Lesson 3
Cloud Platform as a Service usages for accelerated Design and Deployment of IoTs

Large and Big Data platform Oracle IOT PaaS

- For delivering, integrating, securing and retrieving
- For analysing comprehensive data from millions of device endpoints
- For solutions enabling real-time response and data capture
- Integrating with the IT systems

Oracle IOT Development Platform

- Provisioning of Oracle Java SE, ME, Embedded Suite
- Oracle Event Processing
- Solutions that facilitates seamless communications between all elements of the IoT architecture (Chapter 1 Figure 1.5) .

Oracle M2M platform

- Offering the middleware capabilities
- Communications between the devices

KaaIoT Development Platform

- Multi-purpose Middleware Platform
- Provisioning of an elastic server-architecture deployable at cloud, a fast-growing ecosystem of compatible hardware
- A platform with inclusion of built-in end-to-end data encryption solutions
- Software for monitoring, management and configuration of connected devices using the communication protocols

KaaIoT Development Platform

- Provisioning of Analytics
- Data processing systems
- Distributed IoT systems, and services which include smart home, connected car, fleet management,
- Operable across a broad variety of devices, and enterprise applications

Xively PaaS

- Capabilities of elastic and scalable server
- Management and routing of the messages in real time
- Provision of time series archiving of data
- Generation of conditional triggers
- Assignment of fine-grain permissions

Xively PaaS

- Provisioning of Many devices activation and management
- Developer-workbench and device-management console
- Permits RESTful API
- Multiple data formats, including JSON, XML and CSV

Xively PaaS

- Enables development using searchable libraries of devices as well as business CRM and ERP objects, clients for iOS, Android, JavaScript and more, and server libraries for programs development Ruby, Python, Java and more

Nimbits IoT Applications and Services PaaS

- Open source for the and offers distributed cloud (Section 6.4.2)
- A downloadable server platform on chips, Raspberry Pi, web server compatible with most J2EE servers (such as Jetty Server or Apache Tomcat,) and clouds using Linux, Amazon EC2, Google App Engine

IBM Internet of Things Foundation (IITF) Connected Devices Platform

- A fully managed, cloud-hosted service for devices registration, connectivity and control, rapid visualization
- Storage of data derived from the IoT
- Connectivity using the HTTP API.
- Node-RED visual editor for wiring the IoT application
- IITF features at various
- Stages in IBM conceptual framework (Figure 1.3)

IBM Bluemix is a cloud platform

- Access of the applications to the devices data
- Fast composition of analytics and visualisation dashboards

CISCO IoT (CIOT) Application development platform

- Application environment for number of languages
- Number of programming models and open-source development tools
- Provisioning the network connectivity, cyber and physical security
- Data analytics,

CISCO IOx

- Combines IoT application execution within the CISCO Fog applications
- IOx technology offers highly secure connectivity
- Fast and reliable application integration with sensors and cloud
- Near real time, automated and high volume of data

CISCO Fog

- Provides an ecosystem with ability to transform sensor data
- Performing the control functions within the distributed network nodes
- Enables development of applications such as site asset management, energy monitoring, and smart parking infrastructure and connected cities.

AWS IoT device SDK, IOT and services

- Capabilities of collect, store and analyse
- Data from multiple devices and development of applications

