

# Federal Aviation Administration

## System Wide Information Management (SWIM)



# SWIFT Portal

## User Guide



Version 4.0

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Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, D.C. 20591



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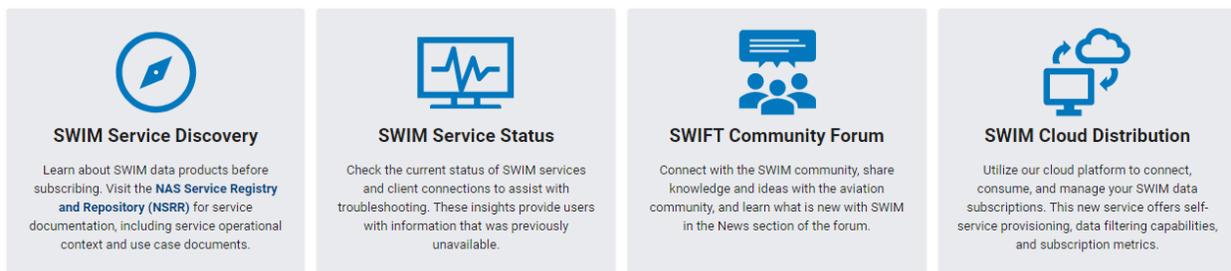
## 1.0 Introduction

The System Wide Information Management (SWIM) Program is a National Airspace System (NAS)-wide information system that supports Next Generation Air Transportation System (NextGen) goals. SWIM facilitates the data-sharing requirements for NextGen, providing the digital data-sharing backbone of NextGen. The SWIM FAA-Industry Team (SWIFT) is an FAA forum, open to the public, offering a collaborative environment for outreach activities related to FAA information services shared via SWIM. SWIFT was established in response to an (RTCA) request, to provide a venue where participants can engage and learn about NAS data and information services along with other SWIM services to improve system integration, automation, system interoperability and communication networks. SWIFT has created a forum to provide greater context of information the FAA is making available to industry through SWIM. SWIFT bridges the gap between operations and technology, addressing questions and concerns raised regarding data-sharing and information services.

The SWIFT Portal was developed to further improve the collaboration between the FAA SWIM Program and Industry through providing a single place for the SWIM community to access, discuss, and get support for all things SWIM. The Portal is an evolution of the existing SWIM Cloud Distribution Service (SCDS) that has been providing the public with seamless self-service access to non-sensitive SWIM data since 2019.

## 2.0 Overview

The SWIFT Portal provides users with four core features including Discovery, Service Status, a Community Forum and the SWIM Cloud Distribution Service (SCDS). Discovery provides users with the ability to Learn about SWIM data products before subscribing, providing direct links the NAS Service Registry and Repository (NSRR) for service documentation, including service operational context and use case documents. Service Status empowers users by allowing them to check the status of SWIM services and client connections to assist with troubleshooting, providing insights to information that was previously unavailable. The Community Forum allows users to connect with the SWIM community, share knowledge and ideas with the aviation community, and learn what is new with SWIM in the News post from the SWIM Program. SWIM Cloud Distribution provides users with the ability to request, connect, consume, and manage SWIM Cloud data subscriptions through self-service provisioning.



**Figure 2-1 - SWIFT Portal Features**

### 3.0 Account Creation

This section will explain the account creation processes and navigation layout for the SWIFT Portal.

#### 3.1 Landing Page

Upon navigating to the SWIFT Portal, users are presented with the SWIFT Portal Landing Page as shown in Figure 3. The Landing Page provides a brief overview of the SWIFT Portal and current features as well as navigation controls including a “GET STARTED” button, a “SIGN IN” link, and a link to the SWIFT Portal “SUPPORT” section that includes Frequently Asked Questions.

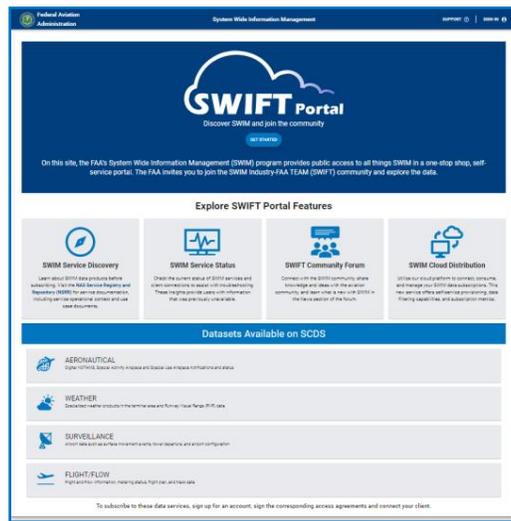
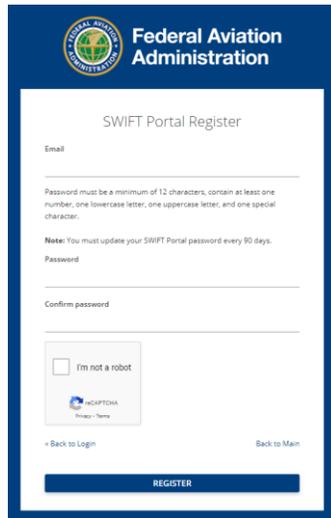


Figure 3-1 - Landing Page



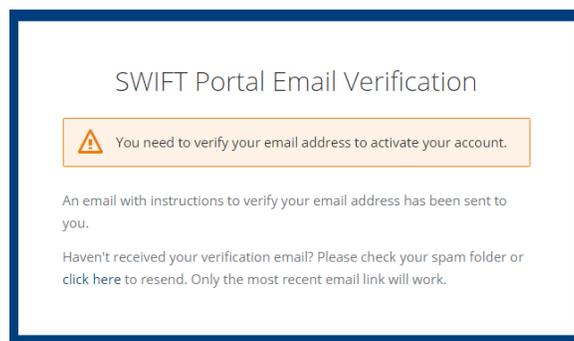
**Figure 3-2 - Account Creation Page**

### 3.2 Account Creation

To request an account with SWIFT Portal, click the “GET STARTED” button on the Landing Page. The account request form will be presented as shown above in Figure 3-1.

### 3.3 Account Creation Form

Fill out the form (passwords must be a minimum of 12 characters, contain at least one number, one lowercase letter, one uppercase letter, and one special character), and check the “I’m not a robot” checkbox in the reCAPTCHA area and then click the “SUBMIT” button to get to the Update Account Information page. The Update Account Information page will ask for your Company Name and Phone Number. Once filled out, click the “SUBMIT” button to get to the Email Verification Page shown below in Figure 3-3.



**Figure 3-3 - Email Verification Page**

### 3.4 Account Deactivation Policy

Accounts that are not accessed or used to connect to a subscription are disabled after 90 days. Users will receive an email notification after 60 days of inactivity that 30 days remain to log into the account to keep it active.

If not connected within 90 days from the last connected time, the account will be disabled. After an account is disabled, a user can request it be re-enabled by contacting the SWIM Support Team via the “ask a question” functionality. If no request is received to re-enable the subscription within 185 days from disablement (275 days from last connect time) it will be deleted from the system.

### 4.0 Home

The SWIFT Portal Home page provides a dashboard for users to view information from various functions provided by the portal including News, Community, Subscriptions, Maintenance and Service Status. Users can configure their homepage by choosing between four different layouts to display the content of their choice by selecting the gear icon in the top right hand of their screen. Figure 4-1 provides a view of the Home page.

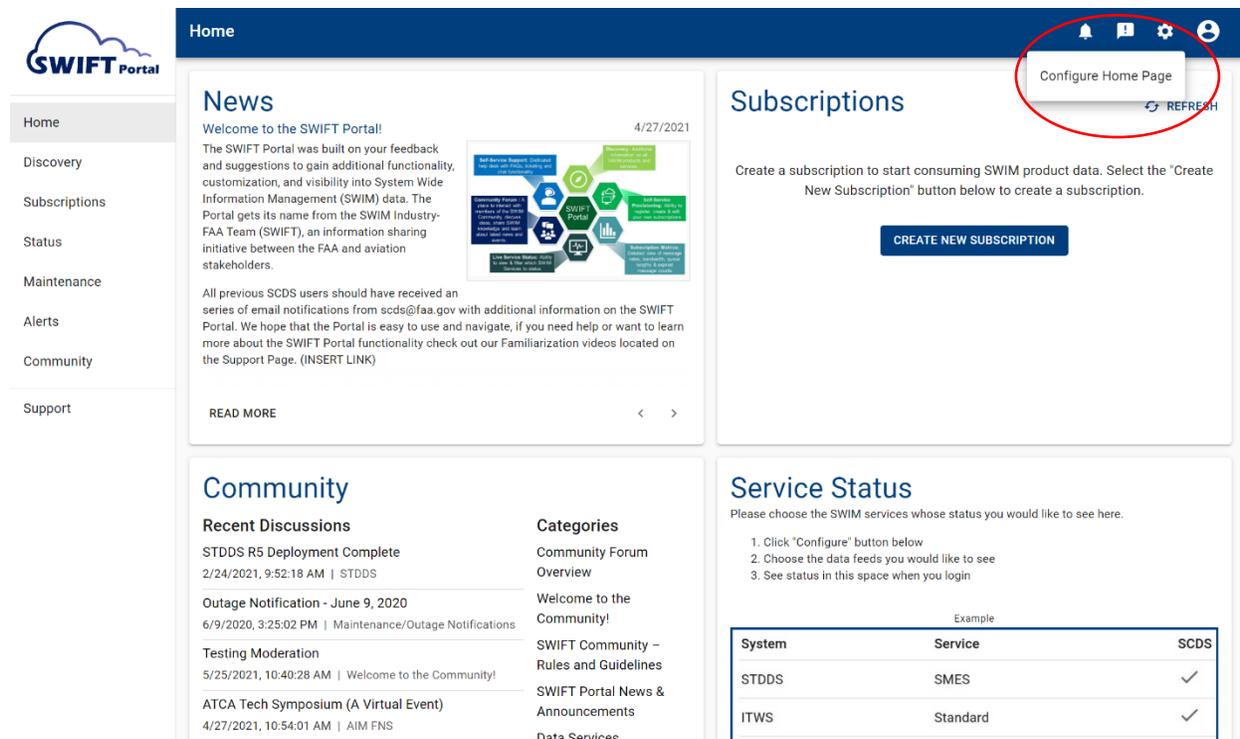


Figure 4-1 – SWIFT Portal Home Page

Figure 4-2 Provides a view of the four display options.

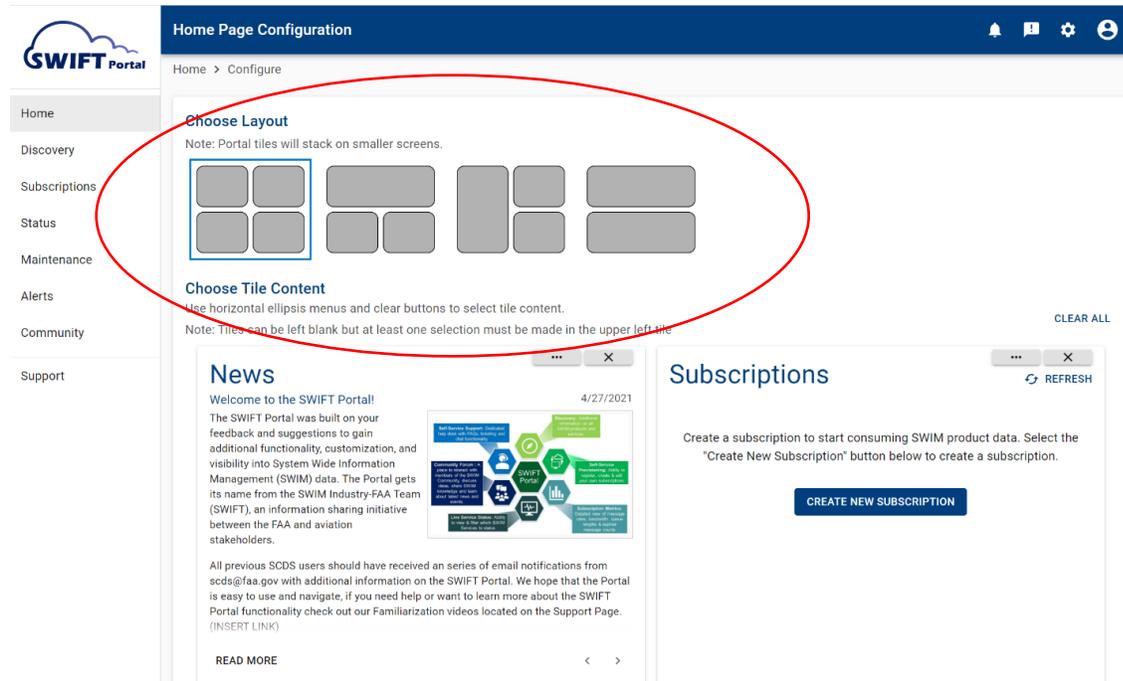


Figure 4-2 – SWIFT Portal Home Page Layout

Figure 4-3 Provides a view of how you can choose the content to display on the various tiles for your Home page by selecting the ellipsis in the top right hand of the tile.

