
SQLnet – Build a gigabyte network for your SQL Servers.

Introduction

This article describes how to build a gigabyte network that can provide your sql servers with a dedicated gigabyte backplane.

Situation / the need

Do you have

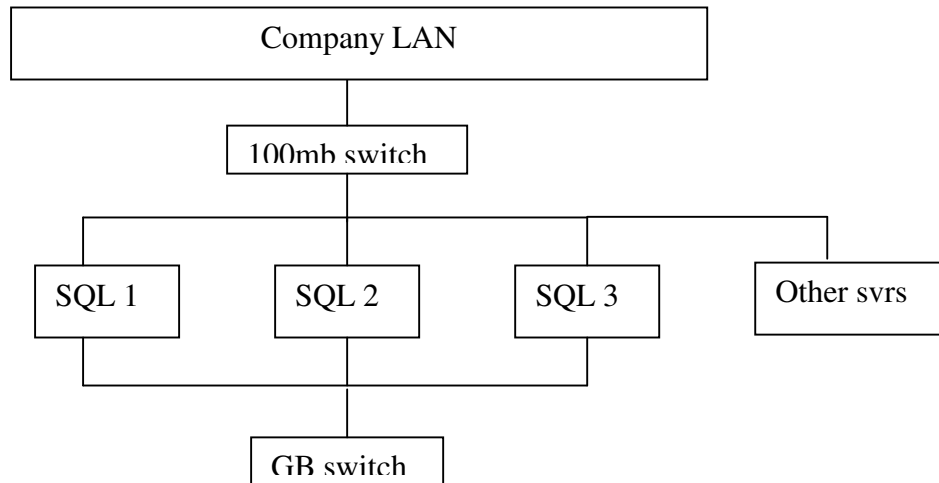
- large DB's: 5 gigabyte+
- large file transfers between servers
- A busy client network
- High performance apps
- An overloaded sql server

Problems

Using a 10 or 100mb/sec network to move gigabyte's of data is slow & unreliable. It can increase the downtime of critical serves. The slow speed of file copies can make servers feel like islands, where file transfers take hours. Thus preventing you from spreading backups across servers, or splitting functionality from your main SQL server, such as creating a reporting server to offload reporting demands.

Solution

The solution is to add a gigabyte network to link your sql servers. Routing all inter SQL server traffic via a gigabyte network. Eg backup file copies & restores. It acts as a secondary fast network, & takes some pressure off the main network. It will allow you to speed up disaster recovery, simplify infrastructure & scale out the SQL servers.



Implementation

Network h/w

Install a gigabyte switch near sql servers, as the cables are short fibre optic & expensive. Install gigabyte cards into the sql servers. Plumb in the fibre optic cable carefully as it is delicate. Tip: Buy a tape labeller & label all cables.

Network s/w

Get your router expert to configure the switch into a single IP subnet.
Select a reserved IP subnet eg 172.10.x.x
Configure NIC's to run IP with no default gateway or wins.

IP name resolution

Here is the tricky bit.

Create a HOSTS file on each SQL server, containing all the members of the GIGABYTE network. Eg.

```
Atlas          172.10.1.1
Athena         172.10.1.2
```

Open a command window, type nbtstat -R to reload the cache.
Try pinging servers, it should resolve to the GIGABYTE card, not via the 100mb network.

SQL server configuration

Use the SQL job engine to copy SQL backup files around. Using xxcopy, xcoppy or robocopy. It is best to perform the backup locally, then copy it across the network, as this decreases backup time, thus locking, & increases reliability.

Conclusion

A dedicated GIGABYTE backplane is a great boon to DBA's. It allows you to scale out your systems, reduce recovery time & risk, administer VLDB's, & take the load off your main network. It provides all this for £2000 / \$3000. Assess your current SQL infrastructure, & think where you want to be in 12 months, then use this article to convince the IT director to allocate some budget to your SQLnet.

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