

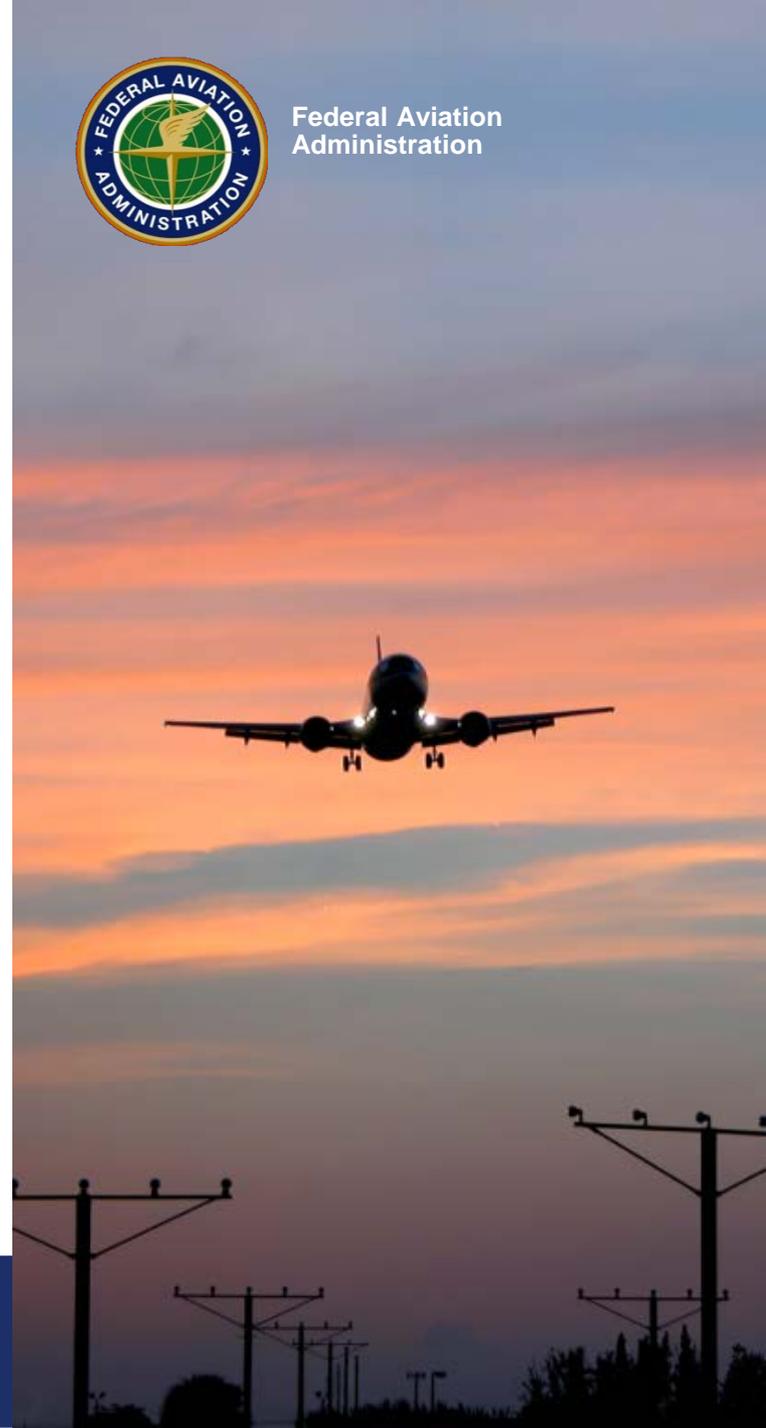
Users Forum #16

August 10, 2017

Hosted by SWIM Program Office
Washington, DC



Federal Aviation
Administration



Today's Agenda

- **Program Announcements**
 - Ops to R&D
 - TFM Data Cat 3
- **Identity and Access Management (IAM) Policy**
- **STDDS Update**
- **NAS Common Reference (NCR)**
- **Coming up...**
- **Q&A**



Got questions during the forum?