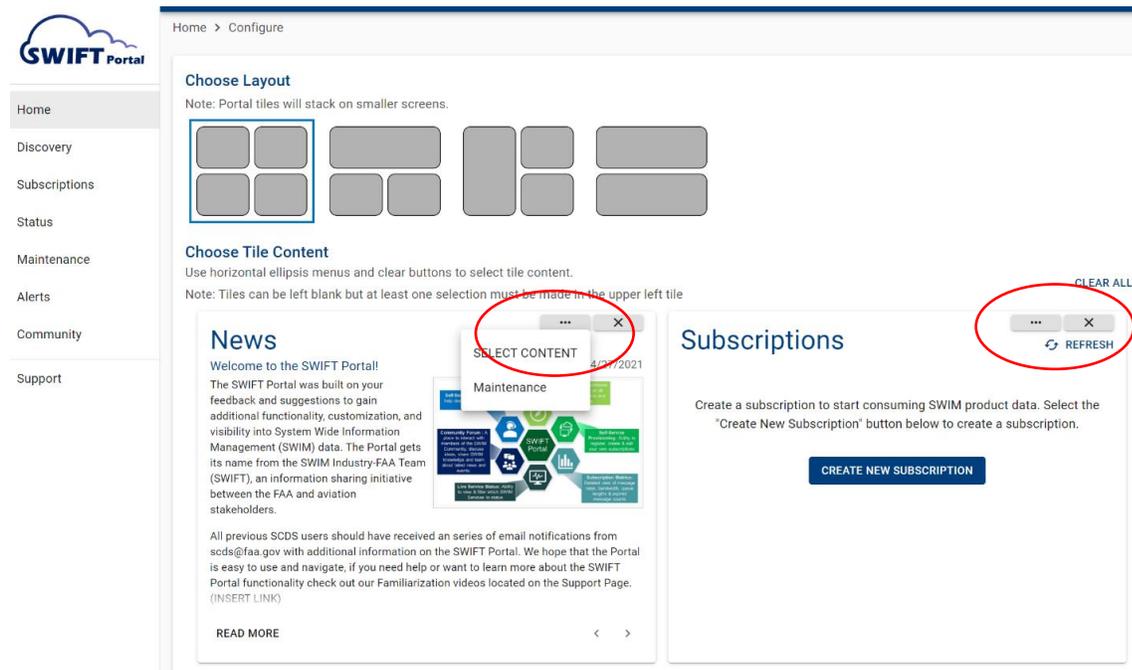
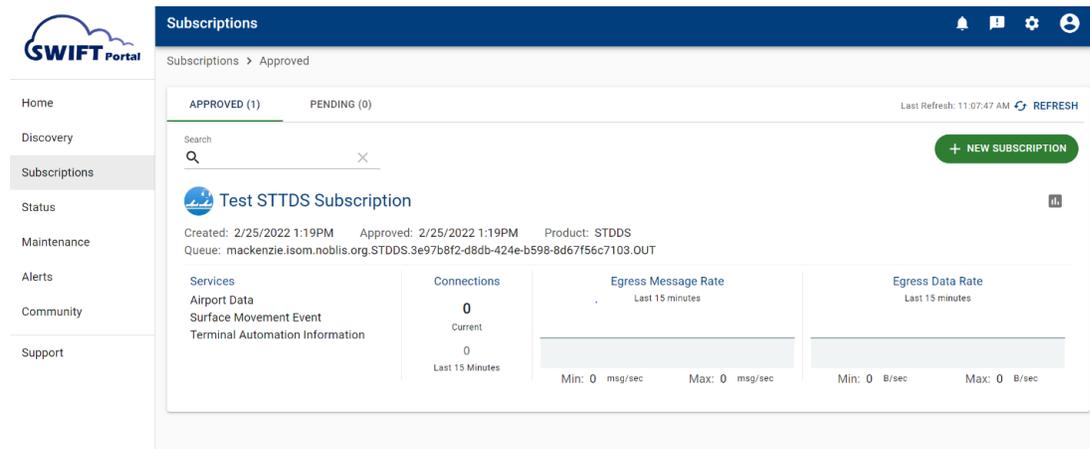
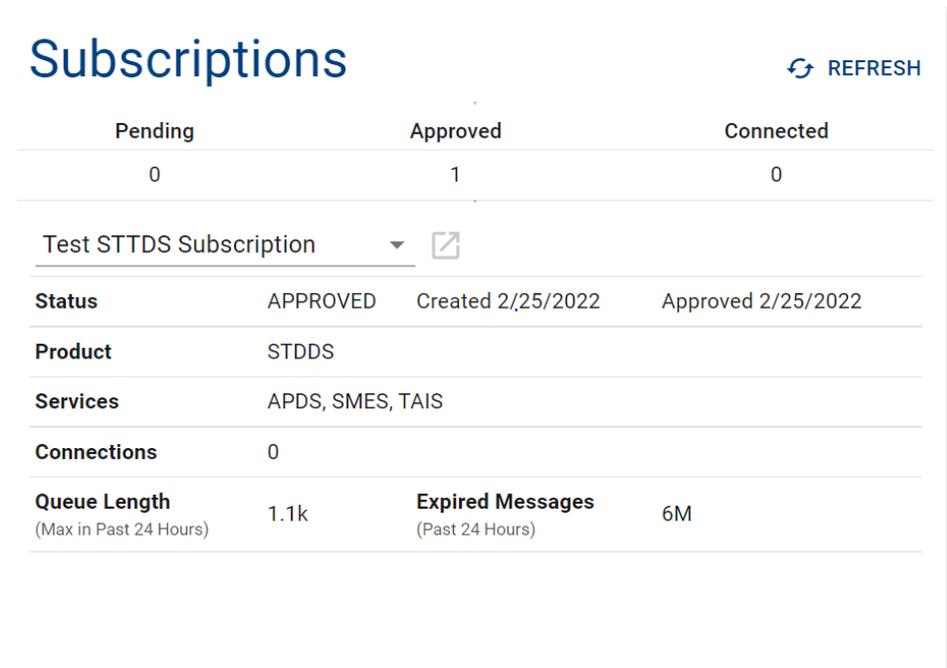


Figure 4-3 – SWIFT Portal Home Page

Figure 4-4 shows the update for the Subscription tile that is an option for the Home page.



**Figure 4-4 – Subscription Tile**

Figure 4-5 Provides a view of the updated service status tile.

# Service Status

Please choose the SWIM services whose status you would like to see here.

1. Click "Configure" button below
2. Choose the data feeds you would like to see
3. See status in this space when you login

Example

System	Service	SCDS
STDDS	SMES	✓
ITWS	Standard	✓
AIM FNS	Publication	✓



**Figure 4-5 – Service Status Tile**

Figure 4-6 provides a view of how you can customize your service status content block by toggling various information items on or off.

**Figure 4-6 – Service Status Content Block**

## 5.0 Service Discovery

The SWIFT Portal Discovery feature provides users with quick access to an overview of the SWIM services available to external users of both SCDS and those available through the NAS Enterprise Security Gateway (NESG). To view NESG only services a user must be assigned the NESG role within the portal. Each service within the discovery section includes a direct link to their associated page on the NAS Service Registry Repository (NSRR). Future improvements in portal may integrate with the NSRR but the current version is not integrated requiring users to have an NSRR account before accessing the NSRR documents associated with the service.

## 6.0 Service Status

The Service Status feature provides users with information on the status of Messaging Nodes and Information Services for both SCDS and NESG consumers. The four service state classifications are *Up*, *Degraded*, *Down*, and *Maintenance* (added in v3.1).

- **Up** state indicates that the service is functioning as expected,
- **Degraded** state occurs when the service is in not completely down but either one component of the node service is down, or the normal rate of the information service is lower than usual,
- **Down** state indicates that the service is unavailable and not sending any data; and
- **Maintenance** shows the periods of time that scheduled outages have occurred.

A detailed view of status history is available and provides the user with the ability to correlate observed outages they observed with the status reported in the portal. Figures 6-1 and 6-2 provide screenshots of the portal service status function. NESG messaging nodes and services are only available to users assigned an NESG role in portal. *Note: status displayed in the screen shots is provided for demonstration purposes only and does not reflect the actual status when the screen shot was taken.*

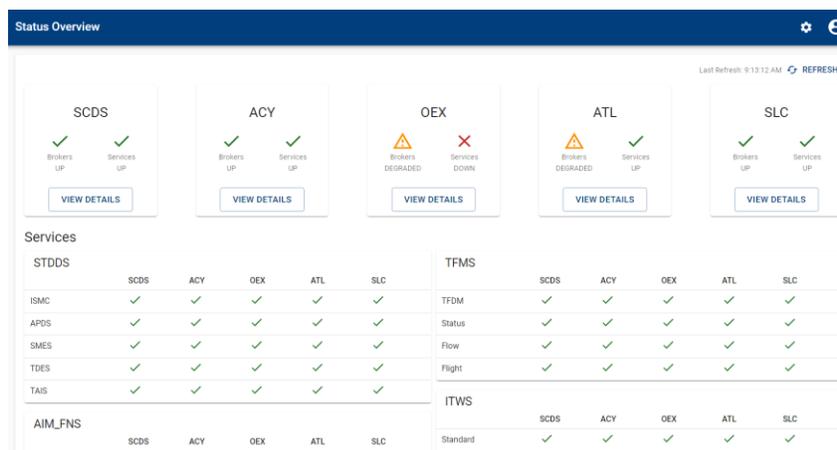


Figure 6-1 – SWIFT Portal Service Status Overview Page

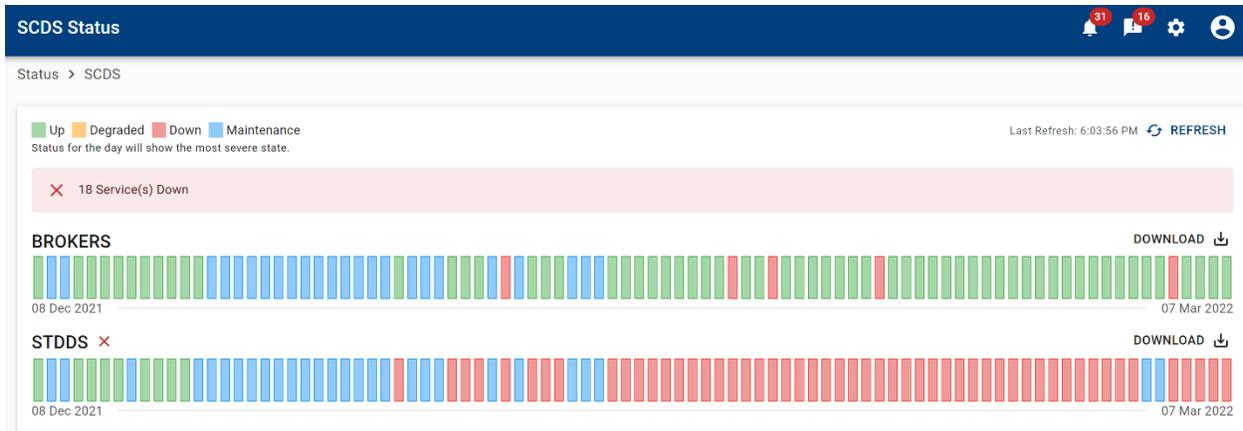


Figure 6-2 – SWIFT Portal Service Status Detail Page

## 6.1 Maintenance

The Maintenance Event capability within the SWIFT Portal now provides users with information on when SWIM systems and services are unavailable or scheduled to go down for maintenance. Maintenance events will update the service status of the various brokers and business services to put them into maintenance mode.

Users can opt-in to receive notifications for planned and unplanned maintenance events.

### 6.1.1 Maintenance Page

There are two ways to navigate to the Maintenance page. The first way is by using the link on the left menu bar labeled “Maintenance.” The second is by configuring your homepage to include the Maintenance Tile which will show any maintenance events that you have notifications set up for. Clicking on either of these options will take you to the main Maintenance overview page that will show active and planned maintenance events, a list of past events and a notifications configuration page. Figures 6-3 and 6-4.

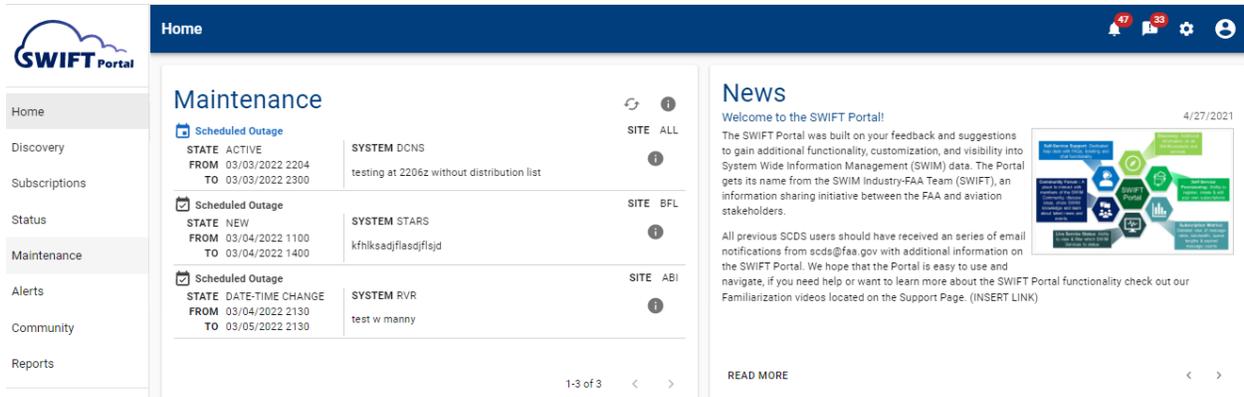


Figure 6-3 – Home Page Navigation

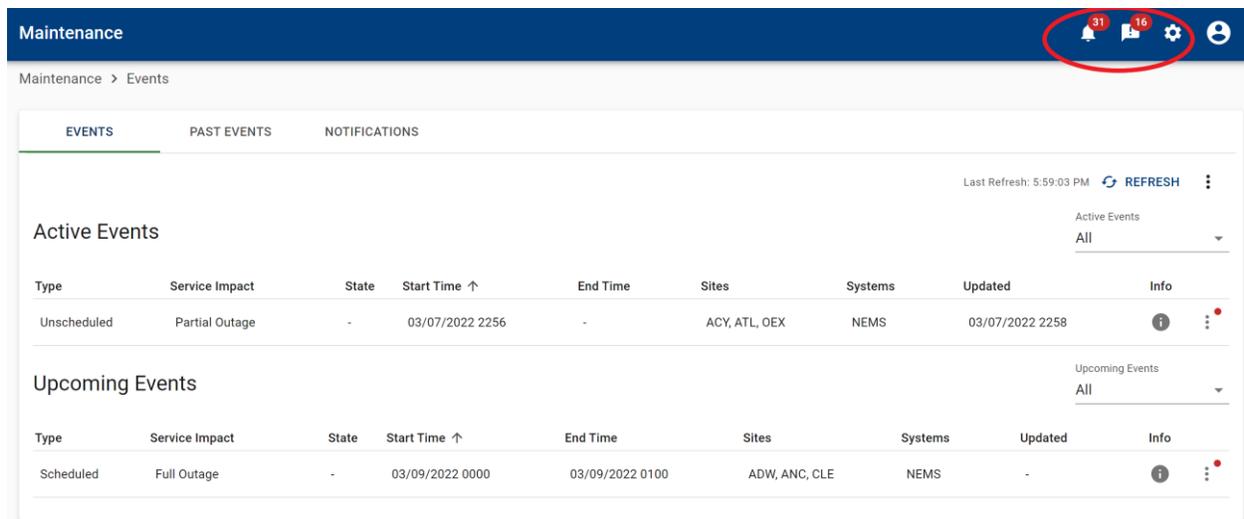
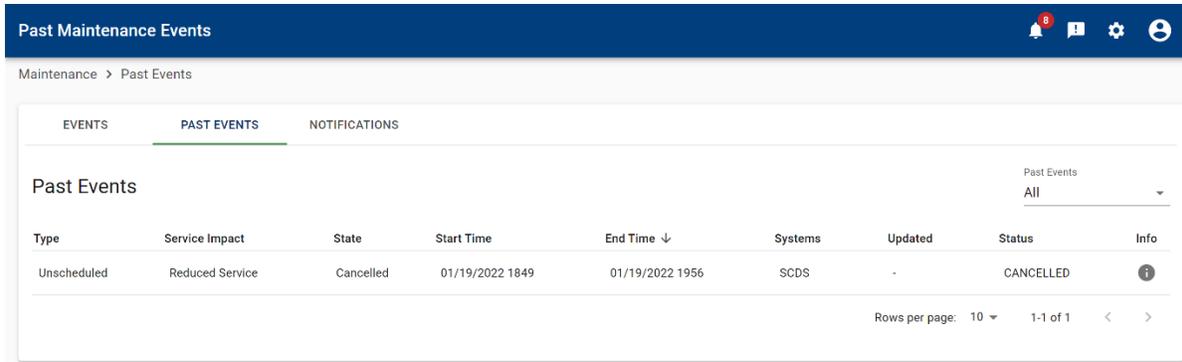


