# Achieving Redundancy with Hosting Controller

Perspective

In the perilous world of hosting one of the most sought-after features is failover capability. Most hosting providers desire a redundant setup in order to keep their content highly available (H.A) and minimize the chances of downtime in case of a disaster.

REDUNDANCY
REDUNDANCY
REDUNDANCY
REDUNDANCY
REDUNDANCY
REDUNDANCY
REDUNDANCY
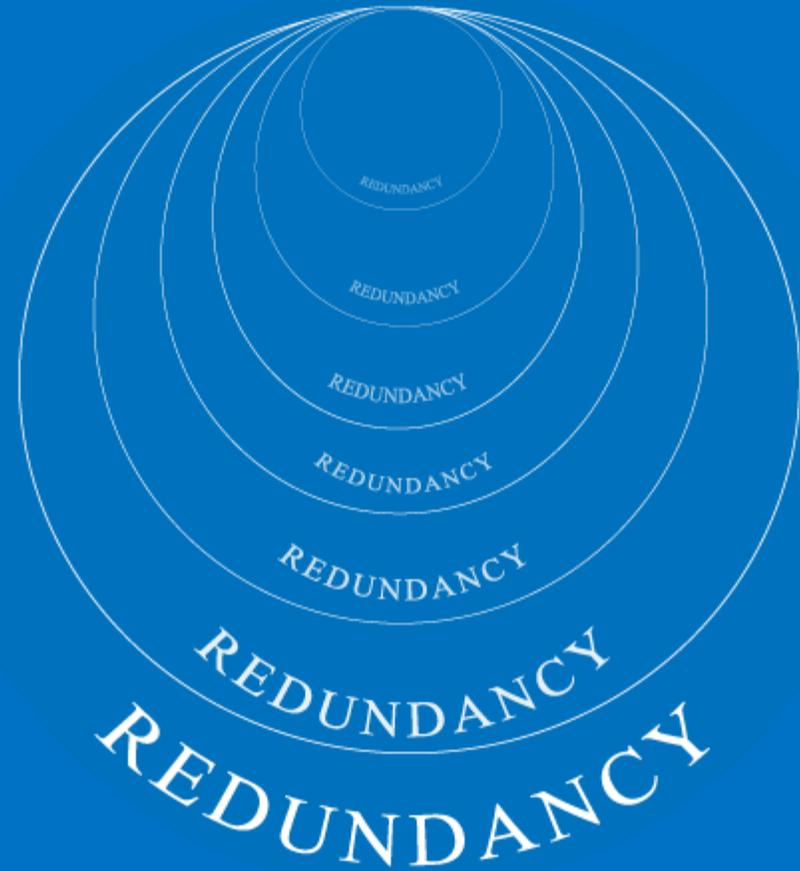
Why is Redundancy Important?

Hosting businesses usually require their data-centric internet applications to be served by more than one servers in a highly available cluster.

Redundancy ensures that the data of a provider is always safe and readily available. Maximizing uptime is one of the prime goals of ISPs, ITSPs, Telcos, HSPs, MSPs and other Cloud providers. Redundancy can and does help.

Hosting Controller

Pushing Boundaries to accomplish end-to-end Redundancy

Let's explore the failover capabilities inherent in Hosting Controller

Hosting Controller's take on Redundancy

Panel Redundancy

HC

holds the provision for control panel redundancy through its simple multi portal server capability.

Exchange High Availability

HC

holds the ability of offering high availability and site resilience for Exchange through its Primary/Secondary arrangement. This connotes the staging of Exchange servers in a Primary/Secondary arrangement

Web Redundancy

HC

proposes the setup of an IIS Web Farm for achieving web redundancy. There are various ways to design the infrastructure of a Web Farm however HC recommends a Homogeneous Web Farm with Shared Configuration.

DNS Replication

HC

manages the DNS redundancy in a proficient manner. DNS zones can be replicated from the Primary DNS to the Secondary or Tertiary DNS for that matter. The replication is handled through Hosting Controller's own interface.

HC Master Control Portal Servers

A successful installation of HC ends up creating an admin site in IIS called **HostingController**.

