

Azure IoT Services Activation Guidance

Complete instructions and resources for connecting and deploying your FPGA Innovate projects to Microsoft Azure can be found here at [GitHub - terasic/InnovateFPGA2021](https://github.com/terasic/InnovateFPGA2021).

Azure cloud services for IoT are available for all competition participants with an Azure free account that includes many popular services free 12 months. In addition, you will also receive credit towards any Azure paid service based on the type of Azure account created. [For complete details, please review the Azure Free Account page here](#)

Choose between 2 types of Azure accounts for your projects, based on your situation:

- **Azure Free Account** includes \$200 credit to use for 30 days - <https://azure.microsoft.com/free/>
- **Azure for Students** includes \$100 credit to use for 1 year and free developer tools - <https://azure.microsoft.com/free/students> includes \$100

Once your account is created, [additional service subscriptions](#) can then be added to your account for your FPGA Innovate competition projects. Azure offers over 200 services to choose from and free accounts have access to many popular paid and free service. We recommend starting with the [Internet of Things for edge to cloud solutions and services](#).

- Each individual Azure service subscription has different a pricing model and many of them include **Free** options. For example, Azure IoT Hub has F1 SKU which is free of charge. Select your individual service options carefully and only for what you need for your project.
- Make sure you sign up for Azure Free Account or Azure for Students only when you are ready. Your free credit spending limit timer will start when you sign up.
- To keep any paid Azure services active and retain data after the free credit has expired, we recommend [upgrading and converting your Azure account to a Pay-As-You-Go account](#) to ensure continued uninterrupted service.
- Once your free credits have expired, any free services used will continue to operate and your account will remain active for 1 year from the account start date, however any paid services will stop working.

Please plan ahead for how you will use your Azure account and paid subscriptions to avoid high costs after the free credit have expired. Below are a few strategies and options to consider in planning your use of Azure IoT services for your projects.

1. Best practices to avoid accidental Azure credit spending

- Make sure you understand quotas and pricing models. Some services are charged based on CPU usage, some are fixed, etc.
- Stop services that are not actively in use
- Delete service instances that are no longer in use
- Shutdown any Virtual Machines while actively not in use

2. Converting accounts and transferring subscriptions, here are a few options for you to consider when your Azure credit expires on your Free Azure account.

Option	Instruction Links	Pros, Cons, and Tips
1. Upgrade to Pay-As-You-Go subscription	Upgrade your Azure free account	<ul style="list-style-type: none"> You can keep all data and configurations. Be careful which SKUs to use to minimize costs. Use Azure cost analysis tools to estimate costs
2. Move your project to another Subscription	Move resources to a new resource group or subscription	<ul style="list-style-type: none"> You can keep all data and configurations You may move your resource group and/or individual services among team members. Resource moves can be tricky so be careful.
3. Export services and configuration, then deploy to new subscription using ARM templates	Use Azure portal to export a template Deploy resources with ARM templates and Azure portal	<ul style="list-style-type: none"> You will NOT keep data, only configurations. You can create a copy of your projects multiple times Works well if each member would like to work on their own project.
4. Distribute services among multiple subscriptions		<ul style="list-style-type: none"> You do not have to deploy all resources in a single subscription. Cost sharing across team members. Free Azure credit will expire in one month on each account. Team members can deploy different services depending on specialty, for example. Some services require to be in the same subscription and/or region. Make sure you plan well.