Figure 6-4 – Maintenance Events

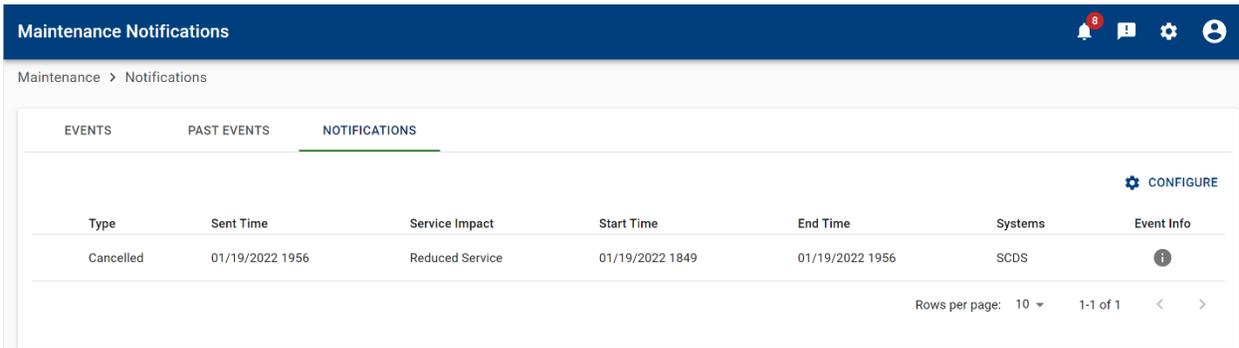
When logged in to the SWIFT portal, you will notice a message icon  in the top right of the toolbar. (See circled section in Figure 6-4) The message icon will denote the number  of unread notifications after you have set up your notification preferences and notifications are generated.

The main Events tab will give a list of current and future maintenance windows. Under the Past Events tab, you can see a list of previous maintenance events. Figure 6-5.



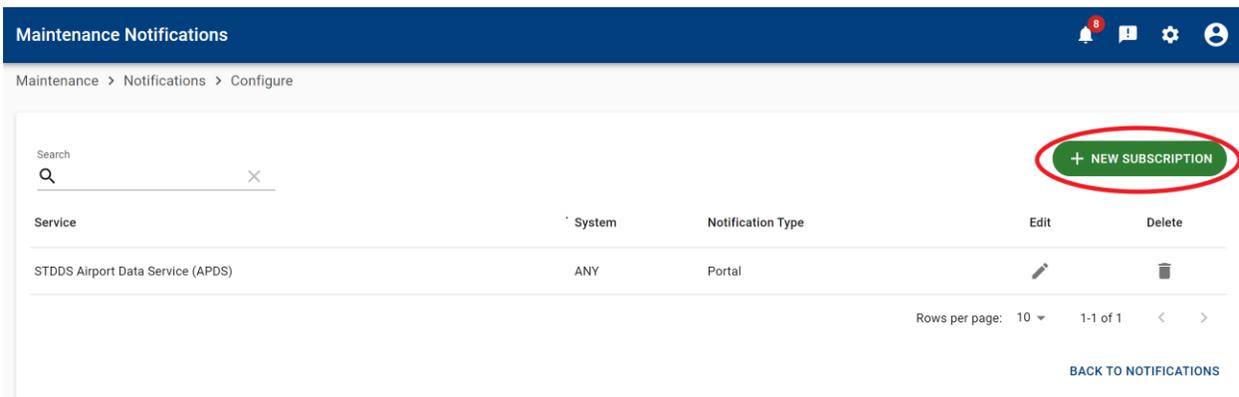
**Figure 6-5 – Maintenance Past Events**

On the Notification tab, you can configure, and view notifications related to maintenance events. To add a new maintenance notification or modify existing notifications, click the Configure button at the top of the table. Figure 6-6.



**Figure 6-6 – Maintenance Notification**

Click the New Subscription button to bring up a new page where you can configure a new Notification Subscription. Figure 6-7.



**Figure 6-7 – Maintenance Configuration**

To receive notifications inside the SWIFT portal, select Portal, and to have them emailed to the registered email address on the account, select Email. Once completed, select Create to finalize the notification. Figure 6-8.

**Figure 6-8 – Notification Subscription**

### 6.1.2 Service Status Page – Maintenance Updates

If there are current or planned maintenance windows in effect, you will see these reflected in the Maintenance tile on your home screen (if added to the layout). They will also be visible on the main Maintenance status page previously shown in Figure 6-4. These views will give you overview details such as Start Times/Dates, affected Sites and Systems and the severity of the outages. See Figures 6-9 and 6-10.

Outage Type	State	Start/End	Affected Sites	System
Unscheduled Outage	ACTIVE	03/07/2022 2256 -	ACY, ATL, OEX	NEMS
Scheduled Outage	NEW	03/09/2022 0000 - 03/09/2022 0100	ADW, ANC, CLE	NEMS

**Figure 6-9 – Maintenance Home Page Tile**

The screenshot shows the 'Maintenance Events' page. At the top, there are tabs for 'EVENTS', 'PAST EVENTS', and 'NOTIFICATIONS'. The 'EVENTS' tab is selected. Below the tabs, there is a 'Last Refresh: 5:59:03 PM' and a 'REFRESH' button. The page is divided into two sections: 'Active Events' and 'Upcoming Events'. Each section contains a table with columns: Type, Service Impact, State, Start Time, End Time, Sites, Systems, Updated, and Info. In the 'Active Events' section, there is one entry: 'Unscheduled', 'Partial Outage', state '-', 'Start Time' 03/07/2022 2256, 'End Time' '-', 'Sites' ACY, ATL, OEX, 'Systems' NEMS, 'Updated' 03/07/2022 2258. In the 'Upcoming Events' section, there is one entry: 'Scheduled', 'Full Outage', state '-', 'Start Time' 03/09/2022 0000, 'End Time' 03/09/2022 0100, 'Sites' ADW, ANC, CLE, 'Systems' NEMS, 'Updated' '-'. Each row has an 'Info' icon.

**Figure 6-10 – Active and Upcoming Maintenance Events**

You can see additional information by clicking on the Info icon  from either of these screens to see the Maintenance Event Details screen. Figure 6-11

The screenshot shows the 'Maintenance Event Details' screen. It contains the following information:

- Date/Time:** March 07, 2022 starting at 2256 UTC
- Event Summary:** UNSCHEDULED OUTAGE NOTIFICATION: NEMS
- Service Impact:** Partial Outage
- Service Impacts:**
  - Aeronautical Common Services Post Op Metrics (ACS-POM)
  - Aeronautical Common Services WMS (ACS-WMS)
  - Aeronautical Common Services WMTS (ACS-WMTS)
- Systems:** NEMS
- Sites:** ACY, ATL, OEX
- Additional Details:** This is emergency unplanned maintenance.
- Created:** March 07, 2022 2257 UTC 
- Last Updated:** March 07, 2022 2258 UTC
- Last Notification Sent:** N/A

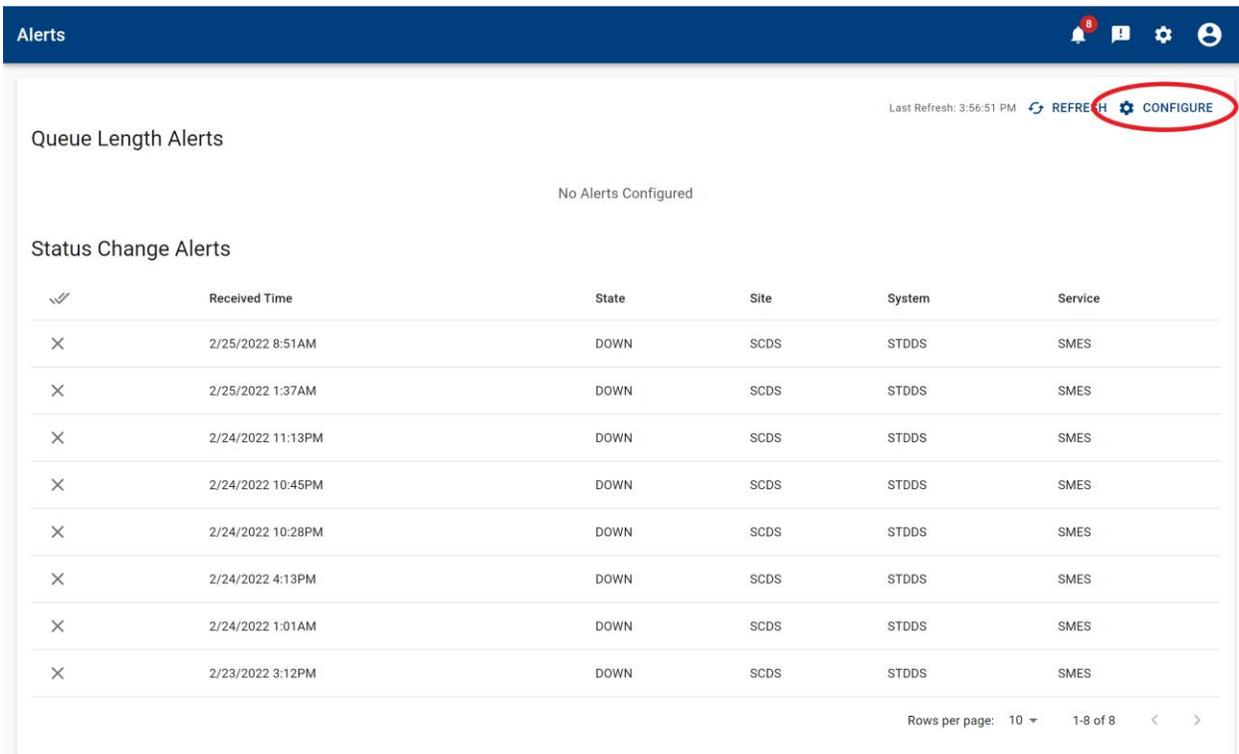
A 'CLOSE' button is located at the bottom right of the screen.

**Figure 6-11 – Maintenance Event Details**

### 6.2.1. Alerts

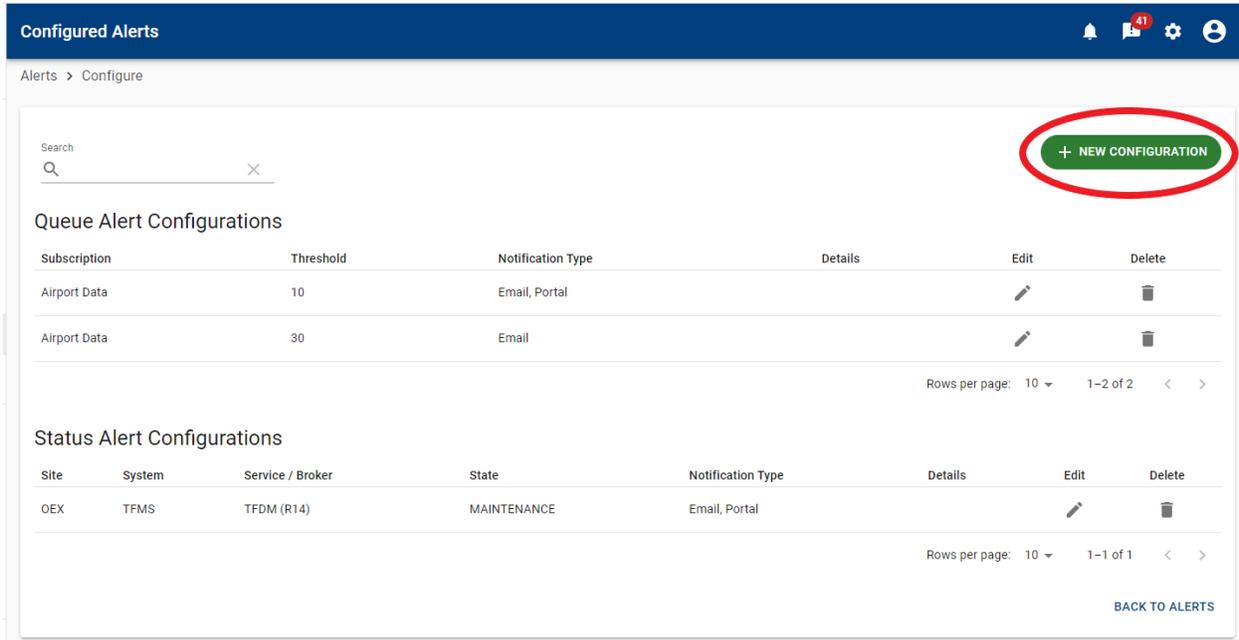
The Alert capability within the SWIFT Portal provides users with information on custom thresholds defined by the user. Alerts will generate notifications when a service’s status meets the criteria defined in the alert.

When logged into the SWIFT portal, you can navigate to the Alert page by clicking “Alerts” on left menu bar. This will take you to the main Alerts overview page that will show a list of past alerts and a notifications configuration page. Figure 6-12. You will also notice a bell icon  in the top right of the toolbar. The bell icon will denote the number  of unread alert notifications you have after you have set up your alert preferences and alerts are generated.



