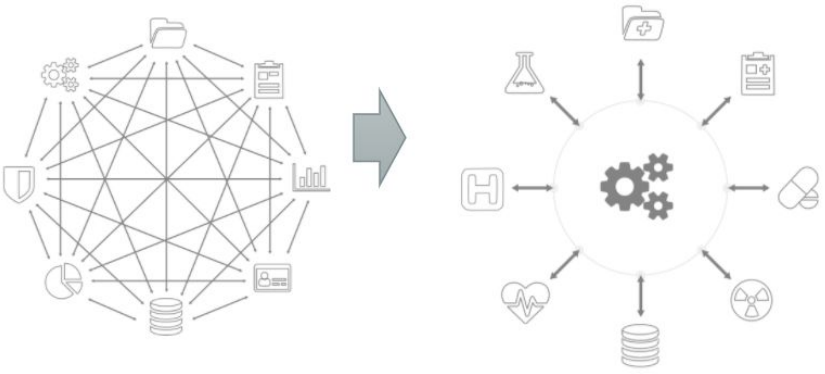
Odin Health Engine - our point of difference

“The Odin Engine is not your typical Integration Engine or ESB - it goes far beyond that. Our engine combines the best functionality from a variety of integration tools, using the latest state-of-the-art technologies, to create an innovative and unrivaled product.”

In the 70s, 80s and early 90s most integrations between computer systems were point to point. Each link was custom built and configured. Over time a spaghetti of interdependent integrations was created with no central way to monitor or troubleshoot. It became a growing, expensive nightmare to change and maintain these networks.

Integration Engines

In the mid 1990s Integration Engines were developed to address many of these issues. They quickly developed into the integration backbone of the Health sector. They enabled the sharing of information between healthcare applications and organisations via asynchronous messaging.



International standards such as HL7 and locally adapted variations defined the interactions. Message acknowledgement and persistence were fundamental to these interactions and enabled the loosely coupled systems to robustly interact.

However this came at a cost which was the performance overhead created by the numerous and complex interactions, the acknowledgements, rejections, validation checking, logging and the interaction tracking required in the engine. As a result these engines were architected purely to support these complex message persistence interactions and as a result struggled to scale significantly.

These are the legacy Interface Engine systems such as Corepoint, Rhapsody, Ensemble, Iguana and Cloverleaf.

Rise of the API and ESB Solutions

The world has moved on significantly in terms of integration technology since the 1990's. Monolithic infrastructure and applications that traditionally powered businesses are giving way to distributed and modular alternatives.

These advances have been spearheaded by organisations like eBay, Salesforce and the major banks who needed to provide a high volume of secure interactions between multiple organisations and consumers. They have embraced and enhanced the use of API (Application Program Interface) technology.

This new model has a number of advantages over the previous message based model. APIs are faster and can execute in real time. They don't need to include the overheads that are required for message persistence, meaning they can scale up more efficiently.

The Health International Standards organisation HL7 has embraced the API approach by developing and releasing its FHIR standards which are essentially API standards for medically related interactions.

In parallel the concept of an Enterprise Service Bus (ESB) was born out of the need to move away from point-to-point integrations, which become brittle and hard to manage over time.

An ESB solution allows the integration of different applications by putting a communication bus between them and then enabling each application to talk to the bus. This detaches systems from each other, allows them to communicate without dependency or knowledge of other systems on the bus. API interactions are typically used by applications to communicate to this bus. These ESB solutions do not adapt well to Integration Engine style messaging requiring message persistence and support legacy technologies.

