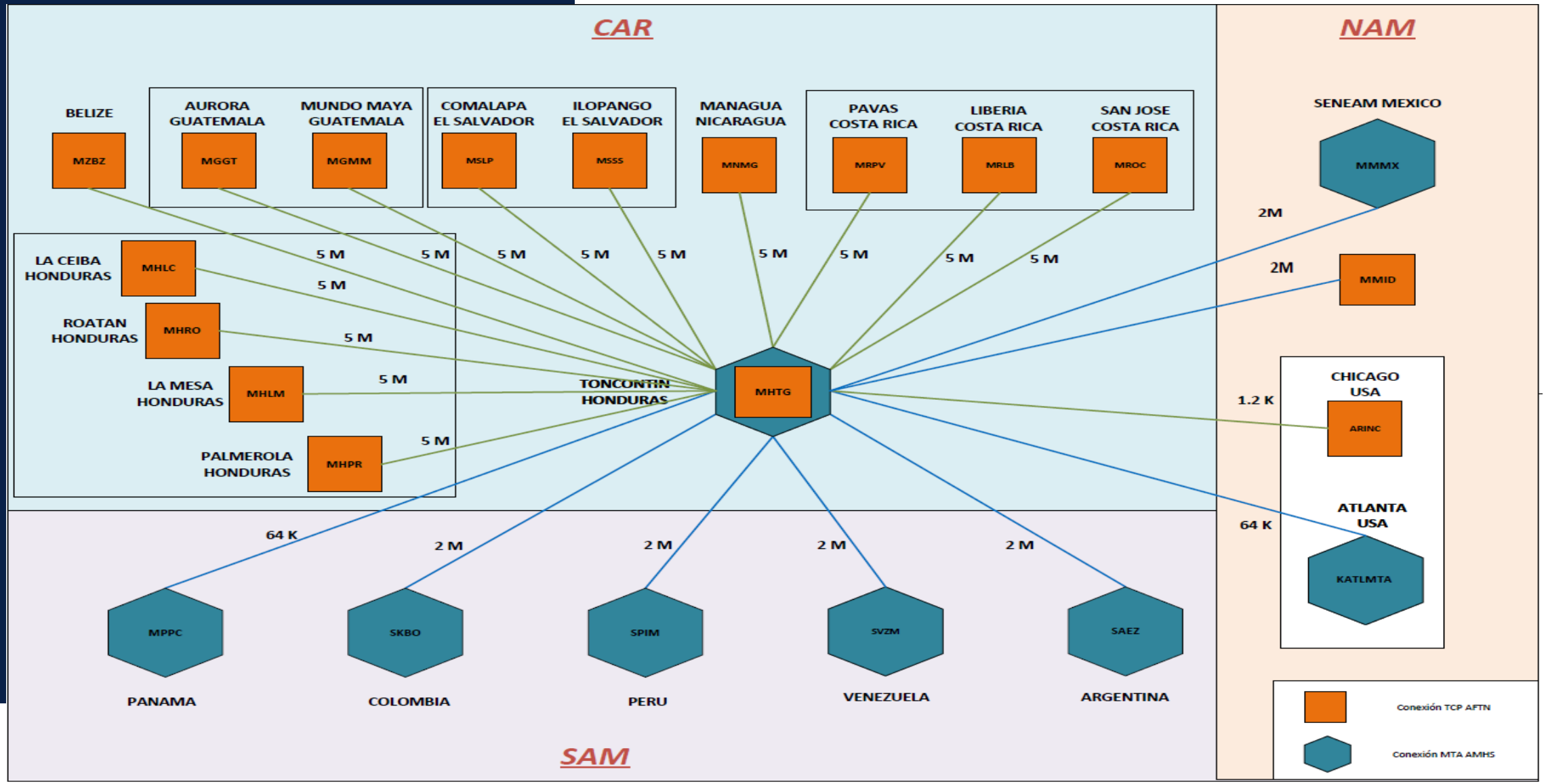
AMHS-AIM Central American Infrastructure

Introduction

COCESNA provides the Aeronautical Information dissemination service through an AMHS-AIM system installed at the Tegucigalpa, Honduras, headquarters.

The AMHS system is responsible for the reception and transmission of aeronautical information for the 6 Member States through the AFTN and AMHS connections required and communication with international systems in the SAM, CAR and NAM regions.

