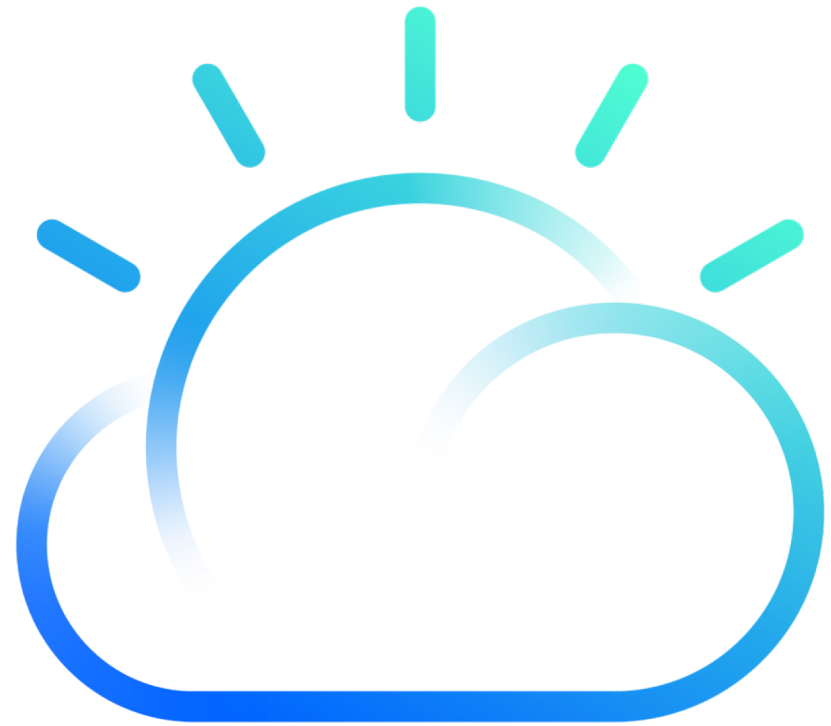


Containers and IBM Db2 Developer Community Edition

Kay Groski
groski@us.ibm.com

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1. The Container Revolution

2.The IT Container Revolution

3.Db2 Common SQL Engine

4.Db2 Developer Community Edition

The first container revolution



The first container revolution



