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Bridging The Gap

seamless access to existing data sources



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Existing Data Sources

- Tapping into existing data sources is crucial for enterprise adoption
- Developer experience should be matched by seamless access to these legacy services
- User-provided services allows unmanaged access
 - Too much work, need to ask DBA
- Write a service broker?
 - Still too much work



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Brooklyn Service Broker

- A Cloud Foundry incubator project donated by Cloudsoft
- General purpose service broker backed by Apache Brooklyn
 - Write blueprints for CF Services in YAML
 - Compose and configure Entities from Brooklyn Catalog
 - E.g Entities exist for MySQL, PostgreSQL, Riak, Redis, MongoDB, Cassandra, RabbitMQ and more...



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DBAccess Entity

- A simple, yet powerful, entity that creates read-only users on existing databases
- Configure with Database Admin credentials
- Brings existing DBs into Cloud Foundry as Managed Services
- Currently supports: Oracle 11g, MySQL and PostgreSQL



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DBAccess Entity

- Use two YAML catalog items
- First defines the DBA details and is hidden from the Service Broker
- Second references the first and adds broker configuration
- Powerful composition technique to keep credentials hidden from end users



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DB Access (YAML) with Admin Credentials

brooklyn.catalog:

id: **com.cloudsoft.development.dbaccess**

version: 1.0

description: Provides admin credentials for the DB database

displayName: DB credentials

iconUrl: classpath://dbaccess.png

itemType: template

brooklyn.config:

broker.config:

hidden: true

services:

- type: **io.cloudsoft.dbaccess.PostgresDatabaseAccessEntity**

brooklyn.config:

dbaccess.endpoint.url: postgresql://x.x.x.x:5432/

dbaccess.admin.user: postgresqluser

dbaccess.admin.password: ay0DyVtt

dbaccess.database: db



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DB Access (YAML) Cloud Foundry Service

...

broker.config:

sensor.whitelist:

- **jdbcUrl**

plans:

- **name: standard**

description: Creates a read-only user on DB

services:

- type: **com.cloudsoft.development.dbaccess:1.0**

brooklyn.enrichers:

- type: org.apache.brooklyn.enricher.stock.Transformer

brooklyn.config:

enricher.sourceSensor: \$brooklyn:sensor("datastore.url")

enricher.targetSensor: \$brooklyn:sensor("jdbcUrl")

enricher.targetValue: \$brooklyn:formatString("jdbc:%s%s",
attributeWhenReady("datastore.url"), config("dbaccess.database"))



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DB Access Service

- Once added to Brooklyn, update service broker and import service into marketplace, then

```
cf create-service "DB Access" standard new-user
```

- And bind to your application to get user credentials

```
cf bind-service my-app new-user
```

- User is deleted on unbind



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Recap

- Enterprises have existing data sources
- To increase enterprise adoption we have to make access to these sources seamless
- By combining the power of Apache Brooklyn with Cloud Foundry this is possible
- More info:
 - <http://www.cloudsoftcorp.com/blog/2015/09/a-service-for-creating-read-only-users-on-existing-databases/>



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