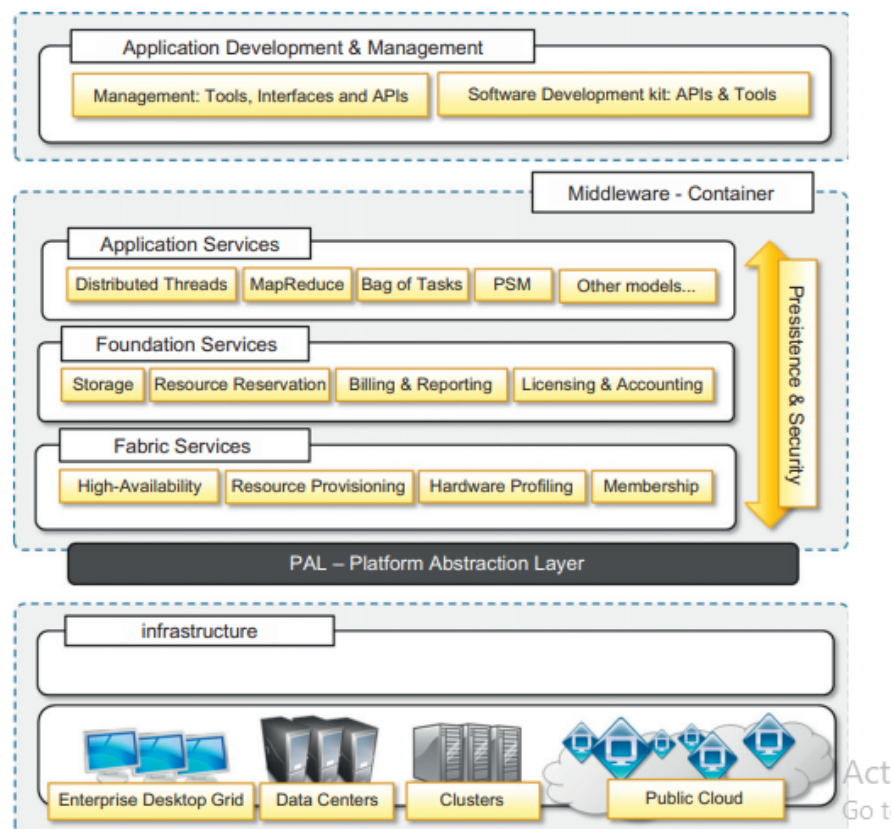


## Aneka Cloud Application Platform

Aneka is Manjrasoft Pty. Ltd.'s solution for developing, deploying, and managing cloud applications. Aneka consists of a scalable cloud middleware that can be deployed on top of heterogeneous computing resources.

### Framework overview

- Aneka is a software platform for developing cloud computing applications.
- It operates as a pure Platform as a Service (PaaS) solution for cloud computing.
- Aneka can be deployed on a variety of resources, including networks, multicore servers, datacenters, virtual cloud infrastructures, or a combination of these.
- Provides middleware for managing and scaling distributed applications.
- Offers an extensible set of APIs for application development on the cloud.



### Aneka Framework Components:

- Aneka uses the concept of a "container" as the basic building block of its middleware.

- A collection of interconnected containers forms the Aneka Cloud.
- Three classes of services within the container: Fabric Services, Foundation Services, and Execution Services.
- Fabric Services manage infrastructure, Foundation Services support Aneka Cloud, and Execution Services handle application management and execution.
- Aneka follows a service-oriented architecture where services are fundamental components.
- Services operate at the container level and provide features to developers, users, and administrators.
- Aneka allows the integration of new services or replacement of existing ones.
- The framework is extensible, enabling the support of different programming and execution models.

#### **Aneka Cloud Services:**

##### **Elasticity and Scaling:**

- Dynamic provisioning service supports the dynamic adjustment of infrastructure for applications.

##### **Runtime Management:**

- Involves container, services managing service membership, lookup, infrastructure maintenance, and profiling.

##### **Resource Management:**

- Aneka dynamically adds/removes resources based on application needs.
- Provides capabilities for reserving nodes for exclusive use by specific applications.

##### **Application Management:**

- Subset of services devoted to scheduling, execution, monitoring, and storage management for applications.

##### **User Management:**

- A multitenant environment with services managing users, groups, and permissions.

- Forms the security infrastructure and is crucial for accounting management.

**QoS/SLA Management and Billing:**

- Services coordinate to meter and bill resource usage by each application within the cloud environment.

### **Anatomy of the Aneka container**

The Aneka container constitutes the building blocks of Aneka Clouds and represents the runtime machinery available to services and applications. The container, the unit of deployment in Aneka Clouds, is a lightweight software layer designed to host services and interact with the underlying operating system and hardware