- **Type your questions into GoTo Webinar**
- **Where can you find a copy of today's slides?**
 - See the “Handouts” section in GoTo to download today's slides
 - Slides will be emailed to attendees and posted in the [SWIM Users Forum page](#).
- **Share your feedback:**
 - Fill out our [post-forum form](#)
 - Contact us at swim@faa.gov



Program Announcements

August 10, 2017

Chris Pressler

SWIM Lead Engineer



Federal Aviation
Administration



Ops to R&D Forwarding Changes

- **SWIM will implement Solace to Solace forwarding from Ops to R&D for all SWIM services available on data.faa.gov.**
 - SFDPS
 - ITWS
 - AIM FNS JMS
 - STDDS
 - APDS
 - ISMC
 - SMES (only limited airports)
 - TAIS (only two source tracons)
 - TBFM
 - TFMS R13
 - Flight Data
 - Flow Information
 - TFDM Outbound (requires foreign ANSP to FAA MOA)
 - Status
- **The current 5 minute delay will be removed.**



Deprecation of TFMDData Cat 3

- **NATS UK has directed the FAA to cease redistribution of all London data.**
- **All grandfathered subscriptions for TFMDData Cat 3, (previously known as ASDI Class One London users) will be updated to TFMDData Cat 4 (Class One London)**
- **This transition will occur prior to 12/31/2017**
- **Please contact your SWIM POC if there are any questions**



