Azure IoT Subsystems

Security
Deployment
High Availability and Disaster Recovery

Things

- IoT Edge Devices — 1
- IoT Devices
- Cloud Gateway (IoT Hub)
- Bulk Device Provisioning — 1

Insights

Stream processing and rules evaluation over data — 2

Store data — 2

- Data Transformation
- Warm Path Store
- Stream Processing — 2
- Cold Path Store — 2
- Machine Learning
- UI & Reporting Tools
- User Management — 4

Action

- Business Integration — 3
- Visualize data and learnings
- Integrate with Business processes — 3

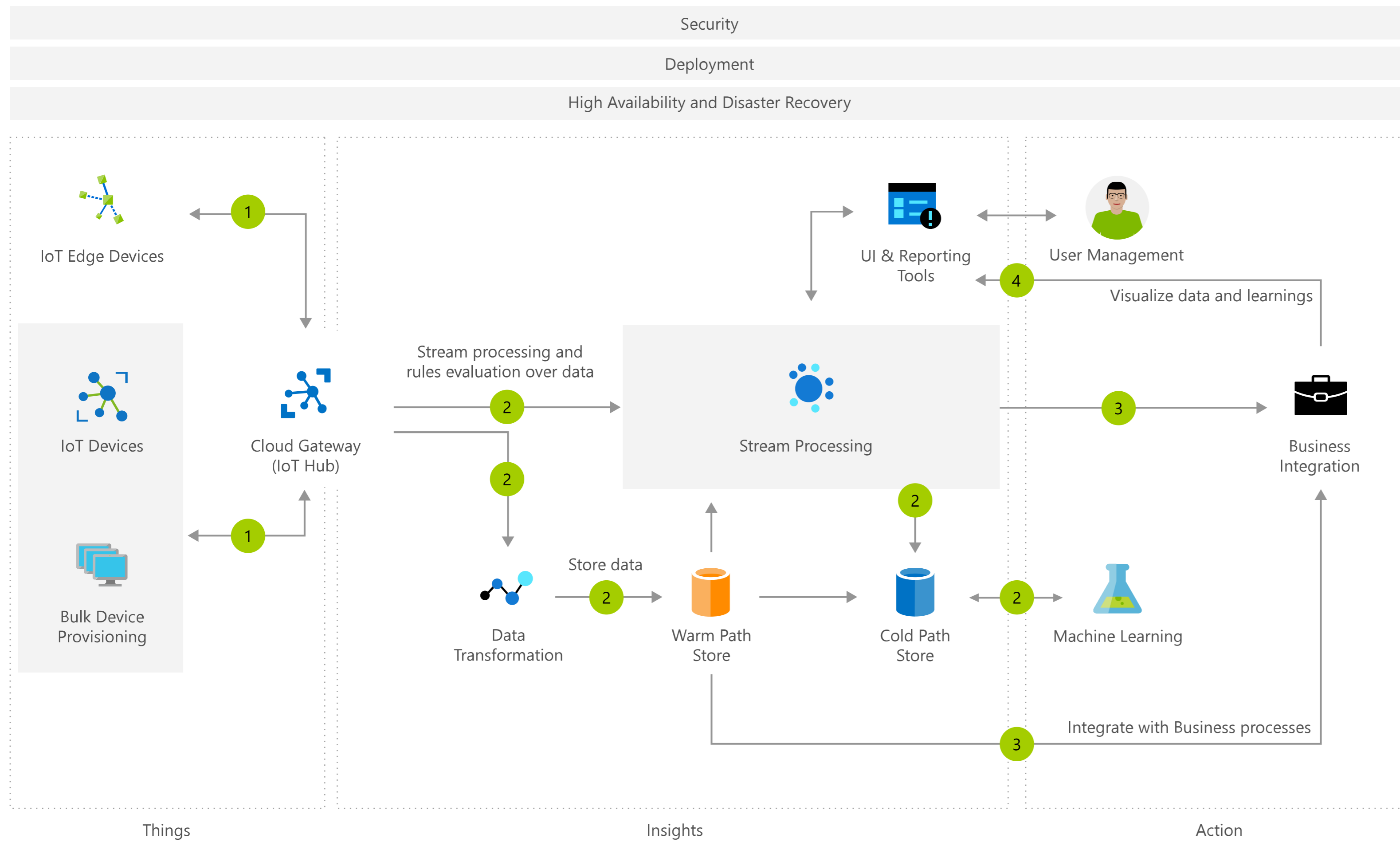## Architecture overview

We recommend an architecture for IoT applications that's cloud native, microservice, and serverless based. The architecture also supports a hybrid cloud and edge compute strategy as some on-premises data processing is expected. To scale individual subsystems horizontally, we recommend the use of an orchestrator, such as Azure Managed Kubernetes or Service Fabric, or PaaS services that offer built-in horizontal scale capabilities, like Azure App Services.

1. Devices send telemetry records or events to the cloud gateway.

2. The following steps happen in parallel:

   Stream processing and rules evaluation is done for device telemetry records and events.

   Device telemetry data is transformed (if needed).

   Device data telemetry is stored.

3. Business process integration (such as email, CRM) is executed.

4. Device information is visualized and displayed in the UI.

Products

- IoT Edge Devices
- IoT Devices
- Cloud Gateway
- Bulk Device Provisioning
- Data Transformation
- Stream Processing
- Warm Path Store
- Cold Path Store
- UI and Reporting Tools
- Machine Learning
- Business Integration

Azure