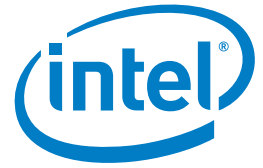


PRODUCT BRIEF

Intel® SOA Expressway for Healthcare

Capabilities and Features



# Intel® SOA Expressway for Healthcare

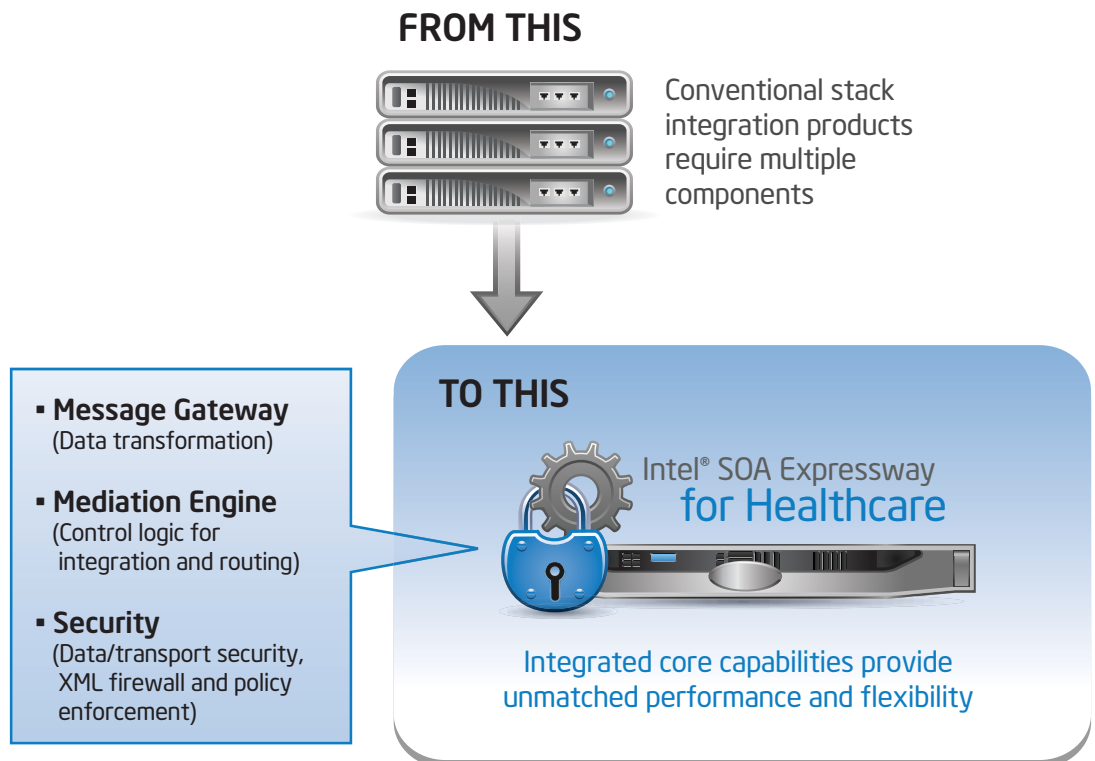
"Integrating Expressway into our Hospital Information System allows us to scale our solution to 1700 hospitals and realize a 10x TCO over competitive solutions."

- Martin XU,  
Vice President B-Soft

## Reform Your Approach to Healthcare Integration

Intel® SOA Expressway for Healthcare is the first purpose-built SOA integration appliance for healthcare that delivers best in class performance, open standards, and simplified security. It provides real-time, accelerated message processing, legacy connectors, and service enablement capabilities to power best of breed Health Information Exchange solution architectures.

Intel SOA Expressway for Healthcare combines a message gateway, service mediation engine and integrated security into a single, tightly integrated software appliance that carries the industry's best price-to-performance ratio.



## Key Features Include

- Market leading message processing performance, data transformation and validation for XML, HL7 and EDI transactions
- Powerful service mediation, protocol translation and routing for the most demanding, real-time data exchange applications
- Unmatched support for securing both web services and legacy data, end-to-end message security and runtime policy enforcement

## Key Benefits

Intel SOA Expressway for Healthcare will reform your approach to healthcare IT through platform performance, feature and cost optimizations.

