



Java Buildpack in 2017

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Here is my source code
Run it on the cloud for me
I do not care how

Java Buildpack

- Buildpacks define ***how*** to run applications
- Java Buildpack cares about 3 things
 - JRE and memory management
 - Container to run application in
 - Zero-touch integration with services

JREs

- OpenJDK (Improved)
- Oracle
- Azul Zulu (New)
- IBM (PR #427)

Containers

- Dist ZIP
- Groovy
- Java Main
- Ratpack
- Spring Boot
- Spring Boot CLI
- Tomcat

Service Integration (APMs)

- AppDynamics (Improved)
- Dynatrace Appmon (New)
- Dynatrace OneAgent (Improved)
- Fusion Reactor (PR #409)
- Introscope
- New Relic

Service Integration (Developer)

- JVM Debugger
- Google Stack Driver Debugger (New)
 - Analyzing Pets and Live Debugging – Colleen Briant
- JRebel
- JMX
- YourKit

Service Integration (HSMs)

- Dyadic EKM Security Provider (New)
- Luna Security Provider (Improved)
- ProtectApp Security Provider (New)

Service Integration (Application)

- Apache Geode Session Cache (PR #437)
- Contrast Security Framework (PR #446)
- Spring Boot Metrics Writer (v3.18)



Container Security Provider

Container Security Provider

- BOSH Trusted Certificates
 - `/etc/ssl/certs/ca-certificates.crt`
- Diego Identity
 - `$CF_INSTANCE_CERT`
 - `$CF_INSTANCE_KEY`



Memory Calculator

Memory Calculator

- Covers more memory regions
 - Heap, Metaspace, Thread Stacks,
ReservedCodeCache, CompressedClassSpace
Direct Memory
- Configurable with standard Java flags
- "Incompatible" with some previous configurations
 - 4.x is opt in (now!)



jvmskill

jvmskill

- Resource Exhaustion
 - Heap, Metaspace, Stacks, Threads
- Behaviors
 - Histogram
 - Memory Region Summary
 - Heap Dump (if Volume Service mounted)

Java Buildpack 2017

- Additions (or pending additions) of new JREs and new Service Integrations
- Java Buildpack 4.x (opt in now!)
 - New Memory Calculator
 - New Resource Exhaustion Behavior



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