

## Abstract

**A common business challenge across enterprises of all size is that of integrating disparate systems and data. The integration challenge can be found in multiple areas whether it is on-premise (between applications), in the cloud and between the cloud.**

The key business drivers for integration are the optimisation of the business process. In order to deliver an efficient business process applications and data both within the business and throughout the supply chain need to come together. The complexity of integration is growing with the move from on-premise applications to cloud based applications, along with the integration of cloud applications from different providers.

The volume of data and the frequency of this data changing is a key issue for businesses of all sizes. Whether it is the order to cash process or another industry specific process allowing businesses to gain insight into data in motion is becoming a more important factor.

In order to provide a solution that adheres to industry best practice and embed years of integration experience Adaptris created the Interlok Framework.

## FEATURES

- Seamless connection to hundreds of applications, data standards and communications protocols.
- Event based architecture.
- Centralised configuration with federated execution.
- Highly scalable both horizontally and vertically.
- High availability built in from the ground up.

- Ability to cache data to reduce latency of repeated calls to slow or remote back end systems.
- Modular design supports standard Enterprise Integration Patterns across any type combination of Interlok Now Adapter or Cirrus Hub.
- Ability to deploy runtime components into industry standard containers (stand-alone Java, OSGI, J2EE, Sonic Management Framework).

## BENEFITS

- Common configuration for all components leads to a lower TCO than other solutions with the ability to expose and consume API's to legacy applications with simple configuration.
- Allows real-time data exchange and the ability to extract and store metadata from events in a separate repository. Allowing users the ability to capture and feed big data repositories without development.
- Single configuration repository means simplified change control of the cloud integration landscape – regardless of where runtime is deployed.
- Scalability can be measured linearly and can grow through configuration to meet increased business requirements.
- Supported 24x7x365 and demonstrated to achieve 99.999 availability.

## ABOUT ADAPTRIS

Adaptris applies industry knowledge and technology solutions to simplify integration challenges for thousands of businesses seeking efficiencies, especially in their supply chains.

The Adaptris Interlok™ Integration Framework is an event-based framework designed to enable architects to rapidly connect different applications, communications standards, and data standards to deliver a highly efficient integrated solution. With over 1,600 deployments, the Adaptris Interlok Integration Framework and Adaptris Cirrus Hybrid Integration Platform apply the right amount of integration technology in the appropriate place using common standards. This enables solutions to be supported for their entire lifecycle, which ensure a lower total cost of ownership (TCO).

- Ability to mediate slow performing on-premise or reduce the cost of cloud applications which charge per call.
- Modular – additional components can be configured as business requirements change, offering a cost effective integration solutions which is delivered at a pace that matches business need.
- A common deployment model means that the logic can be hosted on-premise or in the cloud or split between multiple deployments.

## THE INTERLOK FRAMEWORK

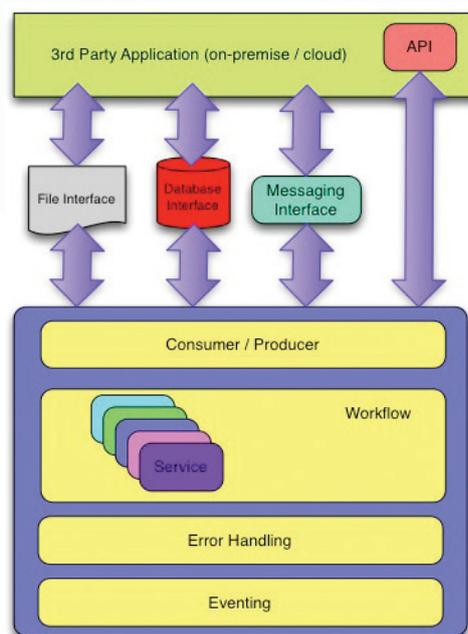
The Adaptris Interlok Framework is an event-based framework designed to enable architects to rapidly connect different applications, communications standards and data standards to deliver an integrated solution.

The key design philosophy of the Interlok framework is the ability to apply the right amount of integration technology in the appropriate place using common standards. This enables solutions to be supported for their entire lifecycle, which ensure a lower total cost of ownership (TCO).

The Interlok Framework was first released in 1998 adopting the principles of Service Oriented Architecture (SOA) and enabling legacy applications to be wrapped as services to be consumed by third party applications. As the integration market space has evolved from application specific API's through SOAP WebServices to RESTful services and web API's the Interlok Framework has embraced all of these paradigms.