SYSTEM CONNECTION BLOCK DIAGRAM



Introduction

COCESNA also provides necessary tools for office operators:

- NOF International of Central America.
- AIS ARO of the 6 States of Central America.
- Positions for information management and publication of the electronic AIP (eAIP) of each of the States.
- Positions for the management and publication of eAIP COCESNA.

E-AIP Central America

Published eAIP
CENTRAL AMERICA

COCESNA

Currently Effective Issue

Effective date	Publication date	Short Description
05 SEP 2024	08 AUG 2024	NON AIRAC AMDT 38/24

Next Issues

Effective date	Publication date	Short Description
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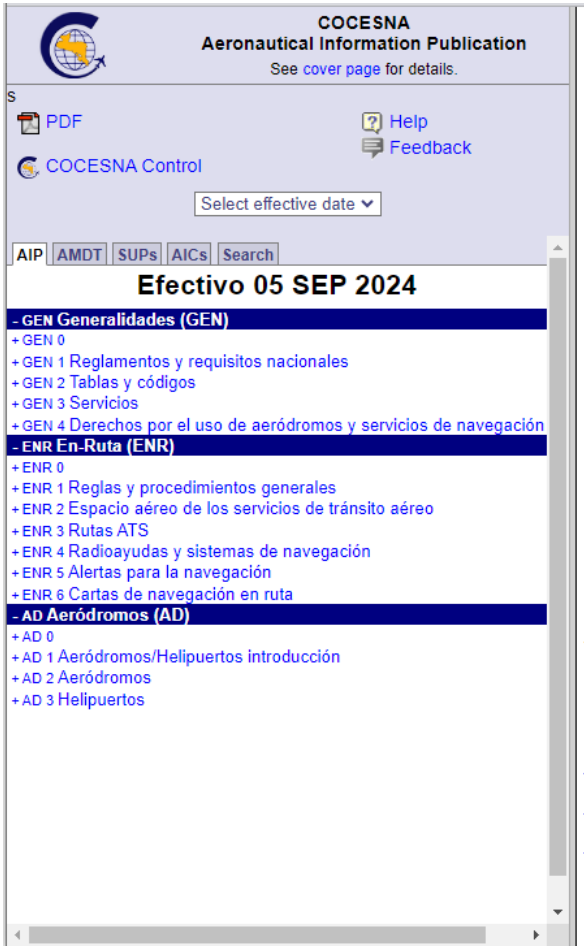
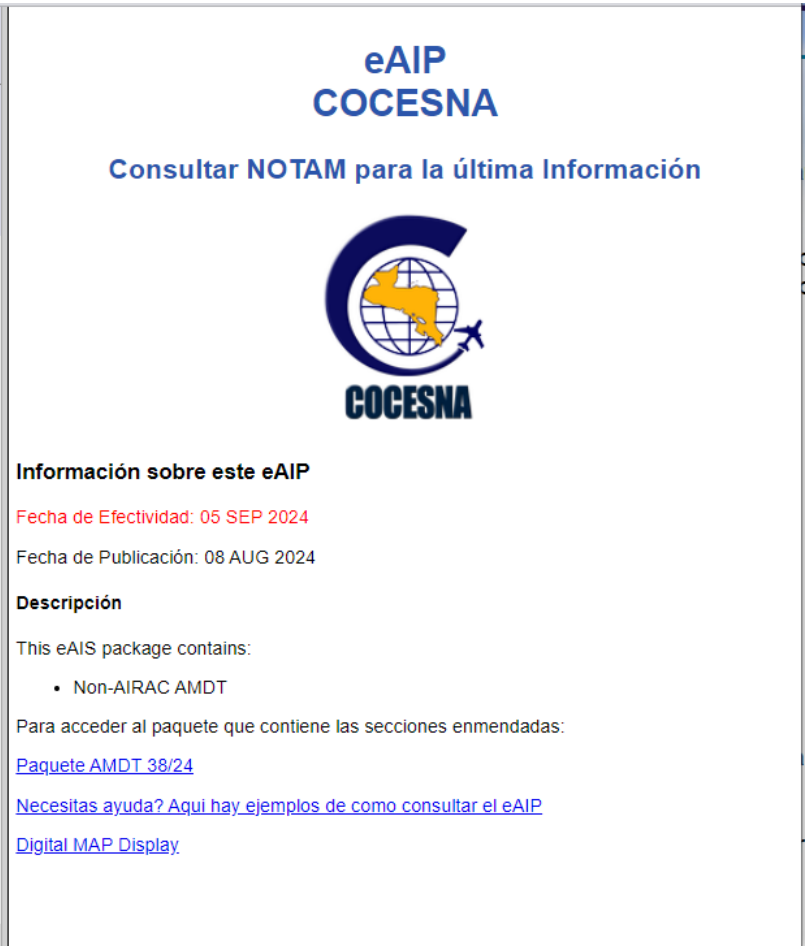
Expired Issues

