Oh The Places You'll Go
How IIC Found Their Path To The Cloud

Julio Cesar Lima, IIC
Juan Pablo Aulestia Martinez, IIC
Aaron Dolan, AVIO

Agenda

- Overview of IIC

- Overview of Maestro Project

- Current State of the Maestro Project

- Driving Vision for Migrating to the Cloud

  •Planning for the Journey

- Our Challenges

  •Our Options

Overview of IIC

- Multilateral organization based in Washington, D.C.

- Established in 1985 with 26 regional member countries

    - Currently has 45 member countries

    - 162 operations approved for a total $2.2 billion in 2016

- Member of the Inter-American Development Bank (IDB) Group

Overview of IIC

- Committed to the development of Latin America and the Caribbean through the private sector

- Supports the private sector and state-owned enterprises through financing
  - Loans
  - Equity Investments
  - Guarantees

By Country

Argentina	Bahamas
Barbados	Belize
Belize	Bolivia
Brazil	Chile
Colombia	Costa Rica
Dominican Republic	Ecuador
El Salvador	Guatemala
Guyana	Haiti
Honduras	Jamaica
Mexico	Nicaragua
Panama	Paraguay
Peru	Suriname
Trinidad and Tobago	Uruguay
Venezuela	

Overview of IIC

30 YEARS **IIC**
Inter-American Investment Corporation
A Member of the IDB Group

With more than $5.6 billion in investments across 920 projects over the last 30 years, and through advisory services for some 10,000 companies,

we promote the region's development, encourage good corporate governance practices, strengthen export strategies, boost energy efficiency, and improve the competitive profile of our clients.

Overview of AVIO Consulting

Company

- Founded in 2007

- Global delivery capabilities for projects in Americas, EMEA, and APAC

- Focus on Oracle PaaS & Fusion Middleware (FMW)

- Over 200 Oracle FMW /PaaS Implementations

- Process, Integration & API CAB Premier Sponsor

PaaS and FMW Product Focus

- SOACS / ICS / Oracle SOA Suite

- PCS / Oracle BPM Suite

- Oracle WebCenter Content

- JCS / Oracle WebLogic

- MCS

ORACLE Gold Partner
Specialized
Service-Oriented Architecture

ORACLE Gold Partner
Specialized
Oracle Unified Business Process Management

Red Expert Alliance Member

Overview of AVIO Consulting

Strategy & Implementation

Products & Frameworks

Training & Mentoring

Journey to Cloud
Apply best practices and lessons learned for moving to the Cloud

Month End Close
Automate the close using Process and Integration

AVIO Academy
Custom training on BPM and SOA either virtual or onsite

Services
Implementation, COE, Governance, MSP, SDLC & DevOps

Proxy
Custom UI through abstraction layer

Best Practices
Access to AVIO's WIKI of best practices

AVIO CONSULTING

Overview of Maestro Project

- Custom lending application

- Handles end-to-end Origination, Disbursement and Supervision lifecycles

  - Went Live in Production in Feb 2016

  - Successful choice of SOA/BPM to ensure flexible and adaptable process and integrations

