

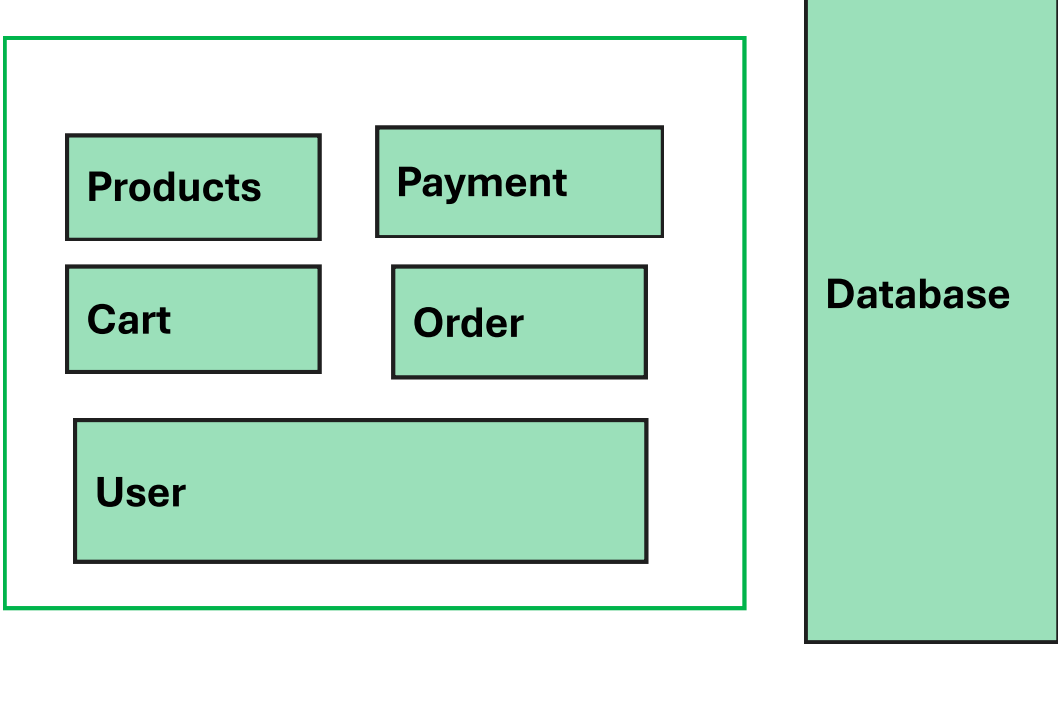
Monolithic Architecture

multiple components are combined in single large application

Single Code Base

Deployed in single bundle

Change in one service then redeploy whole app



Drawbacks of Monolithic Architecture

Agility : developer have to build everything for every minor change.

Unscalable

Fault tolerance : a bug in any module can potentially bring down the whole process.It impact availibilty of apps

Hybrid technologies : have barrier to adopt new technologies

Blocks continous development

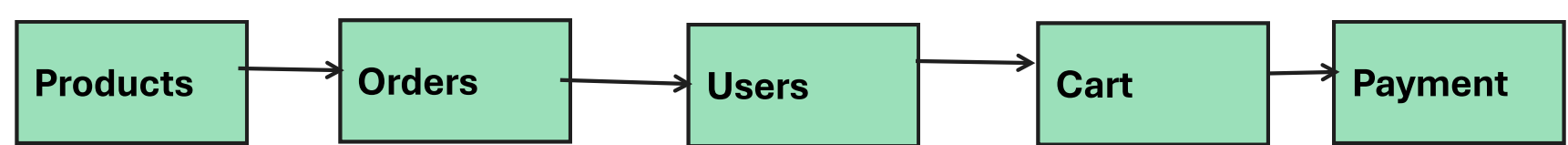
Slow development

Cubersome over time

Microservices it is service oriented architecture

Large app divide into small parts

Def1 : are small services that works together



Def2 : it is architectural style to develop single application as suite of small services

Each microservices run its process and communicate with others.

