REPLATFORM

TECHNOLOGIES

OpenKicks on zLinux

Michael Potter
Replatform Technologies
michael.potter@replatformtech.com

What is OpenKicks

- OpenKicks is not Open Source (yet)

- OpenKicks is sold as source to companies that want complete control of the tech stack.

- Designed from the beginning to be a production quality product.

REPLATFORM TECHNOLOGIES

Open Source Tech Stack

- Linux / zLinux
- GnuCOBOL
- PostgreSQL
- Node.js

REPLATFORM TECHNOLOGIES

Other Open Source

- Python

- Perl

- x3270

- bash

- doxygen

- cobcd

- git

- esql

- Kotlin

- JVM

- doxygen

- scons

- Visual Studio Code

- nginx

REPLATFORM TECHNOLOGIES

Supported COBOL Compilers

- GnuCOBOL
- P3/COBOL (Java)
- Micro Focus COBOL
- IBM COBOL
- gccCOBOL (in development)

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Supported Databases

* PostgreSQL

* DB2

* Database abstraction layer allows adding other databases.

* What is your preference?

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VSAM Emulation

- VSAM emulated as a table in database.

- One table per "VSAM" file.

- "VSAM" file can be shared between regions eliminating file owning region concept.

- Batch programs can read and write "VSAM" while region is up.

- Batch interface is an EXTFH compatible module.

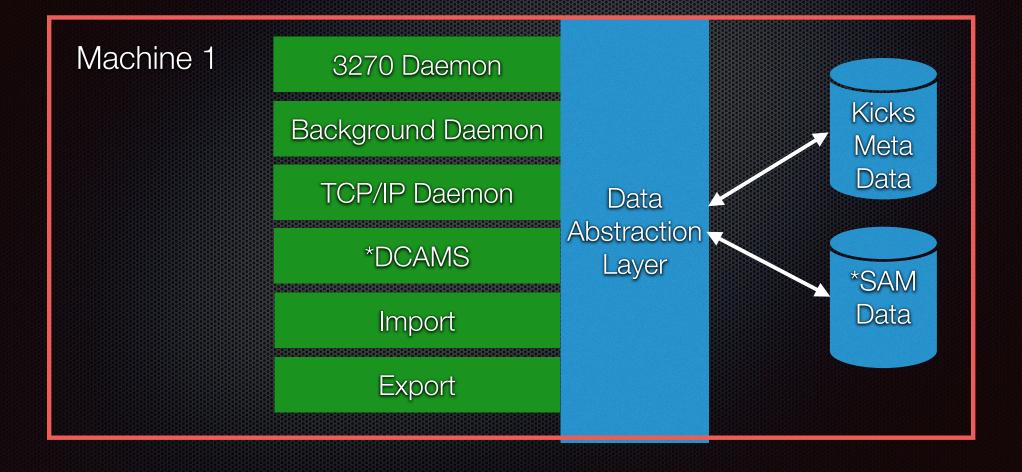- Implemented as shared object to support different vendors.
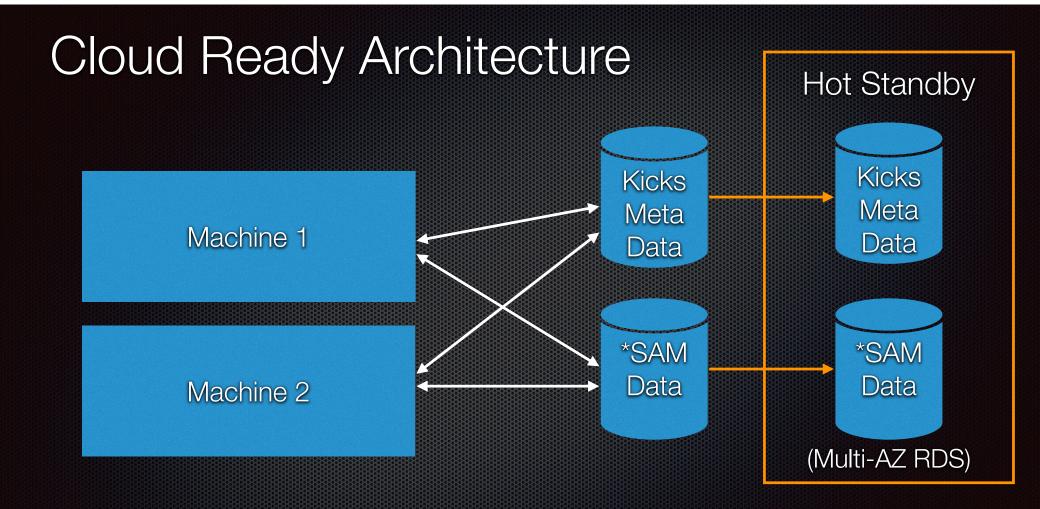
REPLATFORM TECHNOLOGIES