These past amendments are provided for information. They are not to be used in operations anymore.

Effective date	Publication date	Short Description
08 AUG 2024	23 JUL 2024	NON AIRAC AMDT 37/24
11 JUL 2024	13 JUN 2024	NON AIRAC AMDT 36/24
13 JUN 2024	16 MAY 2024	NON AIRAC AMDT 35/24
16 MAY 2024	18 APR 2024	NON AIRAC AMDT 34/24
18 APR 2024	21 MAR 2024	NON AIRAC AMDT 33/24
22 FEB 2024	25 JAN 2024	NON AIRAC AMDT 32/24
28 DEC 2023	30 NOV 2023	NON AIRAC AMDT 31/23
30 NOV 2023	02 NOV 2023	NON AIRAC AMDT 30/23
05 OCT 2023	07 SEP 2023	NON AIRAC AMDT 29/23
07 SEP 2023	10 AUG 2023	NON AIRAC AMDT 28/23
10 AUG 2023	20 JUL 2023	NON AIRAC AMDT 27/23
15 JUN 2023	18 MAY 2023	NON AIRAC AMDT 26/23
18 MAY 2023	20 APR 2023	NON AIRAC AMDT 25/23
23 MAR 2023	23 FEB 2023	NON AIRAC AMDT 24/23
26 JAN 2023	29 DEC 2022	NON AIRAC AMDT 23/23
06 OCT 2022	22 SEP 2022	NON AIRAC AMDT 22/22