The admin site serves as a portal for the users to login into their respective management interfaces and administer their accounts. The servers holding this admin site are termed as HC Master Control Portal Servers. They in essence act as web front ends for customer logins.
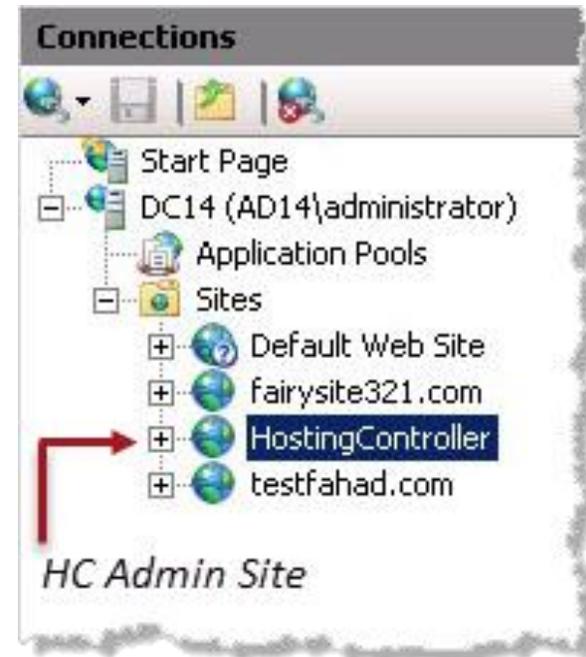
Panel Redundancy

In a web hosting cluster, HC can be installed on two machines namely **HC Portal Server 1** and **HC Portal Server 2**. Both these servers should carry IIS and in doing so they ensure the creation of HC admin site on each of them. If for some reason the first server, **HC Portal Server 1** goes down the control panel is served from the second server **HC Portal Server 2** ensuring complete redundancy and guaranteeing uptime.
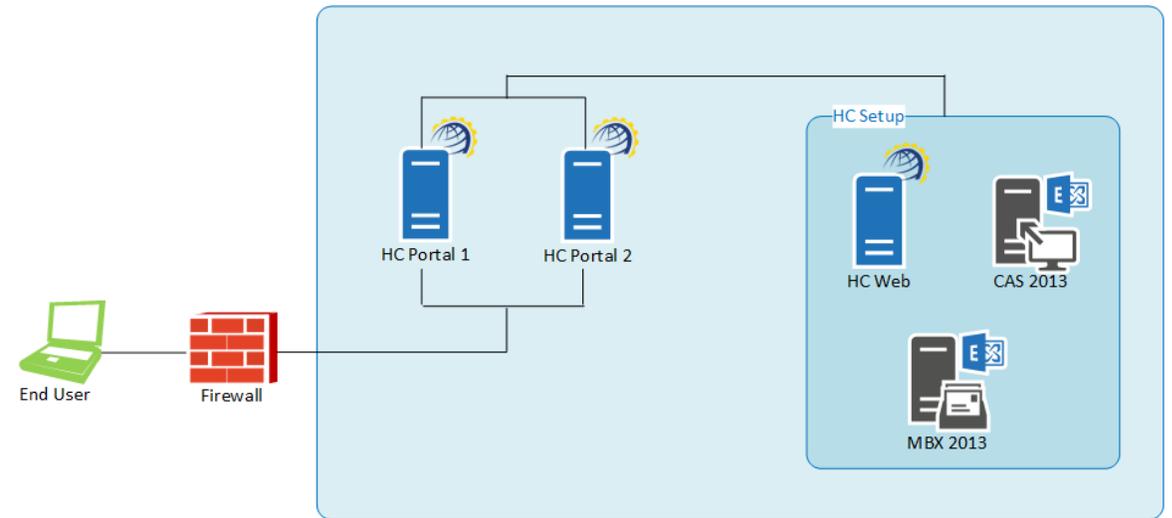
Web Redundancy

In order to achieve Web Redundancy, Hosting Controller proposes a simple setup of an IIS Web Farm. There are various ways to design the infrastructure of a Web Farm however HC recommends a Homogeneous Web Farm with Shared Configuration.

