

# NEOINTEGRATE ASSURED AVAILABILITY™

Timely communication of a patient's clinical information is critical in any healthcare delivery setting – physician's office, emergency room, hospital, lab, or radiology practice. At the core of the clinical data exchange is an interface engine, orchestrating the patient's demographic, orders, and results efficiently and effectively. The interface engine must be always available to assure physicians that they will receive the right information when they need it.

NeoIntegrate Assured Availability™ (A2) delivers an innovative, robust high availability solution for healthcare providers and vendors. NeoIntegrate A2 simplifies high availability and enables an easy-to-implement solution that delivers confidence constantly. Simply stated, our solution is focused intensely and solely on delivering high availability for NeoIntegrate.

## KEY FEATURES AND ADVANTAGES

- + Built within the NeoIntegrate platform to simplify deployment
- + Sends proactive alert when primary server fails; initiates failover within seconds – resumes workflow operations and communication within seconds
- + If failover occurs, communication continues with same IP address and identical business rules, message mapping, etc. – continued communication is transparent to the clinical community
- + When ready to resume operations on primary server, a single click re-synchronizes all message information, and communication resumes effortlessly on primary server
- + Proactive monitoring of both primary and backup servers, watching the health of both servers

NeoIntegrate A2 delivers high availability – affordably, simply, and dynamically. With the NeoIntegrate high availability solution, additional IT resources are not required. NeoIntegrate A2 needs no third party software or new expertise to deliver a healthcare communication system that is always available.

NeoTool delivers confidence to physicians and healthcare professionals that the patient data will be communicated as expected. Creating and delivering confidence strengthens the value delivered by IT to meet the indispensable clinical data exchange requirements for any healthcare environment.

## NEOINTEGRATE A2 SCENARIO

In a typical healthcare environment, tens of thousands of clinical data messages are exchanged daily using HL7, XML, etc. standards. The following is a scenario that illustrates the benefit of using the NeoIntegrate A2 solution:

The core interface engine – NeoIntegrate – is processing various patient demographic, order, result, etc. messages for a healthcare organization. With the NeoIntegrate A2 solution, the messages being communicated are written to the data persistency queues on the primary and backup servers. Once the message is enqueued on both servers, the acknowledgement is sent. The primary server processes the message, updating the backup server when the message is complete.

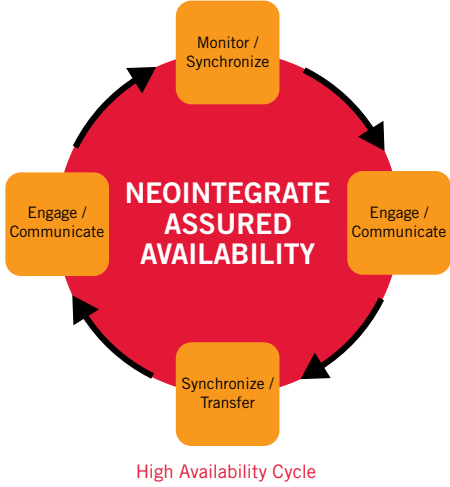
The primary server plays the active role while the backup server is in a passive role. However, the backup server is monitoring the health of the primary server and accepting real-time data replication.

If the primary server suffers a network outage, hardware crash or other catastrophic failure, and it can no longer continue message processing, the backup server detects it and initiates a failover alert. Within seconds, the backup server automatically takes over the service IP address, processes all incomplete messages, and accepts and communicates new messages.

Clinical data exchanges continue with no degradation in service, allowing healthcare operations to continue seamlessly.

## NEOINTEGRATE A2: FULL HIGH AVAILABILITY SUPPORT

NeoIntegrate A2 powerfully supports the full cycle of high availability with the following approach. During the full cycle of high availability, all message data, mappings, and workflow processing rules are synchronized and replicated automatically.



High Availability Cycle Supported by NeoIntegrate Assured Availability:

HIGH AVAILABILITY ACTIVITIES	FEATURES	ADVANTAGES
Monitor / Synchronize	<ul style="list-style-type: none"> <li>+ Monitor primary and backup servers proactively to assure availability</li> <li>+ Automatically replicate message data and business rules – in real-time</li> <li>+ Send communication system health notifications based on defined parameters, such as:</li> <li>+ Backup server unable to ping primary server</li> <li>+ Backup server not replicating</li> <li>+ Disk space running low on primary and backup servers</li> </ul>	<ul style="list-style-type: none"> <li>+ Immediate notification of any change in service</li> <li>+ Unassisted, direct action to continue communication service seamlessly</li> <li>+ Real-time, continuous replication of message data and workflow processing rules</li> <li>+ Proactive notifications of service changes in high availability environment</li> <li>+ Result: High confidence in healthcare communication services are provided continuously, timely, and accurately</li> </ul>
Engage / Communicate	<ul style="list-style-type: none"> <li>+ Automatically activate backup server when failure of primary server is detected</li> <li>+ Communicate message transactions seamlessly on backup server – communication service resumes within seconds</li> </ul>	<ul style="list-style-type: none"> <li>+ Automatic failover activation to 'hot backup' if primary server is unavailable – high availability delivered</li> <li>+ Patient data delivered as expected – timely and complete</li> <li>+ First message in is the first message delivered – always</li> <li>+ Result: Productively set high service level standards for healthcare data exchanges</li> </ul>
Synchronize / Transfer	<ul style="list-style-type: none"> <li>+ Synchronize message data with primary server when ready to failback</li> <li>+ Begin communication processing immediately on primary server, after synchronization</li> </ul>	<ul style="list-style-type: none"> <li>+ No loss of patient data or log files</li> <li>+ No loss of communication service</li> <li>+ 'One-click' failback execution</li> <li>+ Result: Effortless support of high availability environment</li> </ul>
Communicate / Engage	<ul style="list-style-type: none"> <li>+ Return seamlessly to normal communication service on primary server</li> <li>+ Monitor primary server constantly with continuous data replication to backup server</li> </ul>	<ul style="list-style-type: none"> <li>+ Complete cycle of high availability delivered natively within NeoIntegrate</li> <li>+ Result: Lower IT support costs and total cost of ownership for a robust high availability solution</li> </ul>

### ABOUT NEOTOOL:

NeoTool's healthcare integration solutions empower organizations to develop, test, deploy, and manage data exchanges between healthcare applications and providers. Through software, HL7 training, and consulting, NeoTool is dedicated solely to healthcare application interfacing. NeoTool customers include healthcare providers (e.g., hospitals, imaging centers, labs, and clinics), healthcare software application providers, and medical device manufacturers. [www.neotool.com](http://www.neotool.com)

For current healthcare interfacing insights, please visit the NeoTool Healthcare IT Blog – [www.neotool.com/blog](http://www.neotool.com/blog)

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