

Tying it all together- EAI and iPortal

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*Niall Byrne, IONA Technologies
Product Manager, iPortal Application Server
niall.byrne@iona.com*



Agenda

- IONA and EAI
 - will look very briefly at how Orbix has been used in EAI projects
- But, what is IONA doing now to make EAI easier?
- In particular, what is IONA doing to tie together the key technologies?
 - EJB
 - CORBA Brokers
 - Message Brokers
 - Legacy systems
 - The Web



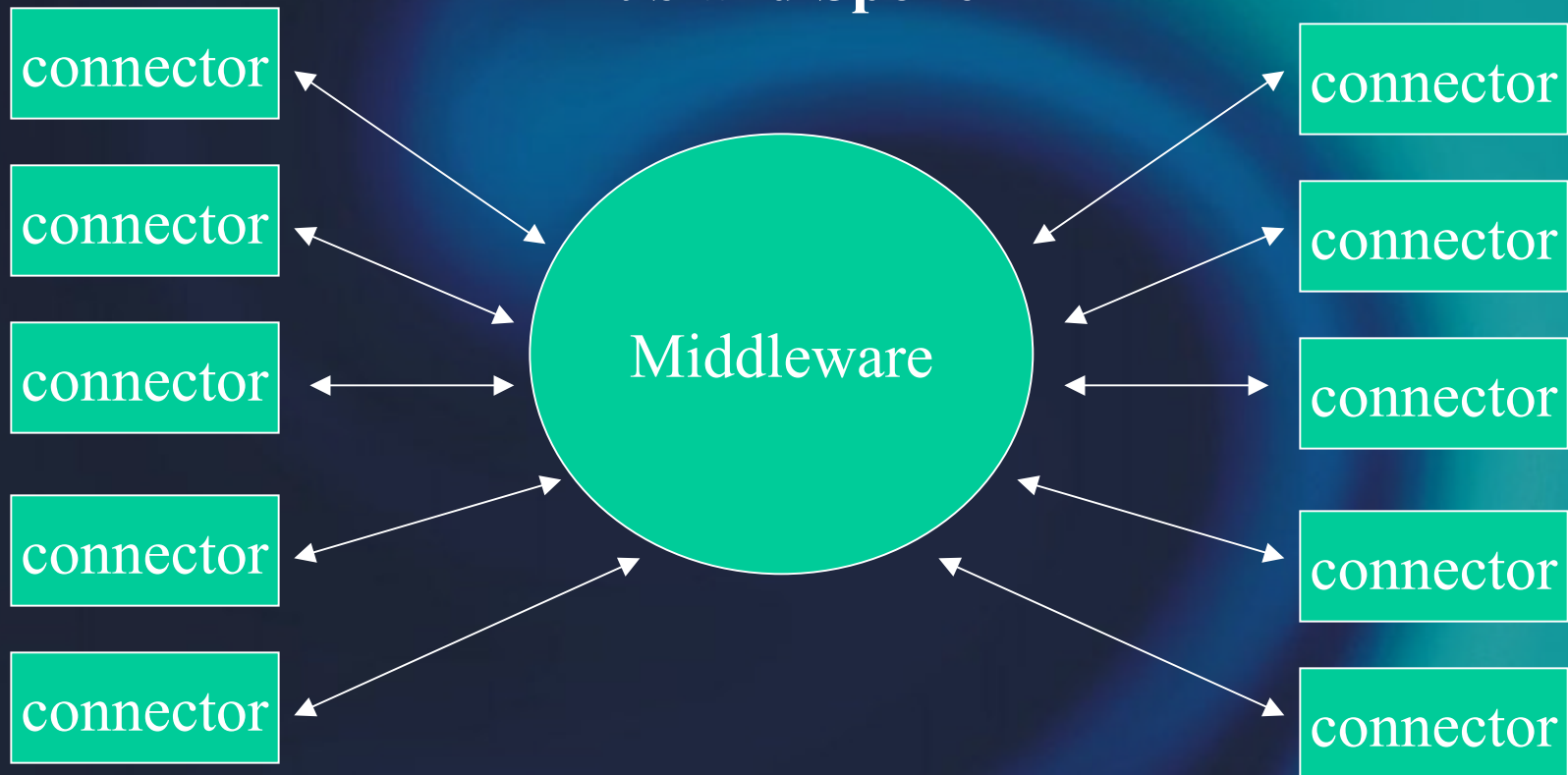
EAI and CORBA

- Standards-based middleware reduces the complexity of EAI
 - using CORBA as the middleware, we can reduce NxN interfaces to N interfaces
 - using Hub and Spoke architectures
- IONA have been doing EAI for years
 - using Orbix, OrbixTalk and OrbixOTM as the middleware
 - can be used to tie existing systems to other existing systems and also to brand new systems