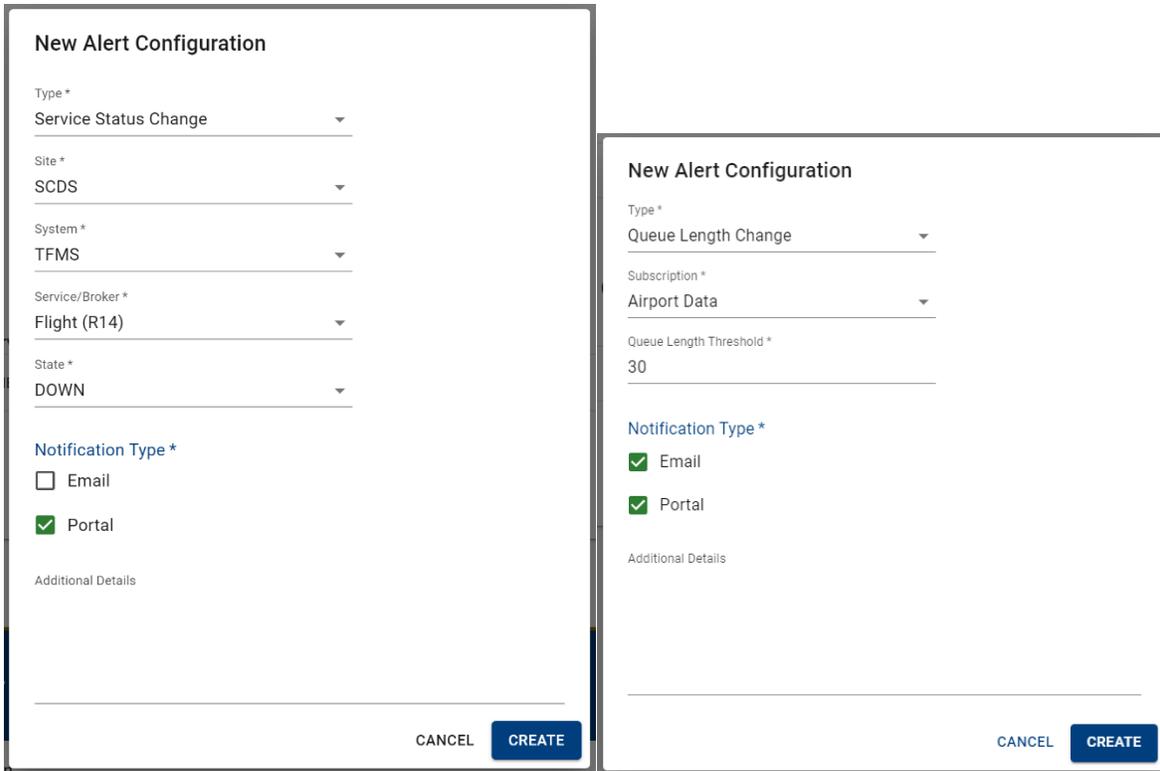
**Figure 6-12 – Alert Home**

To see configured alerts and set up new ones, from the Alert home page, click on the gear (Configure) icon in the top right of the window (See figure 6-12 above). This will take you to the Alert Configuration page. Figure 6-13.



**Figure 6-13 – Alert Configuration**

From the Configuration page, you can edit and delete existing alerts by clicking on the pencil and trash can icons, respectively, of the row of the alert you wish to modify or delete. To configure a new alert, from the Alert configuration page, click the green New Configuration button in the top right of the screen (See figure 6-13 above). In the new window (Figures 6-14), start by selecting what type of alert you wish to receive: Queue Length Change or Service Status Change. For both alert types, you may select which delivery method you wish to receive the alerts, either through the portal login and/or to the email address associated with the current account.



**Figure 6-14, Figure 6-15 – New Alert Configuration**

## 7.0 Community Forum and News

The SWIFT Portal Community Forum provides the SWIM community with a place to connect with the SWIM community, share knowledge and ideas with the aviation community, and learn what is new with SWIM in the News section of the forum. Users can utilize the forum to ask questions, get answers, or search questions asked by others. Figure 7-1 provides a view a user would see when they first navigate to the SWIFT Portal Community Forum.

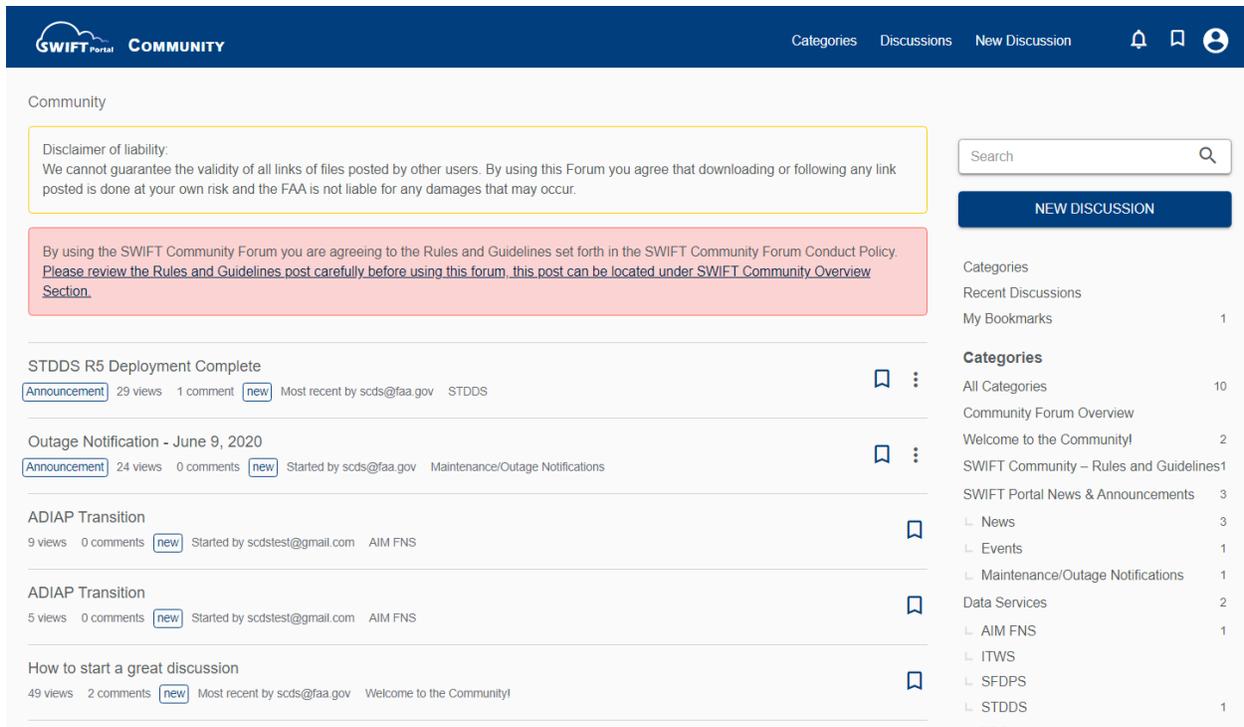


Figure 7-1 – SWIFT Portal Community Forum Main Page

## 7.1 Forum Discussion Threads

From the main page, users are presented with a list of the most recent discussion threads. To view an existing thread, click the Title Text of the topic and the discussion thread will open in a new window as shown in Figure 7-2. Any comments or responses will be shown at the bottom of the thread. Users can comment on the discussion or add or respond to a previous comment. Users can edit their post by clicking the icon. Discussions can be bookmarked by clicking the icon. The right navigation pane provides a list of other categories users can select to view only discussions associated with that topic.

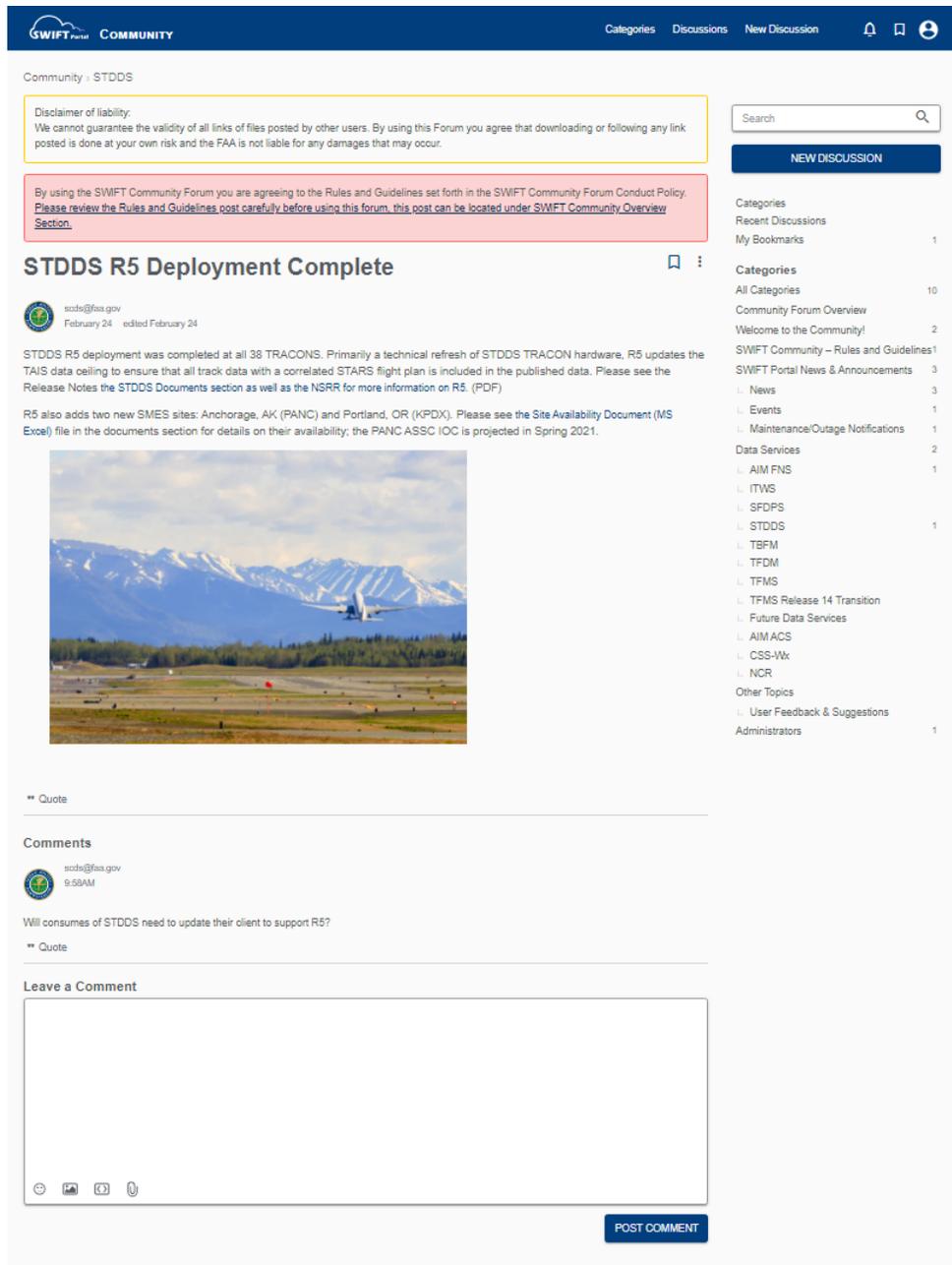


Figure 7-2 – SWIFT Portal Community Forum Discussion Thread

## 7.2 Forum User Preferences

Users can modify their notification preference for the community forum through clicking the account icon in the top right of the community forum page and selecting preferences; see Figure 7-3 for a screenshot illustrating how to do this.

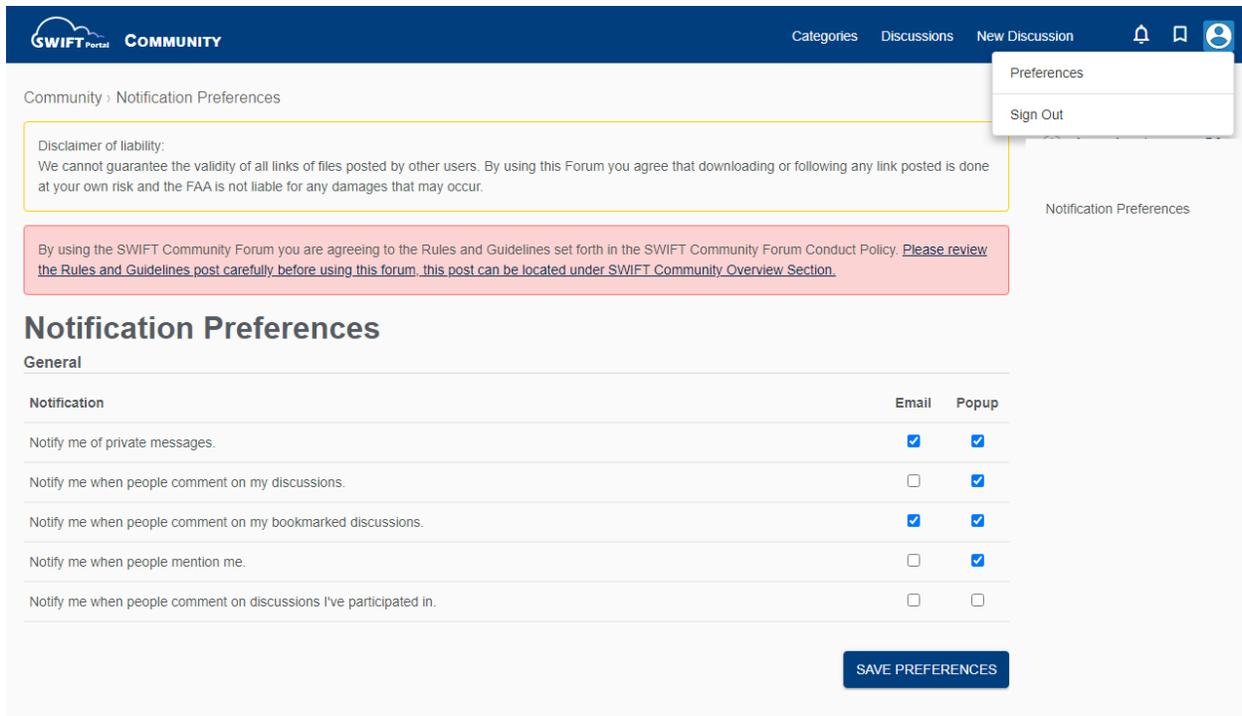


Figure 7-3 – SWIFT Portal Community Forum User Preferences

### 7.3 Forum Top Navigation Bar

The top navigation bar of the Community Forum also provides users with a direct link to view discussion threads by category or discussion and a direct link to create a new discussion; see figure 7-4.



Figure 7-4 – SWIFT Portal Community Forum Top Navigation Bar

### 7.4 Forum Disclaimer

By using the SWIFT Community Forum users agree to the Rules and Guidelines set forth in the SWIFT Community Forum Conduct Policy; see Appendix F of this guide.

### 8.0 SWIM Cloud Distribution Service

The SWIM Cloud Distribution Service (SCDS) feature provides a direct internet, non-VPN, connection to SWIM JMS services via the FAA Public Cloud. The intent of SCDS is to reduce the burden and time for SWIM users to request and connect to FAA SWIM data. To accomplish this, a self-service portal is provided to support on-demand requests for new

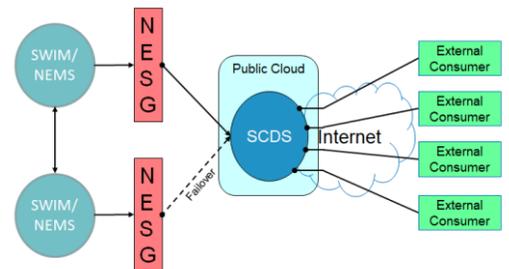


Figure 8-1 - High-Level SCDS Architecture

subscriptions and changes. Figure 8-1 depicts the high-level architecture illustrating how SWIM access is provided via a public cloud with direct internet.

