

JCP EC meeting

FUJITSU

shaping tomorrow with you

# Java at Fujitsu

2016.9.16

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Fujitsu Limited

# Agenda



- Interstage and History
- Fujitsu Cloud and Java

# About me



- Java VM developer
- Working for Fujitsu
  - ◆ Interstage Application Server
- JCP (Java Community Process)
  - ◆ JSR 204 Expert Group
- Author of On-line Java Learning Courses

[https://directshop.fom.fujitsu.com/shop/commodity\\_param/ctc/el\\_middleit/shc/0/cmc/ASP03737](https://directshop.fom.fujitsu.com/shop/commodity_param/ctc/el_middleit/shc/0/cmc/ASP03737)

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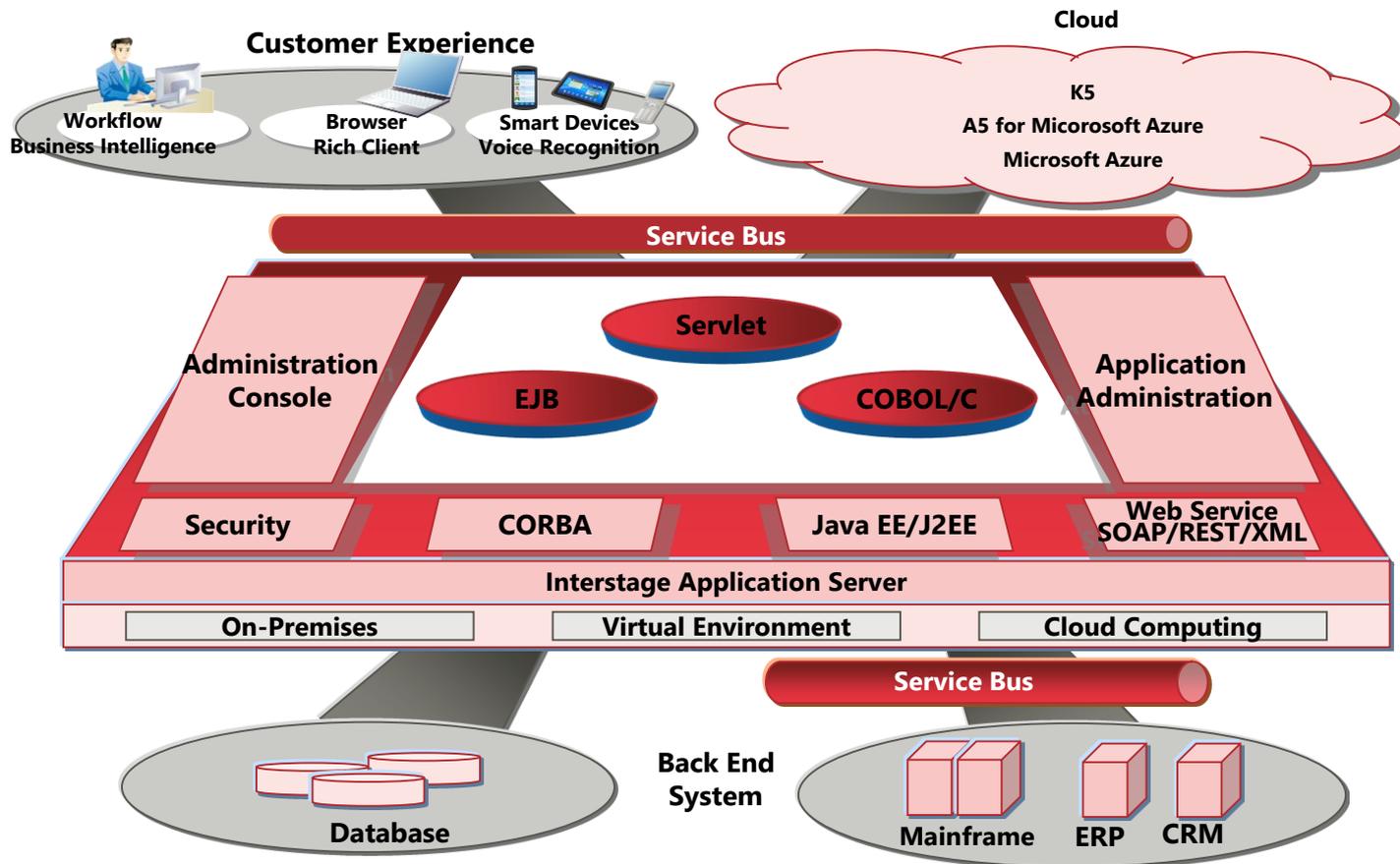
# Agenda

