

# Integration with WS-AppServer

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Cordys BOP 4.1 Developing User Interfaces

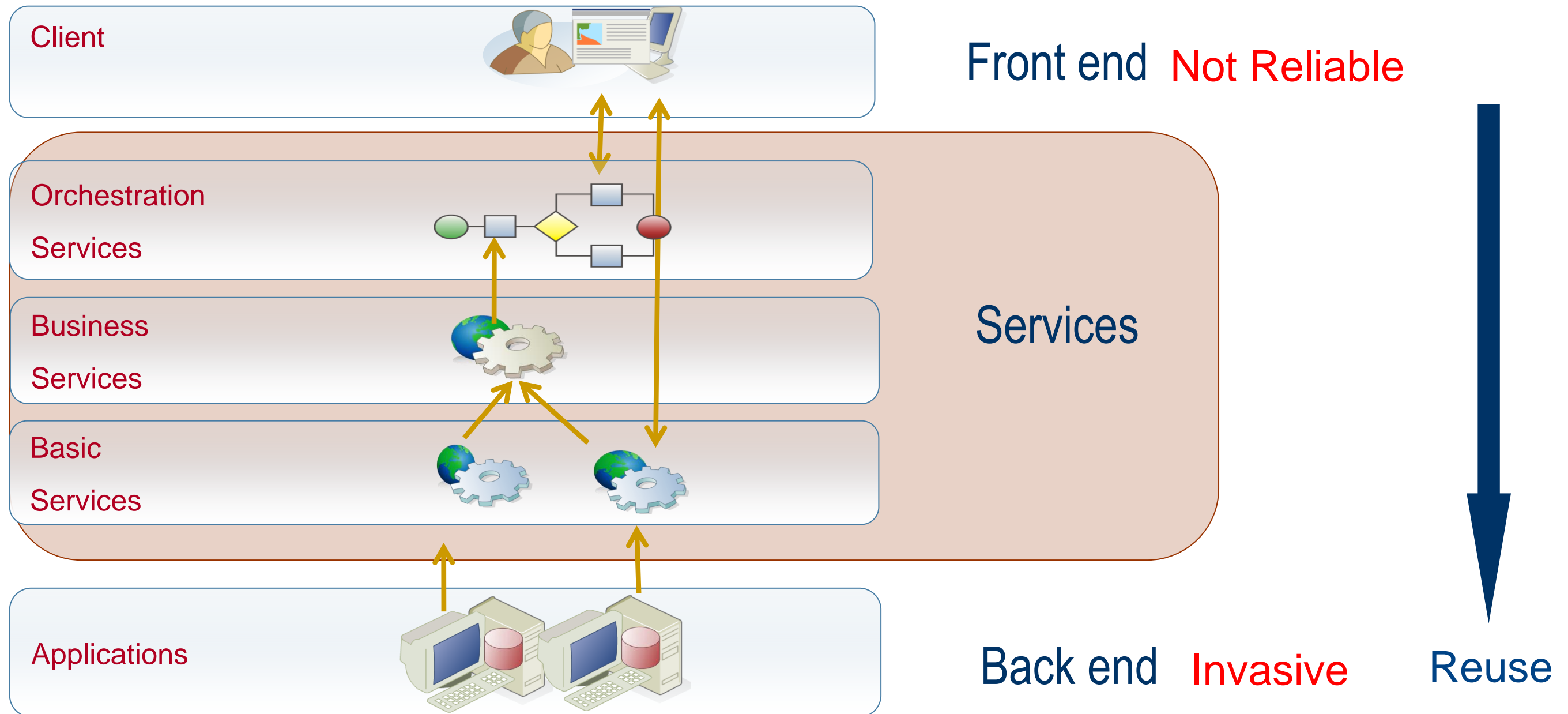
**CORDYS**

- ◆ Where to Place Business Logic
- ◆ Integration with User Interfaces
- ◆ Integration Events

- ◆ Initialization
  - ◆ OrderDate = now
- ◆ Access logic
  - ◆ Field/Object not accessible
- ◆ Validation
  - ◆ Order must have customer
- ◆ Application/Business logic
  - ◆ If order amount > 100000 then discount = 3%
- ◆ ...

