



Bazel

{Fast, Correct} - Choose two

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BUILD & TEST TOOL

EXAMPLE

MONO REPOSITORY

```
mycompany_repo
├── service_a
│   └── main.rs
└── service_b
    └── Main.scala
```

```
mycompany_repo
├── MODULE.bazel
├── MODULE.bazel.lock
├── service_a
│   └── main.rs
├── service_b
│   └── Main.scala
```

```
1 T module(name = "xite")
2
3 T bazel_dep(name = "aspect_rules_lint", version = "2.1.0")
4 T bazel_dep(name = "platforms", version = "1.0.0")
5 T bazel_dep(name = "bazel_skylib", version = "1.9.0")
6 T bazel_dep(name = "buildifier_prebuilt", version = "8.0.3")
7 T bazel_dep(name = "aspect_bazel_lib", version = "2.22.5")
8 T bazel_dep(name = "rules_pkg", version = "1.0.1")
9 T bazel_dep(name = "rules_oci", version = "2.2.7")
10 T bazel_dep(name = "rules_java", version = "9.0.3")
11 T bazel_dep(name = "rules_scala", version = "7.2.2")
12 T bazel_dep(name = "apple_support", version = "1.24.2")
13 T bazel_dep(name = "protobuf", version = "33.4", repo_name = "com_google_protobuf")
14 T bazel_dep(name = "grpc", version = "1.76.0.bcr.1", repo_name = "com_github_grpc_grpc")
```

```
mycompany_repo
├── MODULE.bazel
├── MODULE.bazel.lock
├── service_a
│   ├── BUILD.bazel
│   └── main.rs
├── service_b
│   ├── BUILD.bazel
│   └── Main.scala
```

```
scala_binary(  
  name = "image_binary",  
  srcs = glob(["src/main/**/*.scala"]),  
  main_class = "com.xite.artemis.service.Application",  
  plugins = SCALAC_PLUGINS,  
  resources = glob(  
    ["src/main/resources/**/*"],  
    allow_empty = True,  
  ),  
  scalac_jvm_flags = SCALAC_JVM_FLAGS,  
  scalacopts = SCALAC_OPTS,  
  visibility = ["//visibility:public"],  
  deps = [  
    ":scala_grpc_proto",  
    ":scala_persistence_proto",  
    "@maven//:co_fs2_fs2_core_2_13",  
    "@maven//:co_fs2_fs2_io_2_13",  
    # ...  
  ],  
)
```

```
genrule(  
    name = "stamp_scm_current_branch",  
    outs = ["scm_current_branch"],  
    cmd = "cat bazel-out/stable-status.txt | grep STABLE_BRANCH_LOWER | cut -d' ' -f2 > $@",  
    message = "Stamping SCM current branch",  
    stamp = 1,  
)
```