Containers need to be managed



No assembly required

Malcolm McLean
Intermodal Shipping Containers



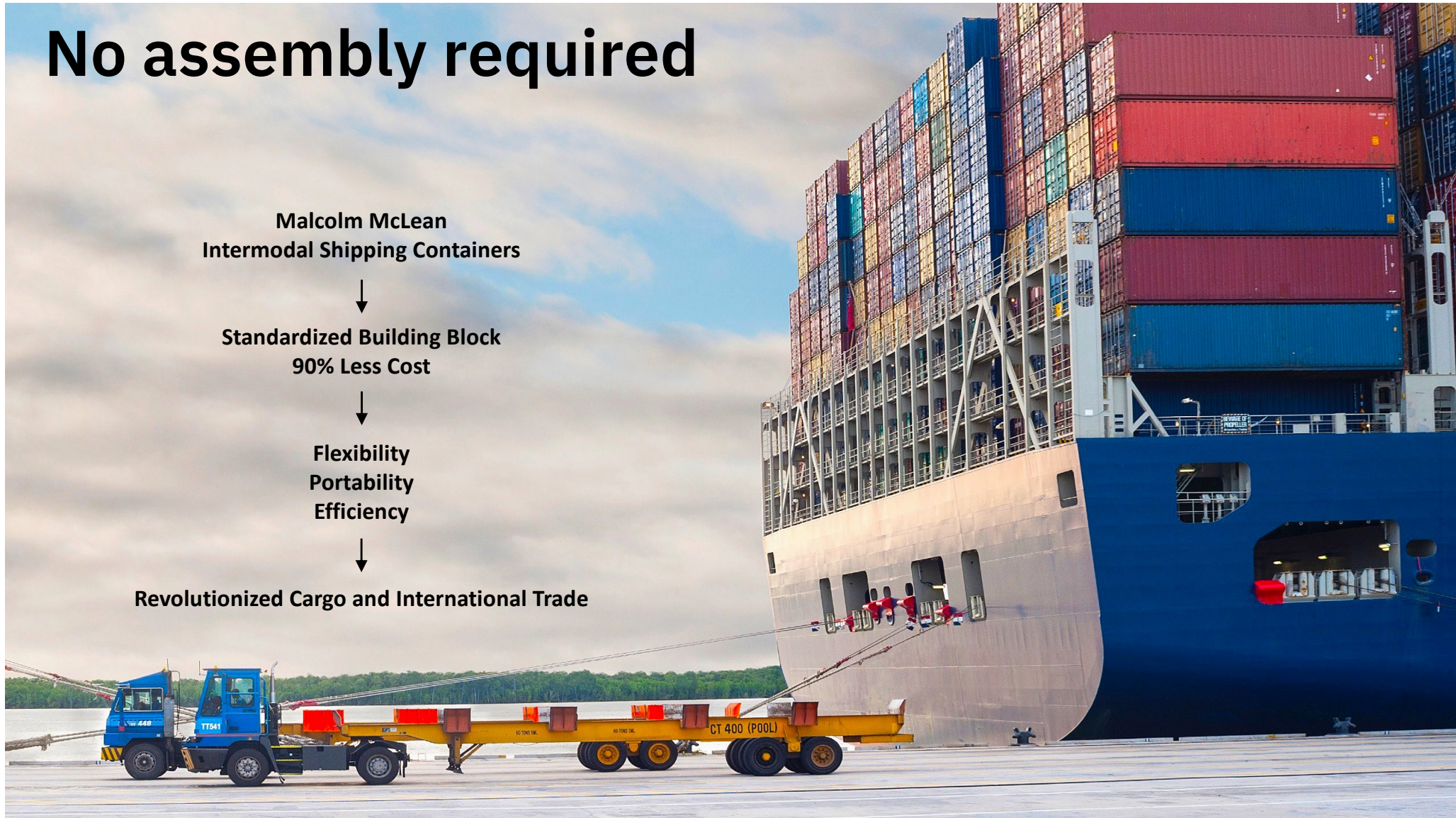
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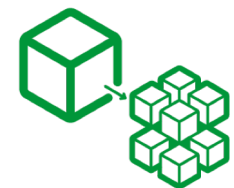
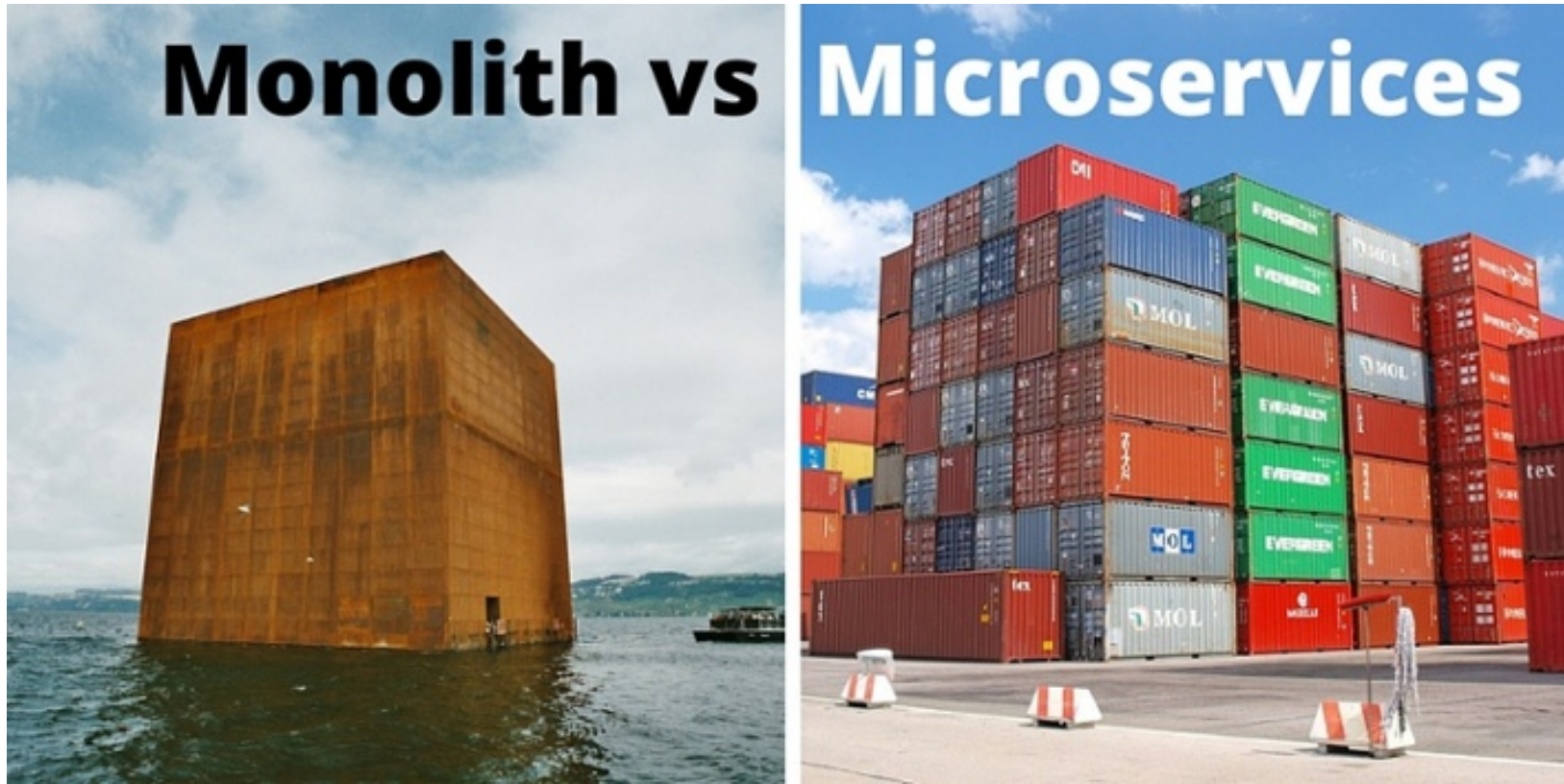
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3.Db2 Common SQL Engine