### • Reduce Costs by Doing Integration Faster

No coding required! 100% codeless design tools to reduce learning curve and improve developer productivity. Simple install process has you up-and-running in 10 minutes or less. Out-of-the-box healthcare integration modules, prebuilt maps and validated adaptors to our partner's products like Initiate\* Patient Hub.

### • Unmatched Performance at an Affordable Cost

Perform message transformation, security, mediation and routing in a tightly integrated, high performance runtime, which addresses the high-cost, poor performance and inflexibility of a software "suite" approach to integration. In its single, integrated core, SOA Expressway delivers what conventional suites require up to five discrete products to achieve.

### • Flexible Form Factors

Hardware and software appliance deployment options meet any combination of requirements for cost, performance and security. Can be deployed as a virtual appliance and runs on popular platforms such as VMWare\*, Xen\* and Microsoft\* Virtual Server.



SOA Soft Appliance

or



Virtualized Appliance

or



Tamper-Resistant Hardware Appliance

### • Future-proofed

Commitment to open standards in the areas of healthcare including ASTM CCR, HL7v2 and HL7v3, CDA/CCD, IHE and HITSP. Extensive support for web services, messaging and security standards eliminates vendor lock-in and ensures the enterprise architecture is in control, not the product stacks that power it.

### • Designed for SOA

Developed for SOA from the ground-up, SOA Expressway provides configuration-centric development tools, healthcare adaptors for turnkey Enterprise Master Patient Index and Terminology solutions, and validated product integration with market leading Identity Management and SOA Governance vendors.

## Intel Validated Ecosystem

Intel has teamed with strategic partners to offer Governments, Health Plans, and large Providers with the means to address the scale, connectivity, and compliance challenges brought on by healthcare IT reform.

### Health Information Network Core



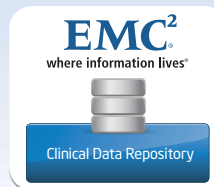
IGI's Affiliated Physician portal is a software solution that provides an efficient way to exchange healthcare information inside hospitals and with health information networks.



The Initiate Patient adapter for Initiate Systems is a validated ecosystem component for integration to the market-leading patient and provider registry solution.



The Terminology Interchange adapter for Apelon is a validated ecosystem component supporting controlled medical vocabulary translation using Apelon's Distributed Terminology System (DTS).



EMC's Integrated Information Infrastructure Solutions for Healthcare is a validated ecosystem component. EMC provides strategic advisory services, IHE-compliant storage, and indexing of clinical information.

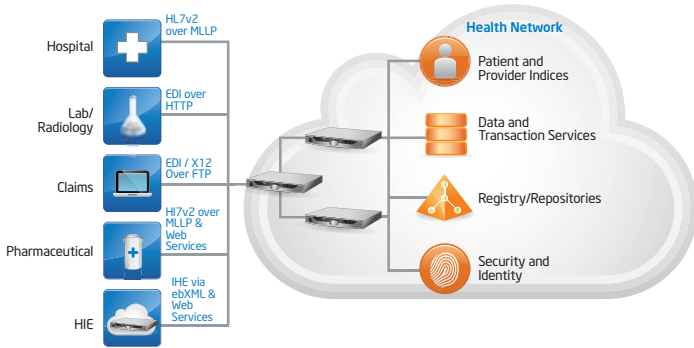


# Deployment Scenarios

In real world deployments, Intel SOA Expressway for Healthcare's high-performance service-oriented computing infrastructure has proven to meet the demands of any size network, from small or mid-sized community exchanges to large-scale networks for an entire nation. It supports flexible deployment and configuration for a variety of usage models and application topologies.