# Where to place Logic

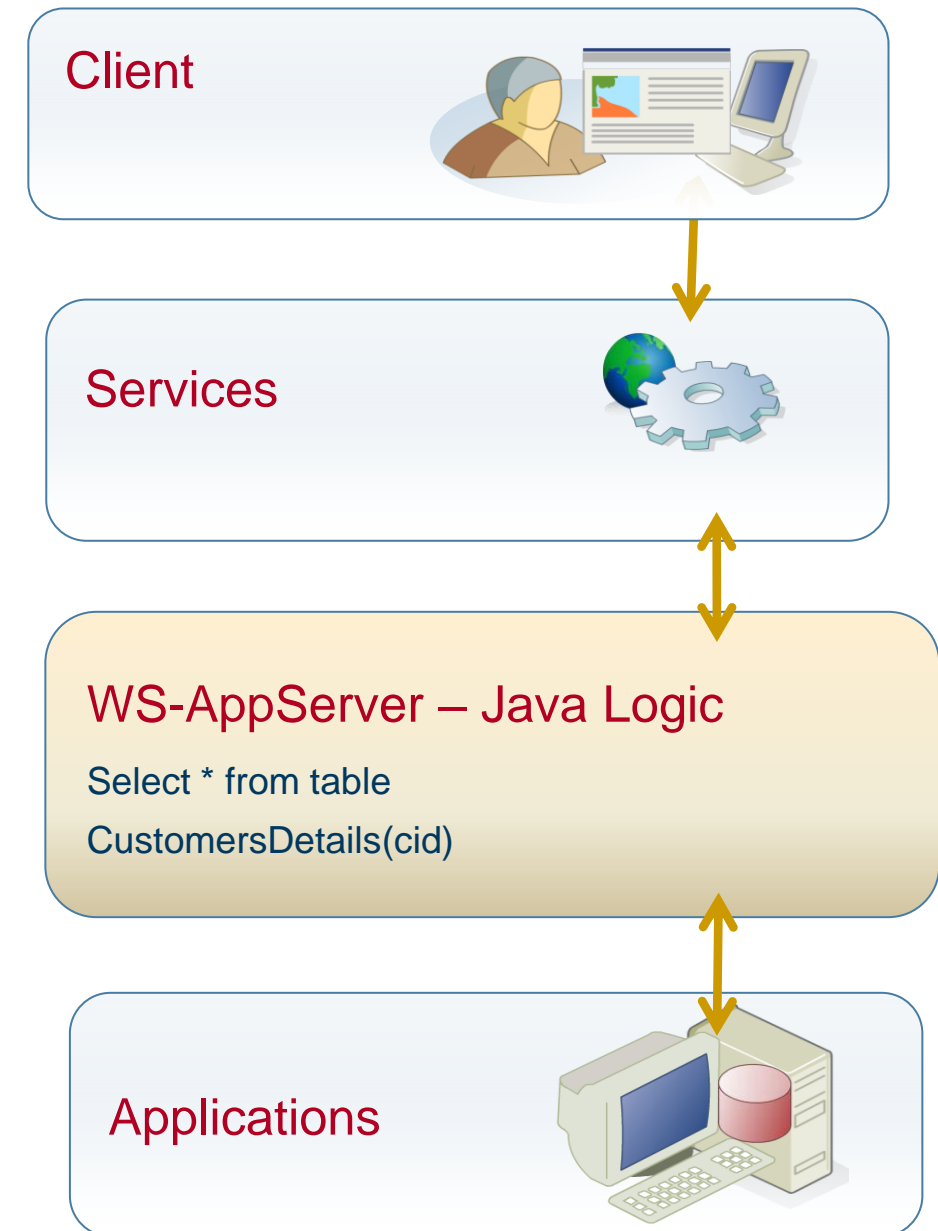
CORDYS



# Service With Business Logic Layer

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- ◆ Business Logic Server Side
- ◆ Metadata Abstraction
- ◆ DB Transaction Support
- ◆ Dynamic Integration with User Interfaces
- ◆ Rules Support