### 8.1 On-Boarding Process

SWIFT Portal provides users with a web management portal to request and manage access to SWIM Cloud Distribution subscriptions. Figure 8-2 below illustrates the process for creating an account, requesting access, connecting, and monitoring consumer connections.

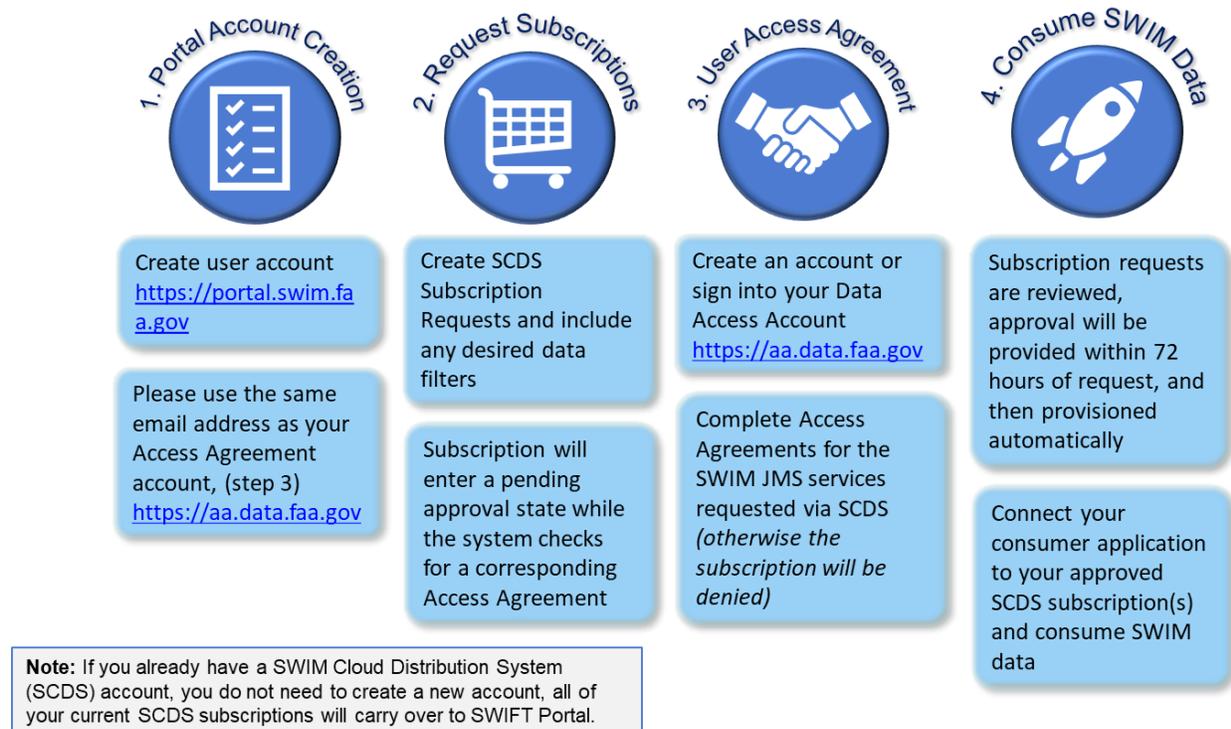


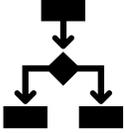
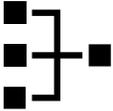
Figure 8-2 – SWIFT Portal Cloud Distribution On-Boarding Process

### 8.2 Services

The SWIM Cloud Distribution Service improves the SWIM On-Boarding process and has implemented several core features to facilitate improved user experience. Table 8-1 provides a summary of these features.

Table 8-1 – SWIFT Portal Cloud Distribution Services

	<p><b>Self-Service Provisioning</b></p>	<p>Users are provided with self-service access to create their own subscriptions and submit for approval. Once approved, the user’s SWIM Queue is automatically provisioned for use.</p>
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	<p><b>Subscription Management</b></p>	<p>Provides users with fine-grained message filtering, allowing users to define the SWIM subscription that fits their specific needs.</p>
	<p><b>Client Metrics</b></p>	<p>The SWIFT Portal provides users with self-service access to real-time client metrics on connections, ingress, egress, and discards, enabling users to monitor their connections, identify, and resolve any issues.</p>
	<p><b>Secure Connection</b></p>	<p>All information passed between the client and server are encrypted via a secure (TLS) connection.</p>
	<p><b>Managed Failover</b></p>	<p>Connections to both ACY and OEX SWIM NESG servers are maintained, and automatic failover is performed for network outages and manual failover for scheduled maintenance related outages.</p>
	<p><b>Help Desk Support</b></p>	<p>SWIFT Portal provides users with everything they need to manage their connections and subscriptions but in the event a user needs additional assistance in resolving issues or simply has a question about the data provided via SWIM, a dedicated Help desk is provided for users to email or call for support.</p>

### 8.2.1 Self-Service Portal

The SWIFT Portal Subscription page provides users with the ability to view information services available via cloud distribution and request subscriptions to a product.

From the Subscriptions Page a user can:

- View the products available
- Create a subscription request to the products available
- View subscriptions pending approval
- View metrics of the active subscriptions
- View the messaging connection information
- Download the Jumpstart Kit
- View sample messages
- View metrics associated with a subscription
- Modify a subscription

### 8.3 Request SWIM Data Subscription

To request a SWIM data product, click on the “GET STARTED NOW” button on the Subscriptions Page; see Figure 8-3. Once clicked, you are directed to the New Subscription wizard shown below in Figure 8-4.

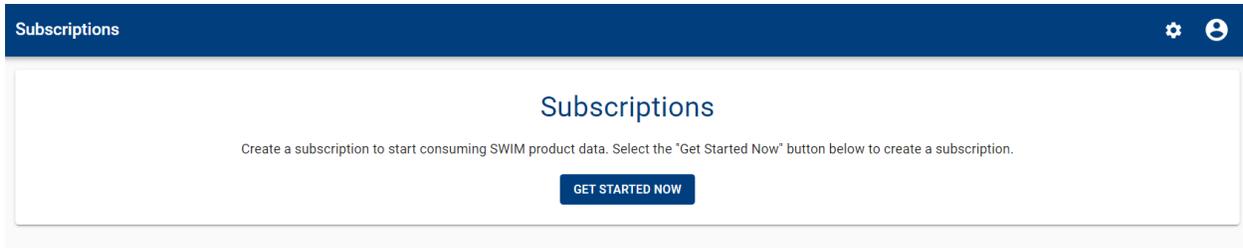


Figure 8-3 – SWIFT Portal Subscription Page

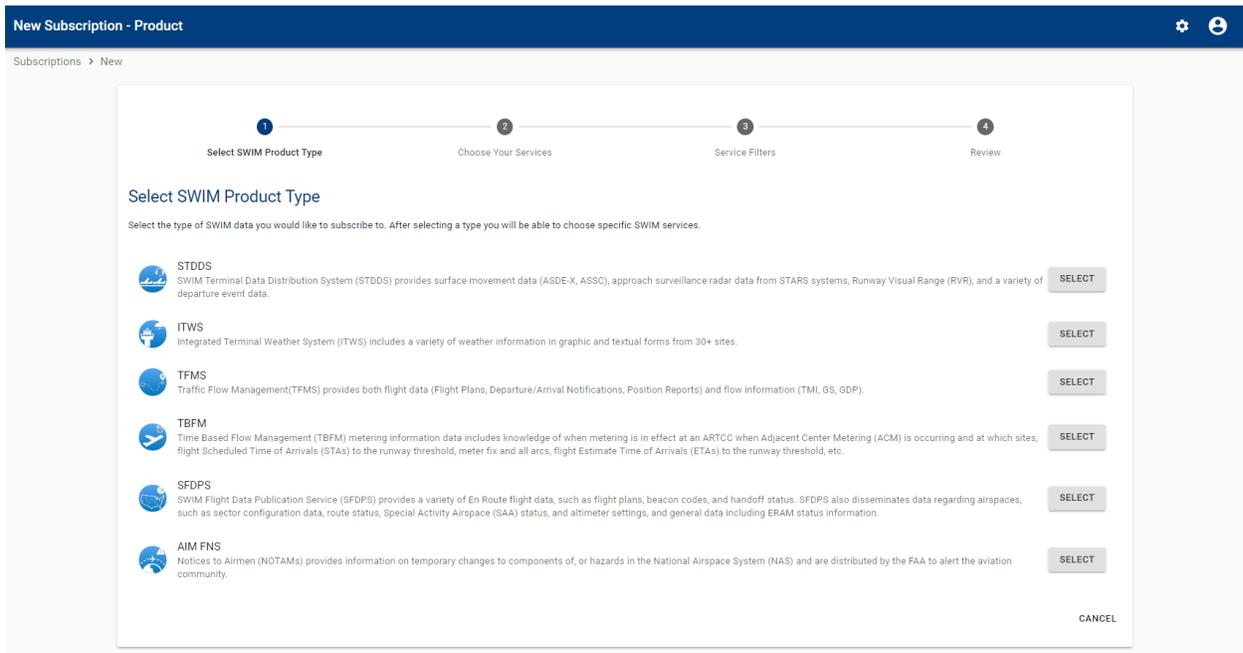


Figure 8-4 – SWIFT Portal New Subscription Wizard Step 1

The New Subscription Wizard will guide you through the subscription process in four simple steps. In Step 1, you can select a SWIM Product Type, which includes the following product types: STDDS, ITWS, TFMS, TBFM, SFDPS, and AIM FNS. Select a product type by clicking on the “SELECT” button next to the desired SWIM Product Type. Step 2 presents you with the individual SWIM services contained within the selected SWIM Product. Figure 8-5 shows the services contained within the STDDS Product. Select the desired service(s) and click on the “NEXT: FILTERS >” button.

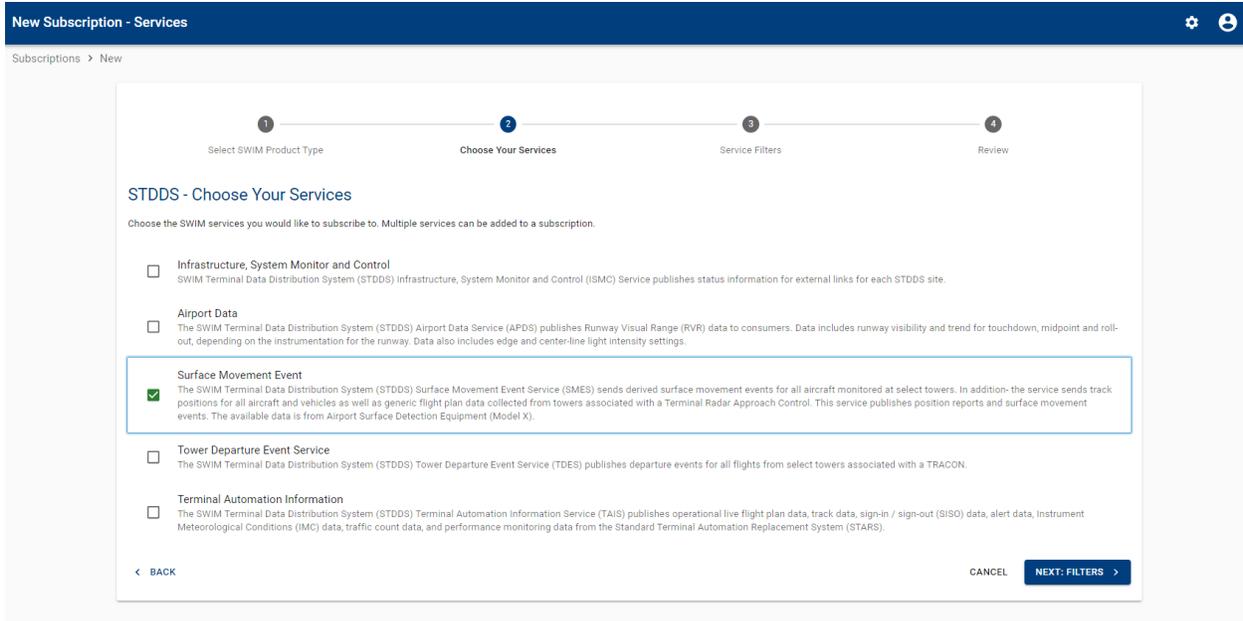
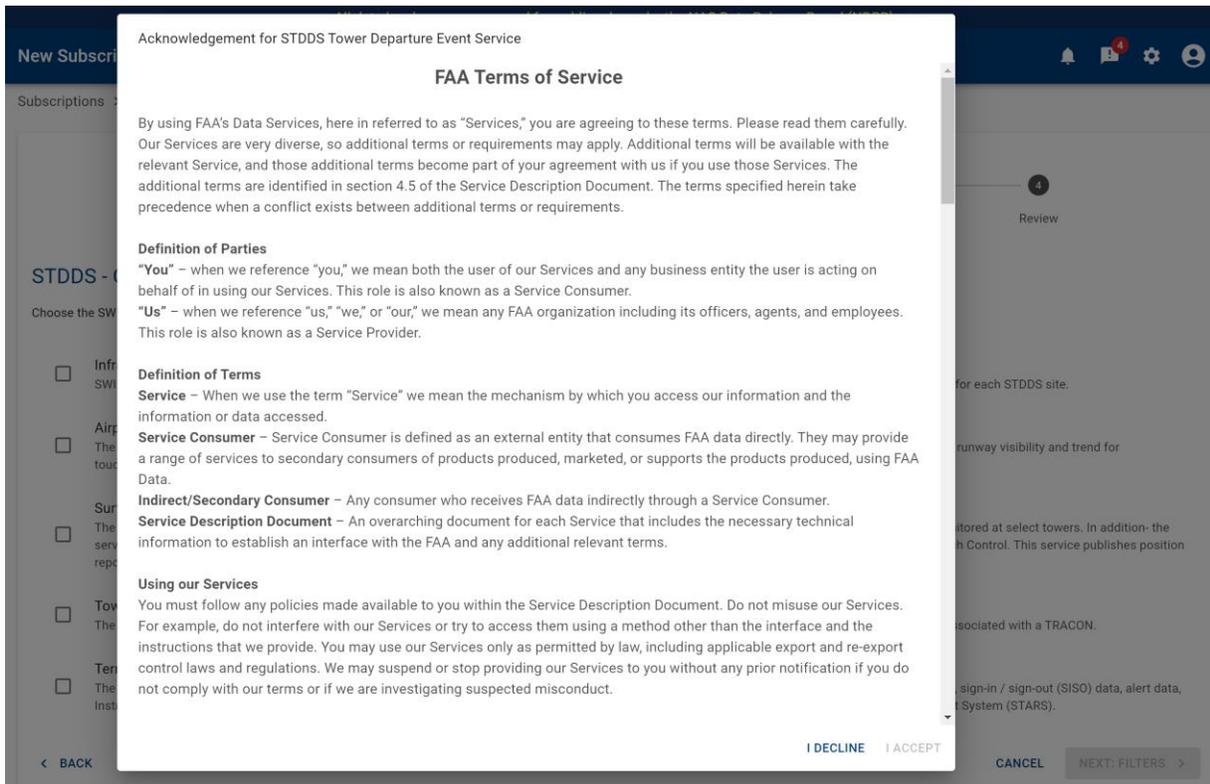


