

# SADIS API WORKSTATION SOFTWARE EVALUATION CRITERIA

(as endorsed by WG-MOG/25 (SADIS) 6-7 June 2024)

Workstation provider: ...  
Software application: ...  
Software Version No. (Release date):...  
Evaluation date: ...  
Evaluation location: ...  
Evaluator: ...

## **Scope of Evaluations:**

*It should be noted that the evaluations are 'high level' evaluations of functionality, and not detailed technical certifications of compliance. Note that:*

*a) The software evaluation process does not certify or endorse any single software application; neither does it recommend one application over another. The software evaluations are the results of software reviews that the Met Office has carried out on behalf of the ICAO METP-WG/MOG. The purpose of these reviews is to verify whether the applications can deliver certain minimum functions which the METP-WG/MOG considers are essential for the correct use of the WAFS and OPMET data obtained from the SADIS API; and*

*b) It remains the responsibility of the user to ensure that procured software meets their full requirements. It is not intended that the software evaluations fulfil this task. The results from the software evaluations may be used as one additional source of information to aid any procurement process but should not be viewed in isolation of other important procurement requirements.*

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Software Functionality	Available and Compliant? ✓✗	Comments
1. Connection and download of data from the SADIS API		
2. WAFS GRIB2 decoder and compliant display package		
3. WAFS IWXXM format SIGWX decoder and compliant display package		
4. Ability to view OPMET data sets in lists/reports sorted according to data type and/or location using the TAC format data.		
5. Ability to view OPMET data sets in a human readable form sorted according to data type and/or location using the IWXXM format data.		
6. Display of OPMET data on a map based on the TAC format data		
7. Display of OPMET data on a map view using the IWXXM format data		
8. Display of volcanic ash and tropical cyclone advisory graphics		
9. Alerting users when advisory type forecasts are received		

Note. – Please refer to the accompanying notes that detail the requirements and whether the functionality was COMPLIANT or NON-COMPLIANT at time of evaluation.

## Requirements

The numbers of the notes below correspond to the numbers of the items listed in the table above. For a software package to receive a ✓ or **COMPLIANT** as opposed to ✗ or **NON-COMPLIANT** in the "Available and Compliant" column on the table, all of the functions detailed below need to be satisfied for each functionality item.

For every workstation provider agreeing for their software to be evaluated under these criteria, the intention is to make the information available to all existing and prospective SADIS users via the SADIS web page at URL: <https://www.metoffice.gov.uk/services/transport/aviation/regulated/sadis/software/suppliers>.

### 1. Connection and download of data from the SADIS API.

1	Demonstrate that data is being downloaded from the SADIS API at regular intervals: a) At 5-minute intervals for OPMET data b) within 1 hour of a published set of WAFS gridded data c) within 1 hour of a published set of WAFS SIGWX data <b>COMPLIANT/NON-COMPLIANT</b>
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### 2. WAFS GRIB2 decoder and compliant display package.

2a	Demonstrate display of ICAO style wind/temperature maps/charts created from WAFS London and WAFS Washington <sup>1</sup> GRIB2 data that: <ul style="list-style-type: none"><li>- conform to the recommended display standards detailed in ICAO Annex 3 or the PANS-MET</li><li>- cover a range of different flight levels and forecast time steps</li><li>- use 0.25 degree and 1.25 degree data</li><li>- can show data anywhere in the world, including spanning the International Date Line, North/South poles and follow correct conventions for the northern and southern hemisphere</li><li>- can be displayed on a map with the ability for users to pan, zoom and change the map projection</li><li>- can be displayed as the fixed ICAO chart areas<sup>2</sup>.</li></ul> Have appropriate legends and labels to identify which WAFS issued the data, validity date/time for the data, and flight level the data is valid for. <b>COMPLIANT/NON-COMPLIANT</b>
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<sup>1</sup> Strictly, it is up to the end user of the system to determine what source of WAFS data they use for their gridded WAFS upper air forecasts. Both WAFS London and WAFS Washington GRIB2 data is available on SADIS API.

