

## Highly Scalable - Built for Integrators; Run by End Users

- ACCURACY**

Search AFIS algorithms are continuously rated in the top tier 1 group in NIST PFTII and MINEX evaluations.

- MATCHING SPEED**

Search AFIS exceeds 30 million fingerprints per second per server, while maintaining the highest accuracy levels required for actual operational environments.

- INTEROPERABILITY**

Search AFIS supports ISO 19794-2 and INCITS 378 interoperable templates for verification and identification and its Universal Image Processing libraries provide for simple integration of third party scanners.

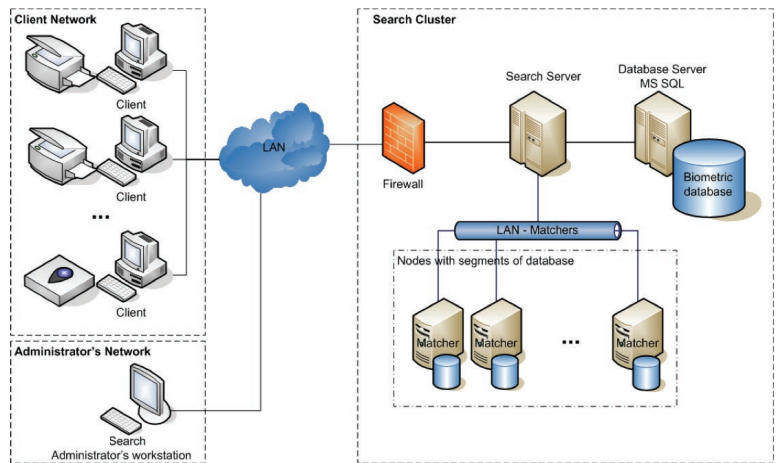
- VERSATILITY**

Search can provide a wide range of search modes: 1:N, 1:Some, 1: Few, and 1:1

- SCALABILITY**

Search AFIS can be deployed in an all-in-one configuration with controller node, interface node and matching node residing in one host; and in clustered multi-node configuration providing high throughput and identification search speed. Search clustering technology has been tested in configurations exceeding 100 matching nodes, and deployed in live production systems with more than 30-nodes.

### System Architecture



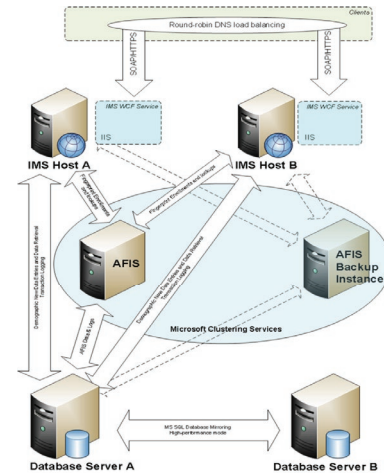
### Proven Technology

TSA/TWIC AFCIS Since 2005	<ul style="list-style-type: none"> <li>• Direct contract with TSA</li> <li>• Periodic upgrades; Capacity 4M records</li> </ul>
Voter Poll Publication - Zimbabwe	<ul style="list-style-type: none"> <li>• 6M records - 2018 Presidential Election</li> </ul>
Voter Registration Nigeria	<ul style="list-style-type: none"> <li>• 68M records - deployment and support: 2002-2003</li> </ul>
US Small Business Administration HSPD-12	<ul style="list-style-type: none"> <li>• 3M records - deployment in 2007</li> </ul>
Voter Registration Zambia	<ul style="list-style-type: none"> <li>• 6M records - deployment and support: 2008-2011</li> </ul>
National ID and Voter Registration - Guinea	<ul style="list-style-type: none"> <li>• 6M records - deployment and support: 2011-2013</li> </ul>
US DHS Science and Technology Division	<ul style="list-style-type: none"> <li>• Next Generation Biometric Entry/Exit Technology</li> <li>• R&amp;D contract: 2009-2015</li> </ul>
US State Department AFIS Deployment	<ul style="list-style-type: none"> <li>• Support for 12 countries national AFIS: 2011-2014</li> </ul>
US DHS TIM Project Accenture Federal Group	<ul style="list-style-type: none"> <li>• 4.5M records - deployment in 2013: On-Going</li> </ul>

## Architecture Advantages

### ✓ HIGH AVAILABILITY

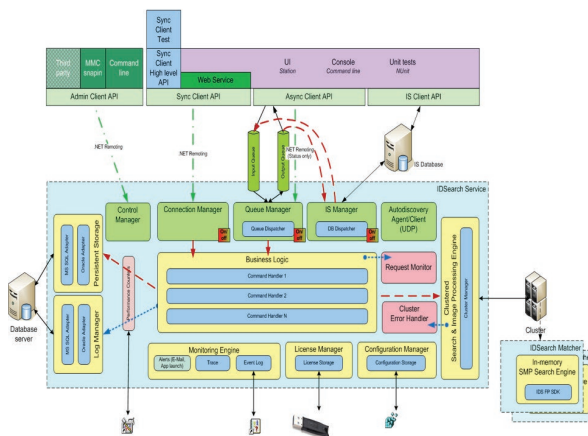
- Automatic Cluster Recovery.
- Supports deployment of AFIS controller node (Search Cluster Manager) in a Microsoft Clustering (MSCS) environment.
- Supports deployment in VMWare environment with matching node code optimized to mitigate any speed loss due to hypervisor.
- Asynchronous interface queue can be deployed in MSCS environment providing added advantage in High Availability scenarios.
- No single point of failure: multiple interface nodes, controller nodes and matching nodes in mesh configuration ensure constant data path availability.



### ✓ LOAD HANDLING

- Image Processing and Matching are simultaneously done in-cluster.
- In-cluster Image Processing utilizes all available cluster resources making for the fastest possible template extraction.
- No dedicated image processing nodes results in Reduced hardware footprint, system configuration complexity and Total Cost of Ownership.
- Request prioritization allows flexible workflow implementation.
- Parallel request processing maximizes system throughput.
- Preset and real-time search space partitioning provides even greater search speed capabilities.

## Search v.5 Architecture



### ✓ INTEGRATION

- Synchronous and Asynchronous interface with request prioritization.
- Support for open-source Message Queuing protocol.
- Unique database-driven Integrator Service Interface (ISI) requires no knowledge of coding.
- Rapid implementation using sample libraries.

### ✓ OPERATION

- Intuitive Search administrative console.
- Performance counters for every component and command type in the system, providing for easy benchmark of system throughput.
- System level logging integrated into Windows application and service logs.
- Component-level tracing available in the configuration.