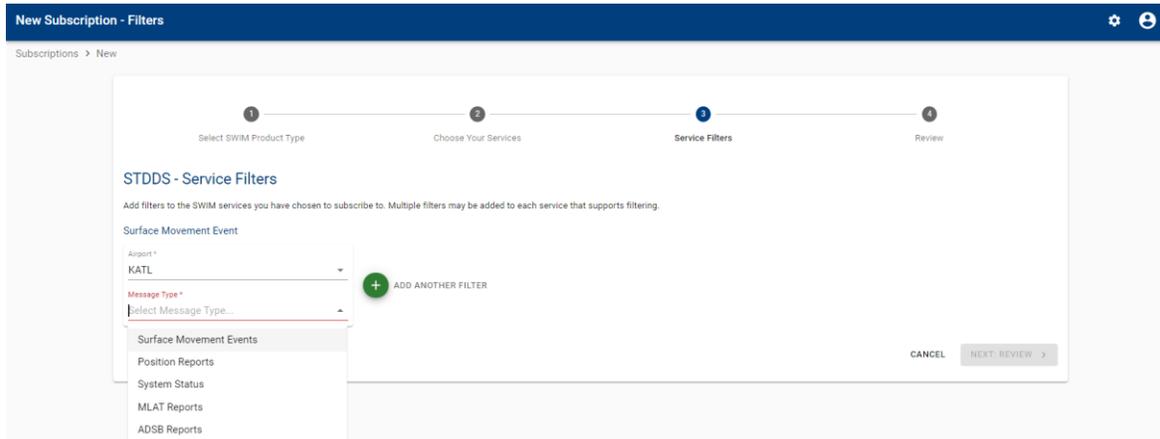
Figure 8-5 - SWIFT Portal New Subscription Wizard Step 2

If this is the first time requesting a subscription for a given service, you will be prompted to sign the Service Access Agreement for that service. Once you scroll to the bottom of the agreement, you will be able to click “I Accept”.



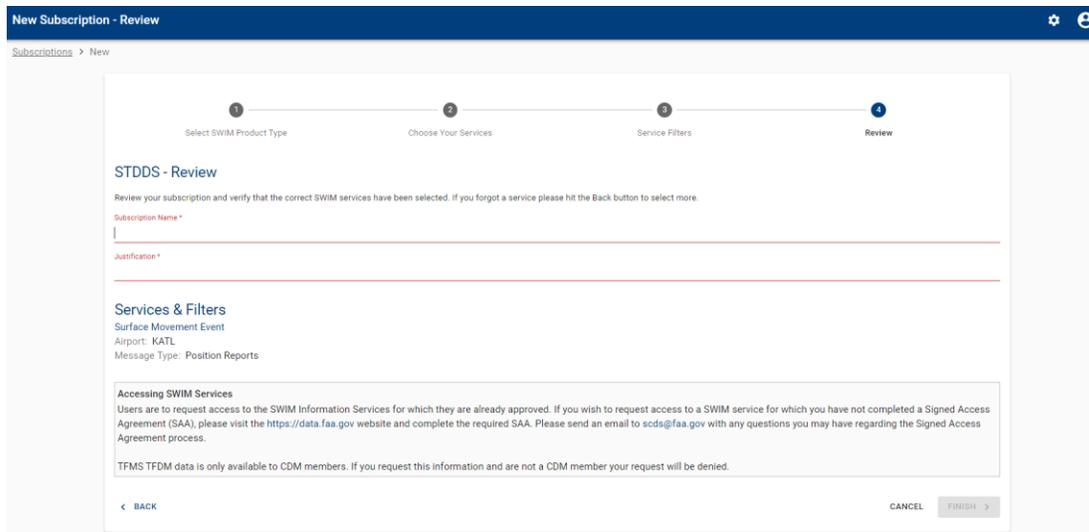
**Figure 8-6 – SWIFT Portal Service Access Agreement**

Step 3 allows you to select which filters are applied to your selected service. Select the desired filters and then select the “NEXT: REVIEW >” to move onto the next step. Figure 8-7 below shows the service filter selection page.



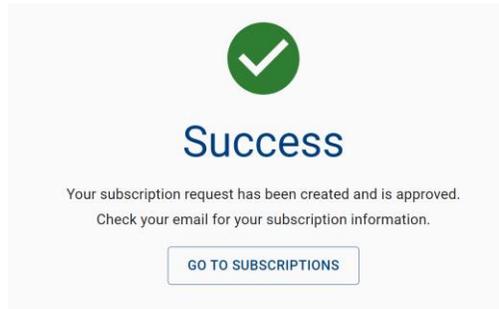
**Figure 8-7 – SWIFT Portal New Subscription Wizard Step 3**

Step 4 provides a review of the selected service and allows you to provide a name for the subscription and justification for the requested service. Once you fill out a name and justification, you will want to review the Terms & Conditions and then check the box to validate that you have read and agree to the Terms & Conditions. Once you complete these items, select the “FINISH >” button to submit your request for approval. Figure 8-8 below shows the review page.



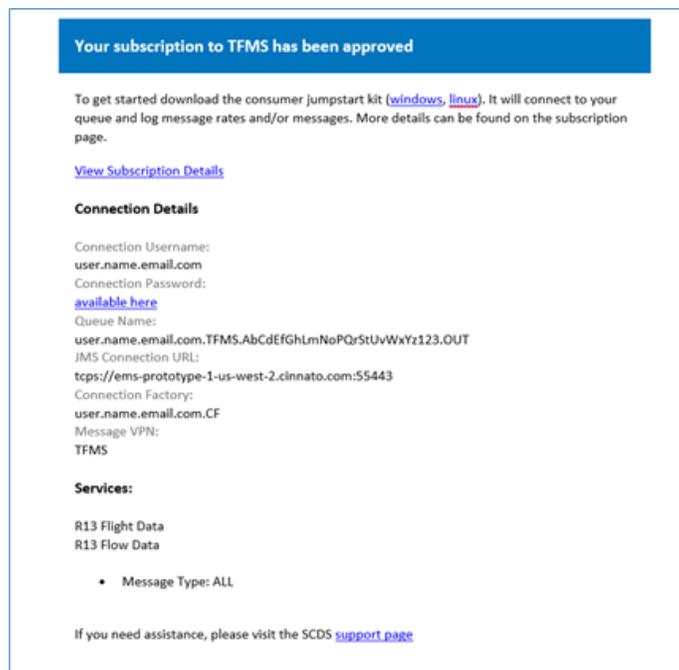
**Figure 8-8 – SWIFT Portal New Subscription Wizard Step 4**

Upon submittal of the request, you will receive confirmation that your subscription has been created and is approved as shown below in Figure 8-9.



**Figure 8-9 – SWIFT Portal New Subscription Request Confirmation**

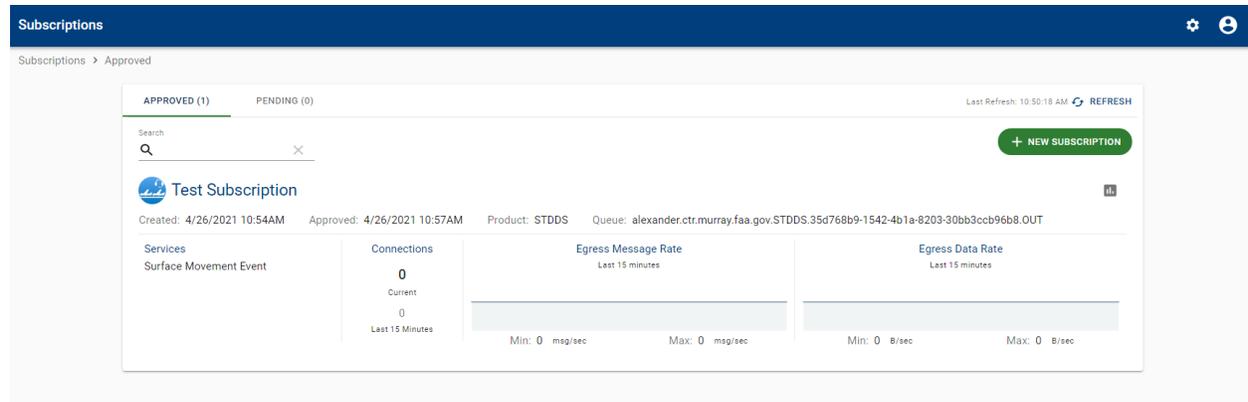
An email will be sent to the email associated with the SCDS account indicating the subscription has been created and approved and the connection details will be contained within the email. Figure 8-10 shows an example of what this email will look like.



**Figure 8-10 – SWIFT Portal New Subscription Approved Email**

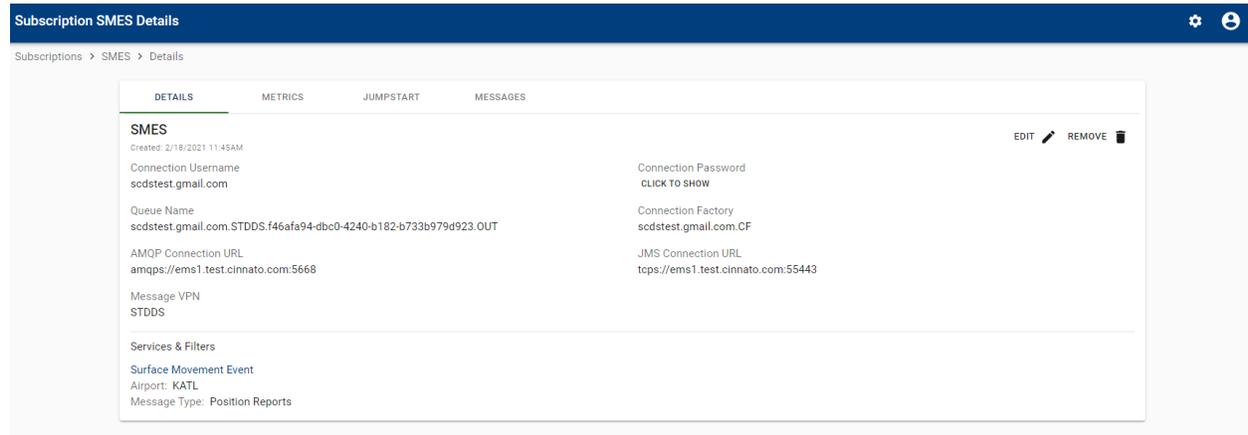
## 8.4 Subscriptions Page

From the SCDS Subscription Request Confirmation shown in Figure 8-11, you can select the “GO TO SUBSCRIPTIONS” button to navigate back to your subscriptions page. If you have any pending or approved subscriptions, you will see them listed as shown Figure 8-11.



**Figure 8-11 – SCDS Subscriptions Page - Approved**

To view the details of a subscription, click the text title of the subscription to navigate to the Subscription Details page. There are four tabs within the Subscription Details Page including a tab for connection details, subscription metric, Jumpstart Kit download, and a message viewer. The connection details button takes you to the connection details tab within the subscription details page. Figure 8-12 **Error! Reference source not found.** shows the connection details tab which include all information required to configure a JMS client to connect to the Cloud Distribution Queue. The subscription name and filters can also be changed by clicking the “EDIT” button or the entire subscription can be deleted by clicking the “REMOVE” button. Currently, it is not possible to change a subscription once submitted. If a new subscription is needed, it will have to be requested and the old one removed.



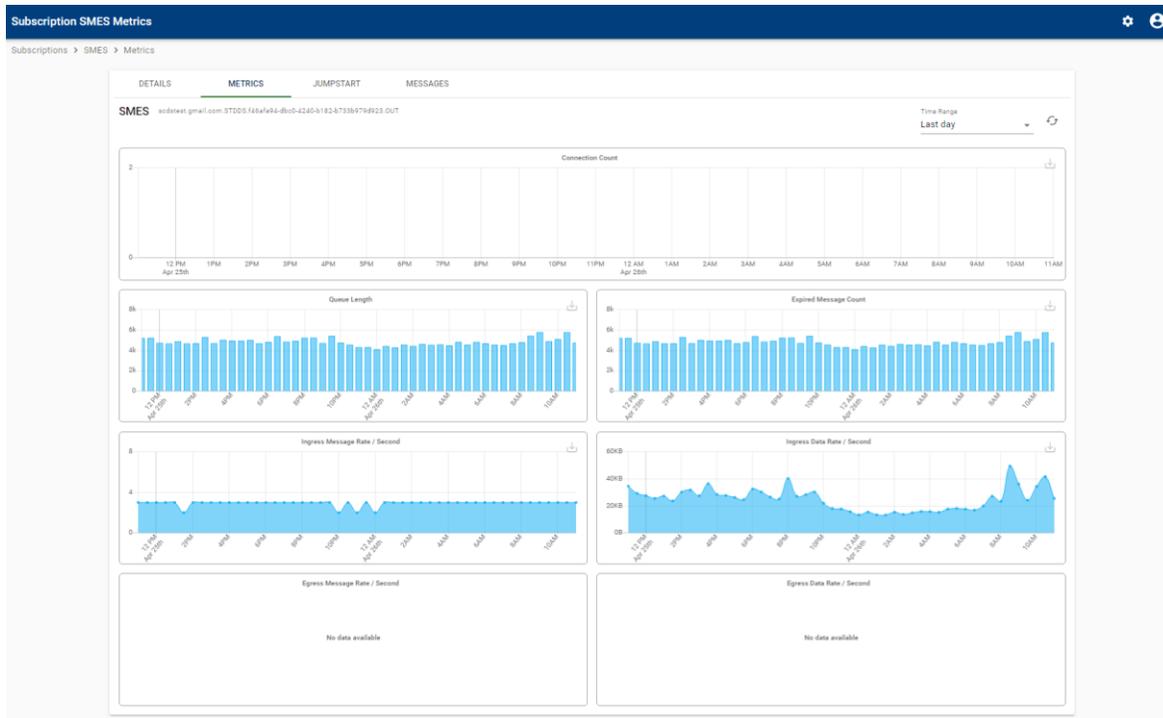
**Figure 8-12 – SWIFT Portal Subscription Page – Connection Details Tab**

The Subscription Metrics Tab shows statistics associated with each subscription. Available metrics are provided in Table 8-2.