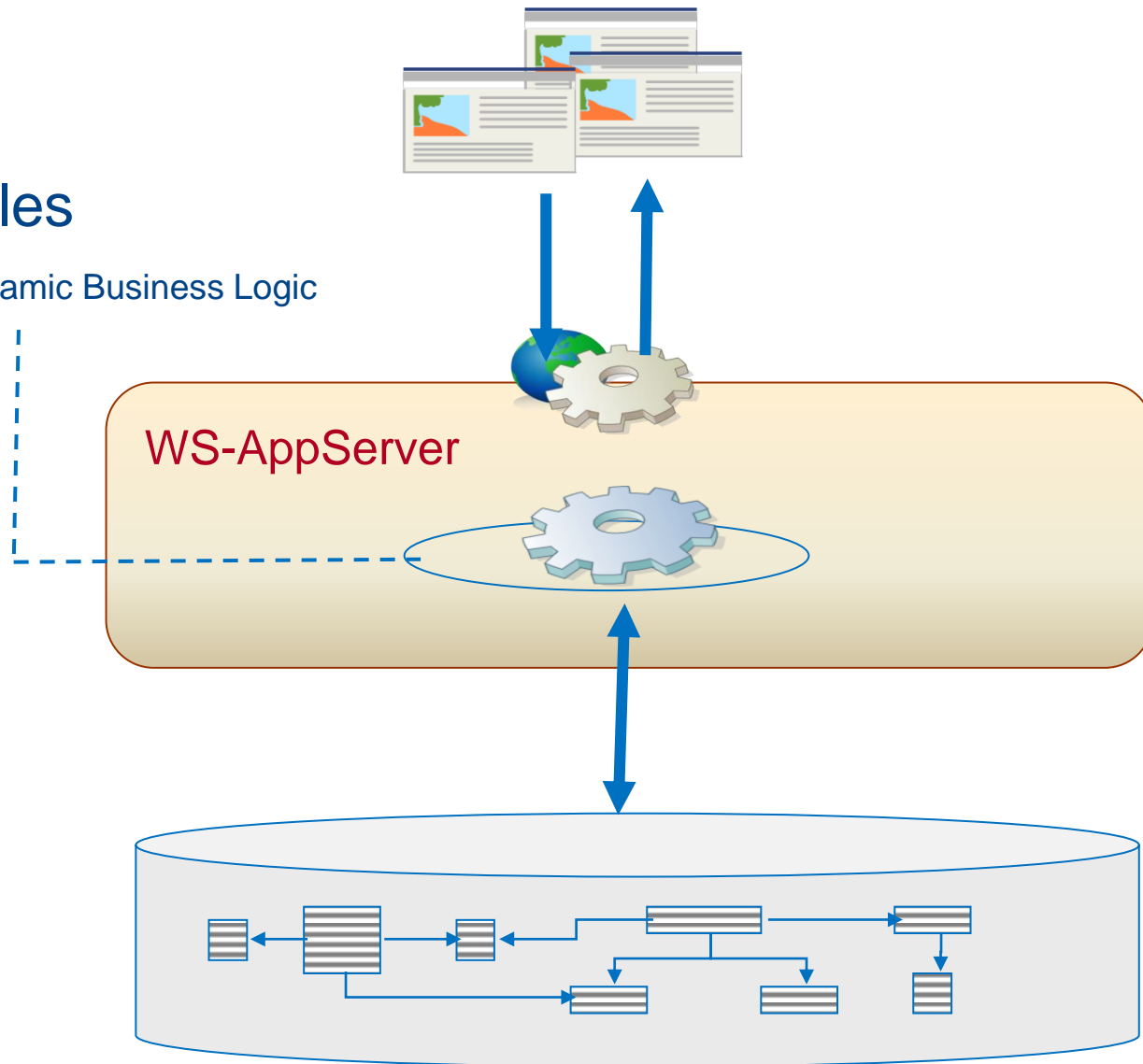


# Where to Place Logic

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## Rules

Dynamic Business Logic



◆ Presentation (Usability) Logic

◆ Application/Business Logic

◆ Access Logic

◆ Constraint Logic

◆ Backend Logic (constraint)

**Invasive**

- ◆ Where to Place Business Logic
- ◆ Integration with User Interfaces
- ◆ Integration Events

# User Interface Integration

- ◆ Form display acts on implemented logic based on model properties
- ◆ Fields act on field specific logic based on the fields WS-AppServer properties

The screenshot shows the 'Model Properties' dialog box with the 'WS-AppServer' tab selected. The 'Model ID' is 'OrdersModel'. Under the 'WS-AppServer' tab, there are checkboxes for 'Apply Access Control', 'Initialization Required', and 'Constraint Validation', all of which are checked. Below these is a section titled 'WS-AppServer Validation Events' with two dropdown menus: 'Before Validation' and 'After Validation'. At the bottom are 'OK' and 'Cancel' buttons.

Model Properties

Model ID  
OrdersModel

☒ Automatic ☐ Non-transactional  
☒ WS-AppServer Integration ☐ Instance Schema  
☒ Prompt To Save

Dataset Events Data Events Namespaces Associations Gateway WS-AppServer Model M

☒ Apply Access Control ☒ Initialization Required ☒ Constraint Validation

WS-AppServer Validation Events

Before Validation  
After Validation

OK Cancel

This section shows the 'Zoom Properties' dropdown menu and the 'WS-AppServer Properties' section. The 'WS-AppServer Properties' section has a checked checkbox for 'Constraint Validation On Change' and an 'Initialize Value Sets' dropdown menu set to 'Once'.