The websites contents as well as files associated with IIS configurations could be stored on a shared network drive.

For configuring your webserver in Web Farm mode, you may consult with the suggested Microsoft guidelines below:

http://www.iis.net/learn/manage/managing-your-configuration-settings/configuring-a-web-farm-using-iis-shared-configuration

http://www.iis.net/learn/manage/managing-your-configuration-settings/shared-configuration 264

HC Web 1

HC Web 2

✓ Webspace
✓ IIS Configurations

Shared Network Drive

HC Web 3

HC Web 4
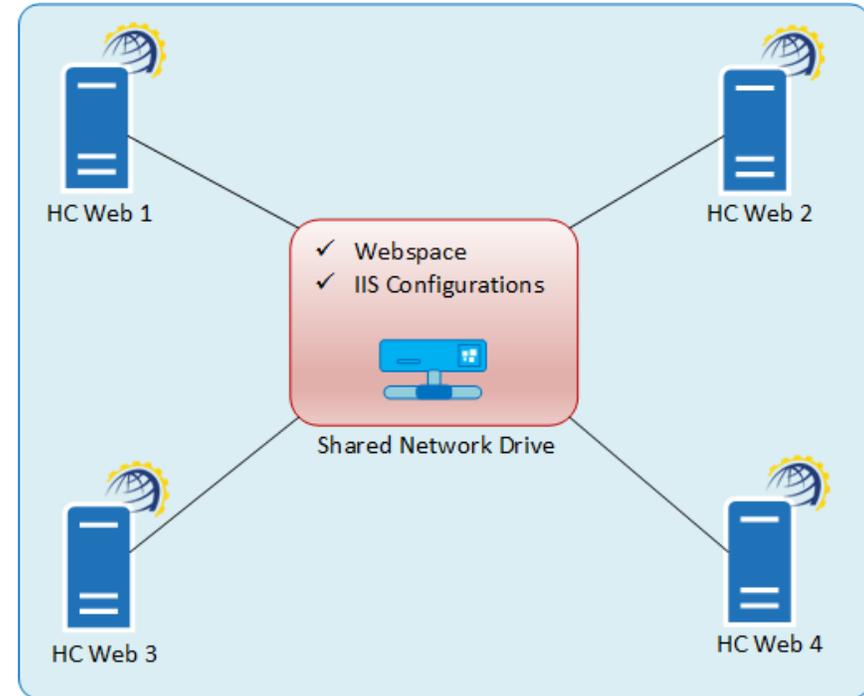
Benefits of Shared Configuration
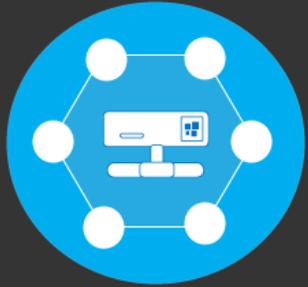
Shared network content is relatively simple to configure.

Adding additional servers to the farm is relatively easy. You may simply point IIS configuration files and website contents to the UNC path.

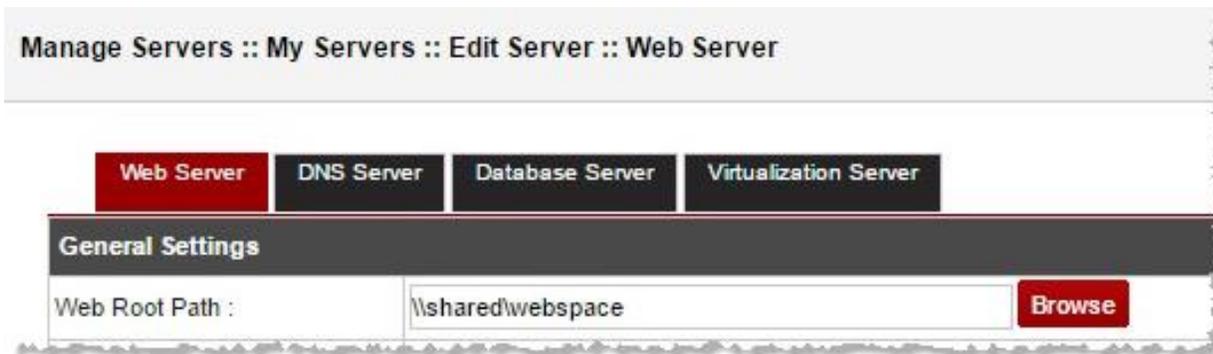Content written to disk is immediately available on all servers.