- Interstage and History
- Fujitsu Cloud and Java

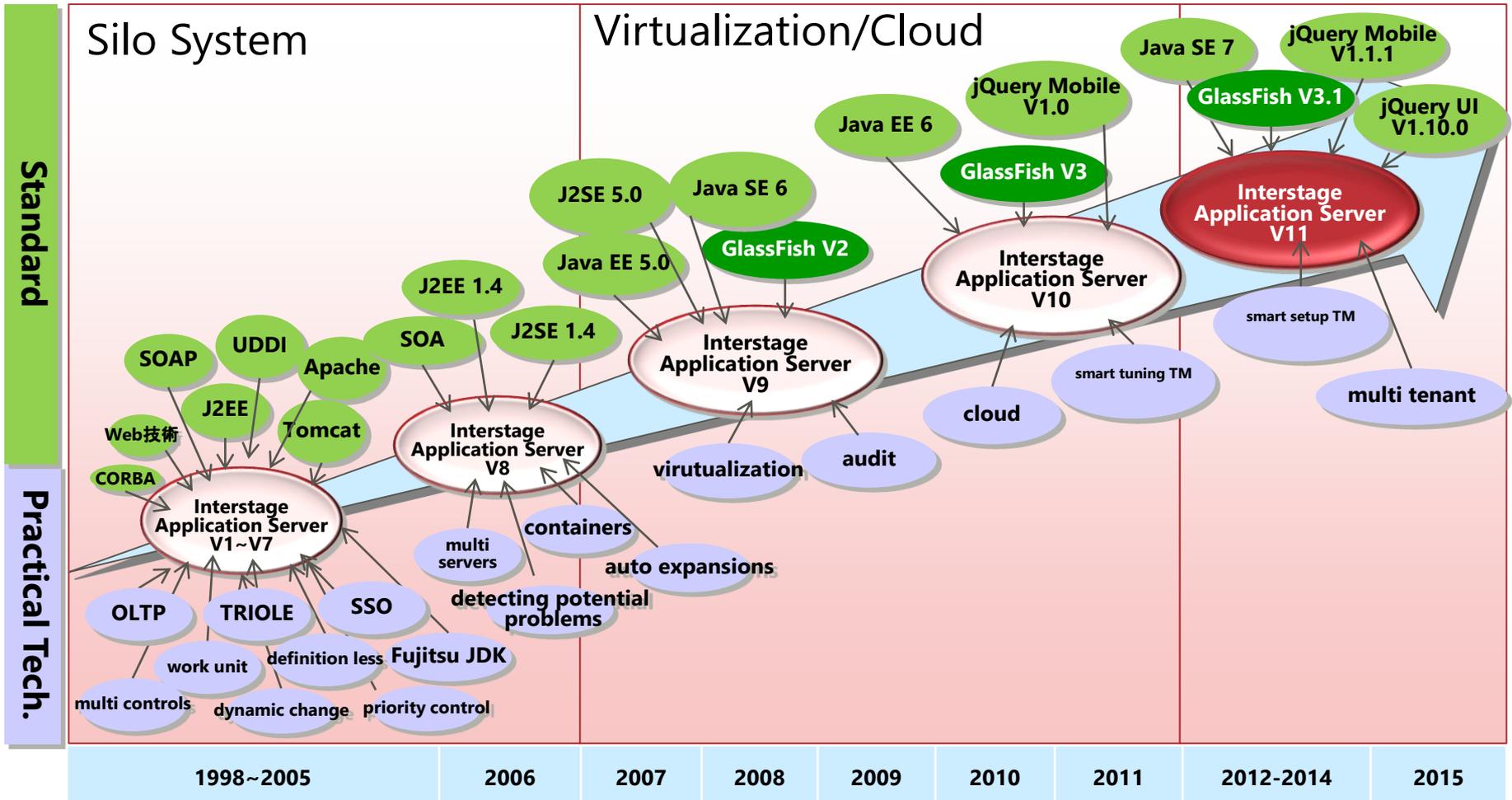
# Interstage Application Server



- Java EE certified application server
- GlassFish based
- J2EE and CORBA are also available



# Interstage History



- GlassFish is RI for Java EE
- Fujitsu reports more than 100 issues for GlassFish, but ...

After RI released, the community is not so active.

# GlassFish activity

<https://www.openhub.net/p/glassfish>

## Activity

### 30 Day Summary

Jun 1 2016 — Jul 1 2016

0 Commits

0 Contributors

### 12 Month Summary

Jul 1 2015 — Jul 1 2016

165 Commits

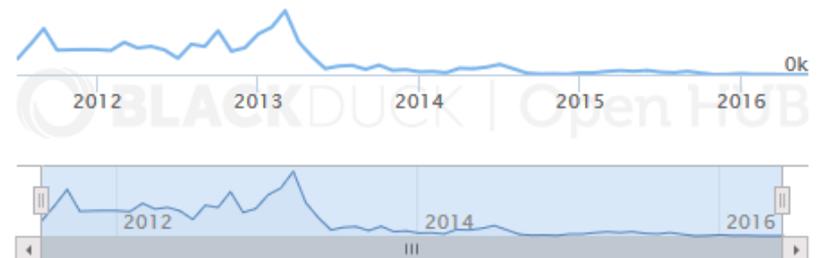