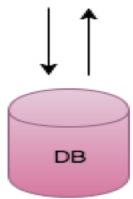
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Microservices

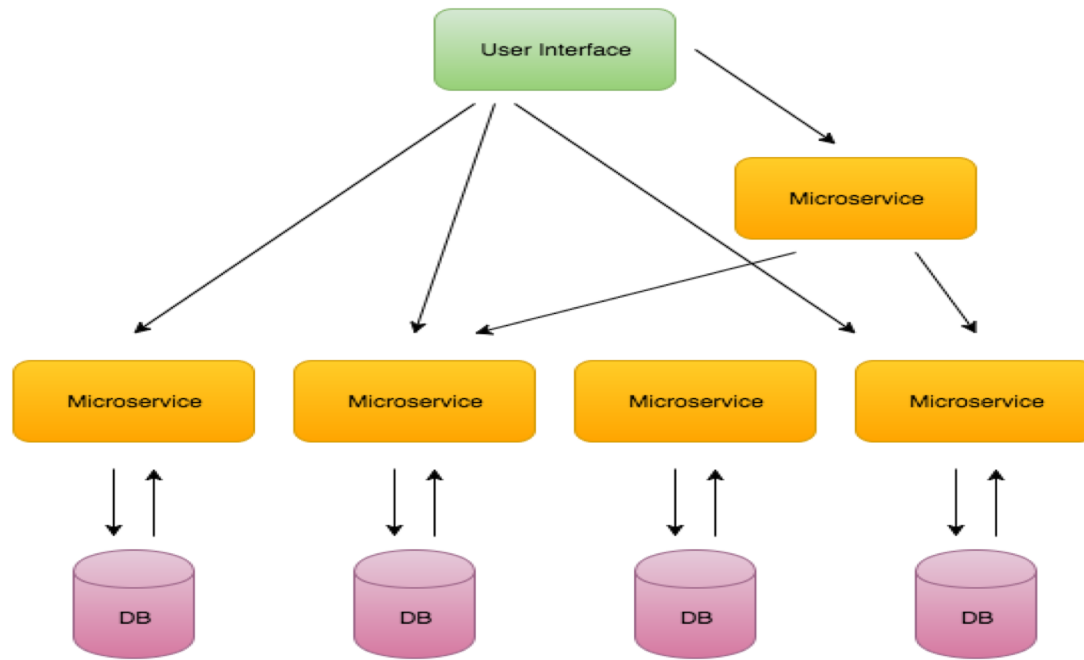


Microservices

Monolithic Architecture

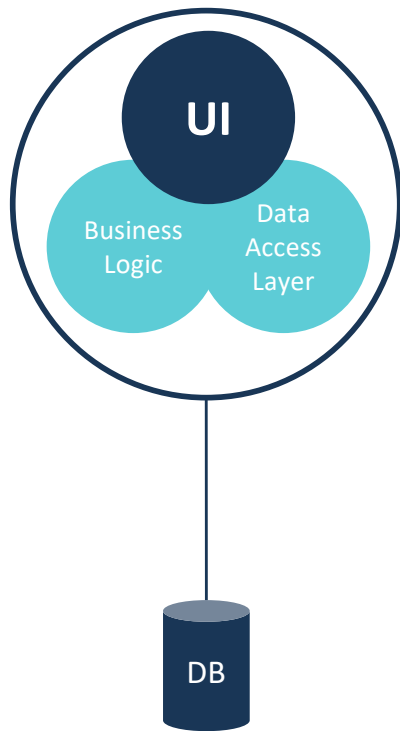


