

Enablement Platform for IoT Application and Analytics

CSI 421-Internet Of Things

Universitas Esa Unggul

- *Enablement Platform for IoT Application and Analytics*
- **Semua Bahan mengacu kepada buku : The Internet of Things: Enabling Technologies, Platforms, and Use Cases [Pethuru Raj, Anupama C. Raman]**

- The Internet of things (IoT) paradigm is definitely on fast track. There are a number of viable and value-adding business and technical cases being unearthed and articulated well by business as well as IT professionals for enabling worldwide governments and organizations to deeply focus on bringing forth a well-intended IoT strategy.

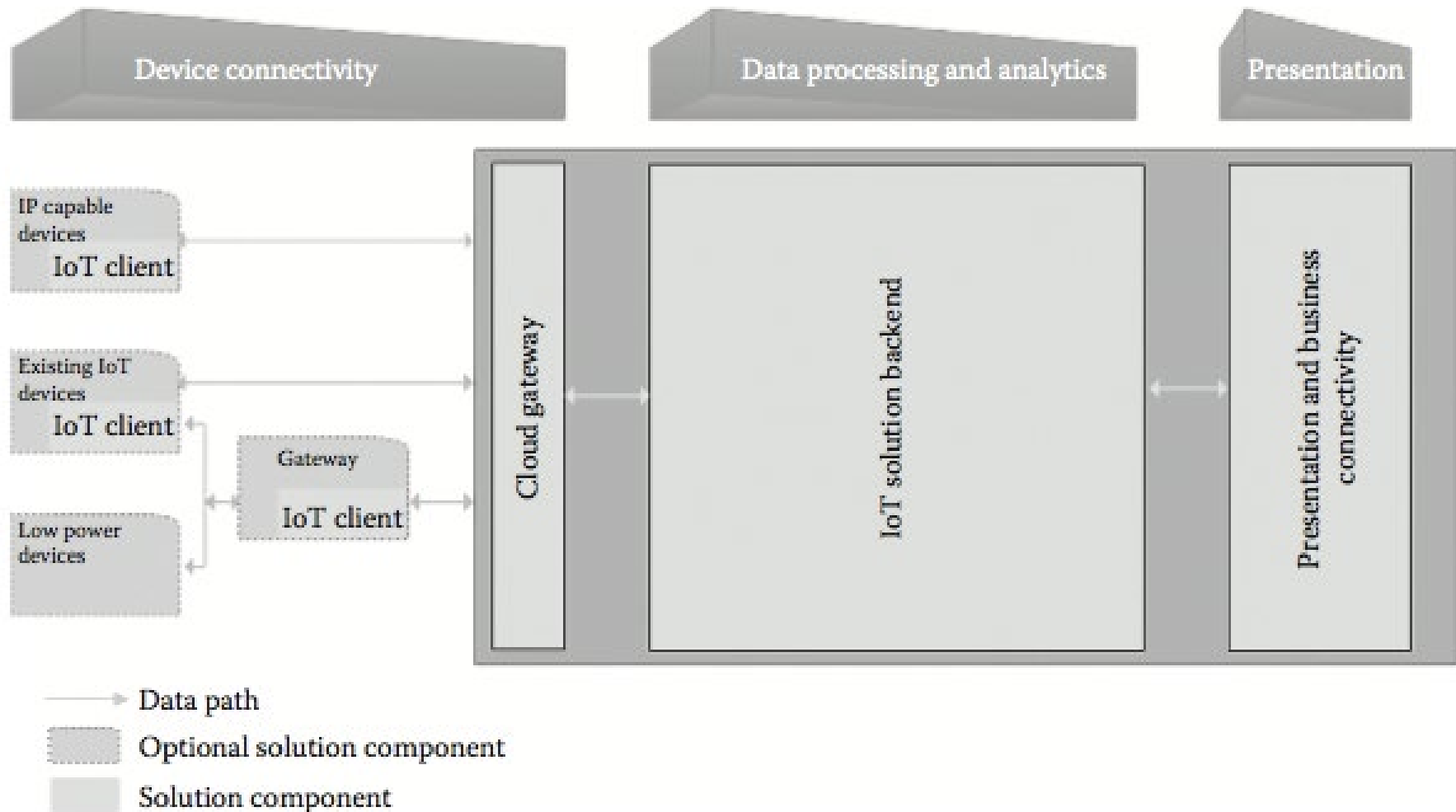
Describing the IoT Journey

- The IoT idea is percolating into every industry vertical.
- IT professionals and computer science professors are actively working on making it pervasive and persuasive.
