IPv6 Test Cases

**IPv6 AAAA Records (tested for ISC BIND & MS DNS)**

* Login as serveradmin
* Go to Configuration>Servers and choose a Server.
* At the Bottom of the Server Config Page, expand DNS Records Template.
* Add an AAAA Record.
* Create a Website using the Server.
* Check the DNS Settings of your DNS Server. The AAAA Record should be there.
* Edit the DNS Properties of the Website using the DNS Editor. You should see the AAAA Records also there, and be able to edit & delete them
* Do this for all DNS Providers with all the different DNS Servers, Namely MSDNS, ISC BIND, Simple DNS, SimpleDNS 5, Nettica & PowerDNS.

**IPv6 Validation (tested)**

* Same steps 1-3 as above.
* Add an AAAA Record with an invalid IPv6 Address.
* There should be a message that this is an invalid IPv6 Address.
* Add an A Record with an invalid IPv4 Address
* There also should be a message that this is an invalid address.

**IPv6 in Hyper-V (not tested)**No work has been done to test this, and this almost certainly will not yet work (see below).

**Modified Forms in the Portal**

The Forms

*WebsitePanel.WebPortal\DektopModules\WebsitePanel\ExchangeServer\ExchangeDomainRecords.ascx*

*WebsitePanel.WebPortal\DektopModules\WebsitePanel\WebsitePanel.WebPortal\DektopModules\WebsitePanel\UserControls\EditIPAddress.ascx*

*WebsitePanel.WebPortal\DektopModules\WebsitePanel\DnsZoneRecords.ascx*

*WebsitePanel.WebPortal\DektopModules\WebsitePanel\GlobalDnsZoneRecords.ascx*

*WebsitePanel.WebPortal\DektopModules\WebsitePanel\IPAddressesAddIPAddress.ascx*

*WebsitePanel.WebPortal\DesktopModules\ProviderControls\HyperV\_Settings.ascx*

have been modified.

They must be checked for IPv6 compatibility and IP Address validation.

* *DnsZoneRecords.ascx* has been tested by Step 1 above.
* *EditIPAddress.ascx* & *IPAddressesAddIPAddress.ascx* can be tested by defining IP Address ranges on a Server. Both also support CIDR address ranges of the from IP/Subnet. This has been tested.
* *GlobalDnsZoneRecords.ascx* can be tested by editing the global DNS zone records. This has been tested.
* *ExchangeDomainRecords.ascx* must be tested with an Exchange Server. This has not been tested.
* *HyperV\_Settings.ascx*: The length of the CIDR textbox has been changed from 2 to 3 to support 3-digit CIDRs. This has not been tested.

**Changes to EnterpriseServer**

The following Controllers have been modified:

*ServerController.cs:*

The Method *AddIPAddressesRange* now supports IPv6 and CIDR notation.  
The Methods *ConvertIPToLong* and *ConvertLongToIP* have been removed because they only work for IPv4. Instead the IPAddress class has been introduced, for similar funtionality.

*VirtualizationServerController.cs:*

*The Method GetPrivateNetworkDetailsInternal* has been modified to support IPv6. In case of IPv6 Addresses it assigns subnet masks of the form "/CIDR" to the subnet mask of the NIC. TODO: It has not been verified & tested if this works with the server implementation.

The Methods *GenerateNextAvailablePrivateIP, GetSortedNormalizedIPAddresses, AddVirtualMachinePrivateIPAddresses, GetSortedNormalizedIPAddresses, GetPrivateNetworkSubnetMask, GetSubnetMaskCidr, CheckPrivateIPAddress* now use *IPAddress* instead of *long* and support IPv6.

*VirtualizationServerControllerForPrivateCloud.cs:*

Same as above.

*The changes to the Hyper-V stuff have not been tested.*

**Changes to Server (tested for ISC BIND & MS DNS)**

All the DNS Providers have been updated to support AAAA records, and apart from ISC BIND and MS DNS must be tested.

**Changes to the Database Schema**

The Database Schema remains unchanged.