Microservices Architecture

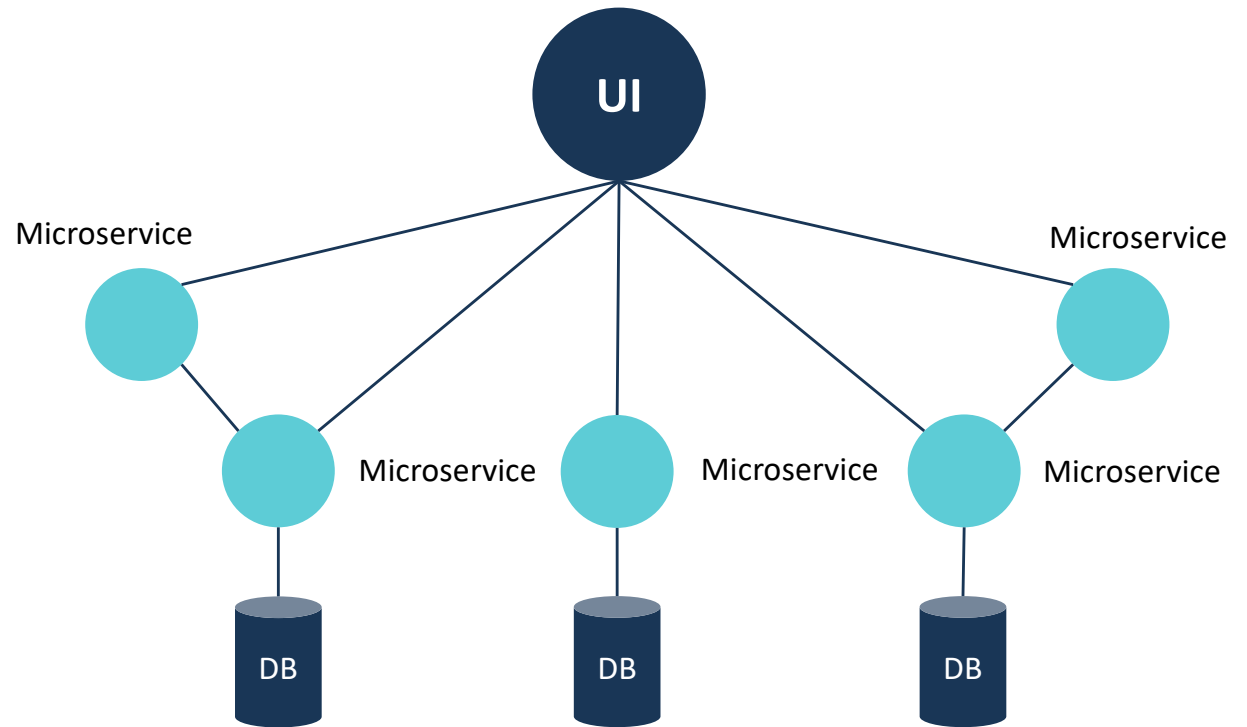


Cloud Native Apps

Monolithic vs Microservices Architectures

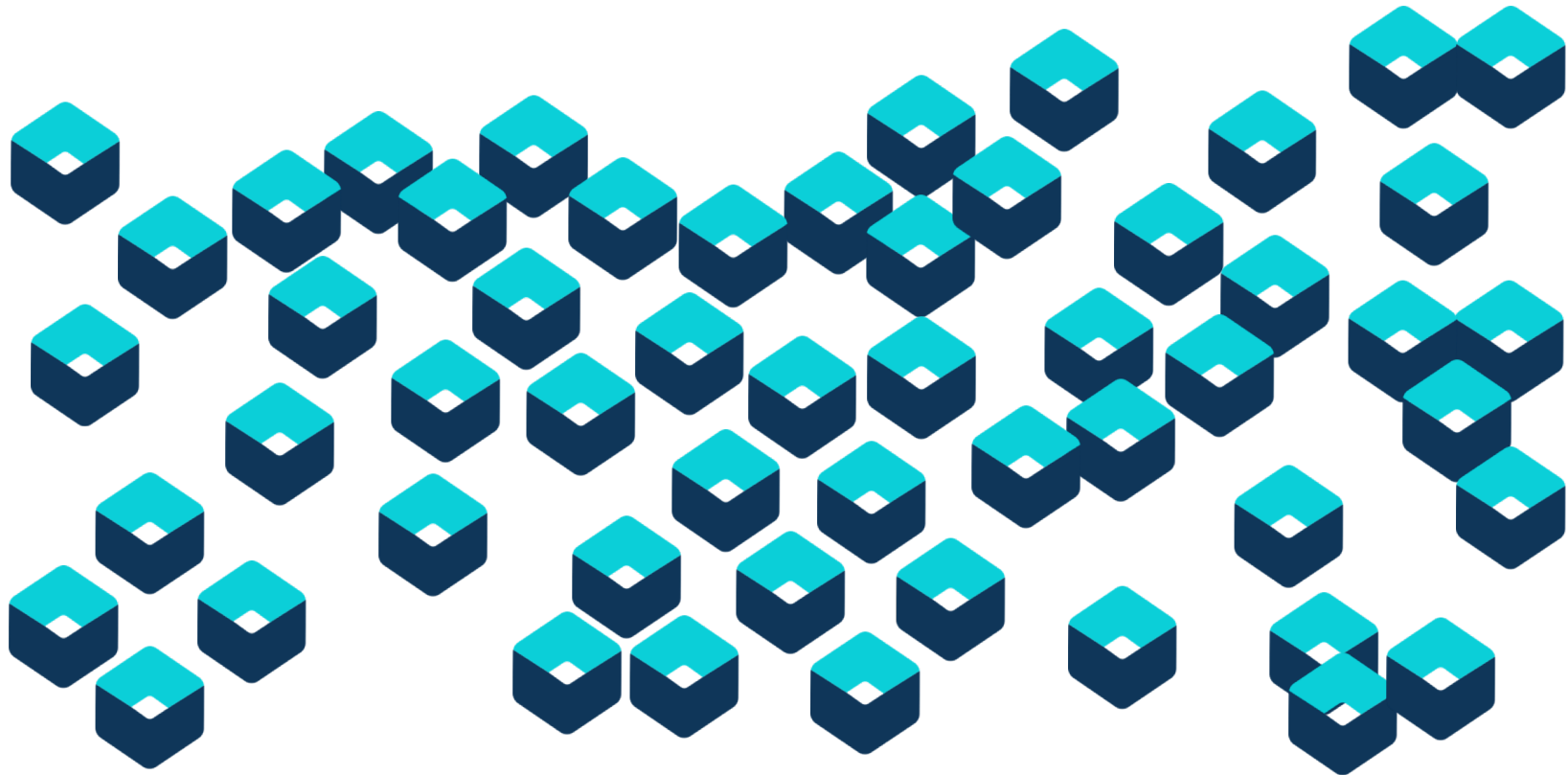


Monolithic Architecture



Microservices Architecture