Only a few copies of the website files need to be kept. Hard disks on the web servers need contain only the OS and HC.

Once the IIS Web Farm has been setup you may install HC on all the web servers and add them to the Hosting Controller interface. The Webspace path at **Cluster Configuration :: Manage Servers :: My Servers :: Edit Server :: Web Server** should point to the shared network drive in all the web servers in the cluster. If for some reason one of the web servers goes down the websites are served from the others, fetching from the central content.

In IIS7 and above certain files such as:

ApplicationHost.config, Administration.config etc contain all the configurations related to the Webservers. All such files need to be exported or copied to the shared network path intended for storing IIS files and website contents.

Manage Servers :: My Servers :: Edit Server :: Web Server

| Web Server | DNS Server | Database Server | Virtualization Server |

General Settings

Web Root Path : \\shared\webspace   Browse

Changes required at Hosting Controller's end:

➢ Open **SQL Server Management Studio** and navigate to the Hosting Controller database by clicking on **Databases >> HC** (Where HC represents Hosting Controller database name).

➢ Click on Tables and open table **tblServers.** Specify the **WebRoot** value of Webspace as in the shared location which looks like "[\\shared\webspace](\\shared\webspace)" instead of local path like "**C:\Webspace**" as the web files are saved on shared location path instead of on the local machine.

➢ Similarly open table **tblServerRoles** and specify the correct path of Webspace in its **ServerSettings** column.

HC Backend Database Clustering

A single database server in a hosting or enterprise cluster can be a single point of failure and hence prove catastrophic for an organization. In order to overcome this challenge providers seek database clustering. As Hosting Controller retains its central database in MSSQL, a SQL failover cluster can be created to achieve the desired result. All servers in HC cluster could connect to the SQL Cluster IP thus if primary SQL instance goes down then HC Database would be available from the Backup SQL Server instance.
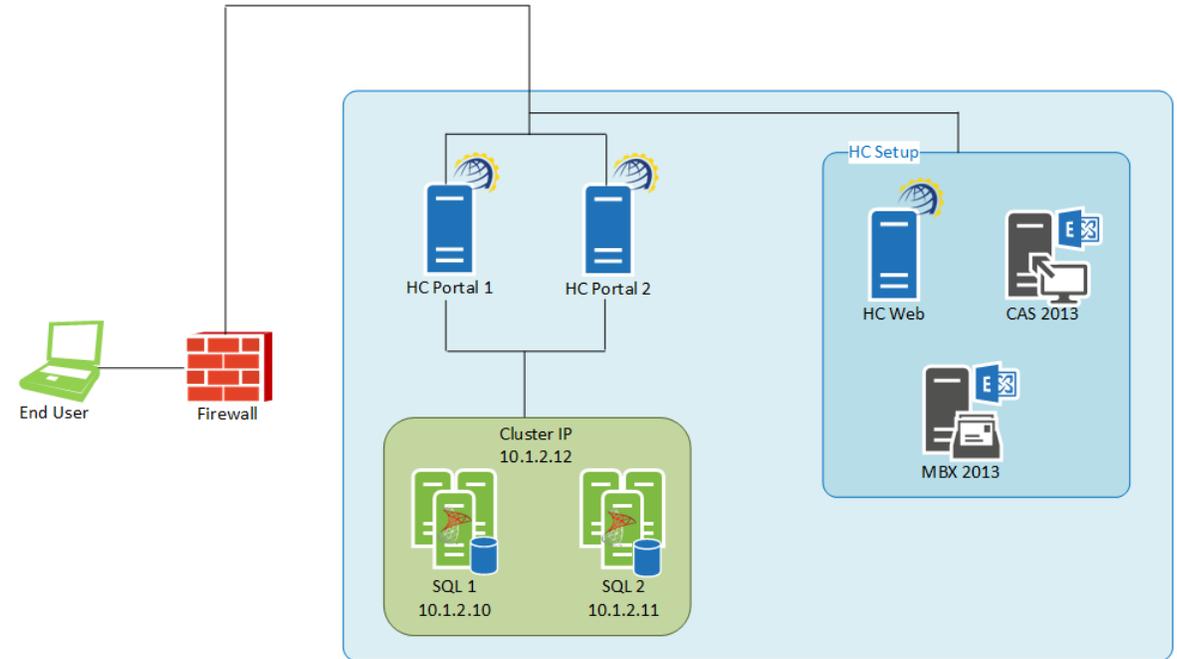
DNS Replication