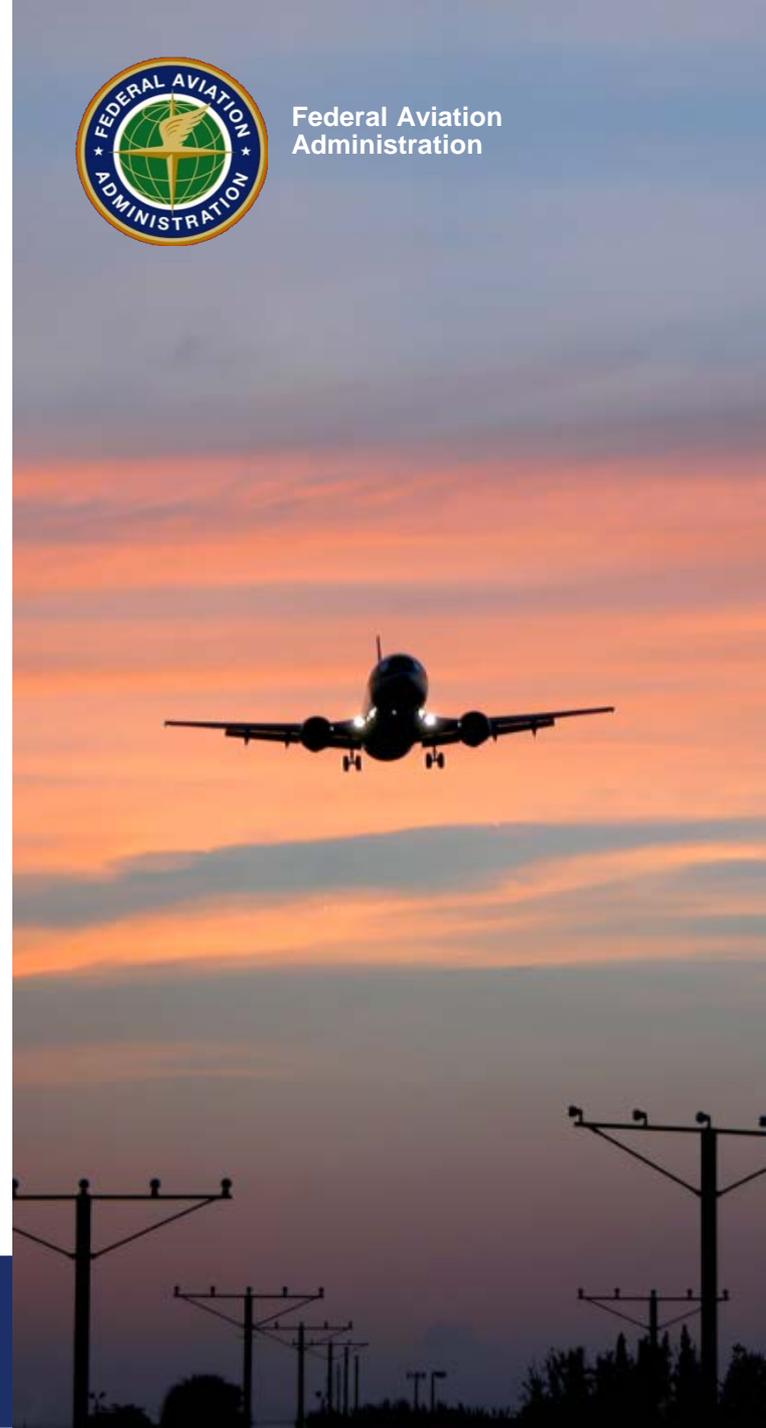
Identity Access Management Capabilities

August 10, 2017

Jim Laymon
IAM Lead



Federal Aviation
Administration



Identity and Access Management (IAM) Capabilities

FAA SWIM systems will support mutual authentication using certificates (FY18)

SWIM will use US Common Policy x.509 credentials

US FAA CA is Symantec

US Federal Trust Framework

TLS 1.2

SAML 2.0

OCSP Validation service available at the FAA boundary

FAA Notice 1370.48N for Authentication

“All Non-NAS Domain ... Systems ... that establish a connection to the NAS Domain to write data into the NAS, to access NAS sensitive data, or to manage NAS assets must use United States (U.S.) Federal PKI Common Policy Framework compliant digital credentials. Non-FAA entities may use credentials issued by a trusted Certification Authority(CA) if U.S. Common Policy compliance is not possible. Credentials must be verified via the IAM Validation Service at the NAS Domain Service Delivery Point (SDP) prior to access.”

https://employees.faa.gov/tools_resources/orders_notices/

Authorization Capability (2020)

Attribute Based Access Control (ABAC)

