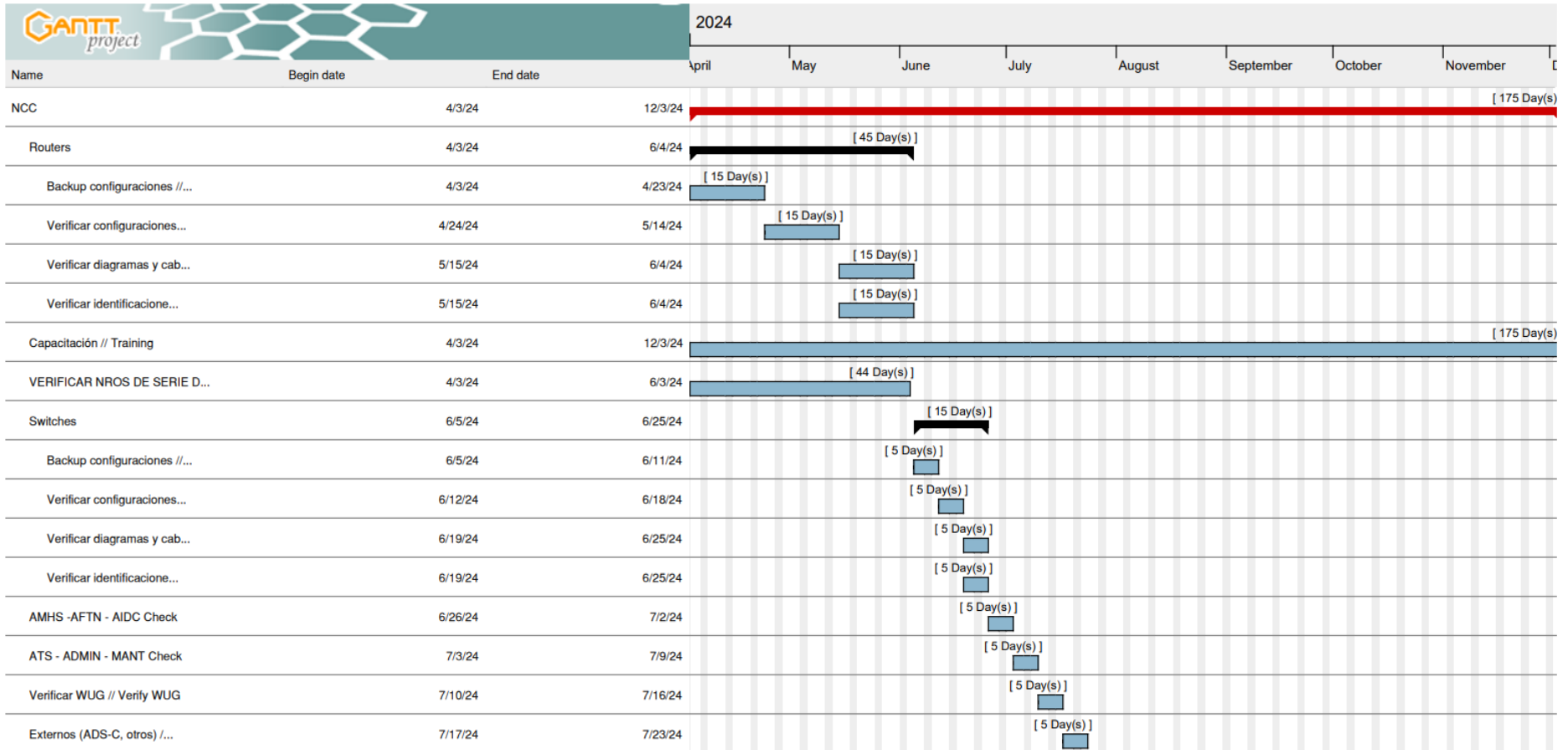
## Diagramación tareas REDDIG para 2024

Jan 15, 2024

### Tasks

4

Name	Begin date	End date
ANTENA	9/11/24	10/22/24
Registro Fotográfico // Photographic record	9/11/24	9/17/24
Cotejo de Diagramas // Compare diagrams	9/11/24	9/24/24
Limpieza de antena // Antenna cleaning	9/18/24	9/24/24
Backup	9/25/24	10/1/24
LNB A	10/2/24	10/4/24
LNB B	10/4/24	10/8/24
RX 1+1	10/9/24	10/11/24
IBUC A	10/11/24	10/15/24
IBUC B	10/16/24	10/18/24
TX 1+1	10/18/24	10/22/24
VERIFICACIÓN NROS DE SERIE DEEQUIPOS Y ESTADO DE INVENTARIO // Verify serial numbers of equipment and inventory status	10/23/24	11/5/24