Zones need to be available at all times to provide translation of domain names to numerical IP addresses. DNS redundancy can very well be handled through Hosting Controller. DNS zones can be replicated from the Primary DNS to the Secondary or Tertiary DNS for that matter. The replication is handled through Hosting Controller's own interface. In order to achieve DNS high availability the Primary and the Secondary DNS servers can be placed in locations geographically apart.
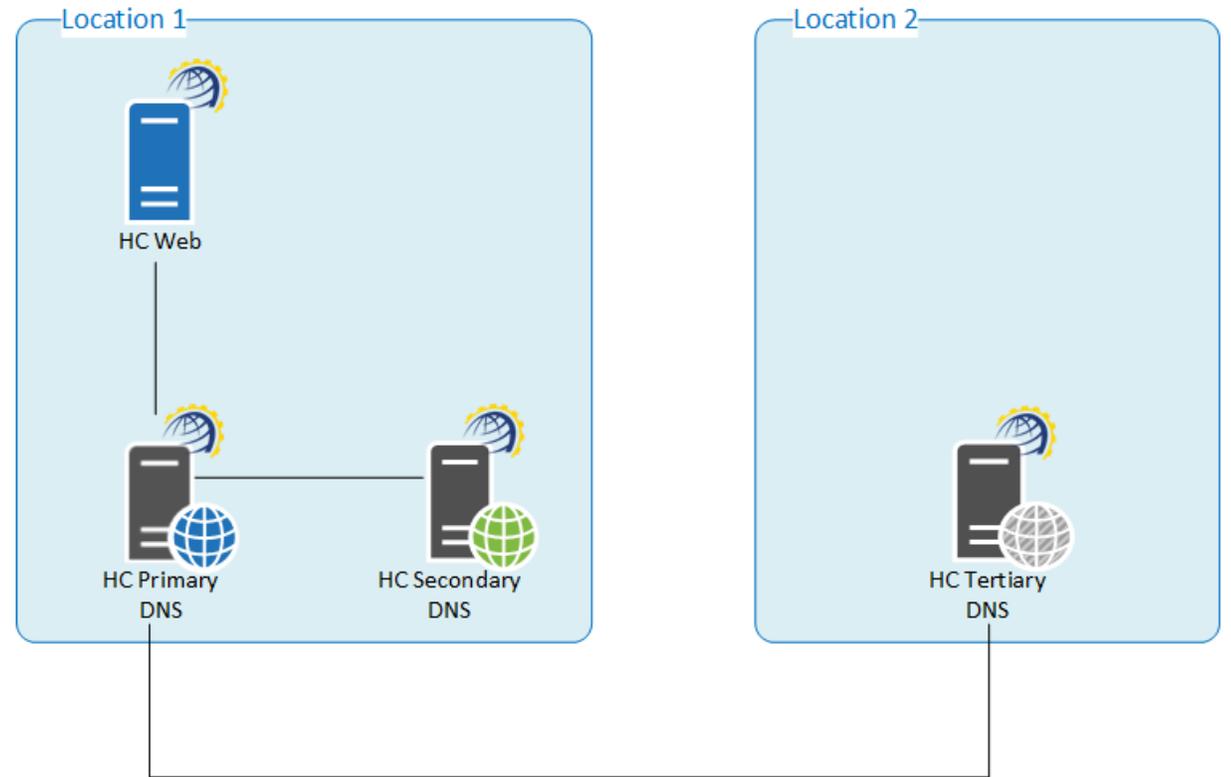
Exchange High Availability

Another form of redundancy that HC provides is the high availability of MS Exchange. Hosting Controller holds the ability of offering high availability and site resilience through its Primary/Secondary arrangement. This connotes the staging of Exchange servers in a Primary/Secondary arrangement whereby the first acts as the Primary and the rest as Secondary servers. If for some reason the Primary goes down, the Secondary assume responsibility, serving the Exchange settings.

