Current Space Weather

• MOSWOC 24/7 Capabilities
  • Models
  • Forecaster Client

• Premium and Public Site
  • Sector-specific guidance
  • General info for the public
Work That’s Underway

- **AWS Migration**: Migrating the Space Weather application onto Amazon Web Services
  - **Opportunity**: Simplifies building of APIs to share observation data and model output (see below)

- **Data Sharing/APIs**:
  - **Opportunity**: Externalises Space Weather data streams for use by researchers and partner organisations

- **Research to Operations Optimisation**:
  - **Opportunity**: Allows access to Space Weather APIs and pre-configured AWS environments to develop and operationalise models, reducing R2O cycle times
As-Is SWX Application Architecture
(Very High-Level)

Data Sources

Internet

SWX Ripple Servers

Met Office DMZ

Met Office CDN

WAVE

Ripple

Message Switching

SWX WAVE Servers

End Users

AWS

Internet

Forecasters

HPC

Model Output

Parameters

Ovation Model Output

Published Data

MongoDB

Internet
MO Internal R2O Optimisation

- **Science Collaboration:** Providing Met Office Space Weather scientists with “sandbox” access to model code, test automation and build pipelines on AWS for validation and development, to shorten Research-to-Operations cycle time
  - **Opportunity:** Use this ongoing effort as a foundation to expose more Space Weather models and observation data to the broader research community (i.e., SWIMMR)
Work on the Horizon

- **KNMI (Netherlands Met Office)**
  - Sharing Met Office Space Weather observations and model data over **AWS APIs** to support KNMI’s launch of a Netherlands-specific Space Weather capability
SWIMMR Portal and Sandbox

- Space Weather operational data portal and “Research Sandbox” capabilities for UK researchers and international collaborators
  - Ability to run Space Weather models and access current (and possibly historic) Space Weather data in a controlled AWS-resident environment
  - Portal follows KNMI pattern
Questions?