VERIFICACIÓN EQUIPOS INDO...	7/24/24	8/6/24	[ 10 Day(s) ]
Registro fotográfico // Photographic record	7/24/24	8/6/24	[ 10 Day(s) ]
Cotejo de diagramas // Compare diagrams	7/24/24	8/6/24	[ 10 Day(s) ]
Backup	8/1/24	8/6/24	[ 4 Day(s) ]
Servers Local y Global	8/7/24	8/13/24	[ 5 Day(s) ]
GPS	8/14/24	8/20/24	[ 5 Day(s) ]
MODEM SKWAN A	8/21/24	8/27/24	[ 5 Day(s) ]
MODEM SKYWAN B	8/28/24	9/3/24	[ 5 Day(s) ]
LINE-UP-MANAGER	9/4/24	9/10/24	[ 5 Day(s) ]
ANTENA	9/11/24	11/5/24	[ 40 Day(s) ]
Registro fotográfico // Photographic record	9/11/24	9/17/24	[ 5 Day(s) ]
Cotejo de diagramas // Co...	9/18/24	9/24/24	[ 5 Day(s) ]
Backup	9/18/24	9/24/24	[ 5 Day(s) ]
LNB A	9/25/24	10/1/24	[ 5 Day(s) ]
LNB B	10/2/24	10/8/24	[ 5 Day(s) ]
RX 1+1	10/9/24	10/15/24	[ 5 Day(s) ]
IBUC A	10/16/24	10/22/24	[ 5 Day(s) ]
IBUC B	10/23/24	10/29/24	[ 5 Day(s) ]
TX 1+1	10/30/24	11/5/24	[ 5 Day(s) ]
CIRION	11/6/24	11/12/24	[ 5 Day(s) ]
Identificar equipos // Eq...	11/6/24	11/12/24	[ 5 Day(s) ]
Verificar cableado // Verify cabling	11/6/24	11/12/24	[ 5 Day(s) ]
Nodos // Nodes	4/3/24	11/5/24	[ 155 Day(s) ]
Routers	4/3/24	4/30/24	[ 20 Day(s) ]
Verificar Configuraciones...	4/3/24	4/9/24	[ 5 Day(s) ]
Verificar Diagramas y cab...	4/3/24	4/16/24	[ 10 Day(s) ]
Verificar Identificacione...	4/17/24	4/30/24	[ 10 Day(s) ]

VERIFICACIÓN EQUIPOS INDO...	4/3/24	4/30/24	[ 20 Day(s) ]
Registro Fotográfico // Photographic record	4/3/24	4/9/24	[ 5 Day(s) ]
Cotejo de diagramas // Compare diagrams	4/3/24	4/16/24	[ 10 Day(s) ]
BackUp	4/17/24	4/30/24	[ 10 Day(s) ]
MODEM B	4/17/24	4/23/24	[ 5 Day(s) ]
SWITCHES	5/1/24	5/28/24	[ 20 Day(s) ]
Verificar Configuraciones...	5/1/24	5/7/24	[ 5 Day(s) ]
Verificar Diagramas y Cab...	5/3/24	5/21/24	[ 13 Day(s) ]
Verificar Identificacione...	5/22/24	5/28/24	[ 5 Day(s) ]
ATS -ADMIN - MANT	5/29/24	6/4/24	[ 5 Day(s) ]
AMHS - AFTN - AIDC Check	6/5/24	6/11/24	[ 5 Day(s) ]
Verificar WUG // Verify WUG	6/12/24	6/18/24	[ 5 Day(s) ]
Externos // External	6/19/24	6/25/24	[ 5 Day(s) ]
Server NMS Local	6/26/24	7/2/24	[ 5 Day(s) ]
GPS	7/3/24	7/9/24	[ 5 Day(s) ]
MODEM A	7/10/24	7/16/24	[ 5 Day(s) ]
LINE-UP-MANAGER	7/24/24	7/30/24	[ 5 Day(s) ]
CIRION	7/31/24	8/13/24	[ 10 Day(s) ]
Identificar equipos // Eq...	7/31/24	8/6/24	[ 5 Day(s) ]
Verificar cableado // Verify cabling	8/7/24	8/13/24	[ 5 Day(s) ]



## Agenda Item 5: Financial situation of the project and approval of the budget

5.1 Under this agenda item, the Meeting received information on Project finances and the revision of the Project budget in WP/05 – *Financial situation of the Project and approval of the 2024 budget* (presented by the Secretariat).

