# Contiv

http://blogs.cisco.com/datacenter/project-contiv

There are numerous projects and tools available in the market place in order for IT to set up the infrastructure

Admins need to be able to **specify the infrastructure operational policies around network, storage, security, compute** for the containerized applications in an automated way

There is a need for those policies be implemented across infrastructure consistently.

If no such mechanism exists, we could have resource contention between production and development applications or security violations between different applications/tenants and overall unpredictable application performance.

We believe there has to be better way for containerized applications to run in a shared infrastructure.

Maps between application intent and operational policies

Infra

Contiv

Defines infra operational policies

Docker compose

Declarative

Application intent

Project Contiv is an **open source project** that defines infrastructure operational policies for container-based application deployment

Docker compose, allows for declarative specification for an application’s microservices composition

Contiv compliments Docker compose for e.g. by specifying the infrastructure operational policies for network, storage and compute – it maps between intent and policy

### Policies

* Security policies for applications for inbound/outbound as well as within application tiers
* Network services policies- integration of L4-L7 services (Load balancers, firewall, encryption, etc.)
* Analytics and diagnostics policies
* Physical infrastructure policies around bandwidth limit/guarantee per container, latency requirements, etc.
* IP allocation management  (IPAM) policies
* Storage policies around persistence storage, volume allocation, snapshotting etc.
* Compute policies around performance requirements/off-load (to NIC or Network) and SLA etc.
* Corporate and government compliance policies

Open source community minded project  <http://www.contiv.io>

Currently provides for

* Networking – plug in for multitenant networking and security – and provided integration for physical network for non-container based workloads. Contiv Networking implements the remote driver and IPAM APIs available in Docker 1.9 onwards.
* Storage - plugin is a docker volume plugin that provides multi-tenant, persistent, distributed storage with intent based consumption using ceph underneath