

- **Network latency less than one millisecond.** Latency is the time it takes for a data packet to travel from one point to another over a network. It can be measured for one-way trips or for round trips, although the latter is used much more commonly. The less latency your network has, the faster data moves between your servers. Database mirroring requires low latency to ensure that the mirror is kept as closely synchronized with the principal as possible. One major cause of network latency is physical distance, which means that principal and mirror servers often need to be located near each other and eliminates some of the true redundancy of the solution. Please note that this is a recommended value, not a requirement.
- **Network bandwidth one gigabyte per second (GB/s) or greater.** Bandwidth measures the amount of data that can be transferred over a network within a given period of time, usually one second. Microsoft recommends (not requires) that your network be capable of transferring at least 1GB of data per second between nodes in the network, due to the high amount of data that will be in the target databases' transaction logs as they are copied from the principal to the mirror.
- **Physical computing resources.** Microsoft recommends that both the physical and mirror SQL Server hosts be provisioned with sufficient processing, memory, storage, and networking resources to accomplish mirroring without impact on performance. Note the number of databases you are going to mirror in your environment; the more databases you mirror, the greater the strain on your servers. The good news is that, by default, database transaction logs are compressed by SQL Server 2008 as they are sent from the principal to the mirror. That does require more processing power to compress the files, but it ensures that the smallest possible file is sent over the network, which reduces network traffic and shortens the time it takes to deliver each file.
- **Database recovery model.** Database mirroring requires that the target database is backed up using the Full recovery model. By default, SharePoint creates several databases that are configured to use the Simple recovery model; you are required to change that setting to configure them for mirroring and need to account for the additional overhead that accompanies change.
- **Database permissions.** The service accounts used by various components in your SharePoint environment must be configured to have the same rights in the SQL Server instance hosting the mirrored database as they do in the principal SQL Server instance. Pay attention to the rights granted the service account serving as the identity of all SharePoint's IIS application pools

(especially the account for the Central Administration site), the database access service account, the default content access account, all accounts associated with Service Applications, and user accounts that have been added to the Farm Administrations SharePoint group.

- **SQL aliases.** You can use SQL Server aliases to abstract the actual address of a SQL Server instance, allowing a client computer to be configured to target the alias rather than the SQL Server instance directly. This abstraction is helpful for applications that have strong ties to their databases, such as SharePoint, because it adds more flexibility on the use of those database resources than is normally available. If the address for that SQL Server instance should change, or if a different server altogether is used, all that is required is a change to the SQL Server alias, rather than a major configuration change to the application. SQL Server aliases make database integration and management much easier for SharePoint in general and should be used whenever possible in your mirroring configuration. Should a mirroring target change, once the change is made in SQL Server's setup, you can update SharePoint via a small modification to the alias instead of a complex change to the farm's configuration.
- **Operational mode.** SharePoint can only be configured for awareness of database mirroring configurations that are using the High Safety with Automatic Failover operational mode. If either of the other two operational modes are used to configure the mirror and SQL Server fails over from the principal database to its mirror, administrator intervention or custom scripting is required to point SharePoint at the mirror database instead of the principal.