### *Financial situation*

5.2 The Meeting took note that, according to the financial statement of 31 December 2023, the Project had received contributions for the total amount of **USD 21,664,173** (including interests and other payments). Expenditures in 2023 had been **USD 1,168,851**, totaling **USD 20,441,033** between 2003 and 2023. This gives a positive balance of USD 1,223,140, which is committed to the contract for the MPLS ground network service, the satellite segment service, the procurement of firewalls and the associated training, the Argentinian fund and other administrative expenditures, resulting in a minimum balance.

5.3 Regarding Project contributions as shown in Table 3 of WP/05, the Meeting agreed on the importance of receiving prompt payment of contributions so as not to affect the Project, especially at this time of transition to REDDIG III, when significant payments will have to be made in order to maintain the existing services and purchase the new services for REDDIG III. Regarding pending contributions, Trinidad & Tobago noted that they had already made the deposit, so the Secretariat would confirm receipt with Headquarters.

5.4 In this regard, it was noted that the extraordinary fee for the procurement of the MPLS service for REDDIG III, as agreed at RCC/29, had to be deposited before the bidding process for such procurement could be started. It was explained that the ICAO procurement process required that the total amount of the service to be acquired be deposited in ICAO prior to starting any process. Accordingly, since the idea was to have the service implemented by early 2025 and considering the time required for the bidding process, the total amount had to be deposited by May. The extraordinary fee is showed below:

### *Budget revision X*

5.5 The Meeting was then informed that revision X of Project RLA03901 had been approved and signed by the ICAO Secretary General on 27 December 2023, and circulated in letters SA7749, SA7750

<b>Estado</b>	<b>Monto</b>	<b>Pagado</b>	<b>Pendiente</b>
<b>Argentina</b>	43,523.00	43,523.00	-
<b>Bolivia</b>	43,523.00	-	43,523.00
<b>Brasil</b>	182,004.00	-	182,004.00
<b>Chile</b>	43,523.00	32,685.00	10,838.00
<b>Colombia</b>	43,523.00	-	43,523.00
<b>Ecuador</b>	43,523.00	-	43,523.00
<b>Francia</b>	43,523.00	-	43,523.00
<b>Guyana</b>	43,523.00	-	43,523.00
<b>Panama</b>	43,523.00	-	43,523.00
<b>Paraguay</b>	43,523.00	-	43,523.00
<b>Peru</b>	43,523.00	-	43,523.00
<b>Suriname</b>	43,523.00	-	43,523.00
<b>Uruguay</b>	43,523.00	40,439.00	3,084.00
<b>Venezuela</b>	43,523.00	-	43,523.00
<b>Trinidad y Tabago</b>	43,523.00	-	43,523.00
	<b>791,326.00</b>	<b>116,647.00</b>	<b>674,679.00</b>

and SA7752. This revision included the extraordinary fee to cover the MPLS service with two links in 2024, and the extension of the project until 2026, to be signed by the States.

5.6 Regarding this last point, the Secretariat requested the States that, after signing this revision, it should be promptly sent to the Regional Office, since, according to instructions from ICAO Headquarters, in addition to having the total amount deposited in the Project, revision X had to be signed by all the States before starting the bidding process.

5.7 One State noted that, because of an internal process for securing Project funds for a period of at least 5 years, it was important to be able to extend the Project until 2030. Accordingly, this possibility was submitted to the consideration of the Meeting.

5.8 A question was raised about which services should be considered for this extension, given that, being in transition to REDDIG III, the new MPLS services of REDDIG III as well as the current services of the satellite network would be available. It was noted that all these services could remain in the budget of this extension until 2030, since the date of cessation of the satellite service had not yet been determined. Budget projections would be prepared and reviewed annually by the RCC, so that adjustments could be made duly in advance to the changes that might be required in the services.

