



Iowa Department Of Public Safety (NVPS)

zirus

Type: System Integrator/Oracle
Technology Specialist
Founded: 1982
Location: West Des Moines, Iowa
Public/Private: Privately held
Size: 60 employees
Geography: North America
URL: www.zirus.com

Zirus is a privately held company specializing in Oracle sales, development, implementation and integration. Zirus has extensive experience with private companies and public organizations throughout the country.

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Customer Solution
Briefs here:**

<http://www.zirus.com/ourwork>

Technology

Stack:

Oracle Application Express

Oracle OC4-J

Oracle Database 9i

Oracle Application Server 10g r2

Oracle JDeveloper 10g

Partner Solution for the Iowa Department of Public Safety – National Virtual Pointer System (NVPS)

The Iowa Department of Public Safety (DPS) has a history of dedication and service to the citizens of Iowa and those who visit the state. DPS is separated into five divisions: Administrative Services, Criminal Investigation, Iowa State Patrol, Narcotics Enforcement, and State Fire Marshal.

Zirus and DPS partnered together to implement a National Virtual Pointer System (NVPS) solution connecting existing federal, state, local and tribal law enforcement investigative systems for target deconfliction purposes for all crime categories. The NVPS provides participating agencies the capability to exchange target pointer information through a single point of entry using sensitive but unclassified network. The purpose of the NVPS is to allow sharing of pointer data (officer or agent contact information) between dissimilar law enforcement databases.

NVPS established a single format for information sharing that allows participating systems, with a single development effort, to communicate with the many dissimilar systems. NVPS relies heavily on both technical standards such as web services and XML and law enforcement community standards such as the GLOBAL Justice XML Data Model.

Solution Details:

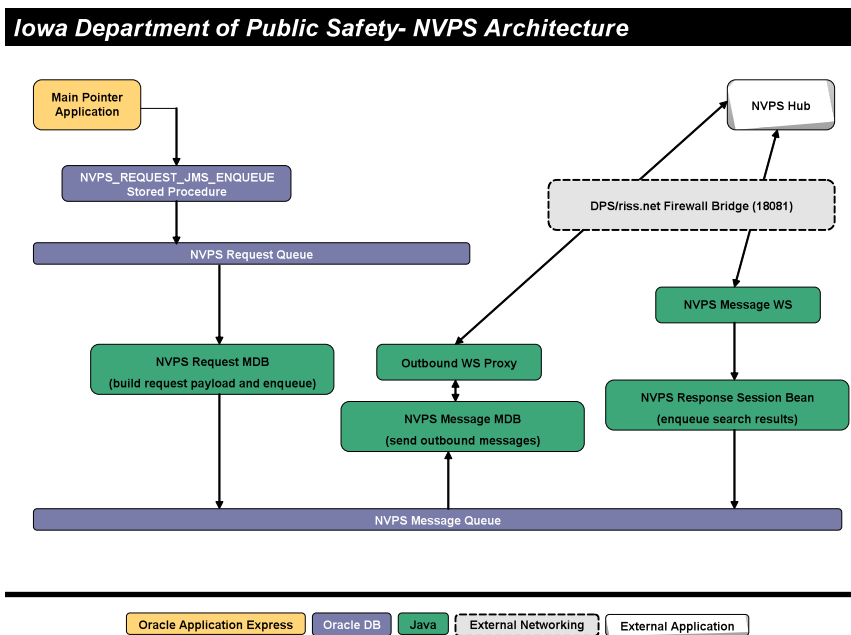
DPS did not have an efficient way to verify the existence of a specific person in any other system. To implement the NVPS solution for DPS, Zirus built upon existing Oracle Application Express applications to incorporate NVPS. To complete the project, the following technologies were used: Java, JAXB, XML, JMS Messaging Queues, and Web Services. JMS Messaging queues were introduced to ensure guaranteed delivery.

The NVPS system works in a couple ways. The center of the process is the NVPS Message web service. The web service deals with requests, hub requests, responses, and hub responses.

- For a request, a DPS user would request that a person is sent to NVPS through the existing pointer application which is written in Oracle Application Express. Once a request is made the information is added to the NVPS Request queue. The NVPS Request Message Driven Bean (MDB) monitors this queue and converts the published messages to an XML format before adding the information to the NVPS Message queue. The NVPS Message MDB monitors this queue and sends the request to the NVPS Message web service located on the NVPS hub. This completes the request. Once a request is sent to the hub, it will send hub requests out to all the law enforcement agencies that have an NVPS solution set up.



- A hub response is received in response to a request sent from DPS. A hub response is received as the information is sent in from other agencies to the hub, either with an empty response (no matches were found) or possible matches. Once a hub response is received, the NVPS Response session bean enqueues the search results for each possible match received. Then, an email is sent out to the requesting DPS officer informing them of a possible match and providing them with the information of the officer from the corresponding agency so the DPS officer can initiate contact to get more information.
- A hub request indicates that some other agency is searching for a specific person. The hub request goes through the NVPS Response session bean and is enqueued onto the NVPS Message queue. From there, the XML payload is converted into Java objects and the Oracle Database is searched for any possible matches.
- For every hub request a response is sent back to the NVPS hub. If no possible matches are found an empty request is sent. Otherwise, a list of possible matches is sent back to the NVPS hub. The XML payload for this response is built from the Java objects of possible matches. This data is pushed onto the NVPS Message queue and sent to the hub leveraging the same set of services as the DPS request. The hub completes the request by relaying the information to the originating agency.



"This project consisted of application development and completing connections to the NVPS hub and testing. The National Virtual Pointer System Solution helps to connect many law enforcement agencies throughout the U.S. and increase their ability to locate people, information and evidence throughout this network. Zirus worked with the Intelligence Bureau of the Iowa Dept. of Public Safety and the High Intensity Drug Trafficking Area (HIDTA) of the Federal Government.

Effective communication between multiple organizations was imperative to the success of the project. This is a quality Zirus strives to bring with each project."

-Mike McDermott, Chief Executive Officer, Zirus