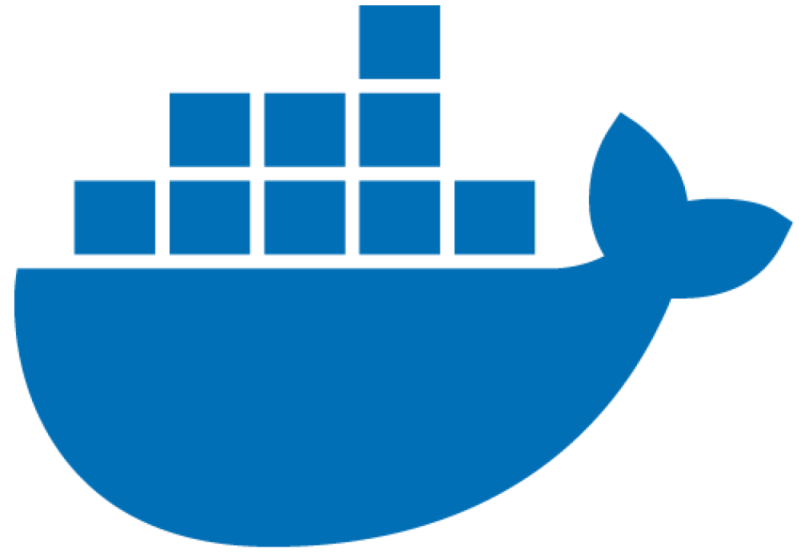
Containers are revolutionizing IT
However, they need automation and orchestration



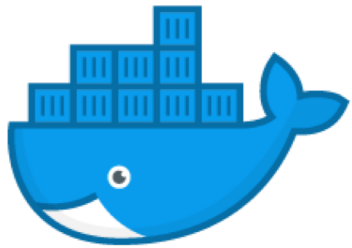
Kubernetes – (Κυβερνήτης - Captain in Greek)