5.9 After an extensive discussion, the Meeting agreed that the Secretariat should carry out a revision of the Project budget (revision Y), extending the project until 2030. For this extension, both the MPLS services with two links as well as the satellite service would be considered for all the years, since the date on which the latter service would be discontinued had not yet been defined. Accordingly, the Meeting approved the following conclusion:

<b>Conclusion</b>	
<b>RCC/30-4</b>	<b>PREPARATION AND APPROVAL OF THE EXTENSION TO 2030 OF PROJECT RLA/03/901 REV “Y”</b>
<b>What:</b>	<b>Expected impact:</b>
<p>The Secretariat:</p> <p>a) Prepare a proposal to extend Project RLA/03/901 until 2030, considering the new telecommunication service (MPLS) with last-mile redundancy, and the satellite communication service until 2030 for budget calculation purposes.</p> <p>b) The draft revision Y of Project RLA/03/901 must be circulated to member States for their acceptance and subsequently initiate the approval process by ICAO Headquarters, for subsequent submission to REDDIG member States.</p>	<p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Interregional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Technical/Operational</p>
<b>Why:</b>	
To carry out REDDIG management activities.	
<b>When:</b>	<b>Status:</b>
Starting in 2024.	Ongoing
<b>Who:</b>	
Secretariat of Regional Technical Cooperation Project RLA/03/901.	

**Agenda Item 6: Annual project evaluation**

6.1 Under this agenda item, the Meeting acknowledged the information presented in the WP/06 on the Project evaluation documents; namely;

- a) Project status as of December 31, 2023, and management and results indicators (WP/06, Appendix A);
- b) Monitoring and control of the Project, work plan for the year 2024 (WP/06, Appendix B); and
- c) Management and results indicators survey (WP/06, Appendix C).

6.2 The survey on management and results indicators 2023 was answered by 05 States (Brazil, Chile, France, Paraguay, and Peru) whose comments and ratings show an average of 4.48 points out of a maximum of 5 established in the rating scale, which indicates that this score implies that "exceeds the requirements", with respect to the program of activities executed in 2023. The consolidated information is presented as an **Appendix** to this agenda item.

-End-

**APPENDIX**

**SURVEY ON MANAGEMENT AND OUTPUT INDICATORS**

**Section I: Evaluation of current project**

**Section II: Assessment of compliance with objectives**

**Section III: Evaluation of implementation and delivery of services by ICAO**

**Section IV: Lessons learned**

5.0	Exceptional results beyond project requirements
4.5	Exceeds requirements
4.0	Project objectives were achieved in all cases
3.5	Most of the project's objectives were achieved
3.0	Some quality results were achieved and implemented
2.5	Some quality results were achieved but are not implementable
2.0	Some results were achieved with little impact and quality
1.5	Below the expected results
1.0	Well below the expected results

<b>Total</b>	<b>4.48</b>
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**SURVEY ON MANAGEMENT INDICATORS AND RESULTS**  
**I. PROJECT EVALUATION**

<b>1.-Project objectives</b>		<b>Rating</b>
<b>Do you think that project objectives are properly established, in line with the development priorities of your State in relation to the national air navigation plan, to address the reality of civil aviation?</b>		
ARG		
BOL		
BRA		
CHI	Yes, they are in accordance with the priorities of the national navigation plan of our State.	5
COL		
ECU		
FRA	yes	4
GUY		
PAR	Project objectives are aligned with the priorities of our State in relation to the National Air Navigation Plan.	4.5
PER	The National Air Navigation Plan supports the sustainable and safe development of air transportation in a competitive and environmentally friendly manner, in this sense, the Reddig Project supports us in providing safety to air operations.	4
SUR		
T&T		
URU		
VEN		
	<b>AVERAGE</b>	<b>4.4</b>

<b>2.-Support at regional and global level</b>		<b>Rating</b>
<b>Do you think that the project responds to and supports your administration's commitments <i>vis-a-vis</i> the regional and global air navigation plans?</b>		
ARG		
BOL		
BRA		
CHI	Yes, it supports our administration's commitments to the PNA, both regionally and globally.	5
COL		
ECU		
FRA	Yes without REDDIG, our control center encounter major difficulties	5
GUY		
PAR	The Project strongly supports our State's commitments to the Regional and Global Air Navigation Plan.	5
PER	Air transport plays an important role in driving economic and social development, but the uncontrolled growth of air traffic can increase safety risks. In that sense, Reddig's communications infrastructure is a great support for maintaining the safety of air operations.	4
SUR		
T&T		
URU		
VEN		
	<b>AVERAGE</b>	<b>4.8</b>

