[Day 01]

Module 01 - Docker 소개

?컨테이너 소개

-Docker 컨테이너의 특징

-Docker와 컨테이너

?Docker와 가상 머신

?Docker 히스토리

?Docker 아키텍처

- Namespace Isolation

- Control Group

- Application Container와 OS Container

- Docker Image

- Docker versus LXC

- Surrounding Technologies

?Docker 구성 요소

?Microservices

- Microservices 이해

- Microservice Architecture Benefits

- Deriving Business Value

- Designing Microservice Systems

**Module 02 - Docker 설치하기**

?표준 리눅스 시스템에 Docker 구성하기

?기타 운영체제에 Docker 구성

?컨테이너 스타일 리눅스 시스템에 Docker 구성하기

**Module 03 - 컨테이너 레포지토리**

?Docker registry, repository and index

?Docker Hub

- Organization account and teams

- Automated builds

?Docker Registry

- Docker Registry 소개

- Docker Registry 구성

?Docker image namespace 이해하기

?이미지 검색

?레지스트리에서 이미지풀링하기

?이미지 저장과 로드

[Day 02]

**Module 04 - 컨테이너 이미지 실행**

?이미지와 컨테이너 이해

?Docker 명령어

?RUNNING CONTAINER IMAGES INTERACTIVELY

?RUNNING CONTAINERIZED SERVICES

?Dockerfile

?Overriding default commands from Dockerfile

?환경 변수

**Module 05 - 컨테이너 관리**

?Runtime constraints on resources

- Memory

- Processors

- Updating constraints on a running container

?Container exit codes and restart policies

?Docker Machine

?Docker 모니터링

[Day 03]

**Module 06 - Docker 스토리지**

?MANAGING STORAGE FOR A CONTAINER

?Docker volumes

?DOCKER 호스트에 대한 스토리지 전략

**Module 07 - Docker 네트워킹**

?Docker networking

- Docker network 아키텍처

- No networking

- Host network

- Bridged network

?사용자 정의 네트워크 생성하기

- Running a container in a network

- Creating multi-host networking

- Exposing and mapping ports

- Open vSwitch

?Linking containers

?Docker container networking

- The docker\_gwbridge network

- An overlay network with Docker Engine

- An overlay network with an external key-value store

**Module 08 - Docker Compose**

?Docker Compose 설치

?Docker Compose YAML file

?The Docker Compose commands

?Docker Compose - examples

[Day 04]

**Module 09 - Docker Swarm**

?Clustering tools and container managers

?Swarm 특징

?Swarm v1, v2 architecture

?A discovery service

?Token

?Swarm mode

?Administer a Swarm Cluster

- Cluster management

- Nodes operations

- Demotion and promotion

- Tagging nodes

- Remove nodes

- Swarm health

- Backing up the cluster configuration

?Deploy Applications on Swarm

- Deploy a replicated nginx

- Connecting services: A WordPress example

- Introducing Docker stacks

?Scaling Up Your Platform

?Exploring Additional Features of Swarm

- Libnetwork

- Encryption and routing mesh

- MacVLAN

- Libkv

?Securing a Swarm Cluster

?Swarm and the Cloud

[Day 05]

Module 10 - Kubernete

?Kubernetes Features

?Kubernetes architecture

- Kubernetes master

- Kubernetes node

?Deploying Kubernetes

- Building datastore

- Creating an overlay network

- Configuring master

- Configuring nodes

- Run container in Kubernetes

?Walking through Kubernetes Concepts

- An overview of Kubernetes control

- Working with pods

- Working with a replication controller

- Working with services

- Working with volumes

- Working with secrets

- Working with names, namespaces

- Working with labels and selectors

?Playing with Containers

- Scaling your containers

- Updating live containers

- Forwarding container ports

- Working with configuration files

?Building a High Availability Cluster

- Clustering etcd

- Building multiple masters

?Building a Continuous Delivery Pipeline

- Moving monolithic to microservices

- Integrating with Jenkins

- Setting up the Continuous Delivery pipeline

?Advanced Cluster Administration

- Advanced settings in kubeconfig

- Setting resource in nodes

- Playing with WebUI

?Logging and Monitoring

- Collecting application logs

- Working with Kubernetes logs

- Working with etcd log

- Monitoring master and node

Module 11 - 클라우드와 Docker

?퍼블릭 클라우드에서 Docker 실행

?오픈스택에서 Docker 구성