A typical EAI architecture

Hub and Spoke



Boeing DCAC



Infostrada

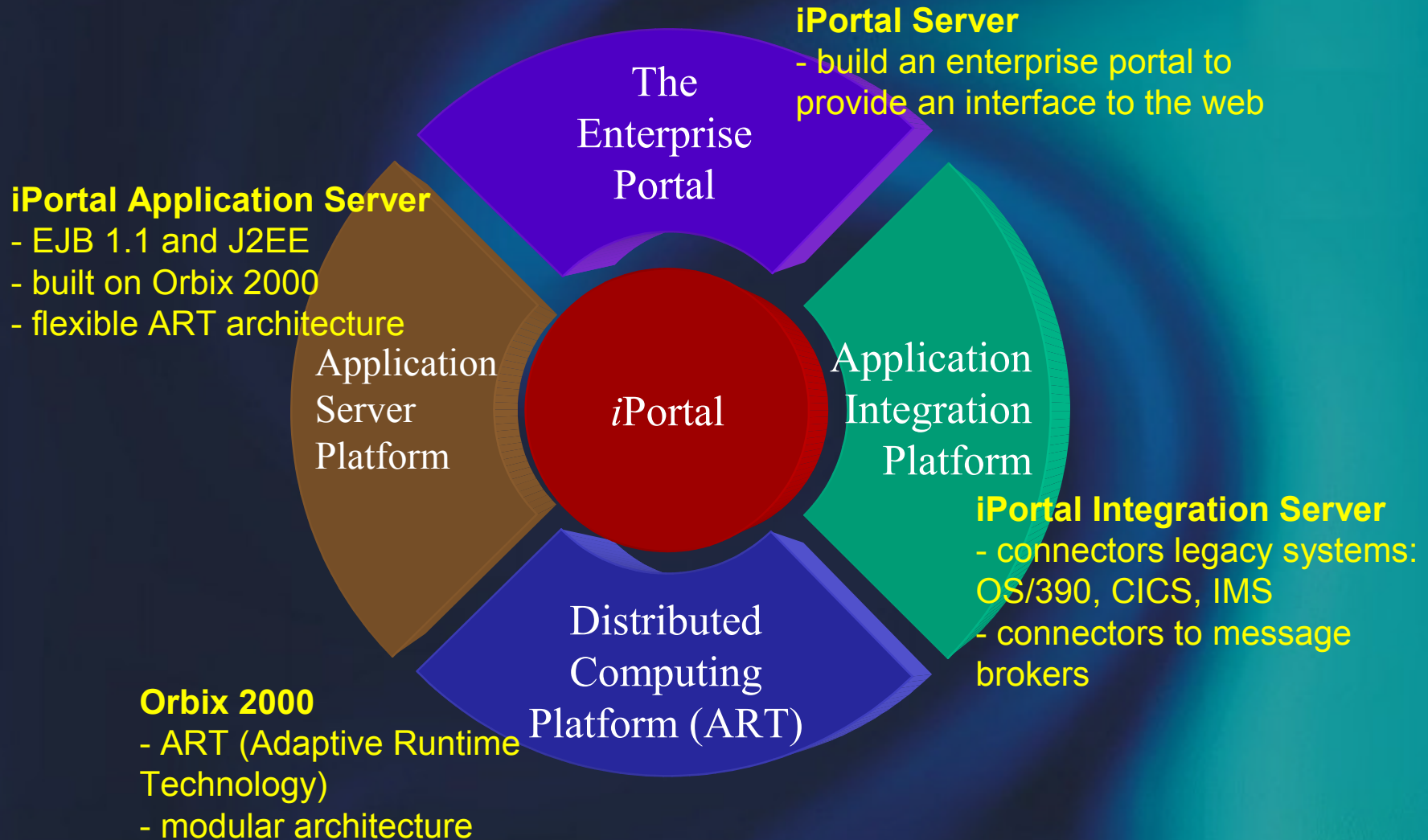


The forces shaping EAI

- **Timeliness** - the flexibility to change in realtime
- **Openness** - open standards and open source software very popular
- **Scalability**, but this also implies ...
 - robustness
 - reliability
 - adaptability
- **The Web** - all businesses must become eBusinesses or die
 - EAI must embrace the web, i.e. IAI
 - EAI architectures must provide integrated backend systems with an interface to the internet
- Let's look at how IONA is trying to solve these problems