<b>3.-Comments of the State(s)</b>		<b>Rating</b>
<b>Do you have any comments on project management?</b>		
ARG		
BOL		
BRA		
CHI	The direction of the project satisfies and is in line with the objectives set.	5
COL		
ECU		
FRA	The direction of the project is very good	5
GUY		
PAR	The Project Management is fully committed to the objectives of the Project and encourages participation.	4.5
PER	The project must continue in the constant search for technological improvements in order to be always up to date.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

<b>4.-Strategy and vision</b>		<b>Rating</b>
<b>Do you consider that the project is in line with your institution's long-term strategy and vision?</b>		
ARG		
BOL		
BRA		
CHI	The project responds to the long-term strategy and vision of our administration.	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Fully complies with the requirements of our State	4.5
PER	Corpac is an organization in charge of providing Air Navigation and Airport Services with adequate safety and efficiency standards. The regional telecommunications network provided by Reddig allows us to maintain safety standards.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

<b>5.- Project quality</b>		<b>Rating</b>
<b>How do you rate the content of this project in terms of achieving the expected objectives?</b>		
ARG		
BOL		
BRA		
CHI	The project responds to the long-term strategy and vision of our administration.	4.5
COL		
ECU		
FRA	With REDDIG 3 the objectives will be expected	4.5
GUY		
PAR	The content of the project is fully in accordance with the objectives.	4.5
PER	The constant modernization of the network infrastructure and the proper administration of the network allow the project to support us in achieving the proposed objectives.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

<b>6- Project resources</b>		<b>Rating</b>
<b>Do you consider that the financial, physical and human resources agreed for attaining the objectives established in the project document are adequate?</b>		
ARG		
BOL		
BRA		
CHI	Yes, they are the right ones.	4.5
COL		
ECU		
FRA	until now yes	5
GUY		
PAR	yes, we agree	4.5
PER	So far, the project has been able to achieve its objectives with the resources available, but it is always necessary to analyze whether there are new problems that could lead to a reformulation of the project's financial, physical and	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

7.-Project participants		Rating
Do you consider that all parties that should be involved in the project are present? If not , who else should be involved?		
ARG		
BOL		
BRA		
CHI	Yes	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes, we consider that all involved are in accordance with the necessary requirements	4.5
PER	In addition to the Focal Points of each state, private air navigation service providers should also participate in order to	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

8.-Project effectiveness		Rating
Is the project cost-effective as compared to similar programmes or projects?		
ARG		
BOL		
BRA	yes, but there are no similar programs	4.5
CHI	Yes	4.5
COL		
ECU		
FRA	Yes	5
GUY		
PAR	Yes	4.5
PER	Compared to national projects in Corpac, the Reddig is in line with the prices offered in the market.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

9.-Modification of project objectives	
What modifications to the objectives and scope of the project would you propose?	
ARG	
BOL	
BRA	no comments
CHI	None.
COL	
ECU	
FRA	until now none
GUY	
PAR	None.
PER	Within the scope of the project, continuous training can be implemented for the personnel managing the reddig in each state in order to have qualified personnel for the local management of the network.
SUR	
T&T	
URU	
VEN	

<b>10.-Other information</b>	
<b>Please provide any other information that may support or clarify your perception of the scope of the current project</b>	
ARG	
BOL	
BRA	no comments
CHI	None.
COL	
ECU	
FRA	none
GUY	
PAR	There are no comments or clarifications from our side.
PER	Tener personal calificado apoyara al administrador de la red en las tareas de soporte tecnico remoto, aportara nuevas soluciones y/o estrategias que se pueden tomar en cuenta para la toma de decisiones en la busqueda de soluciones para los problemas de red.
SUR	
T&T	
URU	
VEN	