<sup>2</sup> A, B, B1, C, D, E, F, G, H, I, J, K, M

2b	<p>Demonstrate display of wind, temperature, relative humidity, geopotential height, tropopause and jet stream (max wind) maps created from WAFC London and WAFC Washington GRIB2 data that:</p> <ul style="list-style-type: none"> <li>- cover a range of different flight levels and forecast time steps</li> <li>- can show data anywhere in the world, including spanning the International Date Line</li> <li>- can be displayed on a map with the ability for users to pan, zoom and change the map projection</li> <li>- use clear and appropriate colour schemes</li> <li>- Have appropriate legends and labels to identify which WAFC issued the data, validity date/time for the data, and flight level the data is for</li> </ul> <p>[COMPLIANT/NON-COMPLIANT]</p>
2c	<p>Demonstrate display of cumulonimbus, turbulence and icing map created from WAFC London and WAFC Washington GRIB2 data that:</p> <ul style="list-style-type: none"> <li>- cover a range of different flight levels and forecast time steps</li> <li>- can show data anywhere in the world, including spanning the International Date Line</li> <li>- can be displayed on a map with the ability for users to pan, zoom and change the map projection</li> <li>- use clear and appropriate colour schemes</li> <li>- Have appropriate legends and labels to identify which WAFC issued the data, validity date/time for the data, and flight level the data is for</li> </ul> <p>[COMPLIANT/NON-COMPLIANT]</p>

### 3. WAFS IWXXM format SIGWX decoder and compliant display package.

3a	<p>Demonstrate display of SIGWX maps/charts from WAFC London and WAFC Washington GRIB2 data that:</p> <ul style="list-style-type: none"> <li>- can be displayed on a map with the ability for users to pan, zoom, toggle layers on and off, and change the map projection</li> <li>- conform to the recommended display conventions detailed in ICAO Annex 3 or the PANS-MET. Text box/arrow head placement and colour schemes must lead to an unambiguous indication to users of the meteorological situation</li> <li>- is identical as far as the meteorological content is concerned to the cross-check png charts that are provided on the SADIS API</li> <li>- cover a range of different forecast time steps</li> <li>- can show data anywhere in the world, including spanning the International Date Line, North/South poles and follow correct conventions for the northern and southern hemisphere</li> </ul>
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	<ul style="list-style-type: none"> <li>- can be displayed as the fixed ICAO chart areas<sup>3</sup>.</li> <li>- Have appropriate legends and labels to identify which WAFC issued the data, validity date/time for the data, and flight level the data is for</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p> <p><i>Note: If the software allows the user to modify any of the plotted meteorological parameters, reference to either WAFC must be automatically removed if such modification is carried out by the end user</i></p> <p>[COMPLIANT/NON-COMPLIANT].</p>
<b>3b</b>	<p>Demonstrate the appearance of the SIGWX if turned into a briefing chart for printing that:</p> <ul style="list-style-type: none"> <li>- is clear and unambiguous to users</li> <li>- is appropriately labelled</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p>

**4. Ability to view OPMET data sets in lists/reports sorted according to data type and/or location using the TAC format data**

<b>4a</b>	<p>Demonstrate the ability to retrieve and display TAFs, METARs, SPECIs, SIGMETs, AIRMETs (EUR region only), GAMETs and Special Air Reports (Special AIREPS) in list or report form that:</p> <ul style="list-style-type: none"> <li>- are from each of the following regions: CARSAM, NAM, EUR/NAT, MID, ASIAPAC</li> <li>- are displayed in plain text format</li> <li>- can be sorted by issuing country or Flight Information Region</li> <li>- can be requested by specifying an individual airport or flight information region</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p>
<b>4b</b>	<p>Demonstrate the ability to retrieve and display Tropical Cyclone Advisory, Volcanic Ash Advisory, Space Weather Advisory, radioactive release messages and NOTAM/ASHTAM relating to volcanic ash in list or report form information that:</p> <ul style="list-style-type: none"> <li>- are from a range of regions</li> <li>- are displayed in plain text format</li> <li>- can be sorted by issuing country or Flight Information Region</li> <li>- can be requested by specifying an individual airport or flight information region</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p>