Down -262 (61%) from previous 12 months

21 Contributors

Down -21 (50%) from previous 12 months

## Commits per Month

Zoom 1yr 3yr 5yr All



## Community

### Ratings

59 users rate this project:

★★★★☆ 4.4/5.0

Click to add your rating

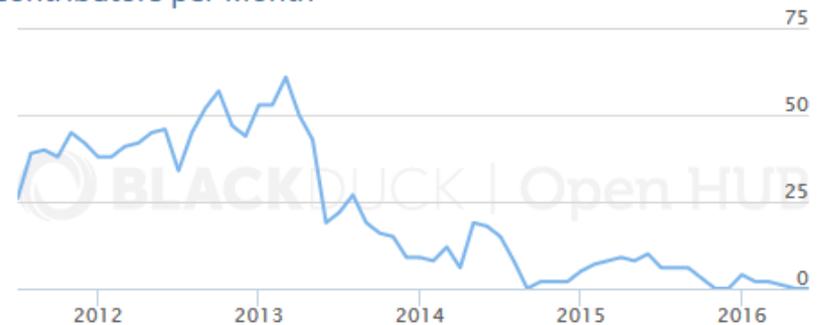
☆☆☆☆☆

[Review this Project!](#)

### Most Recent Contributors

- |                |                 |
|----------------|-----------------|
| Lukas Jungmann | oleksiys        |
| jnakata        | romain_grecourt |
| java_re        | aribandy        |

### Contributors per Month



# SPECjbb benchmark



- Fujitsu achieved world-record several times.