Attribute Authority Directory

SWIM is developing requirements now

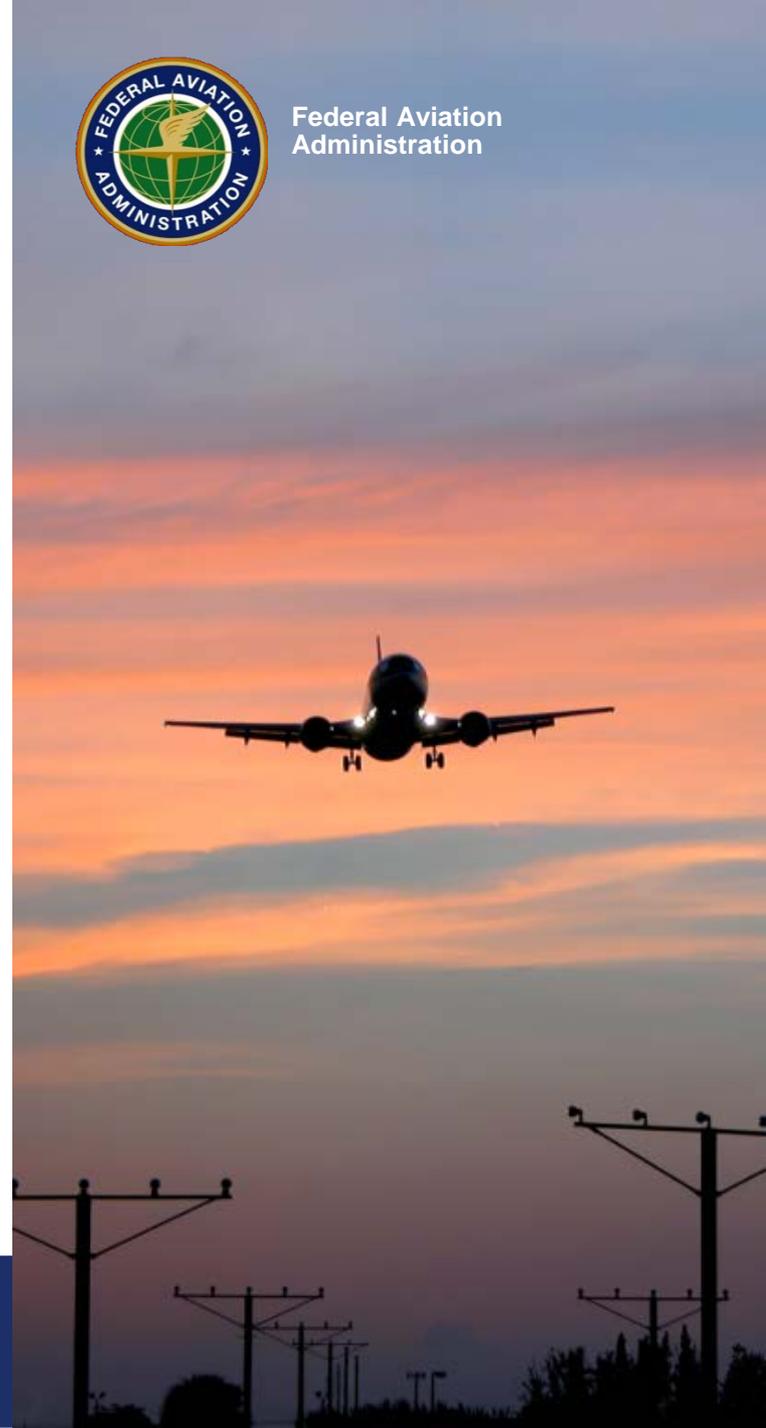
SWIM Terminal Data Distribution System (STDDS)

August 10, 2017

Brian Love
STDDS Lead



Federal Aviation
Administration



STDDS R3.3 Deployment Status

- **All STDDS Upgrades Complete**

- Y90, SCT, JAX, CLT, NCT, MIA, HCF, A90, D21, M98, TPA, PCT, PVD, S56, BUF, R90, IND, D10, SDF, MCI, I90, ABQ, A80, T75, P50, S46, CMH, N90, RDU, PIT, MKE, PHL, P80, M03, F11, C90, A11, D01

- **16 R3.3 STARS sites**

- Complete (14): BTR, MOB, BGR, DLH, SUX, LEX, MLI, PSC, MWH, GGG, MGM, ABI, FAY, AGS
- Upcoming (2): CHS & CAE

**Huge thanks to everyone for a smooth
R3.3 deployment**

STDDS R4.0 Enhancements (subject to change)

- Publish data from all remaining STARS sites
- Integration of SFDPS flight plan data to add correlated GUF1 in SMES, TAIS, TDES
- Publication of filtered TDES data
- Direct publication to NEMS Solace appliances to improve reliability
- Addition of airportId to SurfaceMovementEvent message body
- Additional STARS message batching to decrease bandwidth needs
- Improvements to help detect lost messages
- Changes to ensure original source data can be recovered
- Various program trouble report (PTR) fixes and security patches