<sup>3</sup> A, B, B1, C, D, E, F, G, H, I, J, K, M

**5. Ability to view OPMET data sets in a human readable form sorted according to data type and/or location using the IWXXM format data**

<p><b>5a</b></p>	<p>Demonstrate the ability to retrieve and display TAFs, METARs, SPECIs, SIGMETs and AIRMETs that:</p> <ul style="list-style-type: none"> <li>- are from each of the following regions: CARSAM, NAM, EUR/NAT, MID, ASIAPAC</li> <li>- are displayed in a human readable form</li> <li>- can be sorted by issuing country or Flight Information Region</li> <li>- can be requested by specifying an individual airport or flight information region</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p> <p><i>Note: Full global coverage of IWXXM data is yet available on the SADIS API. For evaluation purposes only data from those regions internationally exchanging data will need to be shown.</i></p>
<p><b>5b</b></p>	<p>Demonstrate the ability to retrieve and display Tropical Cyclone Advisory, Volcanic Ash Advisory and Space Weather Advisory information that:</p> <ul style="list-style-type: none"> <li>- is from a range of regions</li> <li>- is displayed in a human readable form</li> <li>- can be sorted by issuing country or Flight Information Region</li> <li>- can be requested by specifying an individual airport or flight information region</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p> <p><i>Note: Full global coverage of IWXXM data is yet available on the SADIS API. For evaluation purposes only data from those regions internationally exchanging data will need to be shown.</i></p>

**6. Display of OPMET data on a map view based on the TAC format data**

<p><b>6a</b></p>	<p>Demonstrate the ability to display METAR, SPECI and TAF information on a map that:</p> <ul style="list-style-type: none"> <li>- indicates key elements of relevance to the users</li> <li>- applies colour coding that relates to the elements in the forecast</li> <li>- updates automatically when new data is received</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p>
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<b>6b</b>	<p>Demonstrate the ability to display SIGMET and Special Air Report (Special AIREP) information on a map that:</p> <ul style="list-style-type: none"> <li>- indicates key elements of relevance to the users</li> <li>- marks the phenomena in the correct location</li> <li>- applies colour coding that relates to the elements in the forecast</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p>
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**7. Display of OPMET data on a map view based on the IWXXM format data**

<b>7a</b>	<p>Demonstrate the ability to display METAR, SPECI and TAF information on a map that:</p> <ul style="list-style-type: none"> <li>- indicates key elements of relevance to the users</li> <li>- applies colour coding that relates to the elements in the forecast</li> <li>- updates automatically when new data is received</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p> <p><i>Note: Full global coverage of IWXXM data is yet available on the SADIS API. For evaluation purposes only data from those regions internationally exchanging data will need to be shown.</i></p>
<b>7b</b>	<p>Demonstrate the ability to display SIGMET information on a map that:</p> <ul style="list-style-type: none"> <li>- indicates key elements of relevance to the users</li> <li>- marks the phenomena in the correct location</li> <li>- applies colour coding that relates to the elements in the forecast</li> </ul> <p>[COMPLIANT/NON-COMPLIANT].</p> <p><i>Note: Full global coverage of IWXXM data is yet available on the SADIS API. For evaluation purposes only data from those regions internationally exchanging data will need to be shown.</i></p>

**8. Display volcanic ash and tropical cyclone advisory graphics**

<b>8a</b>	<p>Demonstrate the ability to display volcanic ash advisory and tropical cyclone advisory graphic charts.</p> <p>[COMPLIANT/NON-COMPLIANT].</p>
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**9. Alerting users when advisory type forecasts are received**

