

Azure Starter Pack: IoT Proof of Concept



This document provides an overview of the Internet of Things (IoT) Proof of Concept Starter Pack for GSA IT Schedule 70, powered by Microsoft Azure.

Designed to help government customers get up and running quickly with common cloud workloads, the Starter Packs include essential services, support, and implementation guidance for such scenarios as datacenter migration, dev-test, and websites.

Microsoft Azure is an ever-expanding set of cloud services to help your organization meet your business challenges. It's the freedom to build, manage, and deploy applications using your favorite tools and frameworks. Azure is:

- **Productive.** Reduce time to market, by delivering features faster with over 100 end-to-end services.
- **Hybrid.** Develop and deploy where you want, with the only consistent hybrid cloud on the market. Extend Azure on-premises with Azure Stack.
- **Intelligent.** Create intelligent apps using powerful data and artificial intelligence services.
- **Trusted.** Join startups, governments, and 90 percent of Fortune 500 businesses who run on the Microsoft Cloud today.

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Summary

The Internet of Things (IoT) Proof of Concept (POC) Starter Pack provides government customers with essential services, support, and implementation guidance for a proof of concept for an IoT solution to connect and manage your devices on any platform, mine new and existing data using real-time analytics solutions, and deliver these insights across the organization.

For example, you can use the IoT POC Starter Pack and the solution accelerators to:

- Connect and monitor devices with remote monitoring
- Improve industrial efficiencies with connected facilities
- Increase equipment reliability with predictive maintenance
- Develop and test your IoT solution with device simulations

The IoT POC Starter Pack includes a week of support with a Technical Architect to help you get your first IoT device connected. In this document, you'll also find links to the solution accelerators you can use to create fully customizable solutions for common IoT scenarios.

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Azure services included

Azure IoT Hub: securely connect, monitor, and manage billions of devices to develop IoT applications. IoT Hub is an open and flexible cloud platform as a service that supports open source SDKs and multiple protocols.

Azure IoT Edge: a fully-managed service that delivers cloud intelligence locally by deploying and running artificial intelligence (AI), Azure services, and custom logic directly on cross-platform IoT devices. Run your IoT solution securely and at scale—whether in the cloud or offline.

Azure Cosmos DB: Azure Cosmos DB was built from the ground up with global distribution and horizontal scale at its core. Azure Cosmos DB provides native support for NoSQL choices, offers multiple well-defined consistency models, guarantees single-digit-millisecond latencies at the 99th percentile, and guarantees high availability with multi-homing capabilities and low latencies anywhere in the world—all backed by industry-leading, comprehensive service level agreements (SLAs).

Azure Functions: Accelerate your development with an event-driven, serverless compute experience. Easily build the apps you need using simple, serverless functions that scale to meet demand. Use the programming language of your choice, and don't worry about servers or infrastructure.

Azure Data Lake Storage: Azure Data Lake Storage Gen2 is a highly scalable and cost-effective data lake solution for big data analytics. It combines the power of a high-performance file system with massive scale and economy to help you speed time to insight. Data Lake Storage Gen2 extends Azure Blob Storage capabilities and is optimized for analytics workloads.

Azure Stream Analytics: Easily develop and run massively parallel real-time analytics on multiple IoT or non-IoT streams of data using simple SQL like language. Use custom code for

advanced scenarios. With no infrastructure to manage, you can process data on-demand, scale instantly, and only pay per job.

Assumption: Devices will have access to Azure via AMQP, MQTT, or HTTPS either directly or through onsite gateway (<https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-devguide-protocols>).

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How to buy

To buy the IoT POC Starter Pack, please order the following Microsoft SKU through a [Microsoft Licensing Solution Provider \(LSP\)](#) or your Microsoft account representative. Within this SKU, you'll have the flexibility to select the services you need for your specific workload.