Tying it together with iPortal



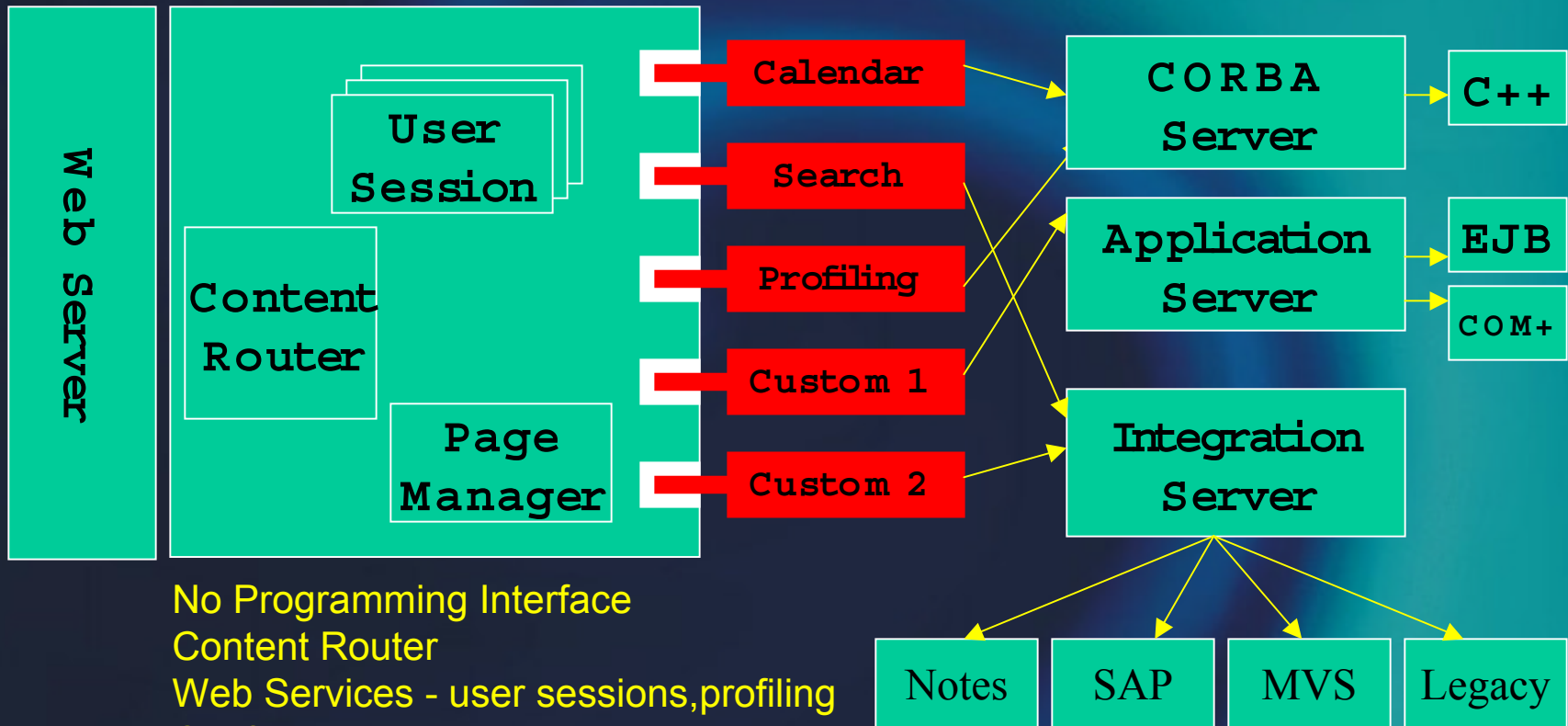
Orbix 2000

- Orbix 2000 is IONA's next-generation CORBA platform
- Can build POA-based CORBA 2.3 applications
- Built on IONA's Adaptive Runtime Technology (ART)
 - Patented micro-kernel architecture
 - Highly modular - minimal ORB core with plug-in framework
 - Allows statically-linked plug-ins and dynamically-loaded plug-ins
 - Most advanced ORB technology on the market



iPortal Server

iPortal Server



No Programming Interface
Content Router
Web Services - user sessions, profiling
Configuration Driven



iPortal Application Server

- A 'J2EE ready' EJB 1.1 **Server/Container**
 - built on ART and Orbix 2000 for Java
- Dynamic container
 - no code generation
 - hot installation/migration
 - dynamic reconfiguration
- and a **Graphical Application Builder** for the roles of
 - EJB Developer, Assembler, Deployer and Administrator
 - Ease of use and a shorter development cycle