Manage containerized workloads and services with Kubernetes



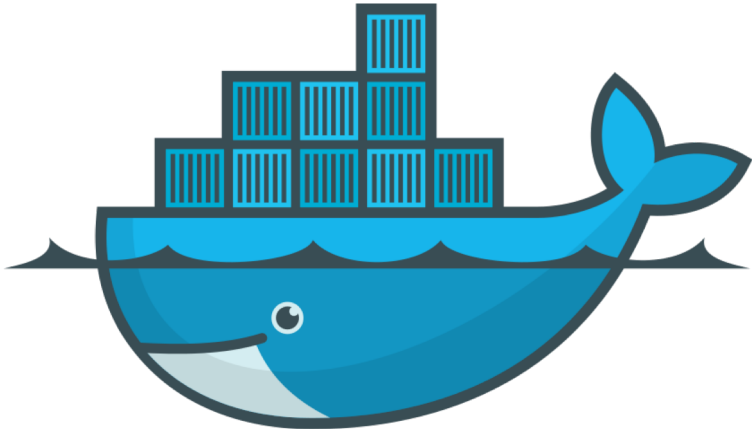
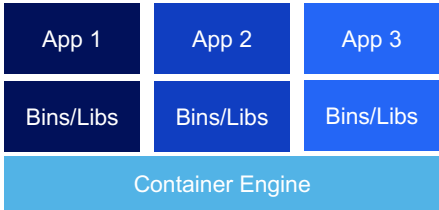


docker



docker

The second container revolution

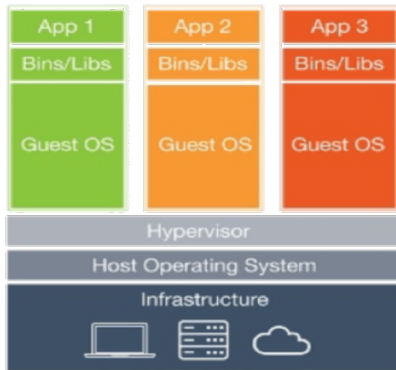


vmware®

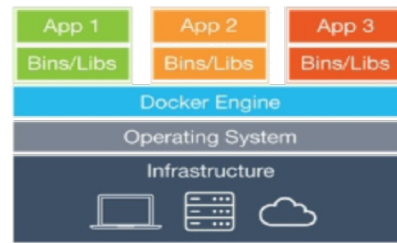


Containers can be 2 – 3 times more resource efficient than VMware

Docker Containers vs Vmware



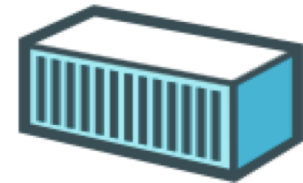
vmware



docker



Build



Ship



Run

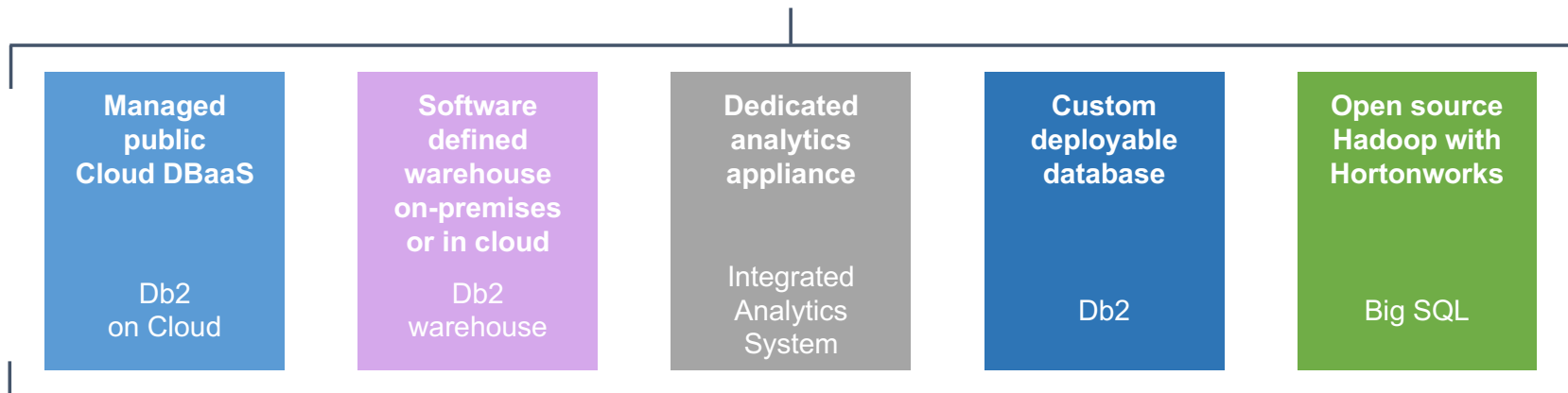
Containers can be 2 – 3 times more resource efficient than VMware

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Operational Database

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Platform Support	Managed Database on IBM Cloud	Hosted Database on IBM Cloud	MacOS and Linux (Docker)	Linux (x64, p, z), AIX, Windows x64, Solaris 64bit
Memory Instance	N/A	1TB	16GB	Unlimited
Database Size	100MB	9.5TB	100GB	Unlimited
Length of Trial	Unlimited	N/A	Unlimited	90 days