LANGUAGE RULES

HERMETIC BUILDS



Bazel

{Fast, Correct} - Choose two

Aggressive Caching

Reproducible

DEPLOYMENT

DISTROLESS

DISTROLESS

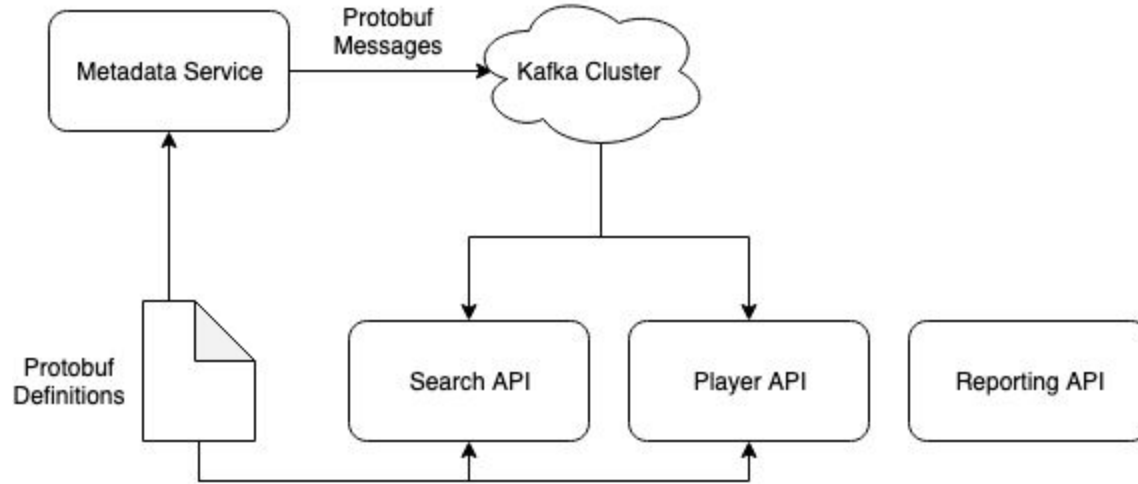
- /tmp
- ca-certificates
- /etc/passwd
- tzdata
- libc
- App specific deps

```
scala_binary(  
  scala_image(  
    name = "image_binary",  
    srcs = glob(["src/main/**/*.scala"]),  
    main_class = "com.xite.artemis.service.Application",  
    plugins = SCALAC_PLUGINS,  
    resources = glob(  
      ["src/main/resources/**/*"],  
      allow_empty = True,  
    ),  
    scalac_jvm_flags = SCALAC_JVM_FLAGS,  
    scalacopts = SCALAC_OPTS,  
    visibility = ["//visibility:public"],  
    deps = [ ],  
  )  
)
```