- There are several forecasts from world-leading market researchers that by 2020, all kinds of tangible things in our everyday environments will be technologically modernized to be web-enabled.
- We are unequivocally reading a lot of distinct advantages of our ordinary articles getting hooked to the Internet. E'
- There are unique benefits for end users and technical professionals whereas newer business models are being talked about in order to explore fresh revenue-generating avenues through such kinds of web-enablement.

The IoT Building Blocks

- *Digitized Entities and Connected Devices*
- *IoT or Sensor Data Gateway*
- *Application Enablement Platforms*
- *Data Analytics Platforms*
- *Knowledge Discovery and Dissemination*
- *Storage, Backup, and Archival*
- *Cognitive Clouds*
- *The Major Players in the IoT Space*

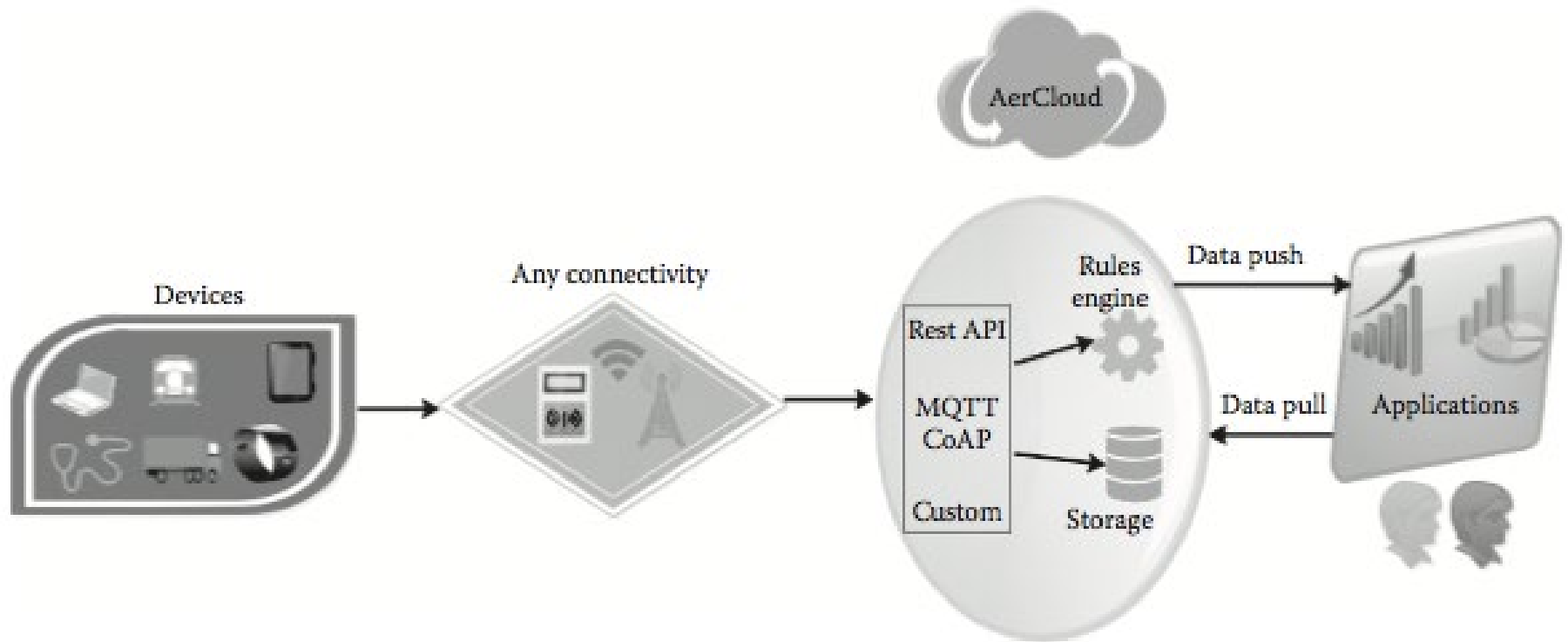
Cloud-based IoT data processing and application development.