## SPECjbb2005

Date		bops
2006/2	PRIMEPOWER 2500	1,157,619
2013/7	M10-4S	35,912,688

## SPECjbb2013/2015

Date		max-jOPS	critical-jOPS
2013/7	M10-4S/SPARC64X	83,909	50,562
2014/4	M10-4S/SPARC64X+	119,521	67,698
2016/2	M10-4S/SPARC64X+	450,467	278,958

<http://www.finanznachrichten.de/nachrichten-2013-07/27476567-fujitsu-m10-achieves-world-record-performance-running-java-application-011.htm>

<http://www.fujitsu.com/jp/products/computing/servers/unix/sparc/concept/performance/m10-4s-specjbb2013-4cpu/>

<http://jp.fujitsu.com/platform/server/sparc/concept/performance/m10-4s-specjbb2013-4cpu-2.html>

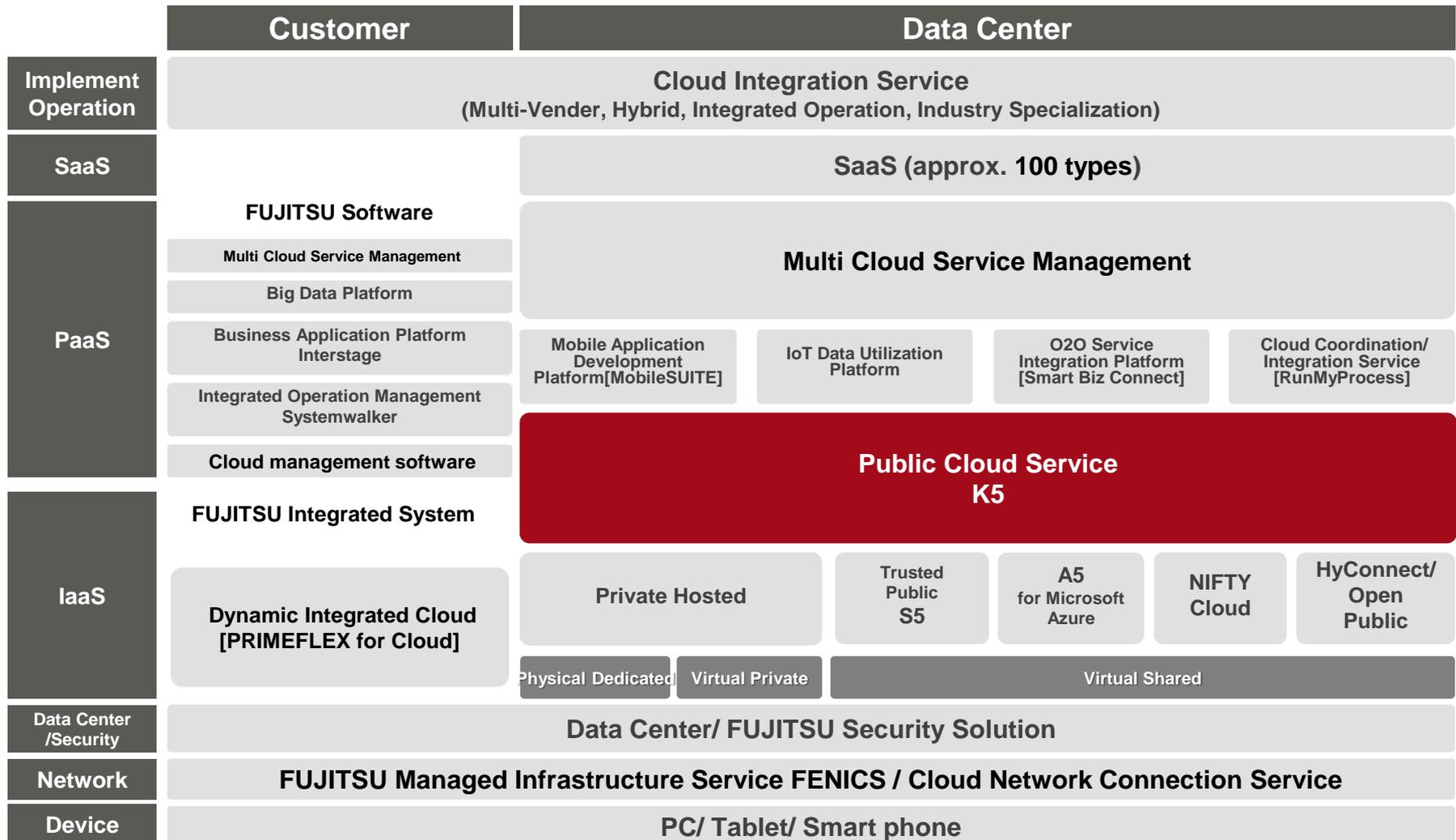
<http://www.fujitsu.com/jp/products/computing/servers/unix/sparc/concept/performance/m10-4s-specjbb2015/index.html>