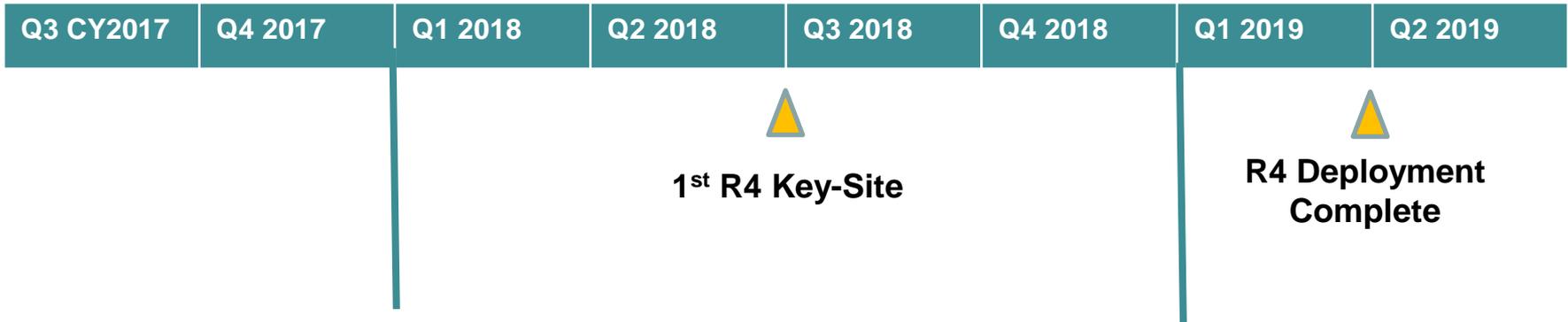


STDDS/SFDPS Matching

Svc	Message	ERAM GUF	SFDPS GUF	Dep Airport	Arr Airport	AC Type	Beacon Code
SMES	SurfaceMovementEvent	✓	✓	✓	✓		
SMES	ASDEXPositionReport	✓	✓	✓	✓		
TAIS	TATrackAndFlightPlanData	✓	✓	✓	✓		
TDES	TowerDepartureEvent	✓	✓		✓	✓	✓



STDDS R4.0 Schedule



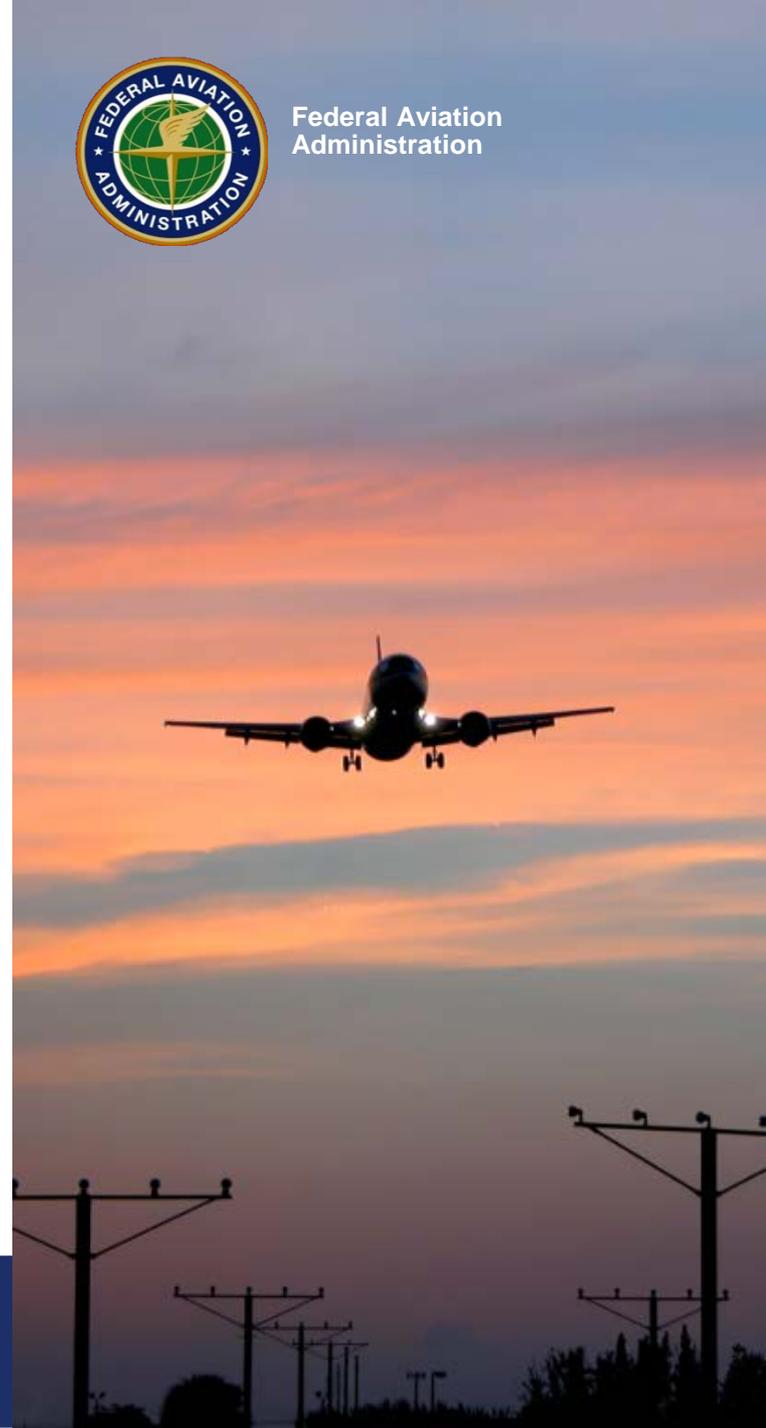
NAS Common Reference (NCR)

