

# Oracle Application Server 10g Adapter for AQ

**ORACLE AS ADAPTERS**

**KEY FEATURES**

- Comprehensive integration
  - AQ point-to-point
  - AQ publish/subscribe
  
- Full support for AQ payload types
  - RAW
  - ADT
  - ADT object attributes as payload
  
- Standards based support
  - JCA 1.5
  - XML
  - WSDL
  - WSIF
  
- Easy-to-use, Rich Design-Time
  - Comprehensive data format support
  - Sampling native data and dynamic metadata generation
  
- Robust Proven Technology
  - Guaranteed exactly once message delivery
  - Scalable and highly available
  - Failure recovery

*Oracle Advanced Queuing (Oracle AQ) is a unique database integrated message queuing feature built on the Oracle Streams information integration infrastructure. Oracle AQ provides an extremely flexible mechanism for bidirectional, asynchronous communication between participating applications and supports both point-to-point and publish/subscribe messaging paradigms. The Oracle Adapter for AQ provides standards based connectivity and seamlessly integrates Oracle Application Server products with the Oracle AQ application.*

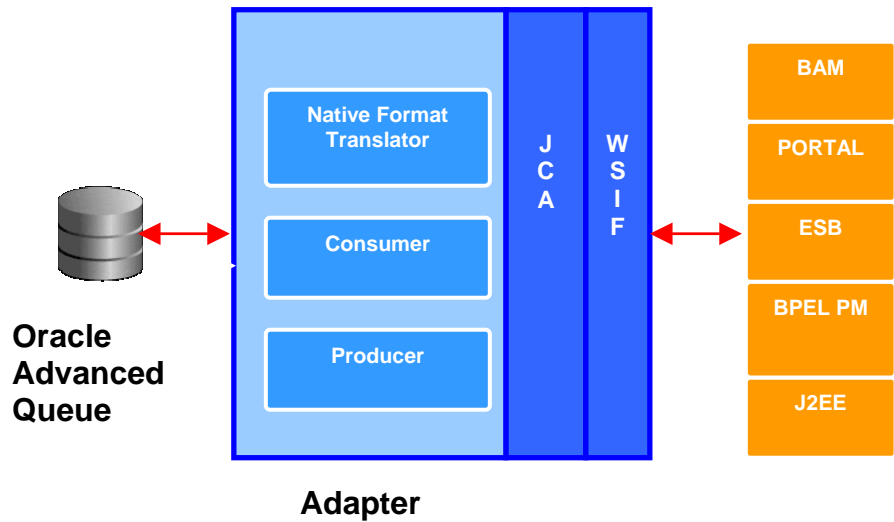


Figure 1: AQ Adapter Architecture Diagram

**Comprehensive AQ Integration**

The Adapter supports both the enqueue and dequeue operations and can serve as a Producer as well as Consumer of AQ messages.

The Adapter supports both point-to-point and publish/subscribe AQ messaging paradigms. The Adapter fully supports the Dequeue and Enqueue Header elements as well as the Message Property elements of an AQ message. The Adapter is capable of integrating with both single and multi-consumer queues

**KEY BENEFITS:**

- Extensive message filtering and selection support
- Comprehensive AQ data format support
- Highly scalable and robust architecture

**RELATED PRODUCT AND SERVICES**

The Oracle Adapter is part of the Oracle Fusion Middleware product family. Related products include:

- Oracle BPEL Process Manager
- Oracle Business Activity Monitoring (Oracle BAM)
- Oracle Portal

**RELATED SERVICES**

The following services are available from Oracle Support Services:

- Update Subscription Services
- Product Support Services
- OnlineDBA
- OnlineDBA for Applications

**Comprehensive AQ Datatype support**

The Adapter supports the RAW, Object (also known as Advanced Data Type – ADTs) and XML AQ data types as message payload. It also provides the flexibility of extracting a specific attribute of an Object AQ data type.

The RAW as well as the attribute of the Object AQ data type can be mapped to various enterprise data formats. These enterprise data formats can be positional, delimited, binary, EBCDIC, COBOL copy books and XML (both DTD and XSD based) data. The Adapter design-time wizard launches a sophisticated Format Builder wizard for sampling data and dynamically generating XSD schemas for non-XML AQ Data types. At run-time, the adapter uses the above schema to parse and format non-XML AQ data to XML and back

**Standards Support and integration with Oracle Fusion Middleware product components**

The Adapter for AQ supports open standards such as JCA, XML, Web Services (WSDL) and Web Service Invocation Framework (WSIF) and is truly portable across J2EE platforms.

The Adapter seamlessly integrates with all Oracle Application Server product components and AQ services can be web-enabled, exposed as portlets or integrated with a business process without any coding effort.

**Support for dynamic run-time parameters**

The Adapter allows the manipulation of AQ Header and Message Property elements of an AQ message dynamically within a business process at run-time. The recipient list of the Multi-consumer queue can also be dynamically defined at run-time.

**Selective Filtering of AQ Messages**

The Adapter supports the various AQ message processing paradigms and message selection and filtering options.

The selection can be influenced either by AQ priority or by AQ correlation ID. The Adapter also offers unique content-based consumption of AQ messages and allows filtering of messages based on message subscription rule. The Adapter is also capable of performing correlation between 2 AQ messages to mimic a request-response scenario. In this case, the correlation ID of the reply message is set to the message ID of the request message.

**Robust architecture**

- The Adapter supports extensive error handling, message rejection and repair capabilities including setting up of a business process for handling correction of data errors.
- The Adapter is fully capable of automatically recovering from database or network failures.

- The Adapter exposes performance metrics to provide visibility into the time spent on each processing step within the Adapter. The performance metrics can be monitored using the Oracle Enterprise Manager.
- The Adapter can dynamically scale run-time connections and exploits the underlying application server connection pooling service for the above.
- The Adapter is deployable in BPEL and Oracle Application Server clusters leading to a highly scalable architecture.
- The Adapter can be completely managed and monitored by the Oracle Application Server Console.

### **Summary**

Oracle Adapter for AQ offers the most complete standards based connectivity solution for accessing Oracle Advanced Queues.