# Agenda

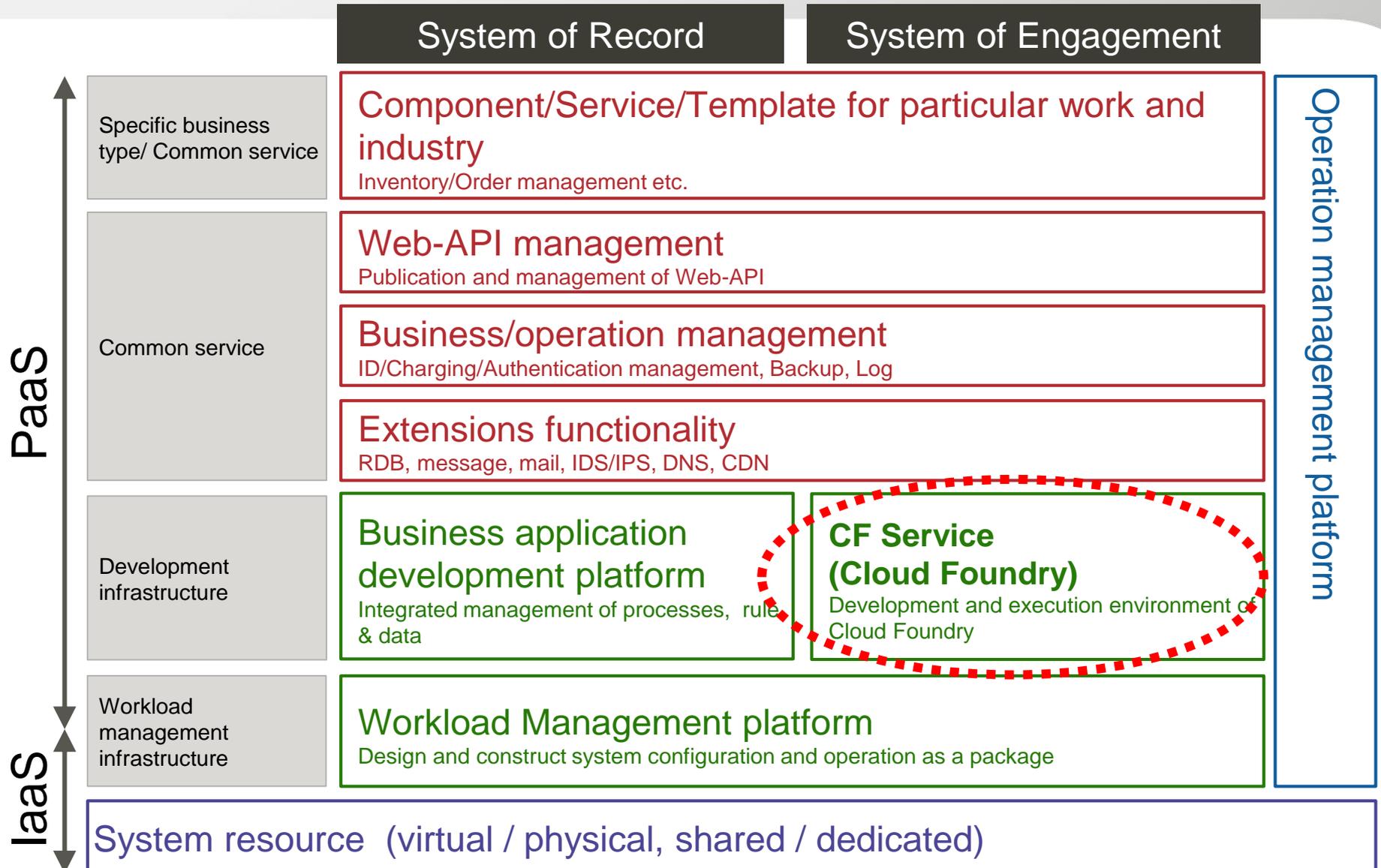


- Interstage and History
  
- Fujitsu Cloud and Java

# Fujitsu Cloud Services

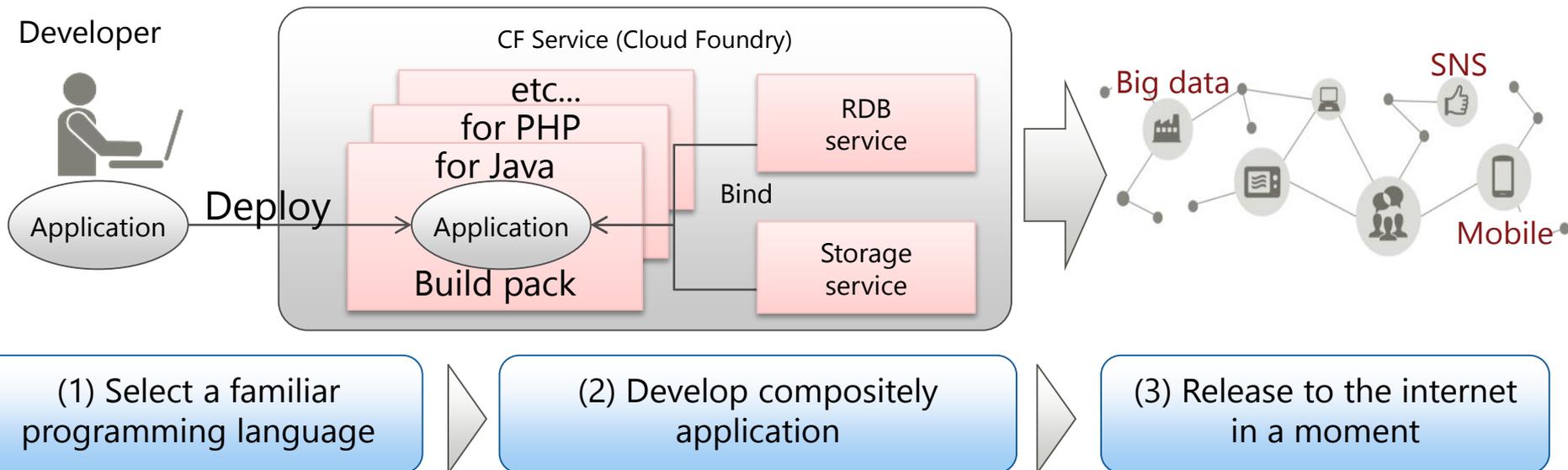


# K5 Services



# CF Service

- Developer can choose his/her familiar programming language
  - ◆ The latest programming languages(Java, PHP, Node.js, Ruby, Python, Go)
- Develop compositely application with different services
  - ◆ Prepares service used frequently by applications (RDB, MQ, Storage, Back link etc.)
- Release developed application to the internet in a moment
  - ◆ Providing with the DNS, SSL and Load balancer configured