**SURVEY ON MANAGEMENT AND OUTPUT INDICATORS  
II. ASSESSMENT OF COMPLIANCE WITH OBJECTIVES**

<b>1.-Project objectives</b>		<b>Rating</b>
<b>In terms of project management by ICAO, do you think that project objectives are being met?</b>		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, they are being done with great professionalism and excellent management.	5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes, they are being met within the proposed objectives.	4.5
PER	Network Management and Operation activities are being carried out in accordance with the project objectives.	4
SUR		
T&T		
URU		
VEN		
	<b>AVERAGE</b>	<b>4.6</b>

<b>2.- Project timetable</b>		<b>Rating</b>
<b>Do you think that project objectives are being met or have been met in a timely basis in accordance with your expectations?</b>		
ARG		
BOL		
BRA	Yes	5
CHI	Yes	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes, they are being complied with to the extent possible.	4.5
PER	Lead times for spare parts replacement and breakdown service are within the established deadlines.	4
SUR		
T&T		
URU		
VEN		
	<b>AVERAGE</b>	<b>4.5</b>

3.-Use of resources		Rating
Do you consider that resources are being used or have been used efficiently in the fulfilment of the objectives?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes	4.5
COL		
ECU		
FRA	Yes	5
GUY		
PAR	Yes	4.5
PER	According to the information on the financial situation of the project, I estimate that the resources have been used efficiently.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

4.- Project cost		Rating
Do you consider that the costs related to the achievement of the objectives are or have been appropriate?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, they have been the right ones.	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	Correct, they are the right ones.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

5.- Major achievements		Rating
What are the main achievements of the project in relation to the expected results?		
ARG		
BOL		
BRA	Yes	5
CHI	International coordination for problem solving.	4.5
COL		
ECU		
FRA	Coordination with adjacent centers	4.5
GUY		
PAR	The availability, the qualified technical team and the satisfaction of the users.	4.5
PER	The efficient management of the network has made it possible to obtain high availability of the services transported by Reddig. Also the network operation activities have allowed the interconnection of Reddig with other systems such as MEVA or with states in other regions.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

6.-Major problems and their resolution		Rating
What are the main problems affecting the achievement of the expected results and how should they be resolved?		
ARG		
BOL		
BRA	Yes	4.5
CHI	The time difference in the administrative and logistical processes of each country, as well as exceptional external factors.	4.5
COL		
ECU		
FRA	In the event of a breakdown, it can take a long time to receive the equipment.	3
GUY		
PAR	The delays that occur in the customs handling by the different states for the provision/return of spare parts. This delay could be reduced by optimizing the management of the focal points.	4
PER	The lack of specialized training for local technical personnel in each state can have a negative influence on the management of the network, for maintenance issues, equipment replacement, equipment disassembly, etc. Adequate and constant training of the technical staff can solve this problem.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.0</b>

7.- Other comments	
Please include other comments related to the compliance of project objectives	
ARG	
BOL	
BRA	No Comments
CHI	The objectives have been achieved with professionalism and dedication by the staff of the States and the administration.
COL	
ECU	
FRA	None
GUY	
PAR	None
PER	If there are delays in the management of Reddig spare parts, either for shipment to the states or for sending defective equipment to
SUR	
T&T	
URU	
VEN	

<b>8.- Risks</b>	
<b>What new events, if any, are likely to affect the achievement of project results? What do you recommend in response to these events?</b>	
ARG	
BOL	
BRA	No comments
CHI	Renewal of suitable personnel to work in REDDIG, replacing those who have retired.
COL	
ECU	
FRA	Perhaps a significant increase cost
GUY	
PAR	The delays that occur in the customs handling by the different states for the provision/return of spare parts. This delay could be reduced by optimizing the management of the focal points.
PER	The implementation of new information transport technologies may cause problems for aeronautical communications carried by Reddig. In this sense, it is advisable to continue using satellite access in parallel with new terrestrial technologies to be implemented in Reddig III, so that the necessary adjustments can be made to the new terrestrial network in order to obtain the same performance as that obtained by satellite.
SUR	
T&T	
URU	
VEN	

<b>9.- Other information</b>	
<b>Please provide any other information that may support or clarify your assessment regarding compliance with the objectives of the project</b>	
ARG	
BOL	
BRA	No Comments
CHI	None
COL	
ECU	
FRA	None
GUY	
PAR	None
PER	The constant evaluation of project resources can help us to make decisions regarding personnel requirements, adjustments to approved budgets, the need for new equipment for network security, etc.
SUR	
T&T	
URU	
VEN	