**Table 8-2 – Cloud Distribution Queue Metrics**

Metric	Description
<b>Connection Count</b>	The number of consumer connections bound to the queue.
<b>Queue Length</b>	The number of messages pending on the queue that have either not been consumed or expired.
<b>Expired Message Count</b>	The number of messages where the JMSEExpiration time has been exceeded resulting in being discarded from the queue and are no longer available for consumption.
<b>Ingress Message Rate</b>	The rate of messages flowing into the queue per minute
<b>Ingress Data Rate</b>	The data rate, bytes per second, flowing into the queue
<b>Egress Message Rate</b>	The rate of messages flowing out of the queue per minute
<b>Egress Data Rate</b>	The data rate, bytes per second, flowing out of the queue

Each of these are presented in temporal graphs that are adjustable with the following settings: Last 15 minutes, Last 30 minutes, Last hour, Last 6 hours, Last 12 hours, Last day, Last 2 days, Last 7 days, and Last 30 days. Figure 8-13 shows the subscription metrics tab within the subscription details page.



**Figure 8-13 – SWIFT Portal Subscription Page – Metrics Tab**

The Jumpstart Tab provides a download button to retrieve the Jumpstart Kit. First you select which operating system you plan to use, either Windows or Linux, and then click the

“DOWNLOAD” button to get the Jumpstart Kit. Figure 8-14 shows the jumpstart kit tab within the subscription details page.

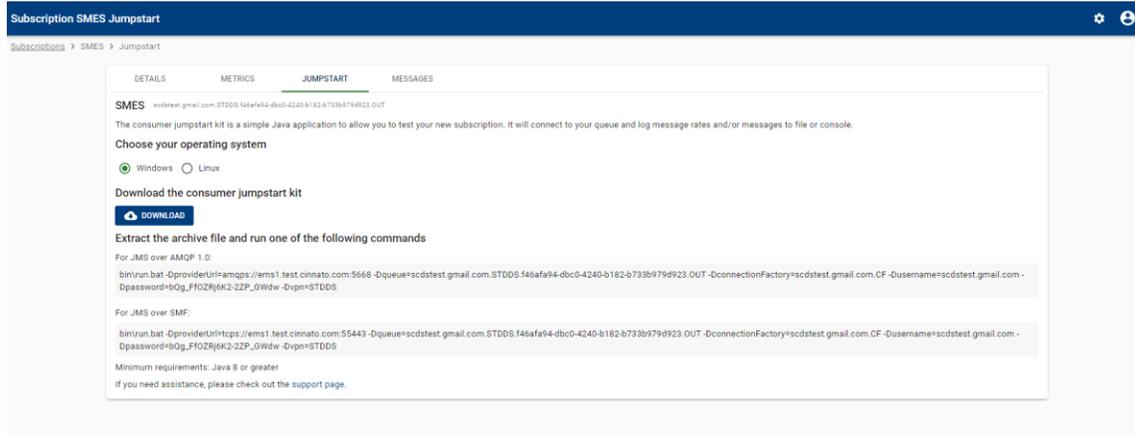


Figure 8-14 – SWIFT Portal Subscription Page – Jumpstart Tab

The Messages Tab enables users to be able to view messages as they arrive in their JMS queues. To load the latest message, press the “LOAD MESSAGE” button located at the top center of the page. Figure 8-15 shows the message viewer.

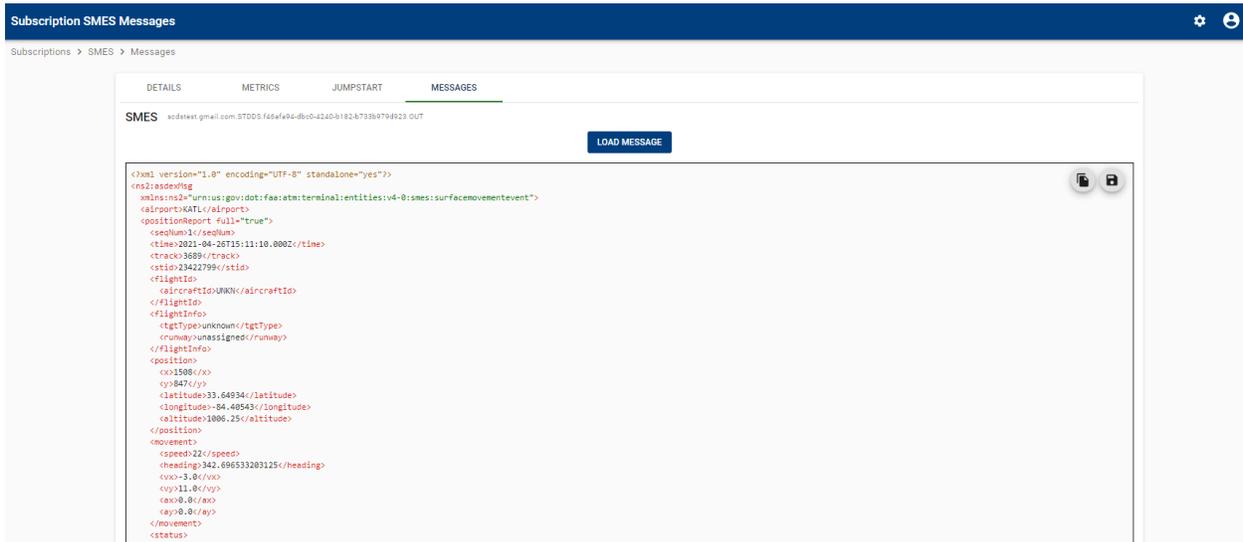


Figure 8-15 – SWIFT Portal Subscription Page - Messages Tab

### 8.4.1 Subscription Disconnection Policy

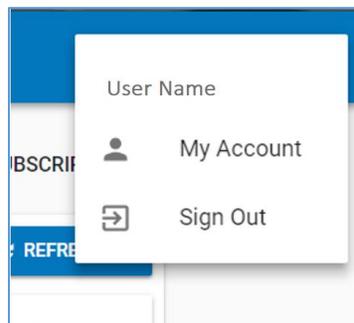
Subscriptions to which connections have not been made in 60 days will be disabled. Users will receive an email notice after 30 days and unless further action is taken within the next 30 days, the subscription(s) will be disabled and subsequently removed 30 days after disablement. If a subscription is being used as a backup or is needed for any reason, users can reach out to the SWIM Support Team via the “ask a question” functionality to have their subscription whitelisted from this audit process.

A final notice will be sent seven days prior to the subscription being disabled. If not connected within 60 days from the last connected time, the subscription will be disabled. After a subscription is disabled, a user can request it be re-enabled by contacting the SWIM Support Team via the “ask a question” functionality. Once a subscription has been disabled a notice will be sent to the user indicating their subscription has been disabled and will remain disabled for 30 days at which point if no action is taken by the user the subscription will be deleted.

If no request is received to re-enable the subscription within 30 days from disablement (90 days from last connect time) it will be deleted from the system.

### 8.4.2 Account Details

To view details associated with your account, click on the user profile icon in the top right corner and you will be presented with an option to view your account or sign out of the SWIFT portal. Figure 8-16 shows the user profile menu options.



**Figure 8-16 – SWIFT Portal User Profile Menu**

If you click on the “My Account” option, you are taken to the Account Details Page. From this menu you are able to edit your account settings, change your portal password, set up your account for two-factor authentication (for enhanced protection of your account, not required to consume SWIM data) and see some general information on active portal sessions (active logons to the SWIFT Portal) and past portal activity. Press the “SAVE” button to make sure any changes are saved within the system. To return to your subscriptions page, select the “BACK TO SWIFT PORTAL” button or you can select the “SIGN OUT” button to log off from the SWIFT Portal.

## 8.5 Service Access Agreements

Service Access Agreements (SAAs) are signed within the SWIFT Portal. As part of the subscription creation process, you will be prompted to sign any unsigned SAAs when selecting the service you wish to consume. Figure 8-17 shows the SAA list and count of signed agreements.

Subscriptions > Agreements

APPROVED (1)	PENDING (0)	SERVICE ACCESS AGREEMENT
		SFDPS SWIM Flight Data Publication Service (1 of 4 signed) ▾
		ITWS Integrated Terminal Weather Service (0 of 2 signed) ▾
		AIM FNS (1 of 2 signed) ▾
		STDDS SWIM Terminal Data Distribution System (4 of 5 signed) ▾
		TBFM Time Based Flow Management (0 of 2 signed) ▾
		TFMS Traffic Flow Management System (0 of 4 signed) ▾
		OTHER (0 of 3 signed) ▾

**Figure 8-17 – Service Access Agreement Page**

SAAs are valid for 365 days and need to be renewed annually. Users will receive an email reminder 60 days before a given SAA is set to expire and another 30 days before. To renew the SAA, go to its respective drop down and click “Sign”.

If the SAA is not renewed by the day of its expiration, the subscriptions connected to that product and service will be disabled. Disabled subscriptions can be restored to an active status by re-signing the SAA on the Subscriptions page. Figure 8-18 shows signed and unsigned SAAs.

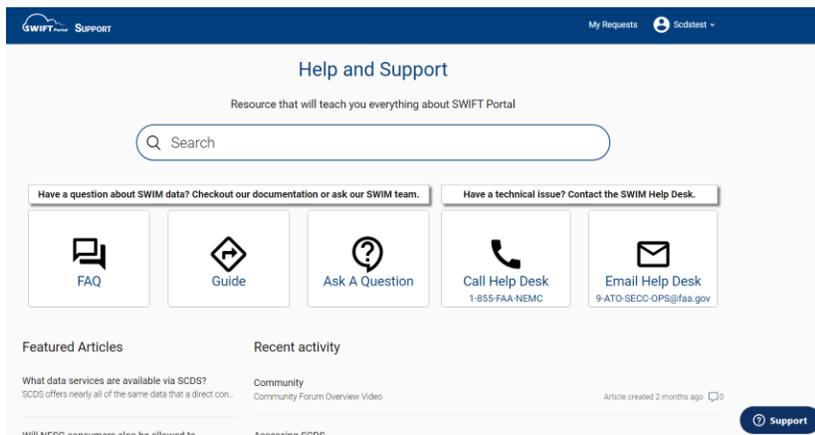
If the SAA is not renewed within 15 days after SAA expiration, you will receive an email notifying you that the subscription will be deleted in 30 days. A final email will be sent 45 days after the expiration of the SAA letting you know the subscription has been deleted.

AIM FNS			(1 of 2 signed) ^	
Agreement	Service	Description	Agreement	Date Signed
Notice to Air Missions (NOTAMs) - AIM FNS	AIM FNS	Accurate, timely distribution of aeronautical information is critical to the safety and efficiency of the National Airspace System (NAS). The Federal NOTAM System (FNS) is a component of the NAS, and a centerpiece of the FAA's AIM Modernization plan.	✓	07/27/2023 7:43PM
Notice to Air Missions (NOTAMs) - NDS	NDS	Accurate, timely distribution of aeronautical information is critical to the safety and efficiency of the National Airspace System (NAS). The Federal NOTAM System (FNS) is a component of the NAS, and a centerpiece of the FAA's AIM Modernization plan.	<a href="#">SIGN</a>	-

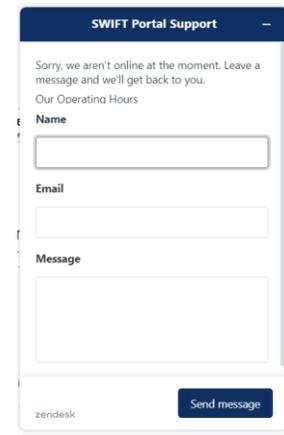
**Figure 8-18 – Service Access Agreement Status and Signature Details**

## 9.0 Support

The SWIFT Portal Support feature provides users with access to Frequently Asked Questions (FAQs), Guides, and the ability to ask a question. There is also information on how to contact the SWIM Enterprise Control Center (SECC) for operational issue with SWIM. Users can use the “Ask A Question” feature to submit a question to the SWIM Support Team. Users should direct general questions on SWIM and information services through this feature. The SECC should only be contacted for operational issues that need to be actively worked toward resolution. There is also a live chat feature provided through the Portal Support page. Users can opt to start a live chat with the SWIM Support Team via clicking the icon in the bottom right of the Support Page. If a support team member is online a chat will be directly started with them. If there is no one available a ticket will be automatically created like if a question is submitted via Ask a Question. Figure 9-1 provides a screenshot of the SWIFT Portal Support page with Figure 9-2 showing the chat feature.



**Figure 9-1 - SWIFT Portal Support Page**



**Figure 9-2 – Support Chat**

## Appendix A: JMS 1.1

JMS is a Java API to support messaging. It is an open standard to allow Java applications to create, send, receive, and read messages. A client application must use a vendor-specific JMS client library and its dependent libraries to interoperate with a vendor's JMS broker. A JMS application using another vendor's JMS client library cannot connect to Solace, but if the client is generically written, it should be able to swap the client libraries to go from using one JMS broker to another. The Solace JMS client libraries will be provided in a Jumpstart Kit through the SCDS Self-Service Portal. More information on the Jumpstart Kit will be discussed in the Self-Service Portal Access and Usage section.

JMS allows for the use of the Java Naming and Directory Interface (JNDI) that can be used to lookup Connection Factory and Queue objects. After a JMS client performs a JNDI lookup, it can create a local JMS object from the information returned.

Message compression settings are configured in the Connection Factory used by the client. The JMS client library will decompress the messages automatically. There is no need to code decompression into the JMS client.

**Note on Solace Compression:** *Solace requires the third-party library JZlib to support compression. If the Solace JMS dependency are added as maven a dependency the required referenced libraries, including compression, will automatically be added and no action will be required. If directly adding the Solace JMS jars to the lib directory, the required reference libraries will need to be included for compression to work. If the required compression library is not included, an error will be thrown when trying to connect using compression. The required JZlib dependency jar can be found on the maven repo by searching for org.apache.servicemix.bundles.jzlib.*

One difference between a client connection to another JMS broker versus the Solace broker, is the need to specify the Message Virtual Private Network (VPN) name. The Message VPNs are managed objects on Solace routers that allow for the segregation of topic space and clients.

There are a couple of ways to set the Message VPN name on the client.

