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Application Manifests

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Topics

- **Introduction to Application Manifests**
- Application Manifest Features

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Application Manifest

- A client-side file that describes the application deployment options
  - Provides repeatability when pushing applications
  - Same options as `cf push` command
- Default name: `manifest.yml`
  - YAML format
  - Human friendly data serialization standard
  - Supported by many programming languages
  - Less verbose than XML, similar to JSON
  - http://www.yaml.org

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Using an Application Manifest with cf push

- cf push automatically detects the application manifest in the current directory
  - Expects a file named manifest.yml
- Can override the manifest name or location with -f option
  - cf push -f dev-manifest.yml
- Ignore existing manifests with --no-manifest option
- No manifest found?
  - cf push will use command line arguments
  - Default values for other deployment options

http://docs.pivotal.io/pivotalcf/devguide/deploy-apps/manifest.html

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YAML Format

- Three dashes
  - Indicate start of document
- Indent with spaces, not tabs!
  - Determines hierarchy
  - Each indent 2 spaces
  - “-” defines “group”
- Syntax: **`property: value`** pairs
- # starts a one line comment

```yaml
---
applications:
- name: nodetestdh01
  memory: 64M
  instances: 2
  host: crn    # comment
  domain: cfapps.io
  # comment

- name: nextapp    # group 2
  memory: 256M
  ...
```

See http://www.yaml.org/spec/1.2/spec.html

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manifest.yml Example

- applications: can describe one or more applications
- name: of the app – used in commands
- command: command used to start the app (optional)
- memory: app memory limit (1 GB default)
- instances: app instances
- host: subdomain of the URL
- domain: last part of the URL

```
---
applications:
- name: cf-node-demo
  command: node app.js
  memory: 128M
  instances: 1
  host: myapp
  domain: cfapps.io
```

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cf push Parameter Precedence

1) Command line arguments (always take precedence)
2) Application manifest values (if not in the command line)
3) The last value the server used
4) Default server values

```
cf push -m 256M
cf push -i 2
```

```
---
applications:
- name: myapp
  host: myappa
  domain: cfapps.io
  instances: 3
```

Question: If an app has been pushed two times using the commands and manifest above, what will be the resulting:

a) application name
b) URL to the application
c) number of instances
d) application memory

a) myapp b) http://myappa.cfapps.io c) 2 (from the command line) d) 256MB (the last server value)

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Why Include Multiple Applications?

- If you specify the application name in the command line
  - **`cf push <appname>`**
- The parameters from the application manifest for that name will be used
- Only one application will be pushed
- Useful for testing different manifest settings
- If you don't pass a name in the command line, all apps are pushed (must specify paths)

```
---
applications:
- name: applowmemory
  memory: 64M
  host: crn-low
  path: lowmem/applow.jar

- name: apphighmemory
  memory: 256M
  host: crn-high
  path: highmem/apphigh.jar
  ...
```

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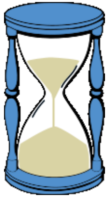
Specifying Timeouts for Large Apps



- Can use the manifest to specify timeouts for starting, staging or startup
  - timeout: default is 60 seconds for startup, maximum is 180 seconds
  - Use environment variables for server staging and startup timeouts (in minutes)

```
---
applications:
- name: nodetestdh01
  memory: 64M
  instances: 2
  host: crn
  domain: cfapps.io
  timeout: 120  # 120 secs
  env:
    # Set to 20 and 10 mins
    CF_STAGING_TIMEOUT: 20
    CF_STARTUP_TIMEOUT: 10
```

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Note on Spaces

- A space cannot be specified in a manifest file
  - Set first: cf target -s development
- To determine the current space
  - Just run: cf target

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```
---
applications:
- name: ???
  memory: 128M
  instances: 1
```

Lab

Use an application manifest with your application

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