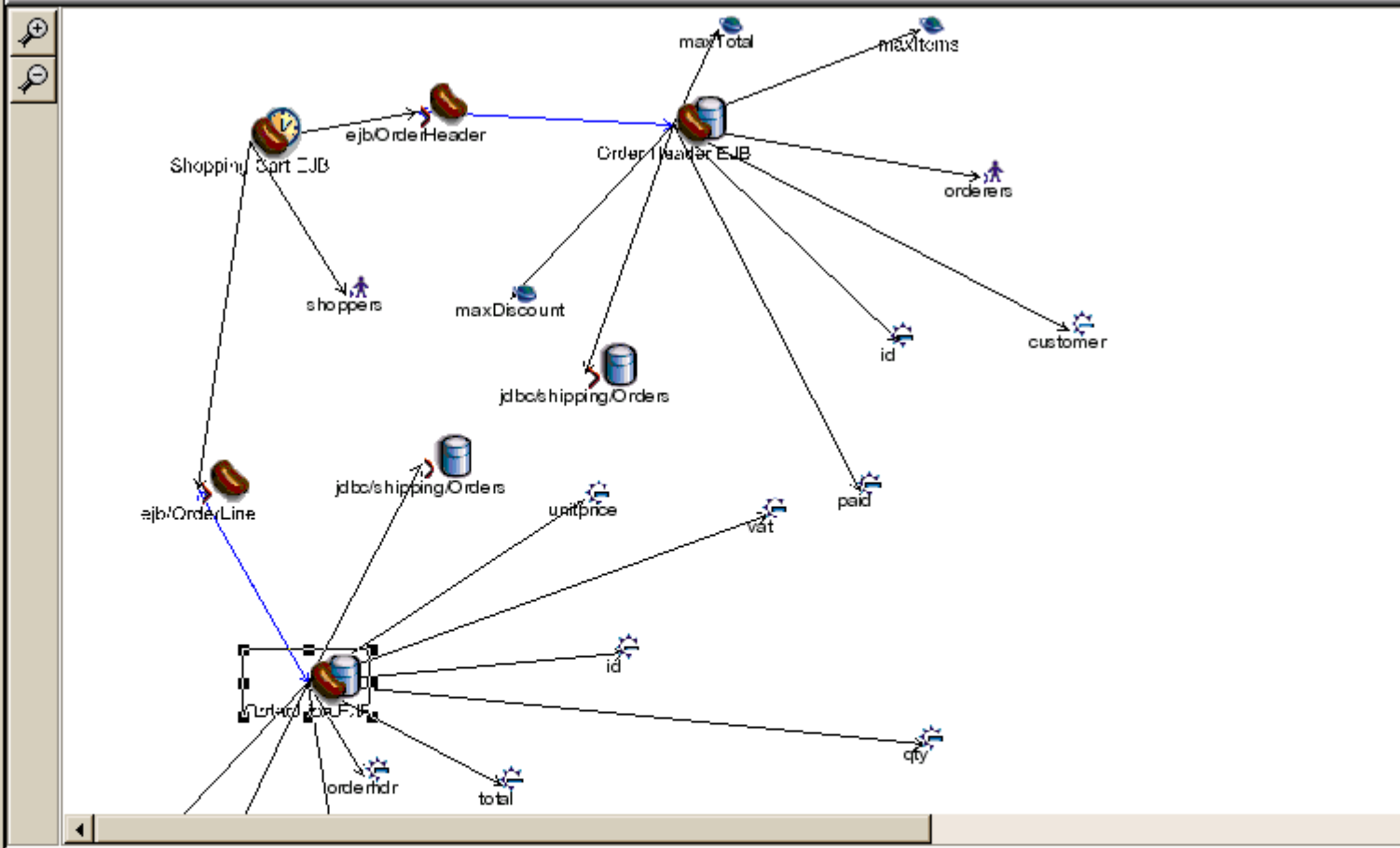


er

Home

- Provision
- Assembly
- Modules
 - Cart.ejb-jar
 - Order.ejb-jar
 - Shopping Cart.ejb-jar**
 - customers
 - carts
 - Required
 - Required
 - Method Permission
 - Method Permission
 - Order Header EJB
 - Order Line EJB
 - Shopping Cart EJB
- Applications
- Deployment
 - Modules
 - Applications
 - Containers
 - Container Configurations
- Suppliers
- IONA