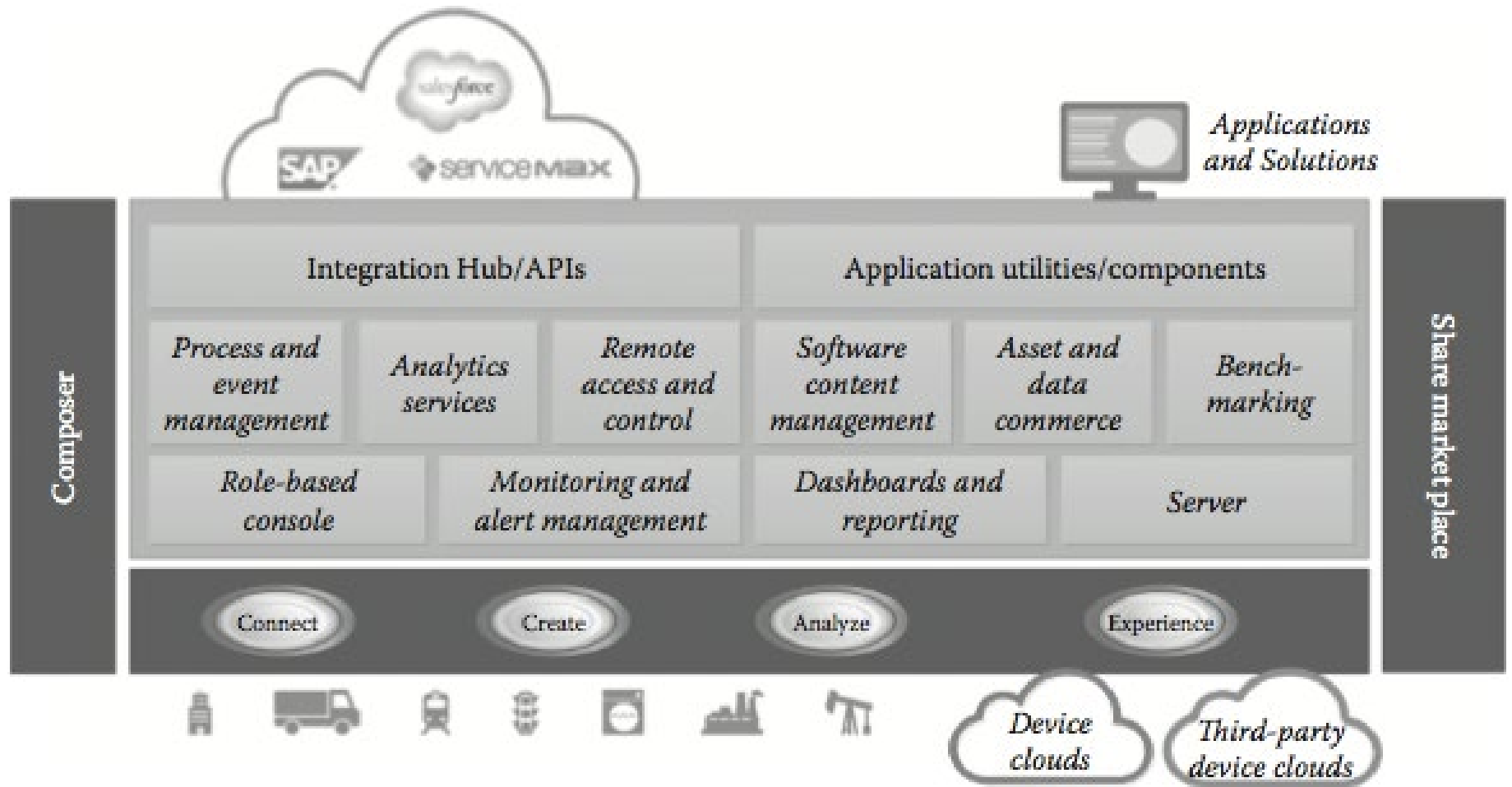
The principal building blocks of IoT AEPs

