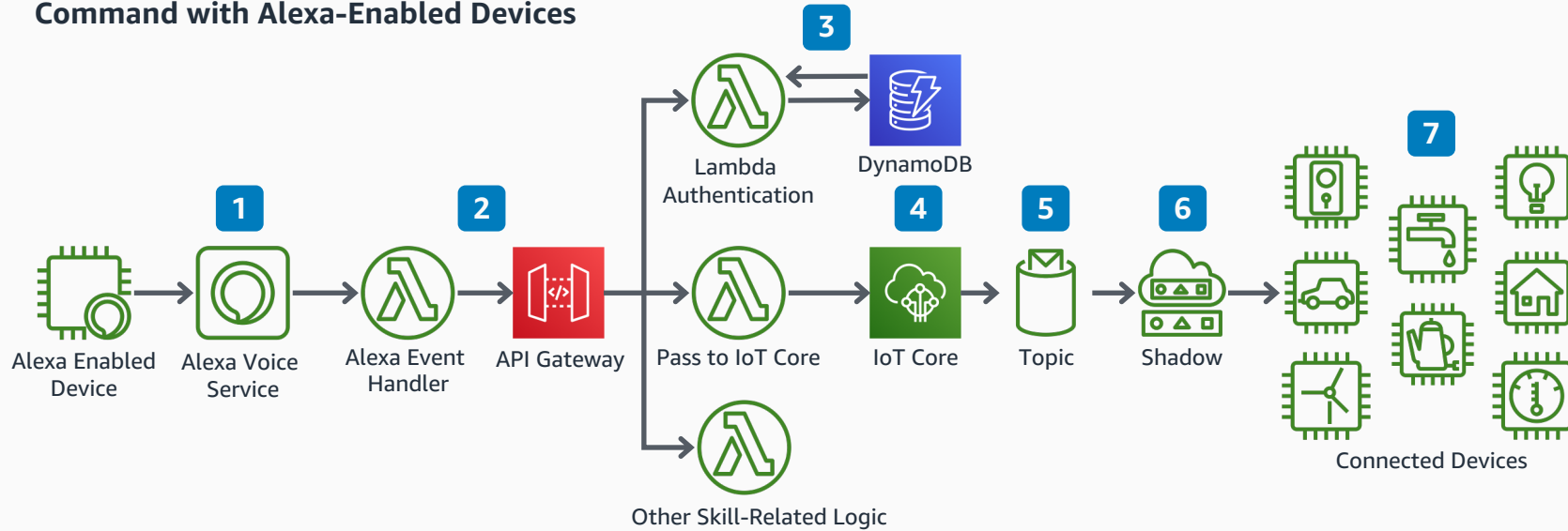


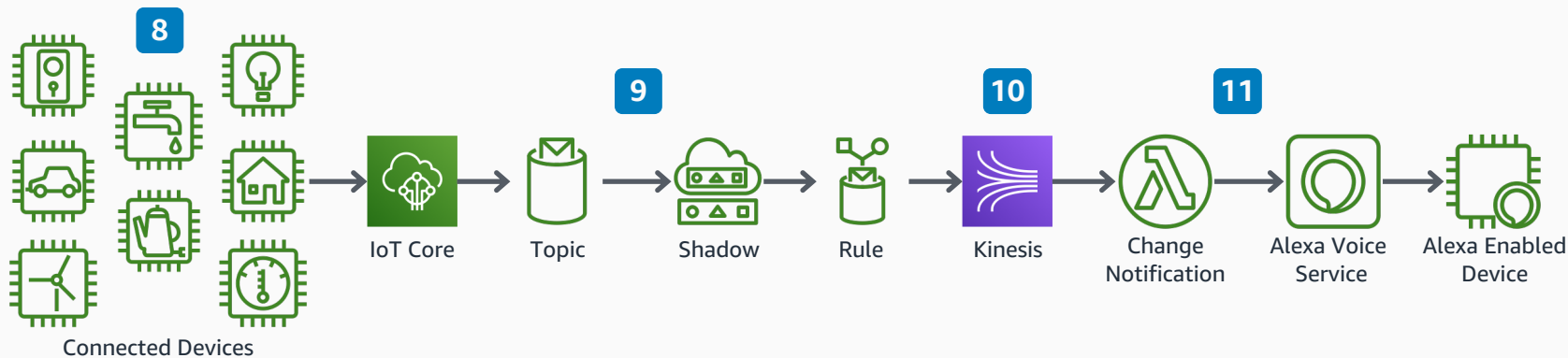
# Connected Home – Command & Control

Integrate Alexa with your connected home devices.

## Command with Alexa-Enabled Devices



## Control & Notify



- 1** An **Alexa** invocation is created by an **Alexa Enabled Device** running either the **Alexa Voice Services SDK** or using an **Amazon Echo**.
- 2** **Alexa Skill** uses **AWS Lambda** as its backend logic. **Amazon API Gateway** handles validating the authorization and access control for the **Alexa** skill before it sends data to the correct **Skill Handler**.
- 3** **Amazon DynamoDB** holds user authorization data that associates your users to their skill and devices while **API Gateway** verifies whether the request should be accepted.
- 4** **AWS IoT Core** enables you to connect devices to the cloud. **IoT Core** sends and receives updates based on **Alexa** invocations.
- 5** Each **Alexa** invocation triggers an **IoT Rule**, which evaluates each invocation and routes the message to other **AWS Services**.
- 6** Each **Alexa** invocation triggers a message to the **AWS IoT Device Shadow**. The **Shadow** service then sends a message to the device with settings that need to be updated to match the **Alexa** request.
- 7** **IoT** data is sent securely from **AWS IoT Core** to the devices that need to take action based on the **Alexa** command.
- 8** In addition to commands, **Alexa** also can receive updates of device data that happens locally. **IoT** data originated by your devices can send data to **AWS IoT Core** using **AWS IoT SDK**, **AWS IoT Greengrass**, or **Amazon FreeRTOS**.
- 9** Messages from the devices are sent to **IoT Core**, which uses an **IoT rule** to write data to **Amazon Kinesis Data Streams**.
- 10** Real-time data is streamed from **Amazon Kinesis Data Streams**. **Amazon Kinesis Data Analytics**, **Spark (EMR)**, **EC2**, **Lambda**, and other services that extract data for processing.
- 11** The notifications interface to **Alexa Voice Service** is invoked in the **AWS Lambda** function. It gives users a visual or audio indication that new content is available from **Alexa** domains or an enabled **Alexa** skill.



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**AWS Reference Architecture**