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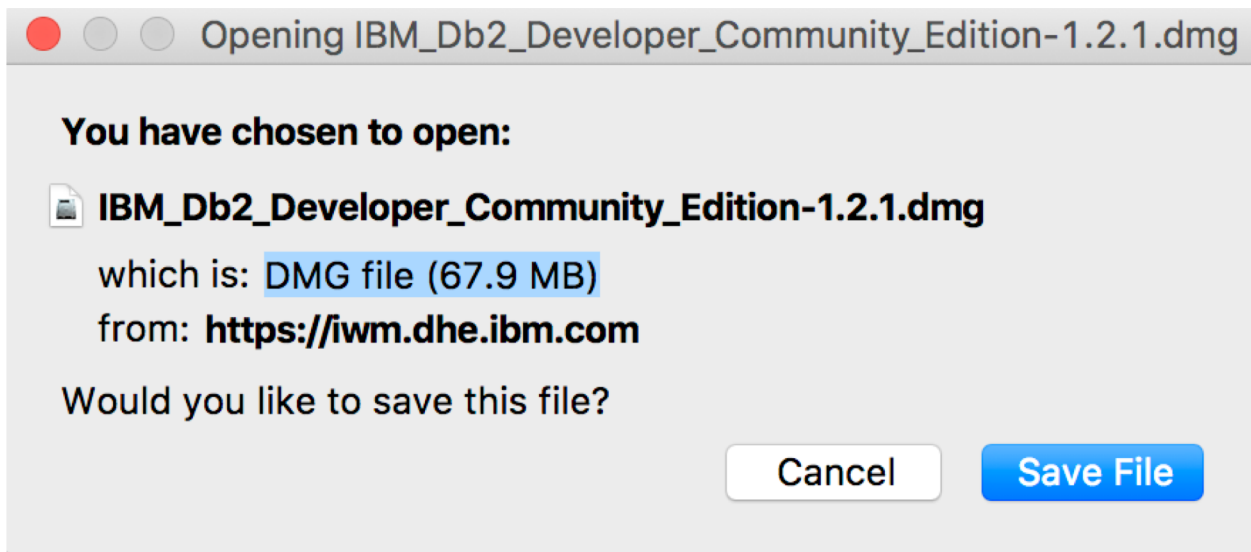
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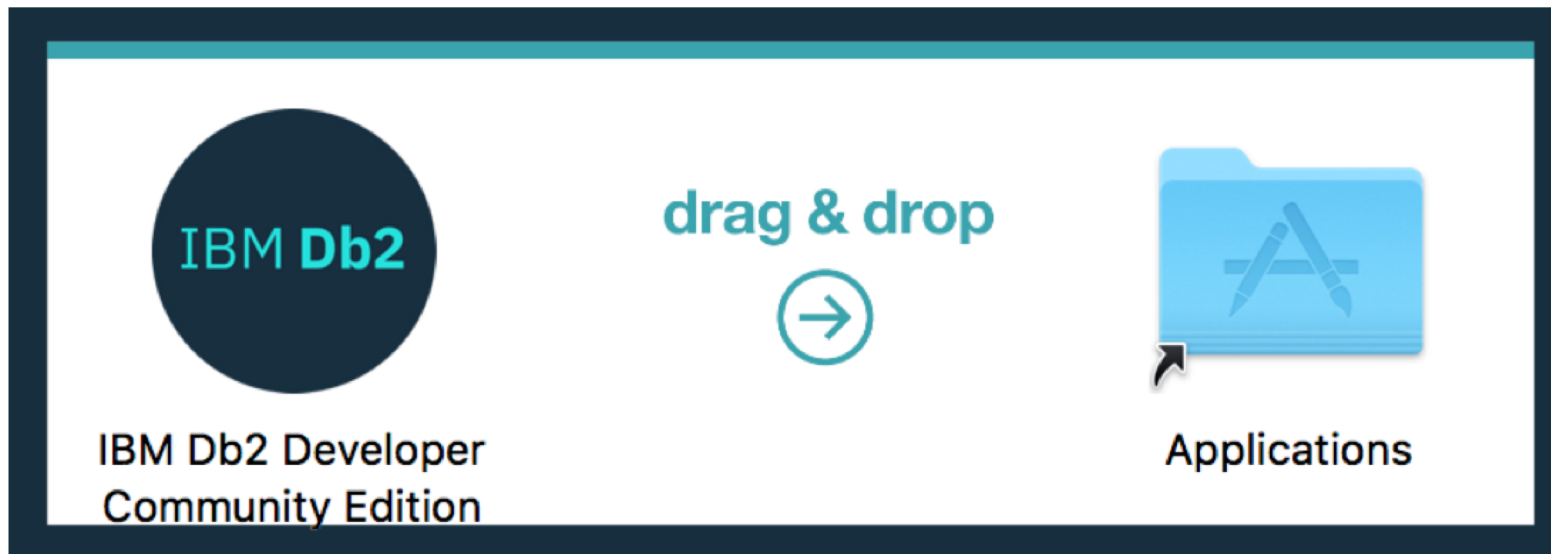
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IBM Db2