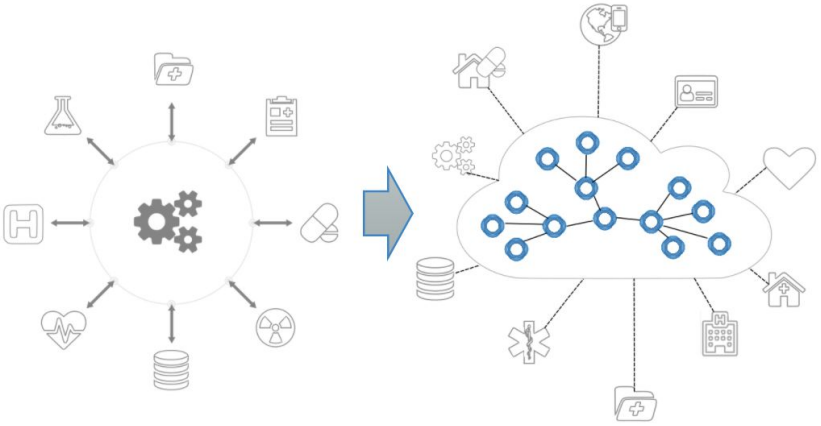
These newer ESB API centric solutions are products such as Mulesoft, Boomi and TIBCO.

The Odin Engine - a unique proposition

The Odin Engine is architected to be a unique and elegant combination of both an Integration Engine and an ESB solution. It offers the advantages of both, without the disadvantages of either. It offers a perfect solution that delivers backward compatibility to fully support legacy messaging, while also delivering a fully featured API centric Enterprise Service Bus (ESB) solution. All on the same platform.

This uniquely positions the Odin engine to bridge the gap between the old and the new integration models. It allows organisations to easily support their existing legacy applications while in parallel on boarding new API and FHIR integrations.

It is also ideally positioned to deliver core federated architecture functionality increasingly demanded by the newer models of Electronic Health Records.



Odin Health is purely focused on Healthcare. So our products fully support the key international healthcare standards and are built to cope with the diverse and complex environments that the health sector presents.

Key features

Integration Engine, ESB and ETL - The Odin Engine combines all these functions into a single elegant solution.

Rock solid - Incredibly robust and proven in some of the world's largest hospitals - processing in excess of 10,000 out patients per day. When a restart is required it's rapid restart functionality ensures a speedy process.

High performance - Up to an order of magnitude (x10) better throughput than other Integration Engines on equivalent hardware platforms. Over 40k messages per second.

Single deployment - Simplicity of installation and support. All functions are combined into a single product with a single installation process.

Complex business logic - Complex route logic is supported with a library of end points and processors available right out of the box. Event handling, data transformation and mapping, message and event queuing and sequencing, security and protocol conversion.

Flexible and rich development - Supports Groovy Script and the ability to import libraries allowing integrators/ developers deep and complete flexibility to craft specific solutions.

User Interface - All user interactions are via elegant, consistent web browser interfaces with a drag and drop designer interface.

Database - Sophisticated database (ETL) interactions are facilitated with all major databases. Stream processing software such as Kafka can easily be included in configurations.

High Availability - Standby Server or fully distributed active cluster options are available for complete resilience.

Fresh - New features are constantly being developed and added to the core product to support industry and customer requirements.

Designed for Healthcare - Purely developed to support healthcare organisations. So of course it comes pre-configured with common HL7 v2.x and FHIR standards.

Large files - Built in support for processing message interactions with very large payloads.

Different flavours

The Odin Engine is available in the following configurations;

Standard Edition is positioned to suit small to medium sized hospitals and healthcare organisations.

High Availability Edition is positioned to suit medium to large hospital and healthcare organisations that require additional resilience delivered by Odin clustering technology.

Enterprise Cloud Edition is positioned to suit very large hospitals, health regions or national health systems. It delivers massive scalability on a fully clustered pure cloud architecture.

1. Odin Engine Standard Edition

- simple on premise deployment and maintenance
- full ESB, Interface Engine and ETL functionality
- HL7 and FHIR support
- core engine functionality included - designer and monitoring

2. Odin Engine High Availability Edition

- simple on premise deployment and maintenance
- active multi node clustering for resilience and load sharing
- Odin Management Console to maintain multiple nodes
- same core functionality as Standard Edition

3. Odin Engine Enterprise Cloud Edition

- cloud native platform
- kubernetes deployment and microservices
- rich load balancing and clustering functionality
- massively scalable across nodes
- private or public cloud, AWS, Azure, on premise, hybrid cloud
- same core functionality as Standard Edition