SADIS COST RECOVERY & ADMINISTRATIVE GROUP (SCRAG)

TWENTY-SIXTH MEETING

(Virtual, 3 December 2025)

AMENDMENT TO ANNEX II, SADIS INVENTORY TO THE SADIS AGREEMENT

(Presented by the United Kingdom)

REFERENCES

SADIS Agreement
METP-WG/MOG/15-Report Paragraph 3.5.1
SCRAG/30

1. Introduction

1.1 This paper presents a reminder and an opportunity to review the SADIS Agreement, Annex II - *SADIS Inventory.* It was last updated at SCRAG 30 in response to recommendations of the Met Panel Met Operations Group (METP-WG/MOG), at its thirtieth meeting (Kansas City, 4-5 June 2025).

2. Discussion

2.1 An update to the SADIS inventory is required, as the SIGWX part of the SADIS system became operational in April 2025. This requires an update to the number of AWS elements that are used, as well as the addition of some new functions. The METP-WG/MOG 30 meeting agreed that the changes presented in Attachment A be brought to the SCRAG meeting under Action 30/09.

2.2 It should be noted further updates to the AWS elements are not expected for a few years, but will be required when probabilistic data is added in November 2028.

3. Action by the group

3.1 The Group is invited to review the proposed amendments to Annex II, SADIS inventory, to the SADIS Agreement. If any changes are suggested, these will be taken forward to the MOG SADIS meeting for approval in April 2026.

APPENDIX A – SADIS Agreement Annex II.
Additions are shown with grey shading, whilst deletions are as a ~~red strikethrough~~**.**

ANNEX II

SADIS INVENTORY

(~~2023~~ 2023-2025)

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 infrastructure and communications circuits

SADIS infrastructure consists of the following:

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

NIL – SADIS FTP and SADIS API operates primarily on cloud infrastructure

ii) **Not procured principally for SADIS**

a) Met Office Message switch (MetSwitch): routes data to the 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;

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). The recognised back-up for SADIS API is the WIFS API. SADIS 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 Guides

Note 2: - It is the responsibility of the SADIS 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)	2	2* FTP Server and
S3	N/A	14	Data ingestion; data storage; data egress; large data store; logging and reporting.
DynamoDB	3x Table	3	Stores incoming TAC and IWXXM reports as well as information needed WAFS data report compilation
Route53	N/A	1	DNS
Lambda	N/A	N/A	Various Serverless Functions used for the following: data debatch; concatenate and sign; packaging IWXXM data; logging; reporting; alerting; housekeeping.
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	

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

AWS Service	Quantity	What the service is used for:
Route53	~~2~~ 5	DNS
CloudFront	~~4~~ 6	CDN - Caching of assets at edge locations to enable efficient data transfer to end users
CloudWatch	~~N/A~~ 61 alarms, 10 dashboards	Log Aggregation; Alerts; Dashboards
API Gateway	~~2~~ 5	User Auth and Auth provision; API request handling
SNS	~~20~~ 33	Monitoring; data ingest; data egress
SQS	~~N/A~~81	Monitoring; data ingest; data egress; DLQs,
AWS Certificate Manager	1 2	Certificate provider for Route53
S3	~~18~~ 46	Data ingestion; data storage; data egress; archiving; logging and reporting.

Lambda	~~4~~ 78	Query executor and builder; response generator; archiving Various Serverless Functions used for: fetching files via pre-signed url; logging; reporting; alerting; authentication; data ingestion; pre-signed url generation; packaging data; data debatch; concatenate and sign;
AWS Secrets Manager (SSM)	~~N/A~~ 6	Configuration
DynamoDB	~~4~~6 x Table	Storage of incoming OPMET reports (and multi-part bulletins) ready for processing
EventBridge Rule	~~28~~ 53	Used to trigger Lambdas.
EventBridge Schedule	14	Used to trigger Lambdas
EventBridge Pipe	3	Used to trigger Step Functions
Step Functions	6	To orchestrate workflows
SSM	141	Configuration
VPC	1	To support security requirements
Security Groups	2	To allow SFTP transfer in and out to be restricted
Elastic IPs	4	To give static IPs that can be whitelisted

Note: The figures shown represent the final number of services required for the full provision of the SADIS API until November 2028.

C. 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) enquiries	Incident Management and customer

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	138 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 8 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	63 staff-days per annum

SADIS Gateway operation.

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.

— END —