Current State of Maestro Project

- Oracle Products
  - OSB 11g, SOA 11g, BPM 11g, WLS 11g, OHS, DB 11g
- Open Source
  - AngularJS 1.x, Maven, Material Design
- Application scale
  - 45 composites
  - 208 UIs
  - 170 custom tables
- 3,000 projects
  - (Origination or Supervision loans)
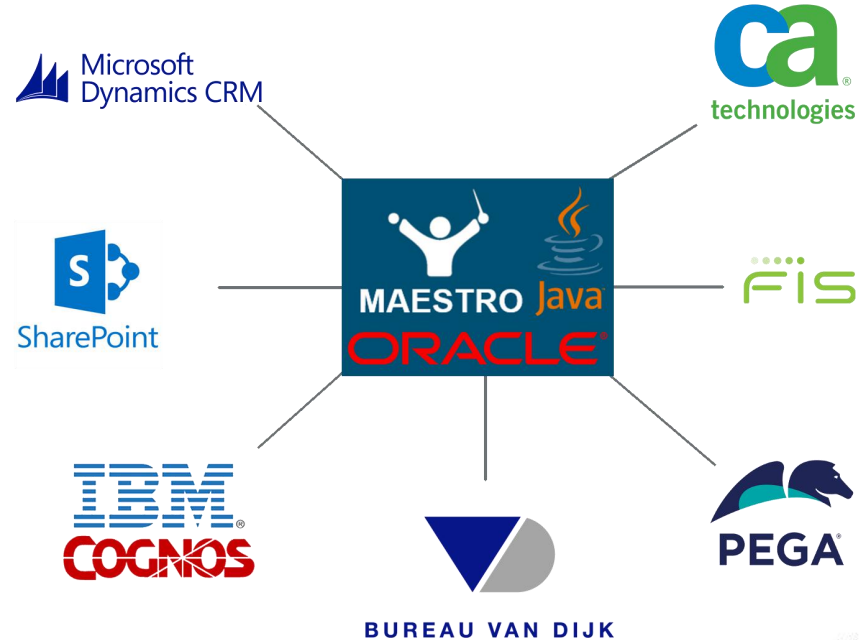
Driving Vision for Migrating to the Cloud

- Eliminate hardware management and maintenance costs

- Take advantage of new management features unique to the Oracle Cloud

- Gain greater visibility using Oracle Cloud monitoring

- IIC team focusing on innovation

Planning for the Journey

Stage 1 - Analyze Prerequisites

- Determine goals which will guide migration path

- Evaluate and analyze prerequisites for going to 12c (i.e. we need JDK 7, project upgrades)

- Determine if we will first upgrade from 11g to 12c on prem and then move to cloud in stages

Stage 2 - Database

- Migrate on-prem Oracle 11g Database to Oracle Cloud 12c Database

Planning for the Journey

Stage 3 - SOA

- Migrate stateless SOA 11g services to to 12c and/or SOA Cloud depending on evaluation

Stage 4 - BPM

- Maestro BPM processes are stateful

- Large and complex BPM code base

- Path of BPM to be determined at the time of upgrade

Our Challenges:
Managing Latency between Cloud and On Prem

- FastConnect features
  - High-speed, dedicated connectivity
  - 1Gbps or 10Gbps port speeds
  - High Availability
  - Secure
  - Predictable
  - Low-latency
  - Standard Layer 3 Routing
  - FastConnect is set up thru the network provider, not by Oracle itself
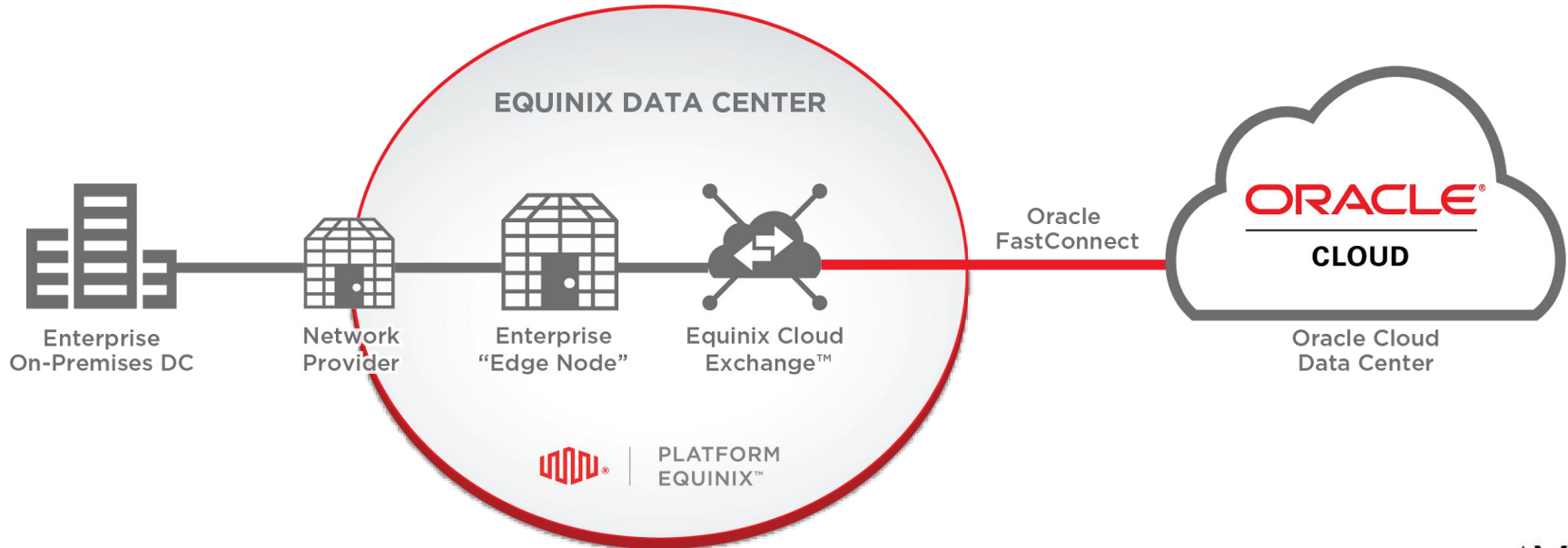 - https://cloud.oracle.com/_downloads/Datasheet_Network_3/FastConnect-Datasheet.pdf