August 10, 2017

Lara Shisler



Federal Aviation
Administration



What is NCR?

- **NCR is a new service that will begin deployment on SWIM in early 2020**
- **NCR will:**
 - Integrate NAS status and constraint information from cross-domain sources, to initially include Aeronautical Common Services, Common Support Services – Weather, TFMDData Flow Information, and STDDS Airport Data Service.
 - Provide a unified, application-level, and standards-based interface to obtain subsets of information via request or subscription, in standard formats, either in XML or as images
 - Support 4D route queries in addition to flexible combinations of spatial, temporal, and scalar filters
 - Create a consistent, spatially and temporally correlated “view” of NAS information



NCR Route Query

The screenshot displays the NCR Route Query application interface. The main window shows a map of the New York City area with various flight data overlays. The left sidebar contains a 'Map Layers' panel with a tree view of layers including 'Base Maps', 'Overlays', and 'query_0' through 'query_lamp'. The top menu bar includes 'nav', 'draw poly', 'draw line', 'clear drawings', 'About NCR', and 'Sign Out'. The right sidebar contains a 'Trajectory Query' panel with a 'Trajectory Query' tab and an 'Ad-hoc Query' tab. The 'Trajectory Query' panel includes fields for 'Query Time', 'Trajectory Type', 'Departure Time', 'Speed (kts)', 'Altitude (ft)', 'Vertical Buffer (ft)', 'Horizontal Buffer (nm)', and 'Layers'. The 'Layers' section is expanded to show 'Aeronautical' and 'Weather' categories with various sub-layers checked. The 'Run', 'Clear', and 'Show' buttons are visible at the bottom of the right sidebar.

Map Layers

- Base Maps
 - Blue Marble
 - World
- Overlays
 - airport
 - NEWRAD Current
 - query_0
 - query_sigmet_0
 - query_aimet_0
 - query_taf_0
 - query_pirep_0
 - query_metars_0
 - query_reroute_0
 - query_ctop_0
 - query_fca_0
 - query_afp_0
 - query_gdp_0
 - query_gs_0
 - query_airport_config_0
 - query_awos_0
 - query_runways_0
 - query_airways_0
 - query_active_sua_0
 - query_sua_0
 - query_notam_0
 - query_sectors_0
 - query_artcc_0
 - query_0_narre
 - query_narre_2016-06-30T23:00:00.0
 - query_narre_2016-06-30T22:00:00.0
 - query_narre_2016-06-30T21:00:00.0
 - query_0_lamp
 - query_lamp_2016-06-30T23:00:00.0
 - query_lamp_2016-06-30T22:00:00.0
 - query_lamp_2016-06-30T21:00:00.0
 - query_lamp_2016-06-30T20:00:00.0

Trajectory Query

Save Query Load Query

Query Time: 2016-06-30T20:00:00 USER

Do not include query time.