Azure Starter Pack: IoT Proof of Concept \$20,000 6QK-00001 Azure Commit

At the end of the IoT POC, please work with your Microsoft Account Team to determine next steps.

The table below details estimated pricing for the services included in the IoT Proof of Concept Starter Pack:

Service type	Region	Description	Estimated Cost
Azure Cosmos DB	East US 2	100 GB storage, 16 x100 RUs	\$140.00
Functions	East US 2	128 MB memory, 2 sec execution time, 10,000,000 executions/mo	\$50.00
Event Hubs	East US	Standard tier: 10 million Ingress events, 5 Throughput unit(s) x 730 Hours	\$130.00
IoT Hub	East US	Standard Tier, S2: Unlimited devices, 6,000,000 msgs/day, \$250.00/mo, 2 units	\$570.00
IoT Edge		There are no charges to use Azure IoT Edge.	\$0.00
Data Lake Store	East US 2	Commitment: 0 Overage GB, 50 Read Transactions, 50 Write Transactions	\$50.00
Container Registry	East US	Standard Tier, 2 units x 30 days, 5 GB Bandwidth, 5 GB Extra Storage	\$160.00
Stream Analytics	East US	2 unit(s), 730 Hours	\$190.00
Time Series Insights	East US 2	S1 tier: 2 unit(s)	\$340.00
Event Grid	East US 2	1,000,000 operations per month	\$10.00
Monthly Total			\$1,640.00
Annual Total			\$19,860.00

All prices shown are in US Dollar (\$). This is a summary estimate, not a quote. For up-to-date pricing information please visit <https://azure.microsoft.com/pricing/calculator/>. This estimate was created 5/21/2018 5:39:35 PM UTC.

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Support and implementation resources

IoT Proof of Concept Starter Pack support includes:

The IoT Proof of Concept Starter Pack includes a week of support with a Technical Architect who will help you get your first IoT device connected. This typically includes:

- Architectural design review which includes reviewing IoT Hub and the pre-configured Azure IoT Suite solutions
- Connection of Azure IoT certified devices to the IoT Hub directly or using the pre-configured Azure IoT Suite of solutions as defined by the design review
- Connection of sensor devices to the Azure IoT certified devices as well as the collection of sensor data
- Dashboards for visualization of the device data as provided by the Azure IoT Suite
- An application for registering devices

IoT Solution Accelerators

Use templates to create fully customizable solutions for common IoT scenarios. Bring your organization together in insightful new ways—from increasing process efficiencies to delivering better customer experiences and citizen services.

Connect and monitor devices with remote monitoring: Get better visibility into your devices, assets, and sensors, wherever they're located. Collect and analyze real-time device data using a preconfigured remote monitoring solution accelerator that triggers automatic alerts and actions—everything from remote diagnostics to maintenance requests.

- [Six steps to a remote monitoring solution](#)
- [Try the remote monitoring solution accelerator](#)

Improve industrial efficiencies with connected facilities/factories: Enhance your operational productivity with a preconfigured connected factory solution accelerator. Connect and monitor your industrial equipment and devices in the cloud—including your machines already operating on the factory floor. Analyze your IoT data for insights that help you increase the performance of the entire factory floor.

- [Six steps to a connected factory solution](#)
- [Try the connected factory solution accelerator](#)

Increase equipment reliability with predictive maintenance: Learn about potential issues before they happen with a preconfigured predictive maintenance solution accelerator. Analyze streaming data from sensors and devices to predict and prevent equipment failures and avoid costly repairs.

- [Six steps to a predictive maintenance solution](#)
- [Try the predictive maintenance solution accelerator](#)

Develop and test your IoT solution with device simulation: Test your IoT solution with tens of thousands of simulated devices using the device simulator solution accelerator. Connect to other accelerators or custom solutions throughout the development cycle.

- [Try the device simulation solution accelerator](#)



Contact your designated Microsoft account representative or partner to help you get started, or email [Microsoft Azure Starter Packs](#) with any questions.