Replatform Tech Products

- OpenKicks - CICS API for zLinux & Linux

- OpenKicks for the JVM - Pure JVM version to support JVM COBOLs

- MortSort - Sort Utility for Sequential files

- OpenEZASOKET - Open Source EZASOKET library

- COBOL BATCH - Starts GnuCOBOL to be able to read VSAM Emulation

REPLATFORM TECHNOLOGIES

Single Machine Architecture

Machine 1

- 3270 Daemon
- Background Daemon
- TCP/IP Daemon
- *DCAMS
- Import
- Export

Data Abstraction Layer

Kicks Meta Data

*SAM Data

Cloud Ready Architecture

Machine 1

Machine 2

Kicks Meta Data

*SAM Data

Hot Standby

Kicks Meta Data

*SAM Data

(Multi-AZ RDS)

Plugin Architecture

- *SAM emulation

- OpenKicks Metadata (Could move metadata to memory for performance)

- Authentication (Active Directory, Unix password, …)

- Authorization (Supports QUERY SECURITY)

- Sequential file support

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Highly Compatible BMS Support

- Treat BMS Map source as Assembler

- Supports "Home Grown" 3270 data streams

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BMS is just assembler

```
           COPY COLORSG
           GBLC &MODE
           GBLC &N
           COPY COLORSS
&MODE      SETC 'INOUT'
&N         SETC '1'
           AIF ('&SYSPARM' EQ 'MAP').INLOAD
&MODE      SETC 'IN'
.INLOAD    ANOP
*
MAPSET&N   DFHMSD TYPE=&SYSPARM,                            C
                  MODE=&MODE,                               C
                  LANG=COBOL,                               C
                  CTRL=FREEKB,                              C
                  STORAGE=AUTO,                             C
                  EXTATT=YES,                               C
                  TIOAPFX=YES
.RERUN     ANOP
THEMAP&N   DFHMDI COLUMN=1,                                 C
                  HEADER=NO,                                C
                  JUSTIFY=FIRST,                            C
                  LINE=1,                                   C
                  SIZE=(22,80),                             C
                  COLOR=DEFAULT
           TOPLINE VERSION='1'
PROG&N     DFHMDF POS=(04,10),                              C
                  LENGTH=8,INITIAL='........',ATTRB=FSET,   C
                  COLOR=&CLRKEY
BIGMSG&N   DFHMDF POS=(06,01),OCCURS=3,                     C
```

CI/CD ready

- OpenKicks deploys with CI/CD

- COBOL/CICS applications can deploy to regions with CI/CD

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Character Set

- ASCII supported of course

- EBCDIC supported if COBOL compiler supports EBCDIC

- Unicode could be added when we have applications that use Unicode.

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32 versus 64 bit

- OpenKicks can be compiled for 32 or 64 bit.

- Linux is making it harder to support 32 bit.

- Currently only testing 64 bit.

- 32 bit still needed because some COBOL applications could be 32 bit dependent.

REPLATFORM TECHNOLOGIES

Operating Systems

- Intel Linux

- zLinux

- AIX

- Arm based Linux - Can be ported.

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JVM Support

- Supports P3/COBOL, a JVM based COBOL compiler.

- Supports web services written in Kotlin using OpenKicks library.

- Can run in parallel with native version.

- First class JVM support without JNI.

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