SADIS COST RECOVERY & ADMINISTRATIVE GROUP (SCRAG)

TWENTY-FIRST MEETING

(Virtual, 1 December 2020)

AMENDMENT TO ANNEX II, SADIS INVENTORY TO THE SADIS AGREEMENT

(Presented by the Secretariat)

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REFERENCES

SADIS Agreement
METP-WG/MOG/13-Report Action 13/06
SCRAG/20 (Extraordinary)

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1.   Introduction

1.1   This paper presents a draft amendment to Annex II, SADIS Inventory, to the SADIS Agreement as a result of recommendations of the METP-WG/MOG, at its Thirteenth Meeting (Virtual, France, 25 March 2020).

2.   Discussion

2.1   The METP-WG/MOG13 agreed on a major revision to the SADIS inventory that reflected the technology that changed as a result of moving from on-premise systems to Amazon Web Services in November 2019. The SADIS support structure was also given a significant update at the same time.

2.2   Due to the scale of changes to the SADIS Agreement, it was agreed that an extraordinary SCRAG meeting would be held straight after the MOG/13 meeting so that the changes could be published straight away.

2.3   In November 2020 IWXXM data was added to SADIS, which involved some extra Amazon Web Services components. These have been updated in the table shown in the procured services section on Annex II. The changes are shown in Appendix A in the usual format: deletions are shown in ~~strikethrough~~, and additions are highlighted.

3.   Action by the group

The Group is invited to review the proposed amendments to Annex II, SADIS inventory, to the SADIS Agreement.

ANNEX II

SADIS INVENTORY

(2019-2020)

The inventory items identified below cover the equipment and staffing required to provide, operate and maintain the Secure Aviation Data Information Service (SADIS). The inventory includes: communications circuits, communications back-up system, procured services, and staff. It should be noted that some equipment items form part of a wider infrastructure. Costs of some individual items cannot be separated from the required infrastructure that includes a significant part of the development of the software and technical configuration. The inventory is in accordance with the SADIS User Guide.

1. EQUIPMENT

A. Key components of SADIS FTP infrastructure and communications circuits

SADIS infrastructure consists of the following:

i)   **Solely procured for SADIS (major components)**

NIL

Note: In November 2019 SADIS FTP was migrated to use Amazon Web Services infrastructure (see Section 2A) which is a procured service.

ii)   **Not procured principally for SADIS**

a)   Met Office Message switch (MetSwitch): Total investment £328K[1] of which 1.23 per cent is attributable to the SADIS FTP service usage: switching data to operational FTP service;

b)   NATS SADIS gateway function software (developed specifically for the gateway as part of the NATS CoreMet system);

c)   Met Office operational monitoring software~~.~~;

        Note. ─ This enables the operational monitoring of the SADIS FTP service and ensures problems can be identified and resolved in a timely manner.

d)   Met Office Service Desk equipment;

        Note. ─ Equates to 3.5 per cent of the total share of Met Office IT Operations equipment.

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[1] budgeted cost for providing MetSwitch service during the fiscal year 2018/2019.

B. SADIS data back-up system

The recognised back-up for SADIS FTP in the event of a failure is via the USA administered, WAFS Information File Service (WIFS). SADIS FTP users are encouraged to arrange back-up accounts with the WIFS provider via https://aviationweather.gov/wifs/.

Note 1: - Usage restrictions apply. Further information is provided in the SADIS User Guide Part 1 (Administrative)

Note 2: - It is the responsibility of the SADIS FTP user to arrange and test back-up accounts with WIFS.

2. PROCURED SERVICES

A.   Amazon Web Services (AWS) elements used by the Met Office in the operation of SADIS FTP:

AWS Service	Specification	Quantity	What the service is used for:
EC2	t3.medium 2* vCPU *(Intel Xeon Platinum 8000 series)* 4 GiB Memory Network Bandwidth: ≤5Gbps; EBS Bandwidth ≤1.50 Gbps)	3	2* FTP Server and 1 Apps Server
S3	N/A	~~6~~12	Data Storage: Ingestion; FTP Content; IWXXM; AuthN; Logs & Alerts.
DynamoDB	1x Table Primary partition key: report_id Read/write capacity mode: On-Demand	1	Stores incoming IWXXM reports from AV OPMET Data Services
Route53	N/A	1	DNS
Lambda	N/A	N/A	Various Serverless Functions including housekeeping, Log formatting, Alerting Management, packaging IWXXM data, etc
Cloudwatch	N/A	N/A	Log Aggregation
NAT Gateway	N/A	1	Access
VPC	N/A	1	
Kinesis Data Stream	N/A	1	Log Entry Routing
Kinesis Firehose	N/A	2	
DynamoDB	N/A		Alert Management
Athena	N/A		

B.   NATS Gateway function:

      i)   Communication circuits between Met Office and NATS infrastructure site; and

      ii)   System maintenance.

3. ANNUAL STAFF REQUIREMENTS

A.   Met Office

i)   First Line Support

Help Desk	*Skill*
1. Service desk (first point of contact)	Incident Management and customer enquiries

Note— The Service Desk acts as a first point of contact for all inquiries, including those concerning the OPMET Gateway function. Complex inquiries will be passed to a relevant expert. Experts are available either on a 24-hour rota basis, or as a daytime support with limited on-call capability

ii)   Second Line Support

24-hour IT Operations support	*Skill*
1. Shift Leader (ITCS)	Technical Supervisor, incident handling
2. Networks Incident Manager (NIM)	Service Continuity, system monitoring

iii)   Third and Fourth Line Support

Normal working hours support and "best endeavors"	*Skill*
1. Message Switching Manager	Incident handling, server adjustments
2. Message Switching Staff	Incident handling and account changes
3. AWS Technical Support	AWS expertise, support and guidance

iv)   Additional support

Day support	*Resource*
1. Administrator	144 staff-days of senior stakeholder relationship manager (SADIS manager)
2. International aviation management	14 staff-days of aviation business head
3. Contract procurement and management	4 staff-days of senior procurement manager
4. Invoice Administration	20 staff-days of finance assistant and 15 staff-days of senior finance manager

B. NATS infrastructure site – Data Services (OPMET Gateway function)

Note 1. —Data Services provide the OPMET Gateway function, which is provided from a single operational site, but with a full capability at an alternative site. Staff are available either on a 24-hour basis, or as a daytime support with on-call capability.

Note 2. — The resource demand to provide the SADIS Gateway service is the standard required staff days needed to provide the SADIS service. It comprises 6 watches providing the H24 element of the service and day support administrative staff. The cost recovery NATS submits to the SCRAG will represent actual staff-days required to provide the service

Role and Responsibilities	*Resource*
1. Operational Staff - Operational Staff relates to the H24 function in ROC LONDON. Monitor, validate, record & report on issues raised through the SADIS Gateway operation.	521 staff-days per annum
2. Engineering Staff - Engineering Staff includes the duties carried out by the Engineering Day support team and an H24 engineers for the support of SADIS.	20 staff-days per annum
3. Administration Staff - The Administration Office carries out the documentation creation and amendments, adaptation changes, investigations and meeting attendance of the SADIS Gateway operation.	63 staff-days per annum

C. Bought-in services

Additional support and maintenance agreements with third parties are in place to provide additional third line AWS support of the SADIS FTP services.