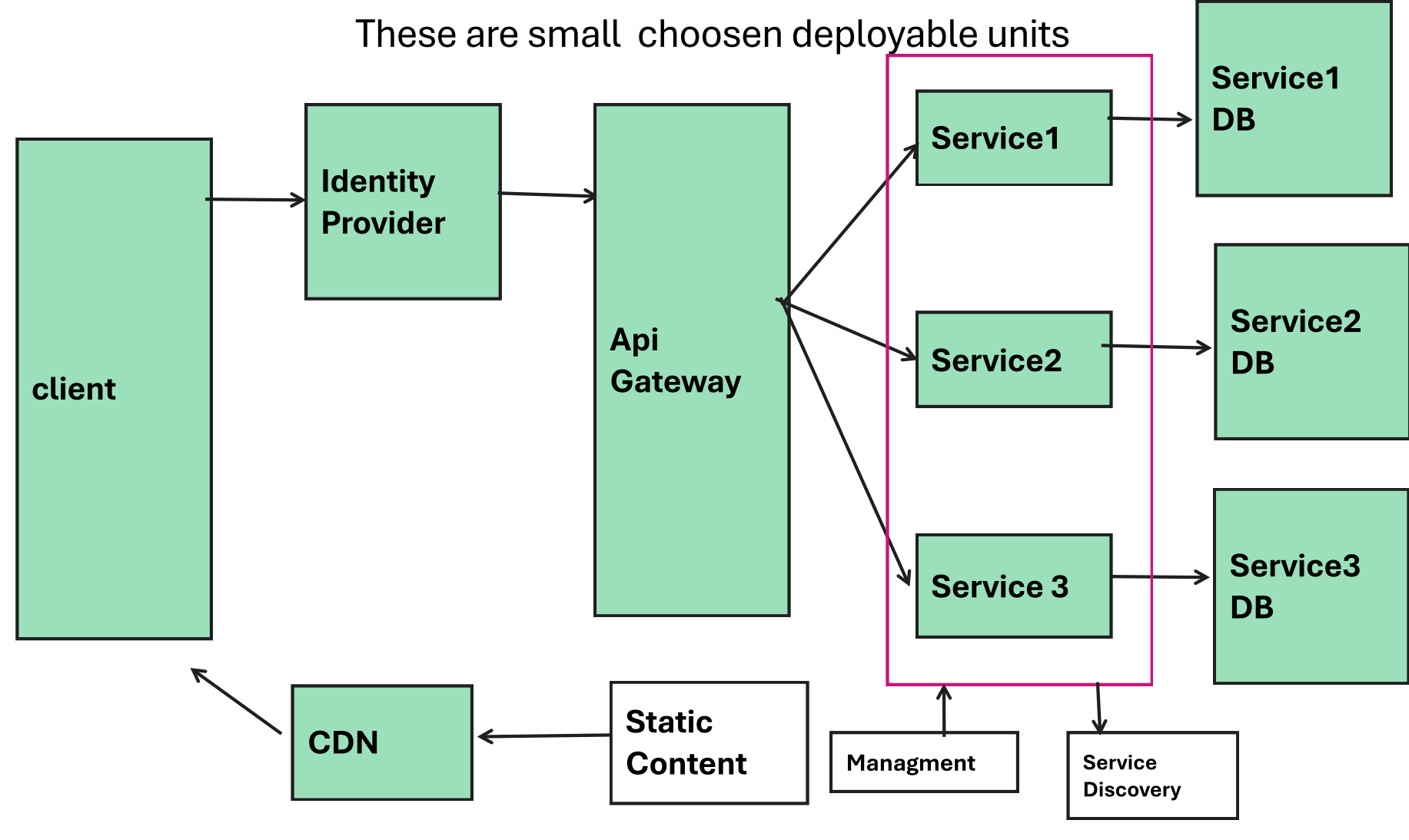
These services are built around business capabilities and independently developed by fully automated deployment machinery.

