IBM Software Demos
IBM Informix Dynamic Server High Availability

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Companies today need to get “Information On Demand” so they can run their business based on timely and effective decisions. This means data must be available when and where they need it.
The cost of system downtime can range from thousands to millions of dollars – even for a few minutes. It is essential for the database server to provide uninterrupted and continuous availability, including minimizing downtime due to maintenance

First, let’s review the terminology:
Failover is the transfer of services to an identical system for operational continuity.
High Availability is the amount of time that an application can be used for productive work. High Availability is generally achieved using failover capabilities.
Continuous Availability includes the capabilities that make the entire system available – with near zero downtime. Continuous Availability can be achieved using High Availability solutions.

IBM Informix Dynamic Server or IDS, provides several High Availability offerings to drive maximum business value and fully leverage your hardware and software investments.

Whether you need a single standby backup for unplanned outages or a highly scalable cluster of servers, IDS provides flexible availability options to meet your specific business needs.

The High Availability Data Replication or HDR feature provides a single standby backup for failover in case of an unplanned outage.

HDR is the cornerstone of the IDS high availability capabilities, and consists of a two node configuration for failover. If the primary server fails, the secondary server becomes the primary, delivering uninterrupted data availability while automatically reconnecting all of the clients. The HDR secondary server can also be used to increase overall throughput by offloading reporting and other query activities from the primary

If you don’t want to make a copy of the data, but want to distribute transaction workload and need protection from a server failure, IDS provides Shared Disk Secondary or SDS capabilities.

The SDS servers share the same physical disk with the primary server.
Any of the secondary servers can be promoted to the primary when needed. SDS also provides scalability on demand, allowing you to quickly add a server for additional processing throughput.

If you want to maintain a full copy of data at another location anywhere in the world, the Remote Standby Secondary or RSS option provides an additional level of failure protection. .

The Remote Standalone Secondary server extends HDR functionality and is a complete replica of the primary server. Multiple local or remote backup servers can be set up with RSS to increase disaster recovery solutions. These servers are also available to offload transactions to increase performance.

The shared disk or SDS and remote RSS servers can be configured in any combination, providing true flexibility, increased performance, and scalability on demand. Lower cost hardware can be used to scale out and improve high availability.

So how is this different from the existing Enterprise Replication capabilities in IDS?

Use Enterprise Replication (ER) for data distribution across different database schemas or when you want to consolidate or distribute data that is independent, using customized business rules. ER configurations can run either standalone or be a part of other high availability options.

The flexibility and power of IDS allows you to choose any of these solutions on their own or in any combination to create multiple layers of protection.

Whether you want High Availability, increased scalability or Enterprise data replication, IDS has flexible options that simply fit your business needs.

All of the options are designed into the IDS server, and don't require any 'bolt-on' hardware or software. They seamlessly work together in any combination for easy deployment of a completely customized multi-layered continuous availability solution.

You can read, write, update and delete on any node – whether it is local or remote – to balance your workload for even more business value from the secondary nodes.

The IDS Connection manager will help manage workload with each new client connection. Clients can automatically connect to a server based on geography or other business criteria. Service Level agreements allow definition of logical groupings. The Connection Manager automatically routes the connections to the node within the logical group with the greatest capacity to handle their workload.

The Connection Manager also handles automatic failover should the primary become unavailable. Failover preferences can easily be defined in a failover plan that details failover sequence down to the last node.

You can create simple or more complex availability strategies. In any case the OpenAdmin Tool for IDS allows you to administer and monitor all of the servers graphically. You can add or drop SDS instances, turn servers on or off, or create and manage connection manager service level agreements and fail-over policies.

You can easily modify this deployment at any time to meet the changing demands of your business. Plug in an SDS server when you need to increase throughput for peak times or add another remote server as your business grows.

Visit ibm.com/Informix or contact your IBM sales representative to learn more about IDS High Availability and disaster recovery solutions.