

## Inside eHHR

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### SOA Success Story: EDI

**Background:** The Department of Medical Assistance Services (DMAS) had long relied on Sybase, through its fiscal agent vendor, to process HIPAA-compliant provider transactions. When the Sybase EDI translator product went out of support in 2014, DMAS was faced with an unacceptable rate of risk and had to find a way to mimic the work that the Sybase EDI product performed.

**The Challenge:** Whatever solution was put in place, it needed to result in a COBOL output because that is the only format the fiscal agent could consume in the legacy Medicaid Management Information System (MMIS). Additionally there were Service Level Agreements (SLAs) between DMAS and its managed care providers that stipulate transactions must be processed in one hour.

**The Solution:** Using the DMAS Electronic Data Interchange (EDI) gateway, IBM Data Power Proxy, IBM Integration Bus (IIB), and IBM WTX and MQ products, the DMAS Information Management division was able to build multiple message flow processes that together create a loosely coupled solution that transforms X12 to XML and XML to COBOL enabling fast transaction processing between the providers, the fiscal agent and DMAS. This solution is flexible enough to create outputs other than COBOL so it is replicable for other purposes as well.

**The Results:** The SOA solution enabled a high availability solution that is decoupled from the main process. This ensured the service remained operational during a 14-hour Oracle maintenance period. The backup queues in the IBM MQ products were able to retain the transactions and automatically process them when the data base was functioning again. With an outage, a more tightly coupled solution would have resulted in lost transactions and broken SLAs. The SOA based design instead allowed for seamless restarting. The solution can process one month of claims in one day, and is able to convert one million X12 transactions to XML in ten minutes, easily enabling DMAS to meet its SLAs with providers. With the successful SOA-based solution in place, the unsupported Sybase solution was retired at the end of 2015, providing DMAS with a fast, flexible, reusable and reliable replacement. The SOA solution cost \$400K to implement—well below the expected cost of \$2M to replace Sybase through DMAS' fiscal agent vendor. The solution also gives DMAS one less system to support in the future.

**The Partnerships:** The following SOA enterprise products are hosted by VITA.:

- ◆ Enterprise Service Bus
- ◆ Rules Engine
- ◆ MQ
- ◆ Work Flow Process
- ◆ Healthcare Industry pack of HL7 & X12
- ◆ Tivoli monitoring tools
- ◆ Data Power
- ◆ Services Registry & Repository

### SOA Technology Benefits

- ◆ No point-to-point system development: SOA enables the use of publish/ subscribe model in which the publisher can publish once and all subscribers can receive the information.
- ◆ Right information at the right time: SOA enables the use of real-time query and response model by published services to the Enterprise Service Bus.
- ◆ By publishing services on the Enterprise Service Bus, SOA enables governance and maintenance of life cycle of services.
- ◆ Less custom coding: SOA tools have out-of-box widgets (drag and drop) and built in adapters.
- ◆ SOA stack is highly secure and supports both internal and external clients.

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#### In this Edition

[SOA Success Story: EDI](#)

[SOA Technology Benefits](#)