Trajectory Type: 2D

Open Trajectory Editor

Import Trajectory

Convert Route String

Departure Time: 2016-06-30T20:15:00 USER

Speed (kts): 300

Altitude (ft): 30000

Vertical Buffer (ft): 5000

Horizontal Buffer (nm): 100

Layers: SELECT ALL

Aeronautical

- artcc sectors
- notam sua
- active_sua airport
- runways awos
- airport_config

Traffic Management

- gs gdp
- afp fca
- ctop reroute

Weather

- metars pirep
- taf airmet
- sigmet lamp
- narre fp
- reflectivity cth
- cdo

Run Clear Show



NCR General Query

The screenshot displays the NCR General Query interface. The main map shows a geographic area around New York City, with various airports and flight paths highlighted in yellow and red. The map includes labels for airports such as KJFK, LGA, and EWR, as well as other nearby airports like KMDW, KMDL, and KMDX. The map also shows various flight paths and sectors.

The interface includes a "Map Layers" panel on the left, a "Trajectory Query" and "Ad-hoc Query" panel on the right, and a "Filters" section at the bottom right. The "Ad-hoc Query" panel shows the following configuration:

- Save Query: []
- Load Query: []
- Query Time: 2016-06-30T20:00:00 USER
- Do not include query time: []
- Query Geometry: POLYGON((-68.81790101484 9 43.199081420898,-68.81790101484901 43.199081420898,-69.84491446037725 43.163442185682285,-
- Layers: [x] SELECT ALL
- Aeronautical:
 - [x] artcc [x] sectors
 - [x] notam [x] sua
 - [x] active_sua [x] airport
 - [x] runways [x] awos
 - [x] airport_config
- Traffic Management:
 - [x] gs [x] gdp
 - [x] afp [x] fca
 - [x] ctop [x] reroute
- Weather:
 - [x] metars [x] piprep
 - [x] taf [x] almet
 - [x] sigmet [x] lamp
 - [x] narre [x] fp
 - [x] reflectivity [x] cth
 - [x] cdo
- Temporal Filter: [x]
- From Time: 2016-06-30T20:00:00 USER
- To Time: 2016-06-30T21:00:00 USER
- Altitude Filter: []
- Min Alt (ft): 0
- Max Alt (ft): 0
- Property: []
- Operator: []
- Value: []
- Add: []
- Filters: Property Filters
- Run: [] Clear: [] Show: []



Summary

- **NCR is not:**

- A decision support tool (e.g., airline flight planning tool or TFM system)
- A SWIM data visualization tool
- A SWIM data publication service (e.g., ACS or CSS-Wx)

- **NCR is:**

- A future SWIM data *query* service
- A service providing filtered subsets of cross-domain NAS status and constraint data
- Commonly-needed functionality that can be utilized by other systems, tools, and SWIM consumers



NCR Schedule

- NCR development is underway
- Operational deployment planned in the 2020 timeframe

*For interested future consumers:
Please contact SWIM@faa.gov for more
information about NCR*