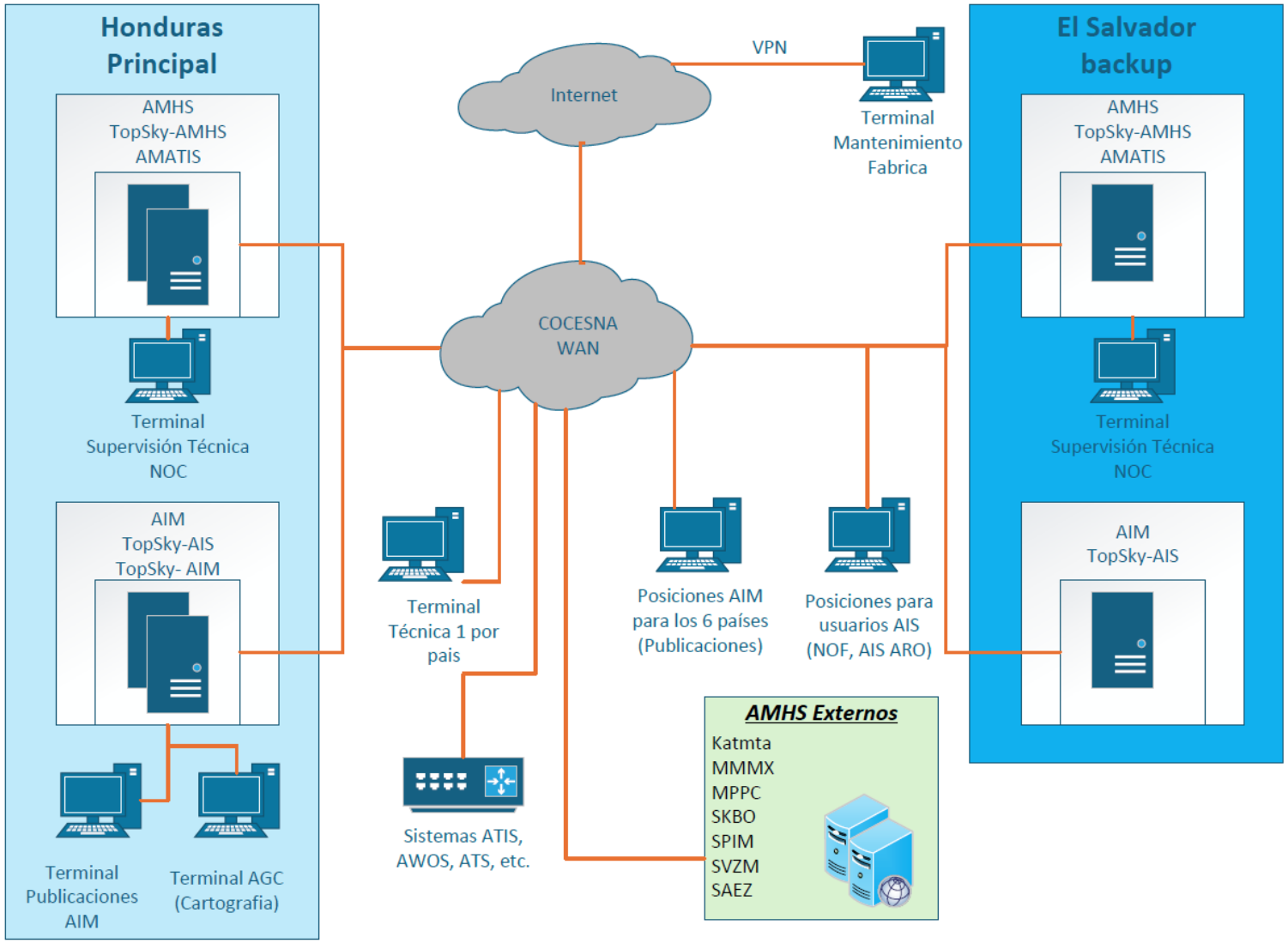


AMHS-AIM Solution

The components included in the THALES supplier solution are:

- TopSky-AMHS (messaging routing, user interface)
- TopSky-AIS (Flight plan and NOTAM management interface)
- TopSky-AIXM (XML 5.1 database management interface)
- TopSky-eAIP (eAIP generation and publication)

System Architecture



AMHS System

The TopSky AMSS system provides the following main components:

1. AFTN Router.
2. AMHS Router.
3. AFTN/AMHS Gateway
4. Monitoring and Management Interface.
5. AMHS Messaging User Interface.

Monitoring and Management Interface.

A2M:

- HMI for T-AMHS system management.
- Configuration of connection channels and routing of the AFTN/AMHS system.
- General system status management.
- Generation of reports and statistics.

User interface

AMATIS:

- Simple web-based HMI interface for AMHS operator.
- Can manage multiple AMHS addresses.
- Can transmit and receive messages with attachments and file exchange in csv, pdf, XML, txt and gz formats.
- By 2025, the ability to interpret IWXXM messages will be available.

AIS System

The TopSky AIS system provides the following main components:

HMI for operators with templates and information validation for error reduction:

1. Flight Plan Management.
2. NOTAM Proposal Management
3. Notam Management.
4. PIB Management.
5. MET Management.

AIM System

The TopSky AIM system provides the following main components:

1. AIXM 5.1 database management.
2. AIXM 5.1 and 4.5 export
3. ARINC 424 export
4. eAIP publication management

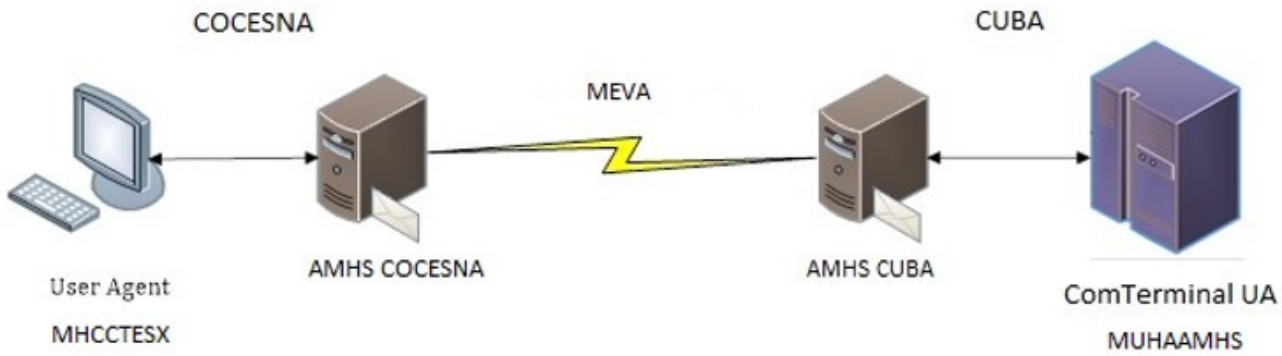
Interoperability tests for IWXXM over AMHS between COCESNA and Cuba

