# Azure IoT Hub Device Monitoring Guide

## 1. Overview

This guide explains how to use the Azure CLI to monitor device events from IoT Hub, and how to troubleshoot common issues. It also includes instructions on how to view the actual payloads in the Azure Portal using the Service Bus Queue route.

## 2. Prerequisites

- Azure CLI installed on your system  
- Azure IoT extension for CLI (installed automatically on first use)  
- Access to the correct Azure subscription and IoT Hub  
- Device already registered in the IoT Hub

## 3. Monitoring via Azure CLI

### Step 1 — Login

az login

### Step 2 — List Subscriptions

az account list -o table

### Step 3 — Set the Subscription

az account set --subscription "<YourSubscriptionID or Name>"

### Step 4 — Confirm Active Subscription

az account show -o table

### Step 5 — List IoT Hubs

az iot hub list -o table

### Step 6 — Monitor a Device

az iot hub monitor-events --hub-name <YourIoTHubName> --device-id <YourDeviceID>

### Optional — Monitor Using Connection String

az iot hub connection-string show --hub-name <YourIoTHubName> --policy-name iothubowner -o tsv  
az iot hub monitor-events --login "<IOTHUB\_CONNECTION\_STRING>"

## 4. Troubleshooting

|  |  |
| --- | --- |
| Issue | Fix |
| The subscription doesn’t exist | Run 'az account list -o table' and ensure you copied the correct subscription ID. |
| command requires the extension azure-iot | Run 'az extension add --name azure-iot'. |
| Missing expression after unary operator -- | Remove PowerShell line continuation (\). Use a single line instead. |
| unrecognized arguments: -n <hub> | New syntax uses '--hub-name' instead of '-n'. |
| No events showing | Ensure device is sending data, check registration, and confirm IoT Hub routes are configured. |

## 5. Viewing Events in Azure Portal (Service Bus Queue)

### Step 1 — Confirm Routing

az iot hub message-route list --resource-group <YourResourceGroup> --hub-name <YourIoTHubName> -o table

### Step 2 — Navigate in Azure Portal

1. Log in to https://portal.azure.com  
2. Go to Resource Group → select Service Bus Namespace → open the Queue (e.g., iothub-queue).  
3. Open the Queue Overview to see Active Messages, Dead-lettered Messages, etc.

### Step 3 — Peek at Messages

1. Inside the Queue, select Service Bus Explorer.  
2. Choose Peek Messages or Peek & Lock.  
3. Example payload:  
{  
 "deviceId": "SIM-001",  
 "eventId": 1001,  
 "timestamp": "2025-08-20T14:30:00Z",  
 "location": {"lat": -26.2041, "lon": 28.0473},  
 "status": "moving"  
}

## 6. Summary

- Use 'az login → az account list → az account set → az iot hub list → az iot hub monitor-events' for CLI monitoring.  
- Troubleshoot common issues using correct subscription ID, IoT extension, and syntax.  
- For a GUI view, use Azure Portal → Service Bus Explorer → Peek Messages to see the actual JSON payloads.