Our core design principal has been federated runtime with a centralised configuration. This means when delivering integration across for example an extended supply chain it is possible to choose where the components are deployed, and yet retain the ability to centrally control them at runtime.

This runtime philosophy has been designed into the Interlok Framework from day one, and rolls up to the Adaptris Cirrus hybrid integration platform. Both offerings are ideally placed to help organisations make the transition to more real-time API's integrating to legacy applications. Furthermore both components support flexible licensing options ranging for perpetual to SaaS.



The diagram above shows some of the different approaches to integration that are included within the Interlok Framework.

The Interlok Framework offers a large number of pre-built utility services out of the box. These include standard Enterprise Integration Patterns such as content-based routing, transformation, splitting and batching along with encryption etc.

The key tenant of configuration vs code is one that has been a priority since day one of the Interlok Framework.

## ADAPTRIS INTERLOK ADAPTERS

At Adaptris we have over 300 pre-built adapters these include adapters for the following popular applications:-

- SAP R/3
- JD Edwards
- Bann
- PeopleSoft
- Oracle Applications
- Siebel
- Odette File Transfer Protocol
- MyOb
- SAGE
- PRMS
- LIS (Redprarie)
- mFour
- BPCS
- Arrow
- Scala
- Nexus
- Quicken
- Great Plains
- EDIFACT
- ANSI X12
- EDIFICE
- TRADACOMS
- EDI-INT AS1
- EDI-INT AS2
- EDI-INT AS3
- SFTP
- HL7

Interlok also provides a wide range of data communications and format adapters please contact us for more details.

The design of the framework allows solution architects to configure components together to deliver a working integration solution in minutes. Furthermore, the Interlok Framework supports common web data transformation standards such as XSLT and XPATH out of the box.

## ADVANCED CAPABILITIES

In addition to standard services there are more value added services within the Interlok Framework including features such as data caching within the Interlok runtime. The ability to cache data within the integration layer means that when dealing with slow responding back-end systems or on networks with high latency it is possible to reduce the number of calls. This is also a significant feature when integrating to cloud or SaaS applications that charge on a metered basis.

The Interlok Framework also has advanced features such as duplicate detection where it is possible to protect integrated systems from duplicate messages along with the ability sequencing messages across networks.

## RUNTIME

The Interlok Framework is open, and built in pure java. It has multiple run-time options which can also be mixed within an enterprise. It supports standalone java virtual machines, OSGI containers, Sonic Management Containers and J2EE application servers. The key feature of the Interlok Framework is that regardless of runtime choice the configuration remains consistent. This allows customers who choose to run the software on-premise the ultimate flexibility to fit in with their operational environment.

## EXTENDING THE FRAMEWORK

A key part of the Framework is the fact that it allows third-party developers the ability to plug in their own custom components. Once third-party components are tested by the Adaptris certification team, they are able to be fully supported. This is an important business benefit when comparing the means that the risk of point-to-point integration is greatly reduced.

## SCALABILITY

At runtime the Interlok Framework has been measured as linearly scalable both horizontally and vertically. When performance testing an integration platform it is important to consider a number of factors, including the size of messages along with volume and latency. The Interlok Framework has been deployed in scenarios where low latency messaging with small payloads are vital to the success of the project. It has also been successful in projects where large image files up to multiple gigabytes are delivered to back end content repositories. In order to allow the runtime solution to be optimised the Adaptris Interlok Framework allows tuning from a fine-grained level. From the thread count for individual workflows, up to splitting the runtime adapter instance across different physical servers the runtime performance tuning options are limited only by the backend application performance.

## ADAPTRIS IN ACTION

Adaptris Interlok has been successfully deployed in a wide range of customer installations across a range of industry sectors including Agri-Chem, Component Electronics Manufacturing, Defense, Airlines, Financial Services and Telecommunications.

For example, F4F Agriculture is a highly successful business-to-business trading exchange facilitating electronic commerce globally within the Agriculture sector. F4F looked to Adaptris Interlok and Cirrus to power the B2B community, allowing users to connect to existing data sources, as well as a diverse range of applications. Cirrus offers an elastic capacity infrastructure as a service (IaaS) focused on delivering high performance hybrid integration across diverse systems.

Adaptris' ability to deploy components as and when required – and to facilitate the best use of existing IT assets within the environment – were key factors in its selection. The cloud-hosted solution allows local execution of integration to be centrally monitored and managed, along with real-time event based tracking, which offers complete visibility into the data transactions. Cirrus also includes web-based solutions for smaller participants in the B2B supply chain to enable them to trade on an even footing with larger competitors.

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