<b>9a</b>	Demonstrate the ability to alert users when volcanic ash advisory, tropical cyclone advisory, space weather advisories, ASHTAM/NOTAM relating to volcanic ash, nuclear emergency advisories are received in TAC format. <b>[COMPLIANT/NON-COMPLIANT]</b> . <i>Note: It is acknowledged that there may be no available bulletins that can be used to demonstrate some of these, and for this self-certification is acceptable.</i>
<b>9b</b>	Demonstrate the ability to alert users when volcanic ash advisory, tropical cyclone advisory and space weather advisories are received in IWXXM format. <b>[COMPLIANT/NON-COMPLIANT]</b> . <i>Note: It is acknowledged that there may be no available bulletins that can be used to demonstrate some of these, and for this self-certification is acceptable.</i>

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## APPENDIX A

### Agreement between SADIS Provider and SADIS Workstation Software providers, relating to the evaluation of SADIS workstation software

#### Evaluation Options:

1) Demonstration of software functionality using web-conferencing or screen sharing technology, supported by screenshots and hard copy printouts of charts/logs demonstrating compliance.

To do this, a several demonstration periods will be agreed from which the workstation software supplier should demonstrate the key software function. It will not be possible to assess all criteria in this way, so this evaluation method will be accompanied by the provision of screenshots, lists, charts and logs that will be assessed separately.

2) The SADIS Manager could attend the offices of the SADIS workstation software provider and evaluate the system in real-time.

#### For 'cost' purposes:

- The SADIS Provider will charge to evaluate at a high level (see scope of evaluations below) the SADIS workstation software against the most recent SADIS evaluation criteria, as endorsed by METP-WG/MOG. Whilst substantial changes cannot be made without endorsement by METP-WG/MOG, some minor adjustments may be permissible dependent upon any changes endorsed by other official (particularly ICAO) groups/authorities.
- It is anticipated that a typical evaluation will take two days of the SADIS Manager's time, and the charge rates will be advised before entering into any commitment. Should the evaluation extend beyond two days (total working time, not elapsed time) then additional charges will be raised.
- The evaluation would have to be conducted in English for all verbal and written correspondence. Any requirement for translation facilities would need to be arranged by and met by the SADIS workstation software provider.

In the event of option 2, then the SADIS Manager's travel, subsistence and (if necessary) hotel accommodation costs would need to be met by the SADIS workstation software provider.

#### Scope of Evaluations:

It should be noted that the evaluations are 'high level' evaluations of functionality, and not detailed technical certifications of compliance. Note that:

a) The software evaluation process does not certify or endorse any single software application; neither does it recommend one application over another. The software evaluations are the results of software reviews that the Met Office has carried out on behalf of the ICAO METP-WG/MOG. The purpose of these reviews is to verify whether the applications can deliver certain minimum functions which the MOG considers are essential for the correct use of the WAFS and OPMET data; and

b) It remains the responsibility of the user to ensure that procured software meets their full requirements. It is not intended that the software evaluations fulfil this task. The results from the software evaluations may be used as one additional source of information to aid any procurement process but should not be viewed in isolation of other important procurement requirements.

**Additional:**

The SADIS Provider will provide the final SADIS workstation software evaluation report on: <https://www.metoffice.gov.uk/services/transport/aviation/regulated/sadis/software/suppliers> The report will not be published without prior agreement of the SADIS workstation software provider. The SADIS Provider will also update the METP-WG/MOG annually on the progress of evaluations over the preceding year. As such, any SADIS workstation software evaluations should be considered to be available in the public domain.

**Disputes:**

Final decision upon compliance or otherwise against a particular criteria rests solely upon the SADIS Manager. There is no appeal or alternative evaluation option. Whilst the SADIS Manager and the SADIS Provider is willing to enter into some correspondence and will consider the opinions of those representing the workstation software providers, the SADIS Provider reserves the right to determine a final report based upon the evaluation exercise within a reasonable period (and in any case no more than 30 days) after the evaluation. Workstation software providers may supply additional data post evaluation to demonstrate that items identified as being non compliant have been addressed. The decision regarding subsequent compliance again rests solely with the SADIS Manager.

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