# The Revival of `depends_on:` `condition:` in Compose

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# Service Dependencies

Services (by design) depend on one another in complex ways.

Containers know very little about the nature or state of the services they run, so...

Supporting these dependencies is tricky.

# Service Health

The nature of service dependencies is limited by how they interact: **networking.**

We can define **health checks** based on network responsivity.

These are commands that check if a service is responding on an endpoint.

# HEALTHCHECK in Dockerfiles

Health checks can be baked into images using the Dockerfile HEALTHCHECK directive:

```
# Define a health check for a container
HEALTHCHECK --interval=10s --timeout=5s \
    CMD curl -f http://localhost/ || exit 1
```

# Health checks in Compose

## Health checks can also be defined in Compose YAML:

```
# Define a health check for a service
services:
  my_internal_service:
    healthcheck:
      test: ["CMD", "curl", "-f", "http://localhost/"]
      interval: 10s
      timeout: 5s
```

How do we use health checks to support service dependencies?

# depends_on

Compose allows you to control service startup order using the depends_on directive:

```
# Define service dependencies
services:
  my_frontend_service:
    depends_on:
      - my_internal_service
```

# depends_on: condition

In v2 Compose files, depends_on supported an additional form that waited for dependencies to be healthy:

```yaml
# Define service dependencies
services:
  my_frontend_service:
    depends_on:
      my_internal_service:
        condition: service_healthy
```

# depends_on: condition

Unfortunately, the `condition` form of `depends_on` was not supported in v3 Compose files.

Other solutions existed (and still do), but it was nice to have this functionality built-in.

# Compose Specification

In April 2020, Docker announced the community-driven Compose Spec:
compose-spec.io
github.com/compose-spec

That same month, adding `depends_on:` `condition` was requested.

In May 2020, it was reinstated.

# No More File Versions

With the Compose Spec, there are no more v2/v3 Compose file versions — there's just the spec.

Supported by Docker Compose 1.27.0+

# Demo

# Thanks for your time!

Slides available at
[havoc.io/talks/depends-on-condition](havoc.io/talks/depends-on-condition)

Examples available at
[github.com/havoc-io/depends-on-condition](github.com/havoc-io/depends-on-condition)

Ping me with questions or feedback

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