Note

The services must be cloud enabled

Services must be exposed by Rest

These are small choosen deployable units



Identity provider - authenticate client request by indentity provider and then communicate to api gateway

Api gateway handles client request

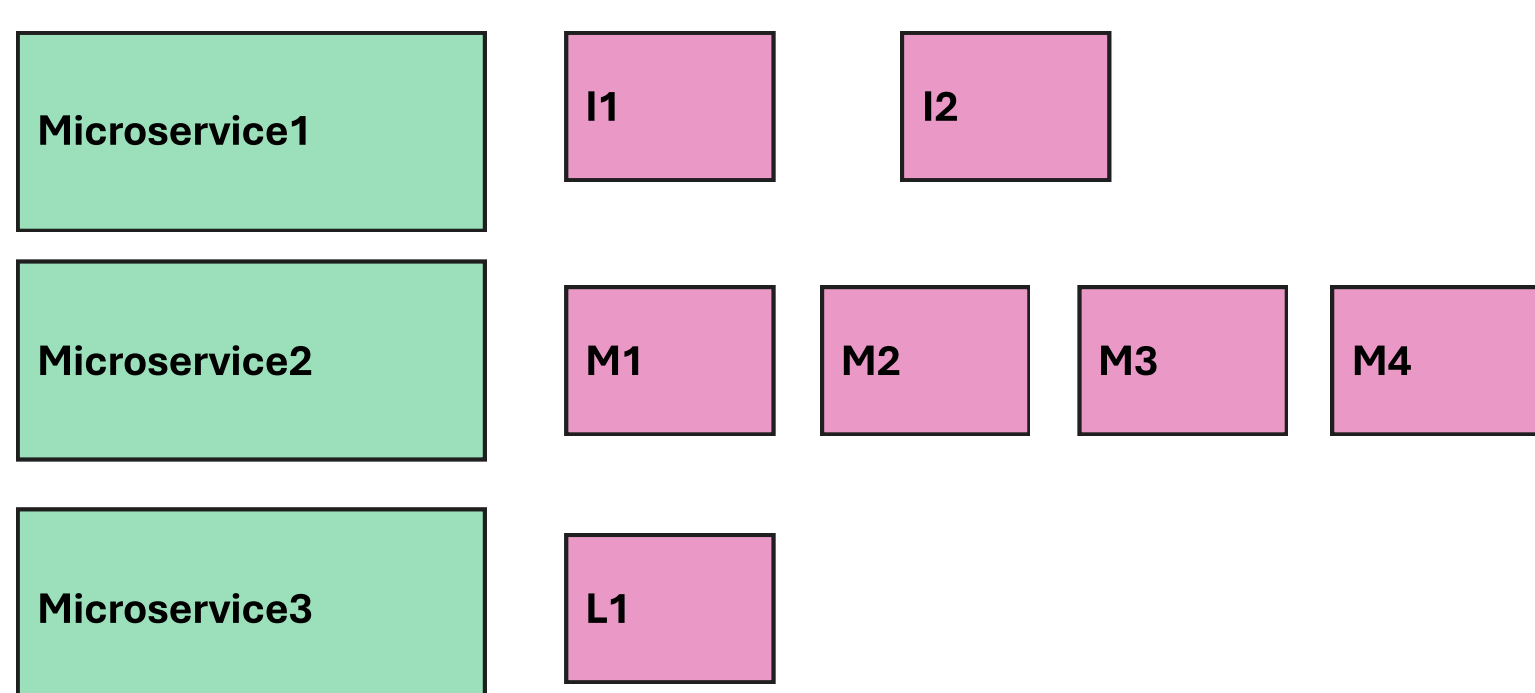
it is a software application between client and a set of backend services

it serve as reverse proxy to accept api request from client forwarding to appropriate services

Message format they communicate through two messages type as synchronous and async

Static content houses all the content of the system

Service discovery it act as guide to find the route of communication between microservices



CDN (Content Delivery Network) delivers content to the distributed end users

Microservices Priciples

Single Responsibility

Loose coupling

Fault tolerance

Infrastructure automation

Deployment

Microservices Advantages

- Easily scalable
- Smaller and fast deployment
- Reduce downtime for single module failure
- Hybrid technologies
- Easy understanding
- Easily upgrade and modify
- Faster release cycle

Disadvantage Of Microservices

- Difficult to manage large no of services
- Bound context
- Configuration management
- Complex testing over distributed environment
- Need to solve problem of load balancing and network latency
- visibility is a challenge