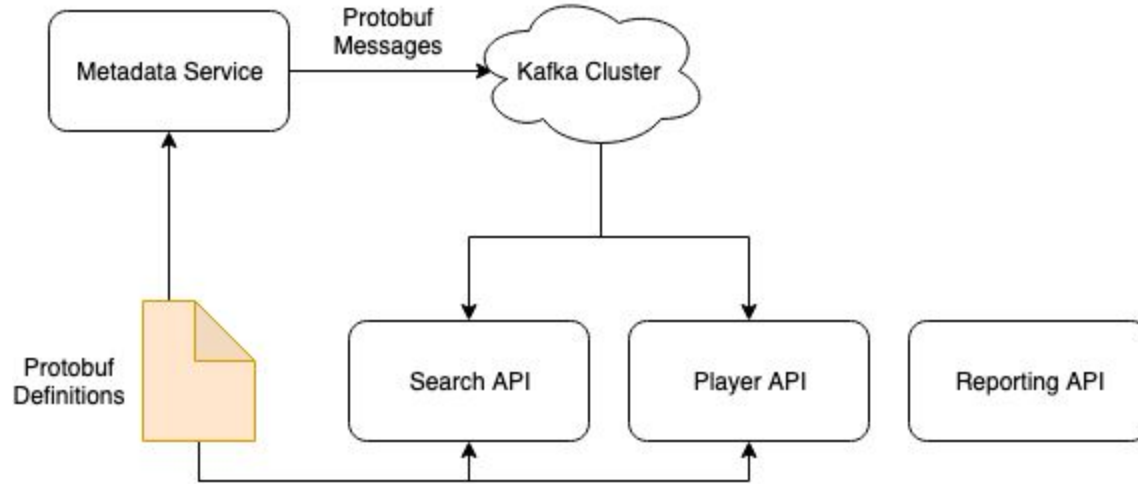


kubernetes

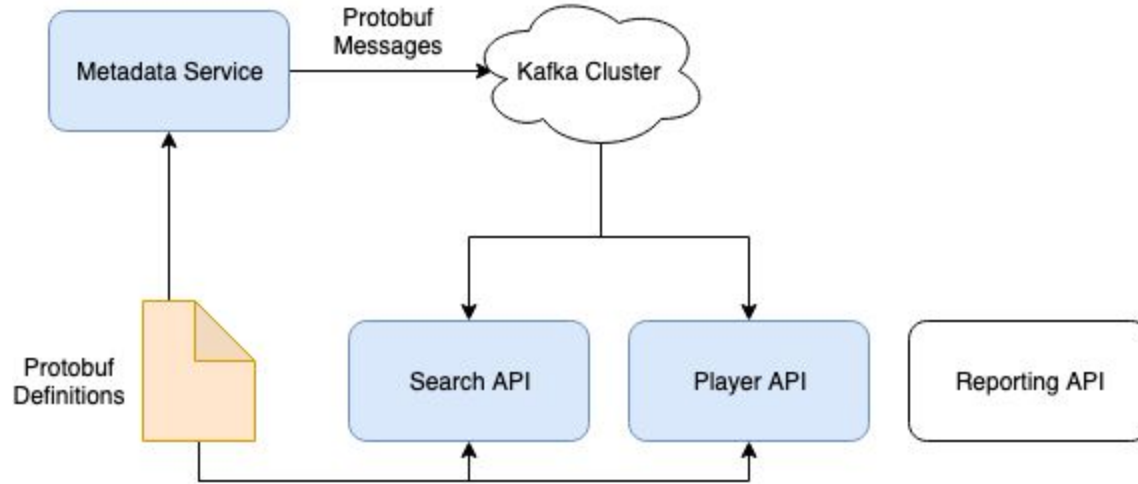
METADATA SERVICE



METADATA SERVICE



METADATA SERVICE



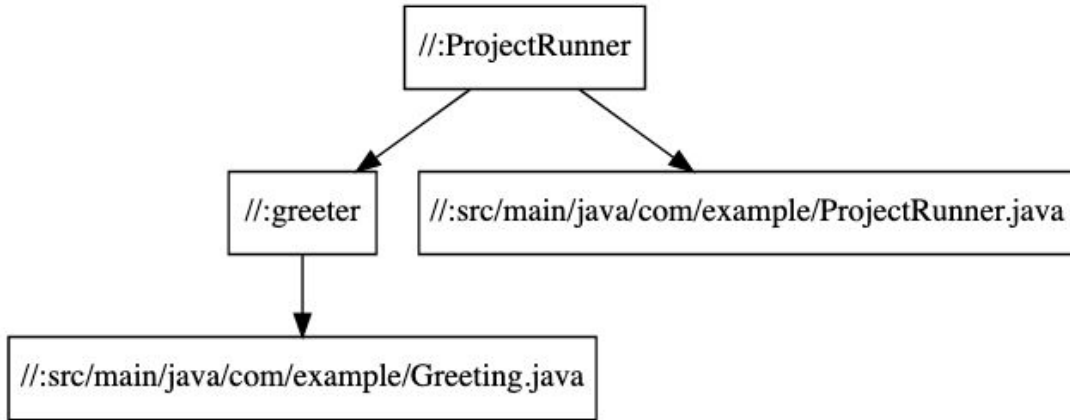
REPRODUCIBLE ENVIRONMENT

DEPENDENCIES

```
maven = use_extension("@rules_jvm_external//:extensions.bzl", "maven")
maven.install(
    artifacts = [
        "ch.qos.logback:logback-classic:1.5.32",
        "co.fs2:fs2-core_2.13:3.12.2",
        "co.fs2:fs2-io_2.13:3.12.2",
        "com.beachape:enumeratum_2.13:1.9.7",
        "com.beachape:enumeratum-circe_2.13:1.9.7",
        "com.chuusai:shapeless_2.13:2.3.13",
        "com.clickhouse:clickhouse-http-client:0.9.8",
        "com.clickhouse:jdbc-v2:0.9.8",
```

```
maven_install.json ×
1  {
2      "__AUTOGENERATED_FILE_DO_NOT_MODIFY_THIS_FILE_MANUALLY": "THERE_IS_NO_DATA_ONLY_ZUUL",
3      "__INPUT_ARTIFACTS_HASH": "1264179079",
4      "__RESOLVED_ARTIFACTS_HASH": "-1033616960",
5      "conflict_resolution": {
6          "com.google.guava:guava:33.5.0-jre": "com.google.guava:guava:32.0.1-jre"
7      },
8      "artifacts": {
9          "ar.com.hjg:pngj": {
10             "shasums": {
11                 "jar": "e6b762f15e4891178ddd74e4d57318f518ce278000129efa41f85410b132ccc",
12                 "sources": "4debe6db2149c45aff47567ba76adde2ec5593e801b2982dc1cc55594c94f588"
13             },
14             "version": "2.1.0"
15         },
```

```
bazel query --nohost_deps --noimplicit_deps "deps(//:ProjectRunner)" --output graph
```



PITFALLS



PYTHON
DOCUMENTATION
DEPENDENCIES

ADOPTERS



Q & A