CRC-FMTO-006

Testing Procedure

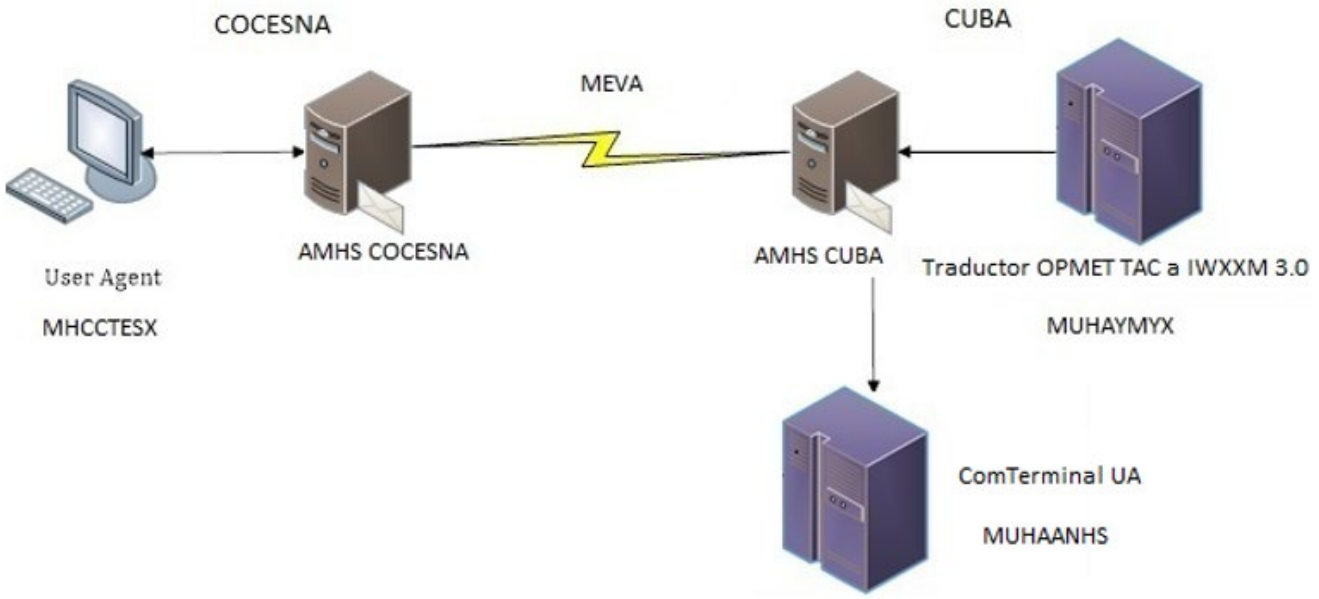
Testing was divided into 2 Phases:

Phase 1: Verification of AMHS message exchange capacity.



Testing Procedure

Phase 2: Generating and sending OPMET XML data from the translation application.



Phase 1 Results

1. The COCESNA UA agent only allows sending an XML file according to the IWXXM 3.0 model, only if its content is modified.
2. During procedure 5.1.1 the characters “<>” were added to the beginning of the file, which allowed adding the XML to the FTBP of the AMHS message.
3. Upon receiving this message in the IACC UA AMHS ComTerminal, the file is extracted and its validity is analyzed. The validation process fails, indicating that the file is not valid because it is not well formed.

Phase 1 Results

4. The COCESNA system does not allow compressed (.gz) files as attachments; it only allows csv, pdf, xml
5. COCESNA extracts traces of successfully received AMHS messages from its MTA.

Phase 1 Conclusions

1. COCESNA shared the results obtained in the procedures with its UA AMHS provider to clarify and solve the difficulties identified.
2. It was decided to continue Phase 2 tests when COCESNA has the IWXXM messaging translation and interpretation system.
3. Currently, COCESNA's system already has support for sending files in compressed formats (.gz).

Thank you