



# AWC's Aviation Weather Testbed Dataflow

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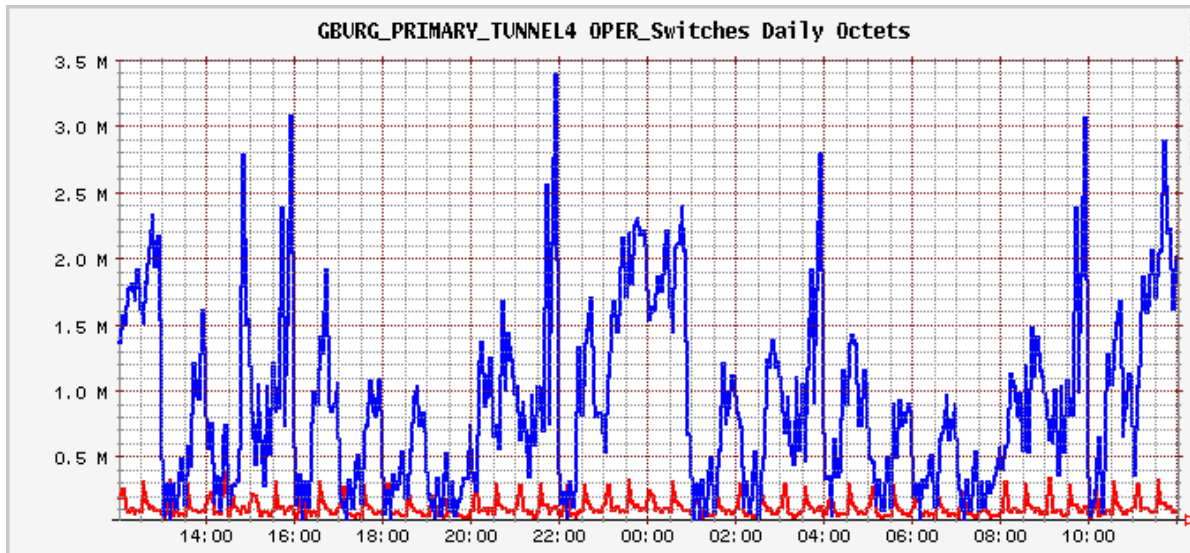
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# Bandwidth

- DS-3 AWC ↔ NCEP WWB/IBM Supercomputer
  - 44.21 Mbit/sec = 5.53 MBytes/sec
  - Always need more bandwidth
  - 140 GB Model Data/day





# Storage

- 5.3 TB online
- 5.4 TB offline
  - archive for case studies





# Model Data Received at AWC (1)

- GFS-Gempak: WAFS 1.25 deg cb-ice-turb F06, F12, F18, F24, F30, F36
- GFS-Gempak: 1x1 deg, 50 hPa, every 3 h to F48
- GFS-Gempak: pt fcst snd: 1 file/run
- GFS-LAMP-grib2
- Hi-Res Window NAM-NMM and NAM-ARW: East 4 km





## Model Data Received at AWC (2)

- NAM-Gempak: 90 km, 25 hPa, hourly to F36, 3h to F48
- NAM-Gempak: 64 km, 25 hPa, hourly to F36, 3h to F48
- NAM-Gempak: pt fcst snd: 1 file/run
- NAM-Gempak: 4 km hi-res window sounding files
- NAM-Grib: 80 km, 25 hPa, every 6h to F84 for 00Z/12Z runs for ADDS
- NAM-Grib: 80 km, 25 hPa, every 6h to F48 for 06Z/18Z runs for ADDS
- NAM-KF-Gempak: 40 km, 25 hPa, every 3h to F48





# Model Data Received at AWC (3)

- RTMA-Gempak 5 km CONUS grid
- RUC-Gempak: 40 km, 25 hPa, (on-time) hourly F00-F12
- RUC-Gempak: 40 km, 25 hPa, (off time) hourly F00-F09
- RUC-Gempak: pt fcst snd: 1 file/run
  - RUC-Grib: 13 km Conv Prob F3-F9 hourly for T&E
  - RUC-Gempak: 13 km Conv Prob F3-F9 for T&E
- For AWRP Algorithms:
  - RUC-Grib: 20 km 25 hPa (on-time) F0, F1, F2, F3, F6, F9, F12
  - RUC-Grib: 20 km 25 hPa (off time) F0, F1, F2, F3
  - RUC-Grib: 40 km 25 hPa (on-time) F0, F1, F2, F3, F6, F9, F12
  - RUC-Grib: 40 km 25 hPa (off time) F0, F1, F2, F3
  - RUC-Grib: 20 km, HybB 50 lvls (on-time) F0, F1, F2, F3, F6, F9, F12
  - RUC-Grib: 20 km, HybB 50 lvls (off time) F0, F1, F2, F3





## Model Data Received at AWC (4)

- SFCOA-Gempak: 40 km from SPC of objectively analyzed sfc obs + RUC/NAM upper air fcst
- SREF-SPC CONV-Gempak: 40 km, 25 hPa, every 3h to F48
- SREF Probability Gempak: 40 km, C&V, IFR, MVFR, VFR, Icing, Turb pre-processed on NCEP IBM supercomputer
- UKMET-Grib: WAFS 1.25 deg Thinned cb-ice-turb, F24 only
- UKMET-Gempak: 1.25 deg, isobaric/mandatory, every 6 h to F48





# Summary

- AWC Testbed currently has bandwidth & storage
  - to acquire,
  - store,
  - process,
  - test, and
  - evaluate new algorithms to improve aviation meteorological products and services
- Future → more bandwidth and storage

