Workflow based on AWS IoT Greengrass

1. **Device Connectivity:** Leaf devices connect locally to Greengrass Core device using MQTT or other protocols.
   Devices send telemetry data to the Greengrass gateway.
2. **Greengrass Core Runtime:** Greengrass Core runs Lambda functions or components to process data locally.
   Edge processes telemetry and runs custom code on the gateway.
3. **Local Data Storage & Processing:** Lambda functions store data locally (e.g., SQLite) and perform analytics or filtering.
   Data is aggregated, filtered, or enriched on the device.
4. **Cloud Communication:** Processed data is published from Greengrass Core to AWS IoT Core securely.
   Data is forwarded to the cloud for further processing.
5. **Cloud Storage & Processing:** AWS IoT Core routes data to DynamoDB, RDS, or S3; Lambda and other services perform cloud analytics.
   Cloud stores and analyzes telemetry data.
6. **Visualization:** AWS Amplify or Elastic Beanstalk hosts web applications to display data and dashboards.
   Users visualize data through cloud-hosted web apps.
7. **Device Provisioning & Authentication:** Devices are automatically provisioned and authenticated using Fleet Provisioning or Just-In-Time Provisioning.
   Scalable, secure onboarding of thousands of devices.