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Application

Development

Data Studio (4.1.3)

Database Server ⓘ

DB2 Developer-C Edition (11.1.3.3) and Data Server Manager (2.1.5)

Required disk space:

3.79 GB

Advanced Settings ⓘ

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Application

Development

Data Studio (4.1.3)

Database Server i

DB2 Developer-C Edition (11.1.3.3) and
Data Server Manager (2.1.5)

Required disk space:

6.19 GB

Advanced Settings i

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IBM Db2 Developer Community Edition

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IBM Data Server Manager Credentials

DSM Administrator Username: _____ DSM Administrator Password: _____ Confirm DSM Administrator Passwo _____

Database Server Credentials

Database Server Username: ⓘ
db2inst1 _____ Db2 Instance Password: _____ Confirm Db2 Instance Password: _____

- Create SAMPLE database for transactional workloads**
Used primarily for write, update, and delete operations.
- Create SAMPLE database for analytical workloads**
Used primarily for querying or warehousing.

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IBM Data Server Manager Credentials

DSM Administrator Username:
db2inst1

DSM Administrator Password:
●●●●●●



Confirm DSM Administrator Password:
●●●●●●



Database Server Credentials

Database Server Username: ⓘ
db2inst1

Db2 Instance Password:
●●●●●●



Confirm Db2 Instance Password:
●●●●●●

- Create SAMPLE database for transactional workloads**
Used primarily for write, update, and delete operations.
- Create SAMPLE database for analytical workloads**
Used primarily for querying or warehousing.

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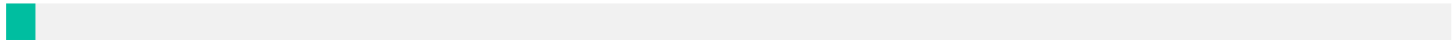
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Welcome to Docker for Mac!

We are whaly happy to have you.

Next



Docker needs privileged access.

Docker for Mac needs privileged access to install its networking components and links to the Docker apps.

You will be asked for your password.

Exit

OK

● Docker is now up and running!

Open your favorite terminal and start typing Docker commands:

```
$ docke
```



Click on the whale in your menu bar to access preferences, repositories, swarms, documentation and more.



Log in with your Docker ID:

Log In

If you don't have a Docker ID yet, you can create one on cloud.docker.com

We send usage statistics, check your [privacy settings](#).

● Docker is starting...

Hang on for a moment.

```
$ docker images
```



Click on the whale in your menu bar to access preferences, repositories, swarms, documentation and more.



Log in with your Docker ID:

Log In

If you don't have a Docker ID yet, you can create one on cloud.docker.com

We send usage statistics, check your [privacy settings](#).

● Docker is now up and running!

Open your favorite terminal and start typing Docker commands:

```
$ docker version
```



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Currently logged in as:


kminator

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License Settings Advanced Credentials Install Complete

Installation complete




A sample database has been created - database name is **SAMPLE**.
The default Db2 instance is **db2inst1**

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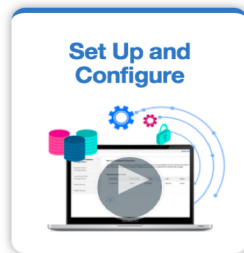
Monitor
Monitor your database activities and administer your databases in app



Create
Develop new applications via Data Server Manager or Data Studio

[Get Started](#)

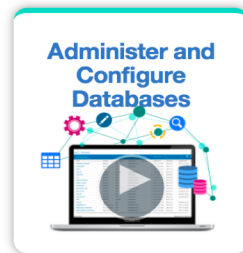
Welcome to Data Server Manager



- Manage users and privileges
- Set up a repository database
- Add database connections



- Add database connections
- Edit monitoring profiles
- Monitor database



- Add database connections
- Manage databases
- Create and manage database objects
- Track changes



- Add database connections
- Edit and run SQL statements
- Tune SQL statements
- Discover object dependencies





How to access Db2 Server directly from your terminal

You can access db2server directly from the containers by following these steps.

Step 1: Open your terminal

[Open Terminal](#)

Step 2: Enter this command into your terminal

```
docker exec -it db2server bash -c "su - db2inst1"
```

- License
- Settings
- Advanced
- Credentials
- Install
- Complete

Installation complete



All database data will be stored in **/Users/groski@us.ibm.com/Library/Application Support/ibm-db2-developerc/DB2/**.

A sample database has been created - database name is **SAMPLE**.

The default Db2 instance is **db2inst1**

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