Database Repository that stores the important data sets	External interfaces APIs, SDKs, and gateways that act as interfaces for third-party systems (e.g., ERP, CRM)	
	Analytics Algorithms for advanced calculations and machine learning	Additional tools Further development tools (e.g., app prototyping, access management, and reporting)
	Data visualization Graphical depiction of (real-time) sensor data	
	Processing and action management Rule engine that allows for (real-time) actions based on incoming sensor and device data	
	Device management Backend tool for the management of device status, remote software deployment, and updates	
	Connectivity and normalization Agents and libraries that ensure constant object connectivity and harmonized data formats	

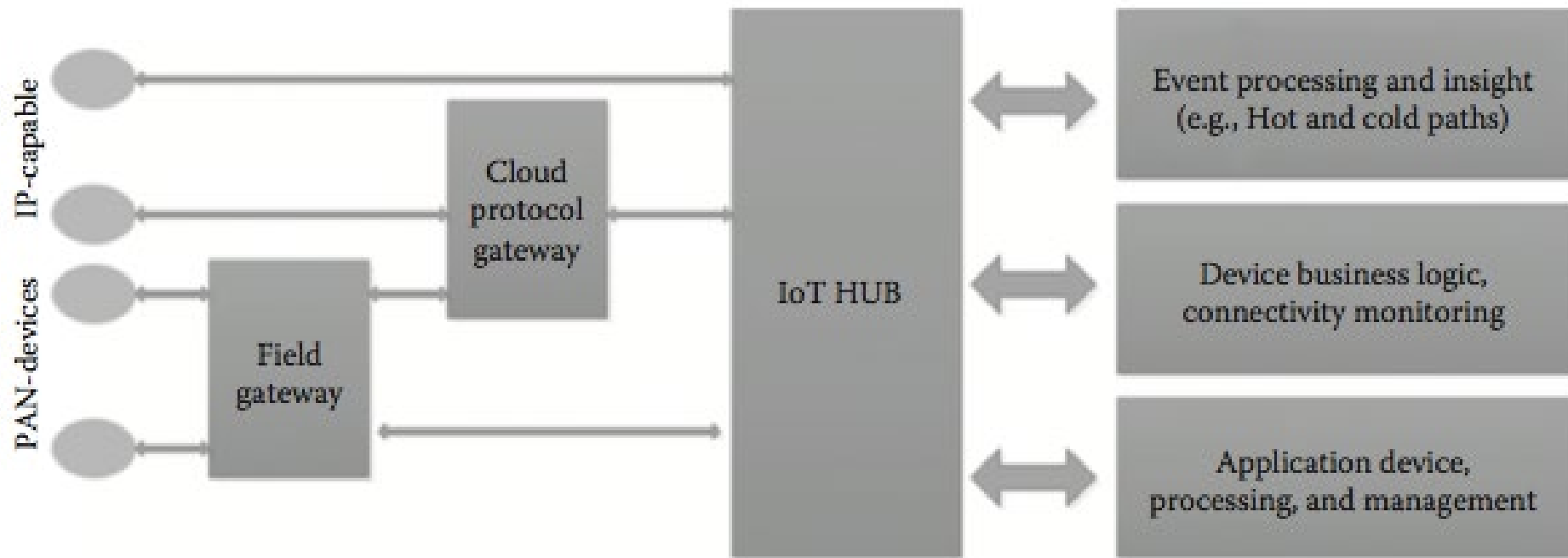
IoT and M2M sensor data platform by AerCloud



