

**CLOUD IS ABOUT HOW
COMPUTING IS DONE, NOT
WHERE**

CLOUD-NATIVE APPLICATION ASSESSMENT

- ▶ Based on twelve-factor app methodology
- ▶ Answers questions around what to migrate

TWELVE-FACTOR APP

- ▶ Methodology for building cloud-native web apps

SCORING

- ▶ Evaluate an app against each of the twelve-factors
- ▶ Assign a score of 0-1 for each

I. CODEBASE

- ▶ Version controlled, one-to-one correlation

Example:

Multiple codebases is a distributed system, not an app

score = .6

II. DEPENDENCIES

- ▶ Explicitly declare and isolate dependencies

EXAMPLE:

Pip + wget for external dependency

score = .7

III. CONFIG

- ▶ Store config in the environment

EXAMPLE:

Using java system properties

```
score = .5
```

IV. BACKING SERVICES

- ▶ Treat backing services as attached resources

EXAMPLE:

Accessing local file system

score = .4

V. BUILD, RELEASE, RUN

- ▶ Strict separation between build, release, and run

EXAMPLE:

Build rpm, run with startup script

score = .8

VI. PROCESSES

- ▶ Processes are stateless and share nothing.

EXAMPLE:

Sticky sessions

score = 0

VII. PORT BINDING

- ▶ Export services via port binding

EXAMPLE:

local MTA instead of a smarthost

score = .2

VIII. CONCURRENCY

- ▶ Scale out via the process model

EXAMPLE:

JVM with large block of system resources

score = .3

IX. DISPOSABILITY

- ▶ The entire process is disposable

EXAMPLE:

Web processes stop listening

score = 1

X. DEV/PROD PARITY

- ▶ All environments are as similar as possible.

EXAMPLE:

Using Redis and MySQL but deploy oracle in prod

score = .7

XI. LOGS

- ▶ Treat logs as event streams

Logging to local file but using Splunk

score = .4

XII. ADMIN PROCESSES

- ▶ Run admin/management tasks as one-off processes

EXAMPLE:

SSH to create Tomcat symlink

score = .2

TWELVE-FACTOR APP ASSESSMENT

SCORING

Sum	Sum of Squares
0.6	0.6
0.7	0.7
0.5	0.5
0.4	0.4
0.8	0.8
0	0
0.2	0.2
0.3	0.3
1	1
0.7	0.7
0.4	0.4
0.2	0.2
5.8	3.72

SCORING

- ▶ Sum of squares

BUSINESS OBJECTIVES

- ▶ Can take business objectives into consideration.

GAP ANALYSIS

- ▶ Identify quick wins and long polls

CONTACT INFORMATION

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