# High Availability and Disaster Recovery (HADR)

While the Windows Azure Infrastructure Services are designed to provide a high availability and fault tolerant platform for applications, there are considerations you as the administrator need to plan for in order to best utilize these capabilities. The Windows Azure high availability mechanisms protect the high availability of the Virtual Machines (VMs), not specifically the applications which run on these VMs. It is up to you as the administrator to use these mechanisms when implementing the application in order to meet the HADR capabilities you require. The following sections contain information on the high availability mechanisms available in Windows Azure to use with your Dynamics GP deployment.

## Availability Set

An availability set in Windows Azure is a configuration option available when load balancing multiple VMs that places the VMs in different fault and update domains. The result is that the application is still available even if there is a failure or planned update to a VM instance that takes it off-line for a period of time. The fault domain protects against unplanned failures by creating the VMs in a different "rack" of servers, resulting in them being on different physical hardware and serviced by different networking components. The update domain protects against downtime from planned updates to the host operating system by placing the VMs on host machines configured with different maintenance schedules.

## SQL Server HADR

There are a number of different HADR technologies in the SQL Server product that are supported in Windows Azure. These include the following.

- AlwaysOn Availability Groups
- Database Mirroring
- Log Shipping
- Backup and Restore with Windows Azure Blob Storage Service

These technologies can be used independently or together to provide the high availability and disaster recovery required. When used with Microsoft Dynamics GP, the AlwaysOn and Database Mirroring technologies provide failover capabilities for the Dynamics GP databases. The Log Shipping and Backup and Restore with Windows Azure Blob Storage Service provide recovery capabilities for the Dynamics GP databases. Refer to the article High Availability and Disaster Recovery for SQL Server in Windows Azure Virtual Machines[1] for additional information.

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1 http://msdn.microsoft.com/library/windowsazure/jj870962.aspx