Shopping Cart.ejb-jar



Selected Components

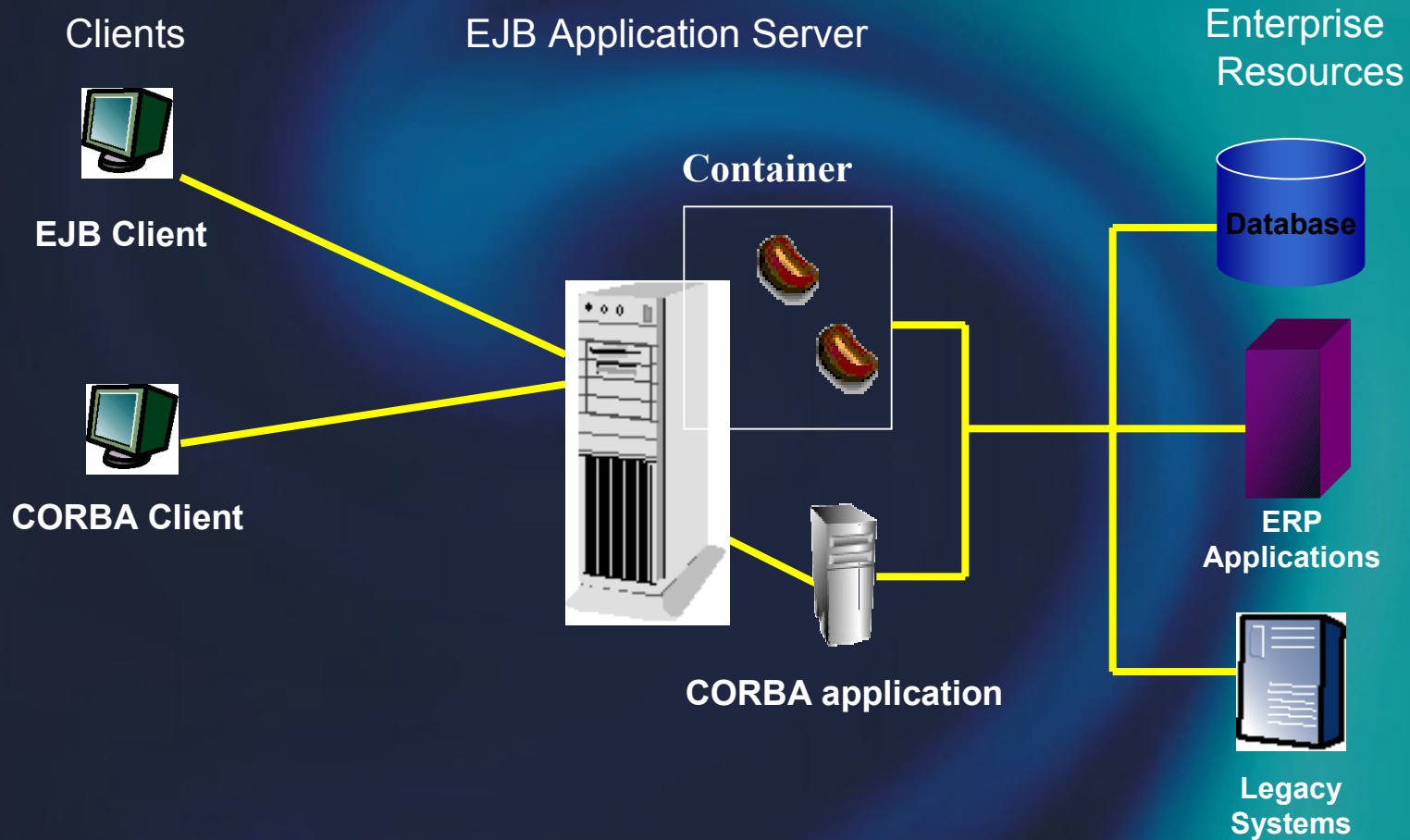
- Cart.ejb-jar
- Cart EJB
- Order.ejb-jar
- Order Header EJB
- Order Line EJB
- Shopping Cart.ejb-jar

Details

| Name | Value |
|-----------------|--|
| Name | IONAOrderLine |
| Description | The is where a full description of the Order ... |
| DisplayName | Order Line EJB |
| LargeIcon | orderlineejb-icon32x32.jpg |
| SmallIcon | orderlineejb-icon16x16.jpg |
| HomeInterface | order.OrderlineHome |
| RemoteInterface | order.Orderline |
| Class | order.OrderlineBean |
| PersistenceType | true |

Zoom In/ Out

CORBA/EJB Interoperability



EJB to CORBA

- Easier than CORBA to EJB
- Ideal if EJB Server built on CORBA, and uses RMI/IIOP to talk to the container
 - beans can then use IIOP to talk to CORBA Servers
 - this is allowed in the EJB 1.1 specification
- Simply compile the IDL to Java
 - the bean is then coded as a normal CORBA client
 - in iPAS, beans are Orbix 2000 for Java clients
- With this approach there is no restriction on the IDL, i.e. Objects By Value is not required
 - will work with CORBA 2.1, CORBA 2.3 and up



CORBA to EJB

- EJB 1.1 spec allows CORBA clients to EJB Servers via IIOP
- but, this is a more difficult problem
 - stems from the Java to IDL mapping
 - requires Objects by Value
- This results in restrictions
 - only CORBA 2.3 clients can communicate directly to EJB
 - CORBA 2.1 clients must use a bridge



iPortal Integration Server

- EAI solution including advanced message broker, workflow, business transformation,
- Built on open standards
- Proven deployments
- Adapters to COTS products
 - SAP & PeopleSoft (Visual Edge)
 - Baan & Vantive (COMet)
 - Seibel & Oracle (CORBA)
 - OS/390 IMS & CICS (CORBA)
 - Any CORBA or COM enabled application
- iPortal Framework
 - *i*Integrate Service