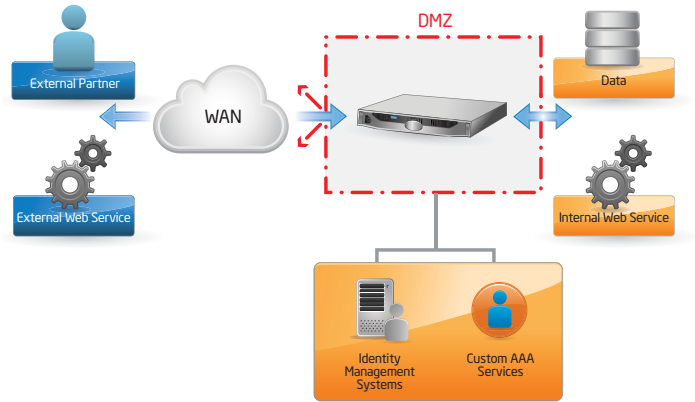
## Scenario 1: Backbone for National, State or Regional Health Information Exchange

Provides connectivity and access to core security, data, and application infrastructure. Standardizes, secures and governs access to master patient and provider indices, record metadata, document exchange and other services for building interoperable healthcare networks.



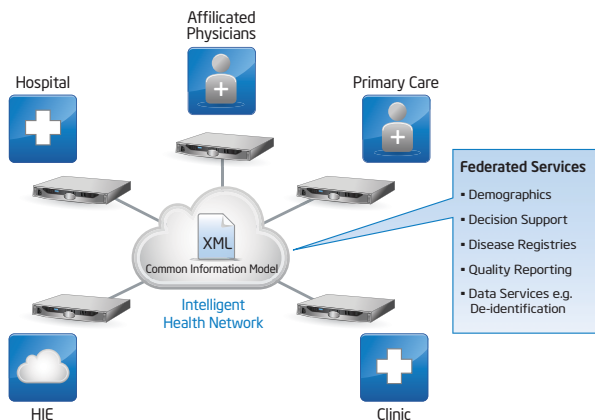
## Scenario 2: Gateway for High-performance Message and Service Brokerage

Accelerate compute-intensive message translation, service mediation and security for Clinical Analytics, SaaS or Cloud-based applications. Delivers batch, real-time, and large message (GB+) transaction processing with security gateway policy enforcement.



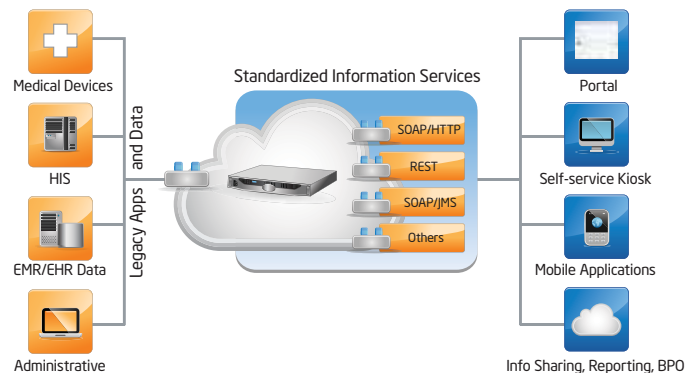
## Scenario 3: Bus for Standards-based Information Exchange and Routing

Assemble a federated, standards-based service bus to securely connect provider facilities and their affiliates to each-other as well as to regional or state HIEs. Quickly connect and integrate heterogeneous EMRs, clinical and administrative systems into an essential services network for quality reporting, demographics lookup, decision support and meaningful use compliance reporting.



## Scenario 4: Secure Proxy for Service Enabling Legacy Systems

Avoid rip-and-replace and extend legacy environments by quickly assembling data from a diverse set of proprietary applications and databases into higher-value, standardized information services layer.