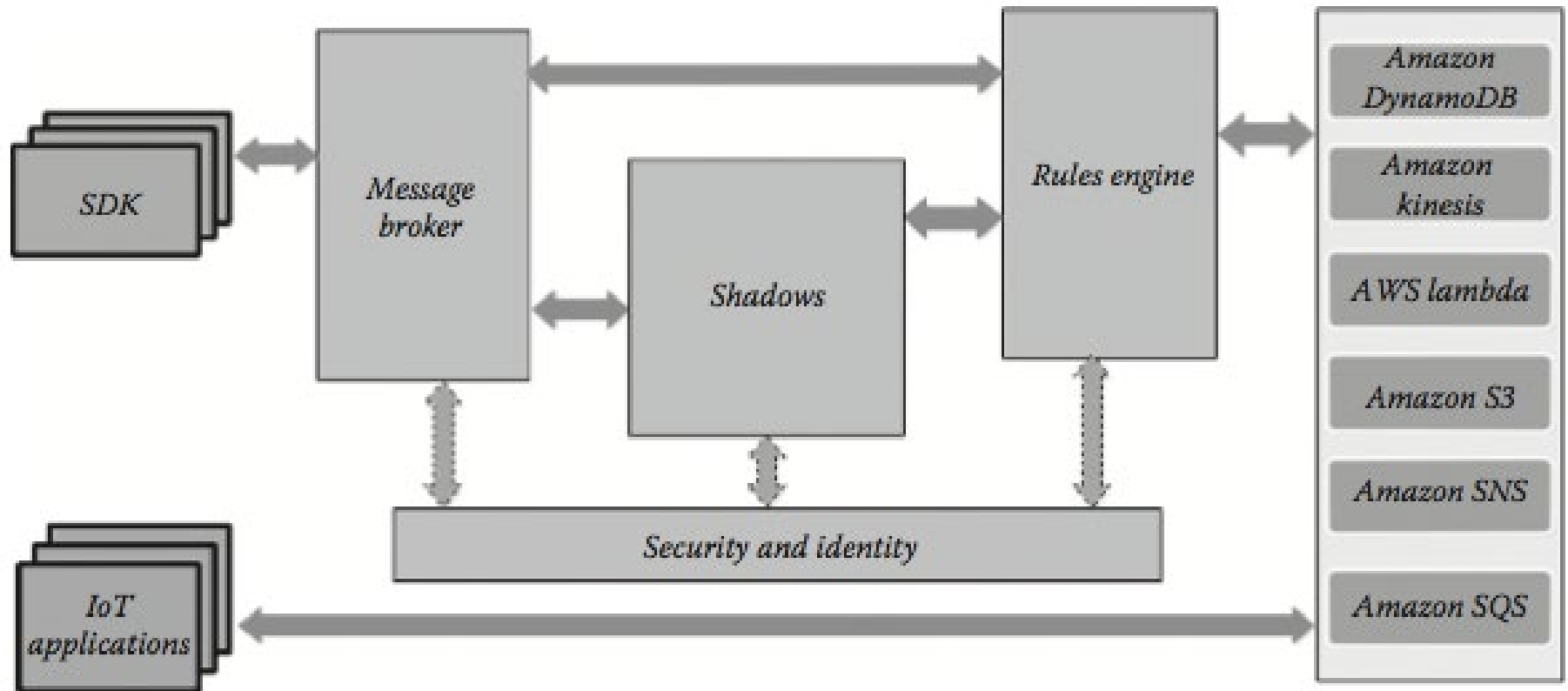
The system architecture of the ThingWorx IoT AEP.



The system architecture for the Microsoft Azure IoT hub



The AWS IoT platform architecture.



The vitria IoT analytics platform architecture

