

Asynchronous Data Exchange

FAQs

FAQs about General

This includes general questions about ADEX, publish-subscribe-based messaging protocol or MQTT, and difference of ADEX to APEX.

What is ADEX?

ADEX stands for **Asynchronous Data Exchange**, a centralised data exchange platform for the Whole-of-Government (WOG). It is part of the Strategic National Project under Smart Nation Sensor Platform (SNSP).

ADEX enables government agencies to publish and subscribe to real-time data using a self-service portal that will run in Government Commercial Cloud (GCC) both in the internet and intranet.

What is MQTT?

Message Queue Telemetry Transport (MQTT), is a publish-subscribe-based messaging protocol based on ISO standard ISO/IEC PRF 20922. It works over TCP/IP. It is designed to be lightweight for small, low power, and low bandwidth device communication. MQTT is the most common protocol used in Internet Of Things (IoT).

What is the difference between ADEX and APEX?

Both **ADEX** and **APEX** are self-service data sharing platform for the Whole-of-Government.

APEX enables users to directly communicate in terms of requesting and granting access to APIs. It acts as a centralized and secure API gateway.

It uses request-response architecture, each client opens a direct connection to each server, because the client request data directly from the server. A one-to-one distribution process.

The equivalent is like SMS used for sending message to a recipient. Another example, is newspapers where you go to a store to buy or get it delivered to your house.

For more information about **APEX**, refer to this [link](#).

ADEX is a platform for real-time, asynchronous fire-and-forget data transfer.

It uses pub-sub transport messaging protocol (MQTT), which allows clients to publish and subscribe to a channel and receives messages as they become available. A one-to-many distribution process.

The equivalent is like WhatsApp mobile app where you can group chats. Another example is radio news where you tune in to a channel.

One advantage of ADEX, it is good for frequent traffic and lightweight networks. It reduces network load and clients are pushed the latest data. ADEX will work not only with sensor, but also with non-sensor and streaming data.

You can check relevant information about request-response versus publish-subscribe [here](#) and which one to use [here](#).

FAQs about Account

FAQs for account includes questions about creating account, how to sign up, resetting of password, disabled or locked account.

How do I create an account?

You need to sign up to create an account

Go to [ADEX](#) portal and click **Sign Up**. You must use a valid agency email address when you sign up.

Follow the steps here: [Getting Started](#)

For first sign up within your organization, you role will be a Publisher. If you want to upgrade your account as Administrator role, send an email to ADEX Support Team through sense@tech.gov.sg.

How do I reset my password?

There are two ways to reset your account password successfully.

Step 1: Go to **Profile** icon > **Account settings**.

Step 2: Click **Change** and Change your password window appears.

Step 3: Enter the following:

- Current password
- New password
- Confirm new password

Step 4: Click **Change password**.

or,

Step 1: Go to **Home** page.

Step 2: Click **Forgot password?** and Forgot password window appears.

Step 3: Enter email address.

Step 4: Click **Send recovery link**. You will receive an email with the confirmation code and links if you requested to verify your email address or reset your password.

Step 5: Click **Reset Password**.

What happens if my account is locked?

You can send request to unlock account to Administrator using **Contact us**.

Or,

Step 1: Go to **Home** page.

Step 2: Click **click here** and the Unlock account request window appears.

Account Locked: Your account has been locked for security reasons. To unlock it, please approach your administrator or [click here](#)

Welcome back!

Email address

johndoe@tech.gov.sg

Password

.....

Forgot password?

Log in

Don't have an account? [Create one](#)

Step 3: Enter email address.

Step 4: Click **Submit**.

Unlock account request

Email address *

Submit

[Log in with a different account](#)

How can I log in if my account is disabled?

If your account is disabled and you cannot log in with your credentials, send an email to your Administrator to help you enable your account.

What happens if my password expires?

You will receive a notification from the portal before 90 days of expiry when you log in to ADEX. If you did not make any change to your password, then your password will be expired.

You can go to Login page and click **Forgot password**.

FAQs about Publishing

FAQs for publishing includes questions about publishing a topic.

How can I find out who is the publisher of the topic?

Go to **Browse topics** page and click the topic that you need to find out who the publisher is. You can see the “Publisher Created by ID” in the **Topic Details** page.

How can I contact the publisher of the topic?

Use the “Publisher Created by ID” from the **Topic Details** page and email to contact Publisher about this topic.

FAQs about Subscription

FAQs for subscription includes questions about topic subscription.

Can I subscribe to my own topics?

You cannot subscribe to topics published by the same project. The same project is not allowed to subscribe to its own topics.

FAQs about Topic

FAQs for topic includes questions about topic, topic pattern, and character restrictions on the topic pattern.

Why I cannot see a topic in the Browse topics page?

Check with the publisher if the topic visibility is own agency and WOG. If you are in the same organisation (or team) as the

publisher, and the visibility is own agency, you should be able to see the topic.

Does the topic pattern has a maximum length?

The topic pattern has a maximum level of up to 8 levels. The total maximum length of the topic pattern is 150 characters including the prefix and slashes (/).

What are the character restrictions on the topic pattern?

While creating a topic, the name must not have any slash (/), dot (.), or special characters. Letters, numbers, space, dash (-), and underscore (_) are allowed.

FAQs about Messaging

FAQs for messaging includes questions about inputs required to connect to ADEX broker and disconnection to MQTT.

Why is my MQTT connection disconnecting?

You are using a duplicate MQTT Client ID across your different MQTT connections. MQTT Client ID should be unique in the exchange. You can generate one using a UUID.

What are the inputs required to connect to ADEX broker?

Inputs required to connect to ADEX broker:

- Unique MQTT Client ID
- Client key
- Client secret
- SSL CA file
- SSL Client cert
- SSL private key
- Private key password

All required and obtainable from the ADEX Portal.

Why my MQTT client cannot connect to ADEX?

Make sure you have provided your IP address for the support team to open the firewall.

Check the connection settings on your client and ensure that the passwords are entered correctly.

Check your SSL certificates are in valid format. Refer to [this page](#) on how to check.

For example, check the private key file is ok using this command:

```
openssl rsa -noout -modulus -in .key | openssl md5
```

FAQs about Portal

FAQs for portal includes questions about issues in accessing the portal.

I get an SSL error when browsing to the portal.

If you get an SSL error “NET::ERR_CERT_COMMON_NAME_INVALID” when browsing to <https://sdx.sensor.gov.sg>, click **Proceed** and accept to be redirected automatically to <https://sdx.sensors.gov.sg>.