Adding Multiple Projects and Images to Docker Compose

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PRINCIPAL ARCHITECT

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Overview

Docker Compose foundation

DNS within Docker Compose

Review overall solution

Add Seq and smtp4dev images
- Port conflict resolution

Add UI with SSL and its own DNS
- Internal networking

Add API as a path within UI

```yaml
version: '3.7'

services:
  reverseproxy:
    build:
      context: .
      dockerfile: nginx/nginx.Dockerfile
    depends_on:
      - globomantics.identityserver
    ports:
      - "44395:443"

  globomantics.identityserver:
    build:
      context: .
      dockerfile: Globomantics.IdentityServer/Dockerfile
    environment:
      - ASPNETCORE_URLS=http://*:5000
    ports:
      - "5020:5000"
```
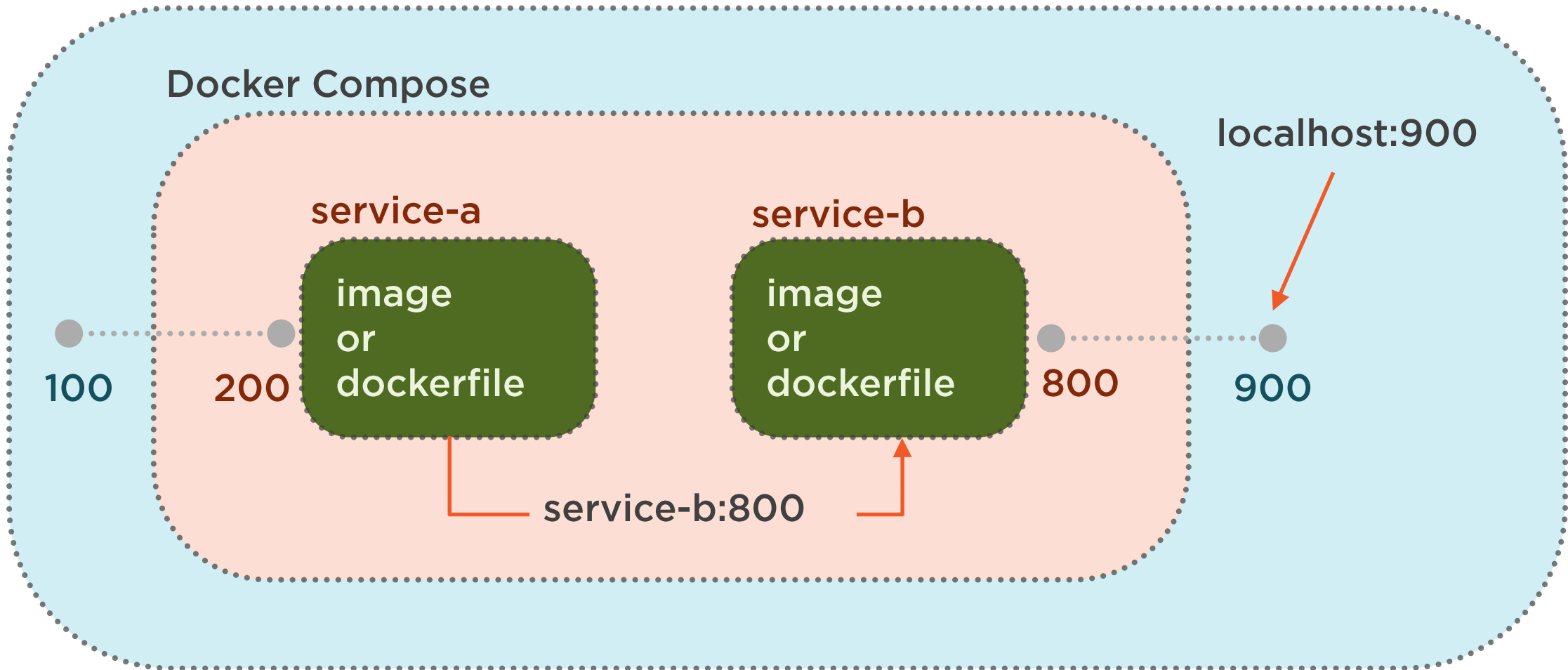
◄ Defines a set of one or more services
◄ Each service has a name