1. It can be set as a Java system property when running the Java program using the -D command line option.

```
“java -DSolace_JMS_VPN=myVPN ...”
```

2. It can be set as Initial Context environment property in the Java code.

```
Hashtable<String,Object> environment = new Hashtable<String,Object>();
environment.put(InitialContext.INITIAL_CONTEXT_FACTORY, "com.solacesystems.jndi.SolJNDIInitialContextFactory");
environment.put(InitialContext.PROVIDER_URL, "smf://192.168.1.1:55555");
environment.put(Context.SECURITY_PRINCIPAL, "userName");
environment.put(Context.SECURITY_CREDENTIALS, "userPassword");
environment.put(SupportedProperty.SOLACE_JMS_VPN, "myVPN");
InitialContext = new InitialContext(environment);
ConnectionFactory cf = (ConnectionFactory)initialContext.lookup("connectionFactoryName");
```

3. It can be place in a jndi.properties file that is the class path of the Java application.

```
Solace_JMS_VPN=myVPN
```

## **Appendix B: Consumer Application Connection Steps and Design Guidance**

If a consumer client loses their connection or receives an exception, it is recommended as best practice to write the client software to perform a reconnect. Any processing, parsing, or writing to disk of the messages after they are received should be done in a separate thread than the process thread that is consuming the messages. If parsing and writing to disk is done in the same thread as the message consumer thread, a slow consumer situation may occur and result in missed messages.

Using the Self-Service Portal Metrics Page, a user should be able to determine if their egress message rate matches their ingress messages rate. If the ingress message rate is much higher than the egress message rates and the expired message rate is not zero, then likely the client is not able to consume the messages fast enough. Possible solutions could include using a multi-threaded client or multiple clients to consume from a single queue to keep up with the message rate. Other possible issues could be limited bandwidth on the user's network or performance limitations on the user's server.

## Appendix C: Jumpstart Kit

The Jumpstart Kit contains a simple JMS consumer that allows for testing connections; it is not intended for real world applications. This section provides an overview of the Jumpstart Kit. It will cover contents of the Jumpstart Kit as well as describe how to use the Kit to consume SWIM services. There are two versions of the Jumpstart Kit available for download from the Subscription Details Page under the Jumpstart Tab depending on which operating system you will be consuming SWIM data. To download the Jumpstart Kit, navigate to the Subscription’s Details Page and the Jumpstart Tab. Select which version of the jumpstart kit you need, either Windows or Linux. See Figure 8-14 for a view of the Jumpstart Kit Download Page.

### Jumpstart Contents

Figure C-1 below shows the top-level contents of the Windows Jumpstart Kit. The README file provides details on the available configuration options for using the Jumpstart Kit as well as instructions on how to start the consumer.

Name	Date modified	Type	Size
bin	5/22/2018 11:06 A...	File folder	
lib	5/22/2018 11:06 A...	File folder	
src	5/22/2018 11:06 A...	File folder	
licenses	5/22/2018 11:06 A...	Text Document	2 KB
licenses-all	5/22/2018 11:06 A...	Text Document	4 KB
pom	5/22/2018 11:06 A...	XML Document	9 KB
README.md	5/22/2018 11:06 A...	MD File	3 KB

Figure C-1 - SCDS Windows Jumpstart Kit Contents

Figure C-2 shows the contents of the Linux version of the Jumpstart Kit. The README file provides details on the available configuration options for using the Jumpstart Kit as well as instructions on how to start the consumer.

```
lib/jumpstart-jar-with-dependencies.jar
licenses.txt
licenses-all.txt
README.md
pom.xml
bin/
bin/run
bin/run.bat
src/
src/main/
src/main/assembly/
src/main/java/
src/main/java/com/
src/main/java/com/harris/
src/main/java/com/harris/cinnato/
src/main/java/com/harris/cinnato/outputs/
src/main/java/com/harris/cinnato/solace/
src/main/scripts/
src/main/resources/
src/main/assembly/distribution.xml
src/main/java/com/harris/cinnato/outputs/MessageFileOutput.java
src/main/java/com/harris/cinnato/outputs/Output.java
src/main/java/com/harris/cinnato/outputs/FileOutput.java
src/main/java/com/harris/cinnato/outputs/NoopOutput.java
src/main/java/com/harris/cinnato/outputs/StdoutOutput.java
src/main/java/com/harris/cinnato/Consumer.java
src/main/java/com/harris/cinnato/solace/SolaceConsumer.java
src/main/java/com/harris/cinnato/solace/SolaceInitialContext.java
src/main/java/com/harris/cinnato/solace/AMQPConsumer.java
src/main/java/com/harris/cinnato/solace/JMSConsumer.java
src/main/scripts/run
src/main/scripts/run.bat
src/main/resources/cacerts
src/main/resources/log4j.properties
src/main/resources/reference.conf
```

**Figure C-2 - SCDS Linux Jumpstart Kit Contents**

## Jumpstart Configuration

There are two methods to configure the Jumpstart Kit, one using command line options and the other by creating a configuration file. To use the command line, use the following command and fill in the parameters associated with the wire level protocol being used and your subscription:

- Linux: `./bin/run -DproviderUrl=<url> -Dqueue=<queue> -DconnectionFactory=<factory> -Dusername=<user> -Dpassword=<pass> -Dvpn=<vpn>`

or

- Windows: `.\bin\run.bat -DproviderUrl=<url> -Dqueue=<queue> -DconnectionFactory=<factory> -Dusername=<user> -Dpassword=<pass> -Dvpn=<vpn>` To use the jumpstart kit with a configuration file, you will need to create a configuration file and pass the configuration file name as an argument when starting the consumer. The following parameters are required in the configuration file:

- `providerUrl:<url>`
- `queue:<queue>`
- `connectionFactory:<factory>`
- `username:<user>`
- `password:<pass>`
- `vpn:<vpn>`
- `metrics:false`
- `output:com.harris.cinnato.outputs.FileOutput`
- `json:true`

To run the Jumpstart Kit using the configuration file, run the following command:

- Linux: `./bin/run -Dconfig.file=<path/to/config-file>`
- or
- Windows: `.\bin\run.bat -Dconfig.file=<path\to\config-file>`

These values for the Jumpstart parameters can be obtained from the Connection Details Tab within the Subscription Details Page of SWIFT Portal.

## Appendix D: NESG Client Migration Guide

With the removal of the IPSec VPN, TLS is being used to encrypt user credentials when connecting to the Solace servers. This change requires the setting of Solace specific client properties that will enable the use of the TLS/SSL interface. There are three properties that a user needs to be aware of and set accordingly:

### 1. SSL Trust Store

- The file path of the trust store that the Solace JMS Client should use. This property is mandatory if the SSL Certificate Validation property is set to true. A DST Root CA X3 certificate is required and is included in the default Java trust store located in the Java directory under lib/security/cacerts (JDK 7u111+ and JDK 8u101+; earlier version require it to be imported).
- Format is a URL or path of the trust store file
  - If JAVA\_HOME is set, you can use the default Java trust store by setting the path to `String defaultTrustStore = System.getenv("JAVA_HOME") + "/jre/lib/security/cacerts"`
- Can be set using:
  - Client code under the Initial Context variable using JNDI name;  
`env.put("Solace_JMS_SSL_TrustStore", defaultTrustStore)`
  - Integration software setting for additional JNDI properties;  
`name="Solace_JMS_SSL_TrustStore" value="mytruststore.jks"`
  - Java System Property; `-Djavax.net.ssl.trustStore=mytruststore.jks`

### 2. SSL Trust Store Format

- Indicates the format used by the trust store provided for the SSL Trust Store property.
- Acceptable formats are “jks” or “pkcs12”
- Can be set using:
  - Client code under the Initial Context variable using JNDI name;  
`env.put("Solace_JMS_SSL_TrustStoreFormat", "jks")`
  - Integration software setting for additional JNDI properties;  
`name="Solace_JMS_SSL_TrustStoreFormat" value="jks"`
  - Java System Property; `-Djavax.net.ssl.trustStoreType=jks`

### 3. SSL Trust Password

- The trust store password that should be used for to access the trust store file provided in step 1. If using the default Java trust store, this property does not need to be set.
- Can be set using:

- Client code under the Initial Context variable using JNDI name;  
env.put("Solace\_JMS\_SSL\_TrustStorePassword", "mypass")
- Integration software setting for additional JNDI properties;  
name="Solace\_JMS\_SSL\_TrustStorePassword" value="mypass"
- Java System Property; -Djavax.net.ssl.trustStorePassword=mypass

More information on Solace JNDI properties can be found on their website at:

<https://docs.solace.com/Solace-JMS-API/JNDI-Connection-Properti.htm>

Compression over TLS has been made available in a recent Solace API release. While the initial release of Portal will not enforce compression but will in a future release. To prevent additional updates in the future, a user should update their Solace JAR files when migrating to SWIM Cloud Distribution with the most recent ones that support compression over TLS. These JARs can be downloaded from the Solace website at:

[https://products.solace.com/download/JMS\\_API](https://products.solace.com/download/JMS_API)

### **Migrating an ActiveMQ/WebLogic Client to SCDS Solace**

For those users who need to migrate from ActiveMQ or WebLogic, an additional property Solace property is required to be set. This is the Message VPN for the connection. Unlike ActiveMQ or WebLogic, Solace implements a concept called Message VPNs. A Message VPN is simply a virtually segregated environment for messages. SWIM uses these Message VPNs to separate the different systems that provide data via Solace; AIM FNS, FDPS, ITWS, STDDS, TBFM, and TFMS.

#### **The Message VPN can be set in two ways:**

1. Through appending the username with @ and the Message VPN name (e.g., user@FDPS) or
2. Through setting the Solace\_JMS\_VPN property
  - a. Client code under the Initial Context variable env.put("Solace\_JMS\_VPN", "FDPS") or
  - b. Integration software setting for additional properties name="Solace\_JMS\_VPN" value="FDPS"

## Appendix E: SWIFT Community – Rules and Guidelines

The FAA has created this Community to provide an avenue for SWIM users to find answers, solve problems, and get the most out of SWIM Data Products. Submitted content should be relevant and based upon your own questions and experiences. Messages posted by SWIFT Community members are solely the opinions and responsibilities of the people posting the messages. SWIM does not endorse the advice, comments, views, or opinions posted by members of the SWIFT Community. All users posting to the SWIFT Forums must adhere to the Forum Posting Policy mentioned below:

Posting to the Forums constitutes your agreement to the terms and conditions outlined in this Forum Posting Policy. In cases of abuse, please flag the suspected post and provide a brief reason for flagging. Anyone found to be in violation with the terms and conditions will be given a “strike.”

Community Guidelines Strike Basics:

The SWIFT Community forum has a strict “two strike” policy for violations of the rules and regulations. Strikes are issued when a moderator is notified or finds a policy violation of the rules for how to participate in the SWIFT Community. If a strike is issued, we will notify you via email and provide you with the following information:

- What content was removed
- Which policies it violated
- What you can do next

First Strike punishment will depend upon the user’s violation and is up to the moderator to determine the severity. Action would vary between a warning for a minor violation and a ban for a more serious violation.

Upon a user’s second violation the user will be removed from participating in the Community Forum for no less than 3 months. The moderator reserves the right to institute a longer ban depending on the severity of the violation.

### 1. Respect Others

In order to maintain a welcoming environment for all users, your participation in the Community must always be respectful of others.

In particular:

- Do not post content that is libelous, defamatory, harassing, threatening, or inflammatory. For example, do not use obscenities or profanity, and do not express hatred or intolerance for people on the basis of race, ethnicity, nationality, gender identity, religion, sexual orientation, age, political or personal views, or disability, including promoting organizations with such views.
- Do not post content that is obscene, pornographic, or lewd, or that contains nudity or sexually explicit images.

- Do not post content that invades the privacy of others (Personally Identifiable Information). For example, do not post other people’s phone numbers, email addresses, mailing addresses, or other personal information.
- Do not post links to phishing scams or other malware sites.
- Do not attach corrupted or malicious content.
- Do not impersonate other people or organizations.
- Do not repeatedly send messages or requests to other people.
- Do not attempt to drown out other people’s opinions, including posting from multiple accounts or
  - coordinating with others.
- Do not engage in name-calling or attack people for any reason.
- Spammers, cat fishers, and “trolls” will be banned.

## **2. No Advertising or Personal Promotion**

In order to preserve the integrity of Community content, do not use this community to advertise your own company, products or services. Please do not submit questions or answers that are designed to promote your website, book, business, or other endeavor. If a particular product or solution is identified, please disclose any relationship you may have with the brand.

## **3. Do not post private communications or content the FAA deems as sensitive or related to the security posture of SWIM**

This includes, but is not limited to the following details: IP addresses, passwords, specific Architecture detail of any NAS or future NAS services, authentication and access control methodology, business contingency and disaster recovery plans, physical security details, or any other application security details including:

- Conversations between SWIM Help Desk support, SWIM On-Boarding team, community members, moderators, or partners of SWIM on these forums or any other site without the other party’s prior permission.
- Publicizing any private correspondence such as support tickets, email, private message (PM) correspondence, or chat logs is not permitted without prior permission.

## **4. Do not discuss moderator actions on the forums**

If you do not agree with a moderator’s decision, you may send a private message to the moderator or Community administrator. You may NOT start a thread or post complaining that your post was removed. Nor may you post private correspondence from moderators, such as infraction or warning notices. Questions or comments concerning warnings and suspensions (site or Forum) should be conveyed through e-mail or private messaging.

## **5. Ensure that your contributions comply with copyright regulations**

Do not use copyrighted material. Always give proper attribution when quoting others. Use other people's work only when allowed.

## **6. Be Helpful and Relevant**

The Community is intended to provide helpful, and relevant content to users. Submitted content should be based upon your own honest opinions and experiences. The purpose of this Community is to discuss SWIM data products and services. Discussions and comments should be related to the topics listed below:

- Data product questions
- New ways to use SWIM Data
- SWIFT Portal platform questions
- Subscription related questions and tips
- SWIM Client development questions, recommendations, and tips
- Constructive feedback
- Feature requests and product ideas

If you are creating a discussion about a technical issue, please provide as much information as possible. This allows the Community to help you more effectively.

## **7. Search for Answers Before Posting**

Chances are if you have a problem or question, you are not the first. Someone may have posted the same or a similar question before you and received an answer. The SWIM staff may have covered the subject in an Announcement, FAQ, or Users Guide. Read through the Forums or do a keyword search on your question using the search bar on the main Community Forum Page. This can save you and our community time and effort and can help add your thoughts or new information to a larger existing discussion.

SWIM reserves the right to delete any content that breaks any of the above-mentioned rules. Although the management of the SWIFT Community Forum will actively review content, we cannot review all the messages posted, and therefore, are not responsible for the content of any messages. You remain solely responsible for the content of your messages and content you choose to view.