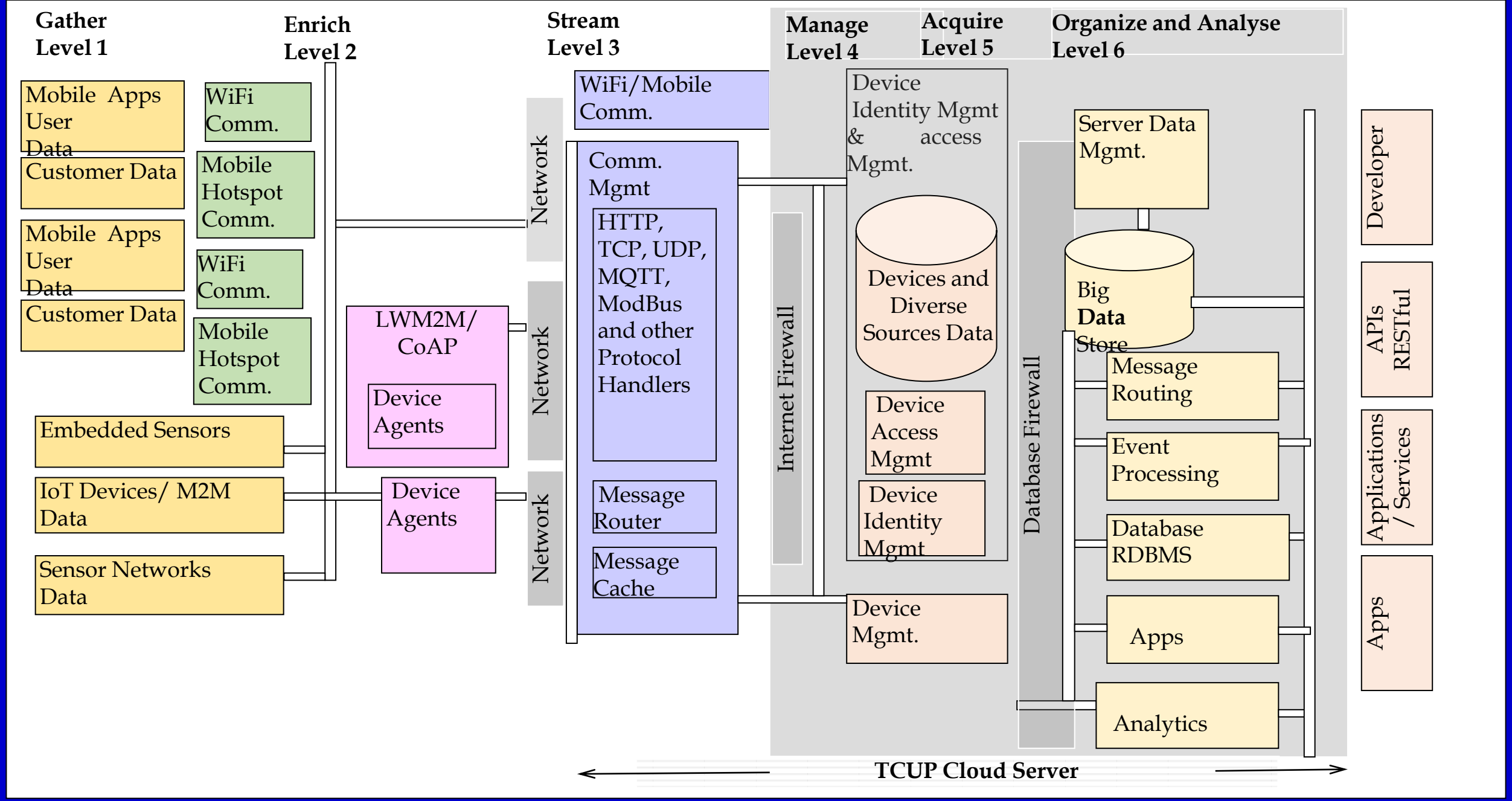

Fig. 12.1 Data flow diagram and architecture when using the TCUP Cloud Server for PaaS

TCS Connected Universe Platform

- A highly scalable platform for sensor integration, sensor data storage, analytics (real-time and Big Data processing) rich query capabilities
- PaaS for connectivity of applications and services and the IoT/M2M devices as well as customer, mobile apps and other data
- Data processing functions and usages of data analytics in business processes, intelligence and knowledge discovery

TCS Connected Universe Platform

- Enables the device management
- Sensors data acquisition and storage, and analytics
- Sensor Web Enablement (SWE) services which span sensor description, discovery, integration, sensor observation and measurement capture, storage, and query
- Deploy solutions across heterogeneous and interoperable devices, sensors, and applications

TCS Connected Universe Platform

- A domain agnostic multi-tenant platform
- Optimises the network traffic
- Gathers, stores and analyses data captured at the embedded sensors, events, and diversified sources

Summary

We learnt

- Oracle, Xively, Nimbits, CISCO, IBM, AWS, TCS PaaS
- Accelerate development of IoT applications and services

End of Lesson 3 on
Cloud Platform as a Service usages for accelerated Design and Deployment of IoTs