# Fujitsu Java Buildpack



- Java Buildpack already exists
  - ◆ Based on Tomcat
  - ◆ Play and Spring also available
- Why we need GlassFish ?
  - ◆ Standardized framework on which WebSocket, JAX-RS, JPA, etc is available
  - ◆ Enterprise system like this
  - ◆ Help migrating from on-premise to cloud

# GlassFish Buildpack



- Based on GlassFish 4.1 WebProfile

- APIs

  - Servlet 3.1

  - JavaServer Pages(JSP) 2.3

  - Unified Expression Language(EL) 3

  - Debugging Support for Other Languages (JSR-45) 1

  - JavaServer Pages Standard Tag Library(JSTL) 1.2

  - JavaServer Faces(JSF) 2.2

  - Java API for RESTful Web Services(JAX-RS) 2

  - Java API for WebSocket(WebSocket) 1

  - Java API for JSON Processing(JSON-P) 1

  - Common Annotations for the Java Platform (JSR-250) 1.2

  - Enterprise JavaBeans(EJB) 3.2 Lite

  - Java Transaction API(JTA) 1.2

  - Java Persistence API(JPA) 2.1

  - Bean Validation 1.1

  - Managed Beans 1

  - Interceptors 1.2

  - Contexts and Dependency Injection for the Java EE Platform 1.1

  - Dependency Injection for Java

# Logging

- Local storage should not be used on Cloud Foundry
- GlassFish supposes local storage
  - ◆ http access logs
  - ◆ logs of GlassFish itself

Change all output to standard out

- On-Premise
  - ◆ Tightly coupled with JDBC
  - ◆ Describe JDBC information at config file
- Cloud
  - ◆ Should couple loosely with JDBC
  - ◆ How do you do that ?

Usually get info from environment vars

# Example 1

```
public class DBAccess extends HttpServlet {
    Connection getConnection() {
        String env = System.getenv("VCAP_SERVICES");
        if ( env != null ) {
            try {
                JsonReader reader = Json.createReader(new StringReader(env));
                JsonObject servicesObject = jsonReader.readObject();
                reader.close();
                JsonObject rdsObject = servicesObject.getJsonObject("fujitsurds");
                String uri = rdsObject.getString("uri");
                Connection connection = DriverManager.getConnection(uri);
                return connection;
            } catch ( Exception e ) {
                return null;
            }
        }
    }
}
```

.....

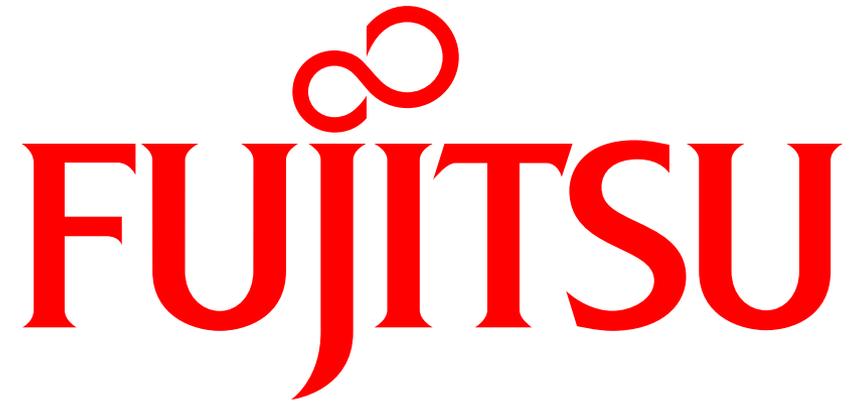
# Example2

- Fujitsu Java Buildpack provides auto binding feature

```
public class DBAccess extends HttpServlet {  
    @Resource (name = "jdbc/postgresqlService")  
    private DataSource ds;  
    ...  
}
```

'postgresqlService' is the name of the service bound to your app  
i.e.

```
% cf bind-service myApp postgresqlService
```



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