# Feature and Functionality Details

Category	Description
Healthcare Integration	<ul style="list-style-type: none"><li>• IHE Profiles (XDS, XCA, ATNA, PIX/PDQ), HL7v2, HL7v3, and HITSP. Library Support: HL7, EDI-X12, HIPAA, NCPDP</li><li>• Over 60 pre-built HL7 v2 to/from CDA conversion maps</li></ul>
XML Firewall Threat Prevention	<ul style="list-style-type: none"><li>• XML Limit Checking, SQL Injection, DTD Checking, XPath Injection, Forbidden RegEx Scan, Malformed XML Attack, XML Bomb Attack, Schema Poisoning Attack</li><li>• Adaptive Denial of Service Protection and Throttling</li><li>• Anti-virus protection using ICAP</li></ul>
Authentication and Authorization	<ul style="list-style-type: none"><li>• X.509 certificate, CRL, username/ password, LDAP or Microsoft* Active Directory, Kerberos, SAML 1.0/1.1/2.0, Web SSO cookie and STS credential mapping, Amazon* Cloud API</li><li>• Integrates with: CA* SiteMinder, Oracle* Internet Directory, Oracle* Access Manager, IBM* Tivoli Access Manager</li><li>• Integrates with XACML policy decision points including Axiomatics* Policy Server and Oracle* Entitlements Server</li></ul>
Data Security	<ul style="list-style-type: none"><li>• OASIS WS-Security 1.0/1.1, W3C XML encryption and XML signatures, WS-I BSP 1.0/1.1, SOAP with Attachments</li><li>• Data validation, schema validation, WSDL validation, SOAP filtering</li><li>• Supports customizable data security</li></ul>
XML Standards	<ul style="list-style-type: none"><li>• XML, XPath and XSLT (1.0, 2.0), XML Schema</li></ul>
Transport Layer Security	<ul style="list-style-type: none"><li>• Support for multiple SSL identities, mutual auth, SSL v3 and TLS v1</li><li>• SSL Support for: HTTP, JMS, FTP, MLLP, Raw TCP</li><li>• Customizable protocol support</li></ul>
Cryptographic Support	<ul style="list-style-type: none"><li>• Supports DES, 3DES, AES, RSA v1.5, RSA-OAEP, SHA-1 and SHA-256</li><li>• Supports hardware cryptographic acceleration and FIPS 140-2 Level 3 network-based Hardware Security Module</li></ul>
Service Mediation	<ul style="list-style-type: none"><li>• Secure SOAP, REST, JSON, or custom service mediation within the datacenter or across the Internet</li><li>• Supports Open Group's X/Open XA transaction standard for long running transactions.</li><li>• Proven integration with all major ISV middleware solutions.</li></ul>
Service Governance	<ul style="list-style-type: none"><li>• High performance runtime policy enforcement for security, SLA, mediation, and transformation</li><li>• Integrates with business service repositories from SoftwareAG* CentraSite, Oracle, SAP</li><li>• Zero downtime dynamic policy updates for routing, attack signatures, validation, and transformation</li><li>• Fine-grain service and policy monitoring</li><li>• Message throttling and ordering</li><li>• UDDI v2/v3 integration for service publishing and retrieval</li></ul>
Supported Hardware	<ul style="list-style-type: none"><li>• Any Intel® Xeon® Multi-Core server with 4GB RAM (8GB Recommended)</li><li>• Available in a hardened, tamper resistant Hardware Appliance, Dell Intel® Xeon 5500 series</li></ul>
Management and Monitoring	<ul style="list-style-type: none"><li>• Cluster support allows a group of appliances to be managed &amp; monitored simultaneously</li><li>• Eclipse-based Intel service and policy designer with pre-built templates</li><li>• Management through command line, SNMP, and integrates with HP* OpenView, Microsoft* MOM</li></ul>
Operating Systems	<ul style="list-style-type: none"><li>• Red Hat* AS4/A5 (32 or 64-bit), SUSE Linux Enterprise 10 (32 or 64-bit), Oracle* Enterprise Linux, Solaris 10, Microsoft* Windows 2003 Server (32 or 64-bit), VMWare ESX</li></ul>
Performance Features	<ul style="list-style-type: none"><li>• Wire speed XML processing engine optimized for Intel® Multi-Core and SSE4.2 hardware instruction set</li><li>• Low sub-millisecond latency</li><li>• High performance multi-step processing</li><li>• Large XML processing (&gt;1GB)</li></ul>

## More Information:

Website: [www.Intel.com/healthcare/ps/soa](http://www.Intel.com/healthcare/ps/soa)

## Contact us by phone:

Americas: 1-410-263-3616

Europe, Middle East, Africa: 44 (0)7919 303 236

All other Geographies: 1-905-681-8768

## Contact us by email:

E-mail: [intelsoainfo@intel.com](mailto:intelsoainfo@intel.com)

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