OVERVIEW

Server-farms create unique new challenges for managing fast-changing application data, such as ASP.NET session-state, e-commerce shopping carts, and business logic state. Many types of application data need to be instantly accessible across the server farm, even when server farms grow to handle heavy processing loads. Traditional, backend database servers and standalone object servers introduce bottlenecks to performance that impact response times and limit scalability.

The secret to unlocking server-farm performance is in-memory, distributed caching that spans the farm and scales with it. Distributed caching keeps rapidly changing data close to where it is needed and quickly accessible, while offloading database servers.

ScaleOut Software's suite of products deliver the industry's leading distributed caching solution for .NET server farms by combining:

- **fast access** that outperforms other storage alternatives,
- **scalability** capable of handling the largest server-farm loads,
- **high availability** to meet stringent mission-critical requirements,
- **ease of use** designed to keep management to an absolute minimum, and
- **low cost** that ensures a fast return on investment.

The following paragraphs explain how ScaleOut Software's products can help you take full advantage of your farm's inherent power to deliver scalable performance and high availability.

SCALEOUT STATESERVER®: SCALABLE, DISTRIBUTED CACHING

ScaleOut StateServer boosts your application's performance and scalability by storing fast changing workload-data directly on the server farm using software-based (in-memory), distributed caching. This product offloads workload-data storage from the back-end database server to dramatically increase access performance and scalability, while lowering infrastructure costs. Patent-pending storage technology enables fast, farm-wide access to all stored data and ensures high availability during server outages or planned downtime.

Intended for use within a data center, ScaleOut StateServer is installed as a Windows service on all servers within a Web or application server farm and uses the Web farm's existing LAN. The software stores, reads, updates, and removes contiguous, opaque, binary data objects containing serialized program data, such as ASP.NET session-state, cached database data, and intermediate business logic state.

In addition to transparently hosting ASP.NET session-state, ScaleOut StateServer provides comprehensive .NET and C/C++ APIs so that applications can directly access the distributed cache. This gives developers the power and flexibility they need to easily integrate ScaleOut StateServer into existing server-farm applications and obtain the highest possible performance and scalability.
**SCALEOUT SESSIONSERVER™: FAST, SCALABLE, SESSION-STATE STORAGE**

For those applications just storing ASP.NET session-state, ScaleOut SessionServer lowers infrastructure costs, boosts performance, and offloads the back-end storage server by hosting ASP.NET session-state directly on the server farm. Incorporating ScaleOut StateServer’s distributed, in-memory caching technology, ScaleOut SessionServer scales performance and storage capacity as the farm grows, while protecting stored data and maintaining high availability. This enables mission-critical, ASP.NET Web applications to meet growing business demands and deliver fast response times to their clients.

**SCALEOUT GEOSERVER™: SCALABLE, GLOBAL REPLICATION**

The ScaleOut GeoServer option extends ScaleOut StateServer’s scalable storage across multiple, geographically distributed data centers by replicating stored objects between ScaleOut StateServer caches running on server farms at different sites. This feature, which is licensed separately from ScaleOut StateServer, lets up to eight data centers protect against loss of data due to a site-wide outage. GeoServer’s capabilities help IT managers meet the stringent performance and uptime needs of high-end Web sites and other mission-critical applications.

Unlike most replication solutions, GeoServer uses scalable and highly available connections that take full advantage of all servers in each farm. To maximize performance and availability, all servers within both the local and remote StateServer farms participate in data replication. As servers are added or removed at each farm, GeoServer automatically reconfigures its network connections to maintain the best possible replication performance without the need for manual intervention.

**SCALEOUT REMOTE CLIENT: SCALABLE CLIENT ACCESS**

For maximum flexibility, applications can remotely access ScaleOut StateServer’s distributed cache using the ScaleOut Remote Client option. A key advantage of this option is that you can dedicate a server farm to hosting ScaleOut StateServer’s distributed cache and then run applications anywhere on the network. This allows the caching farm to run in an optimized configuration, and it offloads the cache's CPU and networking overheads from other servers.

SOSS's Remote Client option provides both high availability and scalable performance. If a caching server should fail or be taken offline, the client application automatically re-establishes a connection as necessary to other servers in the distributed cache. Likewise, the remote client automatically detects new servers as they are added. Client-side libraries maintain load-balancing information obtained from the distributed cache so that access requests are directly sent to the caching servers that store the requested objects.