Our Challenges:
Managing Latency between Cloud and On Prem

FastConnect Partner Edition - Equinix Cloud Exchange

- Connectivity is provisioned through the Equinix Cloud Exchange

EQUINIX DATA CENTER

Enterprise
On-Premises DC

Network
Provider

Enterprise
"Edge Node"

Equinix Cloud
Exchange™

PLATFORM
EQUINIX™

Oracle
FastConnect

ORACLE®
CLOUD

Oracle Cloud
Data Center

Our Challenges:
Product Versions and Data Migration

- BPM processes are very long running (months to years)
  - State is managed internally
  - Have to be migrated as-is to Cloud version
  - On-premise versions differ from Cloud versions
    - Update to latest versions is significant because of project size
    - Allows visibility into migration details

Our Path

- Database Cloud Service
- SOA/BPM/Application
  - IaaS - Compute Cloud Service
  - Java Cloud Service
  - SOA Cloud Service
  - Integration Cloud Service

Oracle Database Cloud Service

Our Path:
Oracle Database Cloud Service

- IIC's first stepping stone into cloud services

- All Oracle databases will move to the cloud

- Easy migration using Database Backup Service

- Will integrate easily into other future Oracle Cloud services

- Eliminates need to maintain physical servers

- Provides full suite of administrative and management options

- Includes suite of monitoring tools

Oracle Database Cloud Service

AVIO
CONSULTING

Our Path:
Oracle Compute Cloud Service - Bare Metal

- Move and improve existing platform

- Eliminates need to maintain physical servers

- Can easily tar existing linux on prem files and transfer them to Bare Metal server to quickly stand up a clone of the on prem environment

- Takes advantage of cloud management features

- Allows gradual upgrade path to 12c and other Oracle Cloud services

Our Path:
Oracle Java Cloud Service

- Includes Java & WebLogic

- Can be extended with BPM

- Can deploy custom applications like IIC's Angular UI

- Take advantage of JCS Administration, Monitoring and automated deployment features

- Requires upgrade to a supported version

Our Path:
Oracle SOA Cloud Service

- PaaS computing platform for running Oracle SOA Suite, Oracle Service Bus and Integration Analytics

- Includes full suite of technology and cloud adapters

- Advanced features for future use include:

  - Oracle B2B

  - Oracle Enterprise Scheduler

  - Oracle Real-Time Integration Business Insight

  - Oracle Business Activity Monitoring

  - Oracle API Manager Cloud Service

  - Oracle Managed File Transfer Cloud Service

Our Path:
Oracle Integration Cloud Service

- Complete iPaaS platform for integration

- Includes full suite of technology and cloud adapters

- Fully managed platform

  - Upgrades

  - Monitoring

  - Reduced administration requirements

Q & A