Primary Exchange

CAS 2013

MBX 2013

Secondary Exchange

CAS 2013

MBX 2013
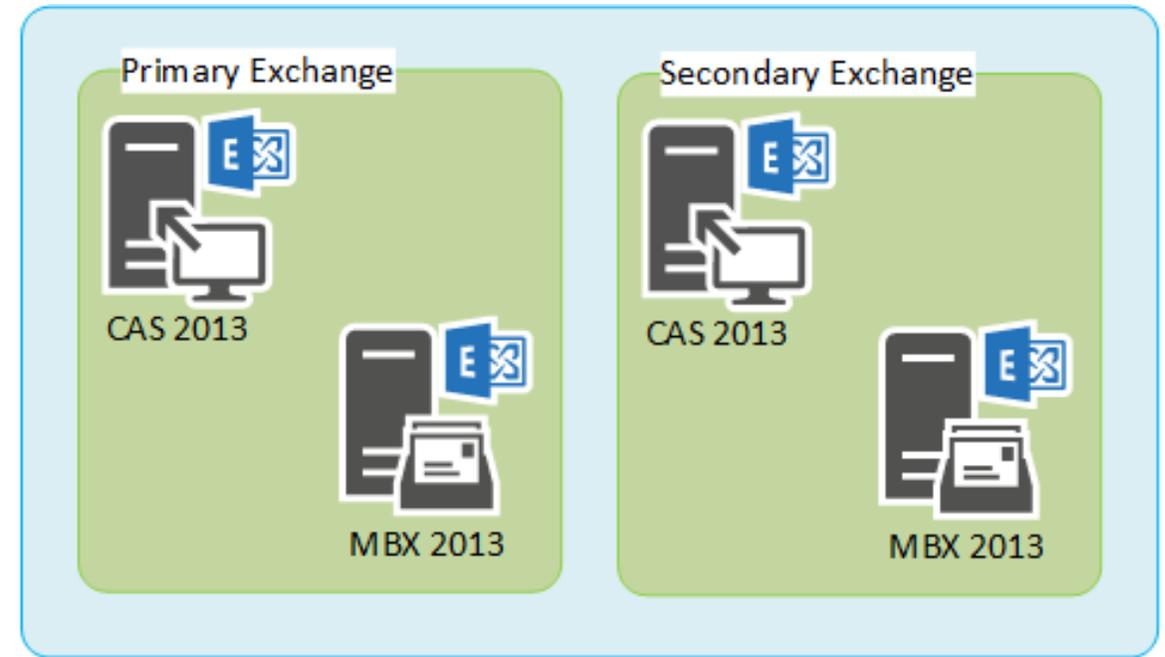
Hosting Controller

Founded in 1999, Hosting Controller is a cloud automation solution for web hosts and cloud based service providers. It allows them to manage both Windows & Linux servers simultaneously as part of a single cluster. In addition to shared hosts, HC offers a full solution suite for hosted Enterprise Applications creating a shared multi-tenant environment for automatic provisioning of Hosted Exchange 2010 & 2013, HC Active Directory Synchronization, BlackBerry, SharePoint, Lync and Dynamics CRM. It also offers a full automation solution for Infrastructure and Virtualization providers offering virtualized partitions on both Windows and Linux based servers through VMware ESXi 5, Hyper-V technology & Xen Hypervisor technology for Linux! Hosting Controller Inc. is based in Toronto, Ontario, Canada and has customers in 125 countries worldwide.

Let Hosting Controller Work for You