High Availability : Enabled on ESXI host

• HA works on the ESXI host level,where if any of the ESXI host gets failed,HA will restart those VM onto another ESXI host
• In HA,when the host crashes or fails, the VM gets restarted on another host so there is a very small downtime which is only related to the time taken for VM restart
• Automatic detection of server failure.HA is a complete automated process and does not need any admin interference as there is no time to recover machine if host is about to crash
• No passive standby ESXI host is requires neither any extra VM.The VM for which its parent host is crashing it can restart an any of the other running host
• HA does not use VMotion
• Enable HA on the cluster setting in order to use HA

For HA,also we need following things :
1.Cluster
2.Shared Storage
3.Vcenter server configured for the Environment

• Before HA was available,the failure of a single ESXI host meant that a large no. of virtual machines that were running on it would be down.This was referred to as the "all of your eggs in one basket" issue and caused some companies not to deploy virtual server
• Resource check : ensure that capacity is always available in order to restart all VM's affected by server failure.HA continuously monitors capacity utilization and reserves spare capacity to be able to restart VM.

Prerequisites for VMware Vsphere HA :

• All hosts must be licensed for VMware HA
• We need at least two hosts in the cluster
• All hosts need a unique host name
• All hosts need to be configured with static IP address if we are using DHCP,we must ensure that the address for each host persist across reboots
• VM's must be located on shared,not local storage,otherwise thet cannot be failed over in case of a host failure
• All host in a VMware HA cluster must have DNS configured
• HA works on the master and slave architecture when we enable HA on the cluster then elction process occurs between all the hosts in the clusters & one host which has large number of datastore mounted has an chance to become a master server once the election process complete,there will be one master server and other ESXI are considered as the slave server, if the master server goes down or crashes then the new election process will occur

HA Failover Time :

• We measured the time from the point VCenter server VM stopped responding to the point VSphere web client started responding to user activity again with the 64host/6000VM invertory,the total time is around 460 seconds(approx 7 min) with about 30-40 sec for HA to get into action