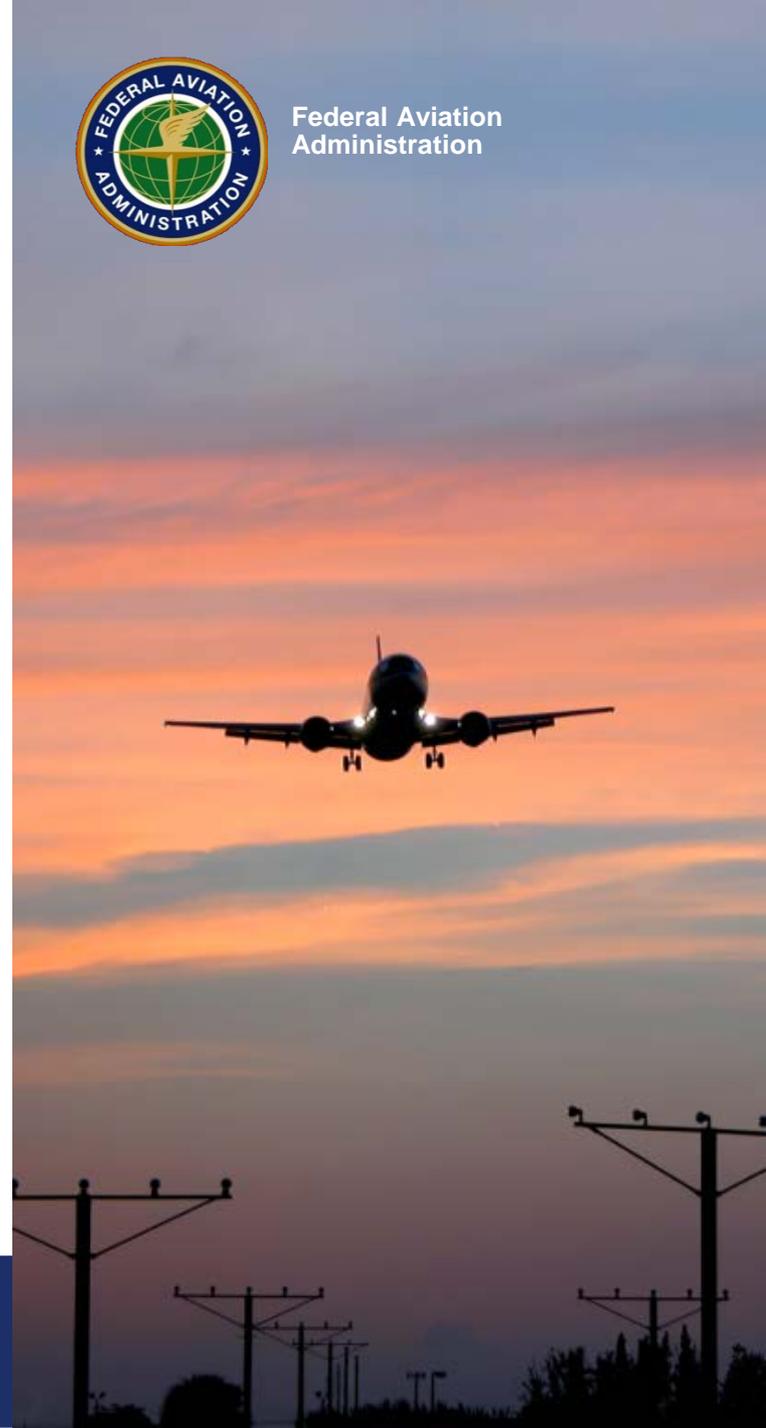
Questions?



Coming Up...



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Dates to Remember

- **Next Users Forum:**
Oct. 12, 2017
- **SWIM at ATCA:**
 - Oct. 15-18
 - Meet the Program Office
 - Activities
 - Demos
 - Speaking Engagements
 - *Specifics will be announced in October.*
 - *Stay tuned!*



SWIM
connect
at the
2017 ATCA Annual



Any Questions?

Please let us know how we did today, and how we can improve Users Forums in the future:

Click [here](#) to provide your feedback.

The slides for today's forum will be posted on the SWIM [website](#).

For more information, contact us at swim@faa.gov

Thank you for joining us! See you on October 12!