**SURVEY ON MANAGEMENT AND OUTPUT INDICATORS**  
**III. EVALUATION OF PROJECT IMPLEMENTATION AND PROVISION OF SERVICES BY ICAO**

<b>1.-Decision-making</b>		<b>Rating</b>
<b>Do you consider that the decision-making process within the project is appropriate?</b>		
ARG		
BOL		
BRA	Yes	4.5
CHI	Yes, it is appropriate.	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	The focal points gathered in the CCR debate in a democratic manner, offering their respective points of view or different issues, so that the decisions accepted during the meeting will be the most appropriate for the good of the project.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

<b>2.-Product quality</b>		<b>Rating</b>
<b>Do you think that the quality of the products produced is appropriate?</b>		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, it is appropriate.	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	The high availability of the Reddig links provides high reliability of the aeronautical information transported by it.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

<b>3.-Orientation</b>		<b>Rating</b>
<b>Do you think that there is compliance with guidance towards achieving project outputs?</b>		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, is complying.	4.5
COL		
ECU		
FRA	Yes	4
GUY		
PAR	Yes	4.5
PER	The interconnection of the AMHS systems between; states in the SAM region, with the MEVA network and with states in other regions demonstrates the high importance of this project for the safety of air operations in these regions.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

<b>4.- Organisation and prioritisation</b>		<b>Rating</b>
<b>Do you think the organisation and prioritisation of the project are appropriate?</b>		
ARG		
BOL		
BRA	Yes	4.5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	The organization and prioritization are in accordance with the project objectives.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

<b>5.-Change management</b>		<b>Rating</b>
<b>Do you think that change management and the degree of flexibility in project management are appropriate?</b>		
ARG		
BOL		
BRA	Yes	4
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	The management of the project is in line with the project objectives, I consider it adequate.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.3</b>

6.- Service to the State		Rating
Do you think that the service provided to your State is appropriate?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Acceptable	3.5
GUY		
PAR	Yes	4.5
PER	The high availability of aeronautical services carried by the reddig, as well as new interconnections with new states and/or systems, help Peru to maintain a high degree of safety in the air operations it manages.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

7.- Communication		Rating
Do you think that the level of communication within and outside the project is adequate?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	So far it is still adequate.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

8.-Conflicts		Rating
Do you believe that conflict management is adequate?		
ARG		
BOL		
BRA	Yes	4.5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	Yes, because the different points of view are heard in meetings and after democratic debates, the best decisions are made for the good of the project.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.4</b>

9.- Use of resources		Rating
Do you think that project resources are being used efficiently to produce the expected results?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	Based on financial reports, economic resources are being adequately utilized. Likewise, the network's technological resources are being used efficiently for the transportation of air navigation services.	4
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.5</b>

10.- Relevance of mechanisms		Rating
Do you think that management mechanisms of the project are relevant?		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, it is the right one	4.5
COL		
ECU		
FRA	Yes	4.5
GUY		
PAR	Yes	4.5
PER	The controls carried out during the project have allowed Reddig to operate today with high service availability.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

11.- Work plan timing		Rating
Based on your work plan, how would you rate the timing of the project as regards the delivery of products, results and inputs?		
ARG		
BOL		
BRA	Yes	5
CHI	Good, in delivery time, products and results.	4.5
COL		
ECU		
FRA	Correct	4.5
GUY		
PAR	Very good	4.5
PER	This project has allowed us to maintain reliable and continuous aeronautical communications with adjacent Aeronautical Control Centers, which benefits the commercial air operations we manage over Peruvian airspace.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.6</b>

<b>12.-Direction</b>		<b>Rating</b>
<b>Do you consider that the activities and products developed through the project are in line with the directives issued by ICAO, the Regional Offices and the air navigation plans?</b>		
ARG		
BOL		
BRA	Yes	5
CHI	Yes, they are	4.5
COL		
ECU		
FRA	Yes	5
GUY		
PAR	Yes	4.5
PER	The integration of aeronautical information at a global level benefits aviation worldwide in terms of performance, cost and environmental benefits. This project is in line with ICAO guidelines, regional offices and air navigation plans.	4.5
SUR		
T&T		
URU		
VEN		
<b>AVERAGE</b>		<b>4.7</b>