◄ Container to be run is defined by a Dockerfile or image

◄ Startup order can be controlled

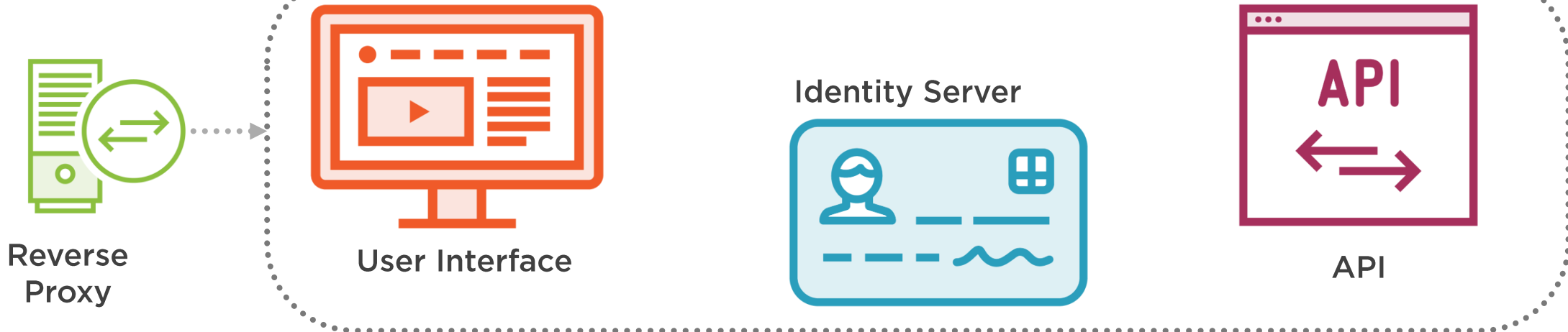◄ Host port : container port

◄ Environment variables can be defined

DNS within Docker Compose

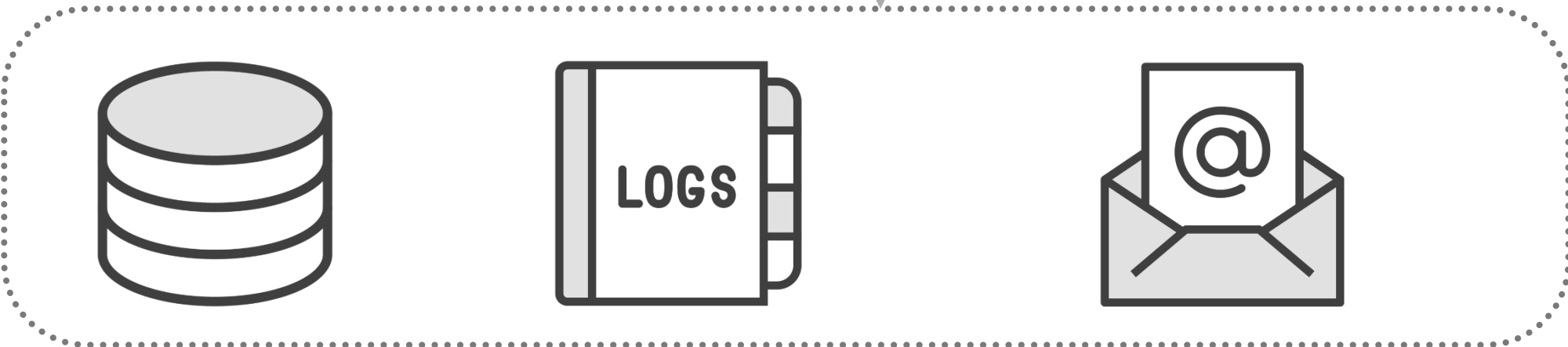**Workstation / Host**

Docker Compose

localhost:900

service-a

image
or
dockerfile

service-b

image
or
dockerfile

100

200

800

900

service-b:800

Solution Overview

Applications

Reverse Proxy

User Interface

Identity Server

API

Demo

Add seq as a service

- Resolve port conflicts

Add smtp4dev as a service

- Remove localhost container
- Update identity server to bypass user database

Verify each service

Demo

Add UI: www-local.globomantics.com

- SSL

- Login with IdentityServer

Good practice:

- Create SSL certificate, trust it, add HOSTS entry

Update nginx setup

- Dockerfile

- Config file

Add networking and update OIDC configuration to enable login

Demo

Add API:

- www-local.globomantics.com/api

Add Docker Support / Dockerfile

Update to run under virtual path

- Tweak Swashbuckle code

Add to Docker Compose

Update nginx config file

- New path on same server

Update some URLs

Summary

WOW!!!

Everything except database is in our Docker Compose file!

You've learned some great techniques

- Resolving port conflicts
- Removing containers
- Network aliases in compose
- Adding trusted root certificates to containers
- Run multiple web apps with single reverse proxy

Up Next:
Adding a Database to Docker Compose