Zoom Properties

WS-AppServer Properties

☒ Constraint Validation On Change

Initialize Value Sets  
Once



- ◆ Event based
- ◆ Server Side
- ◆ Java programming language
- ◆ Support for:
  - ◆ Validation logic
  - ◆ Initialization logic
  - ◆ Change logic
  - ◆ Access and Display logic
  - ◆ Insert / Update / Delete logic
  - ◆ Commit logic

## ◆ Client-Side (JavaScript)

- + Quick to develop
- + No round-trip
- Behavior differences across browsers and clients, for example datetime settings
- Performance dependent on client
- Difficult to re-use

## ◆ Server-Side (Java)

- + Browser independent
- + Easy re-use across User Interfaces
- + Easy to maintain
- Round-trip to server even for small checks and changes
- More work to set up initially

- ◆ Where to Place Business Logic
- ◆ Integration with User Interfaces
- ◆ Integration Events

- ◆ Both Object and Attribute Level

- ◆ Initialize
- ◆ Access
- ◆ Display
- ◆ Constraint

- ◆ Attribute Level only

- ◆ Availability
- ◆ Values
- ◆ Change (before and after)

## ◆ Object Level only

- ◆ AfterLoad
- ◆ Insert (before, on and after)
- ◆ Update (before, on and after)
- ◆ Delete (before, on and after)
- ◆ Commit (before and after)
- ◆ Abort (before and after)

- ◆ AccessMode
- ◆ triggeredBy()
- ◆ StdTriggers
- ◆ QueryObject
- ◆ BusObject
- ◆ BusObjectIterator<class>
- ◆ setProperty()
- ◆ BSF

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**Thank You**

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**Questions?**