<b>13.- Other information</b>	
<b>Please provide any other information that may support or clarify your assessment on products and services provided through the project</b>	
ARG	
BOL	
BRA	
CHI	The products and services through the project have been adequate.
COL	
ECU	
FRA	With the transition to REDDIG 3 the improvement will be significant
GUY	
PAR	No observation
PER	The globalization of communications requires the integration of the different actors involved in this process. In this sense, the exchange of aeronautical information via oral channels, AMHS messaging, radar data, etc., allows the integration of the SAM region to maintain the operational safety of commercial flights.
SUR	
T&T	
URU	
VEN	

**SURVEY ON MANAGEMENT AND OUTPUT INDICATORS**  
**IV. LESSONS LEARNED**

<b>1.-Positive lessons learned from the project</b>	
<b>Provide a brief description of the positive lessons learned from project implementation</b>	
ARG	
BOL	
BRA	The cooperation between States in the project is great, essential and admirable. I commend the dedication and commitment of the Technical Cooperation Officer Ms. Veronica, the CNS Officer Mr. Francisco and the Network Administrator Mr. Javier.
CHI	Teamwork, with the active participation of personnel from the States and the Regional Office.
COL	
ECU	
FRA	Communication is excellent whether in person in LIMA or by video conference.
GUY	
PAR	Good communication through the use of teleconferencing for the management of situations and coordination for problem solving. The human capital conformed by each one of the member states of the project.
PER	An efficient administrative and operational management can maintain over time the operation of an aeronautical communications system, in that sense Reddig can be seen as a regional telecommunications company, which has been in operation for more than 20 years.
SUR	
T&T	
URU	
VEN	
<b>2.-Opportunities for improvement</b>	
<b>Provide a brief description of the opportunities for improvement identified during project implementation</b>	
ARG	
BOL	
BRA	No comments
CHI	Turnover of personnel who then do not continue in the project.
COL	
ECU	
FRA	Staff training must continue in order to maintain and improve their competences
GUY	
PAR	Constant training to have a technical team effectively prepared to face the problems. The implementation of training tools. Constant innovation in the implementation of training in face-to-face and virtual format. Propose laboratories with link and connectivity simulation tools.
PER	The logistical process of equipment and spare parts can be complex and time consuming if not followed up. In that sense having a professional or specialist dedicated to this activity will help the replacement of inoperative equipment to be faster, also the sending of these to repair can be done in less time.
SUR	
T&T	
URU	
VEN	

<b>3.- Strategy to implement the opportunities for improvement identified</b>	
<b>Provide a brief description of the strategy that you would propose to implement the opportunities for improvement identified</b>	
ARG	
BOL	
BRA	No comments
CHI	Maintain the working groups in the States, giving continuity to the tasks and initiate processes for the renewal of personnel.
COL	
ECU	
FRA	With Francisco's departure, I hope that his replacement will be as bright and warm as he was, especially with the arrival of REDDIG 3.
GUY	
PAR	Maintain the strategy used, as it was improved with the experience acquired during the course of the project, and implement the same work system for the REDDIG III project.
PER	The project requires a logistics specialist who can manage the movement of spare parts and/or new equipment purchased across all Reddig member states.
SUR	
T&T	
URU	
VEN	

**Agenda Item 7: Other matters***Pacific Ocean NON FIR area*

7.1 The representative of COCESNA informed that ICAO headquarters (Montreal) has circulated a letter defining the allocation of the existing NON FIR area in the Pacific Ocean, which was subdivided into portions for the following States/Organization: Ecuador (FIR Guayaquil), France (FIR Tahiti), Peru (FIR Lima) and COCESNA (FIR CENAMER).

7.2 Subsequently, the Secretariat confirmed that the letter with reference AN 13/4.6 - ANB-ANS-ANS-ATM97887 was delivered on March 19, 2024.

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7.3 The Secretariat reported that during the World Radiocommunication Conference (WRC-23) the use of the frequency range allocated to AMS(R)S (117.975-137 MHz) for both Earth-to-space and space-to-Earth directions was approved.

7.4 Such a measure will allow the implementation of the VHF satellite concept (Space-based VHF) which, once developed, should provide significant improvement in communications between air traffic controllers and pilots, mainly in oceanic areas.

– End –