



# Static vs Dynamic IP Addresses

*How a Static IP address can save money and improve remote monitoring of facility BAS and EMIS systems.*

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# STATIC VS DYNAMIC



*HVAC Concepts 24/7 Remote Monitoring and Alarm Management Center in Frederick, Maryland.*

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“Static IP addresses help assure more timely service and support. It reduces the number of service calls and site visits by a technician, as well as reduces the time it takes to resolve any problems that may occur. The average fee for this type of service is roughly \$300.00, at a minimum, and possibly once a month. Static IPs potentially can lower monthly costs by \$285.00 x the number of events per month.”

There are many reasons why HVAC Concepts recommends that customers running a Building Automation System (BAS) or Energy Management Information System (EMIS) use a reliable broadband internet connection with a Static IP address rather than a Dynamic IP address.

## BENEFITS

**Ease of Access:** A Static IP address will make your system easier to access remotely because it will always be located at the same address on the internet.

**Greater Stability:** Dynamic IP addresses can change frequently without notice causing system downtime. A Static IP address never changes which means your system is always available for remote access.

**Support/Service:** Having a Static IP address helps assure more timely service and support. It reduces the number of service calls and site visits by a technician, as well as reduces the time it takes to resolve any problems that may occur.

**Savings:** Internet providers can change Dynamic IP addresses at any time, because it is at their discretion. This causes your EMIS system to lose communication with the internet and, while on-site, you will be able to access your system from a local Workstation. It will interrupt remote access usually resulting in a service call to dispatch a technician to your location to reset the remote monitoring connection. The average fee for this type of service is roughly \$300.00, at a minimum, per event. The average cost of a Static IP address is roughly \$15.00 per month, after initial setup. This potentially can lower your monthly costs by \$285.00 x the number of events per month.

**VPNs:** If your system requires a higher level of cybersecurity, HVAC Concepts can work with your IT department to setup our remote monitoring and connection services through your existing VPN.

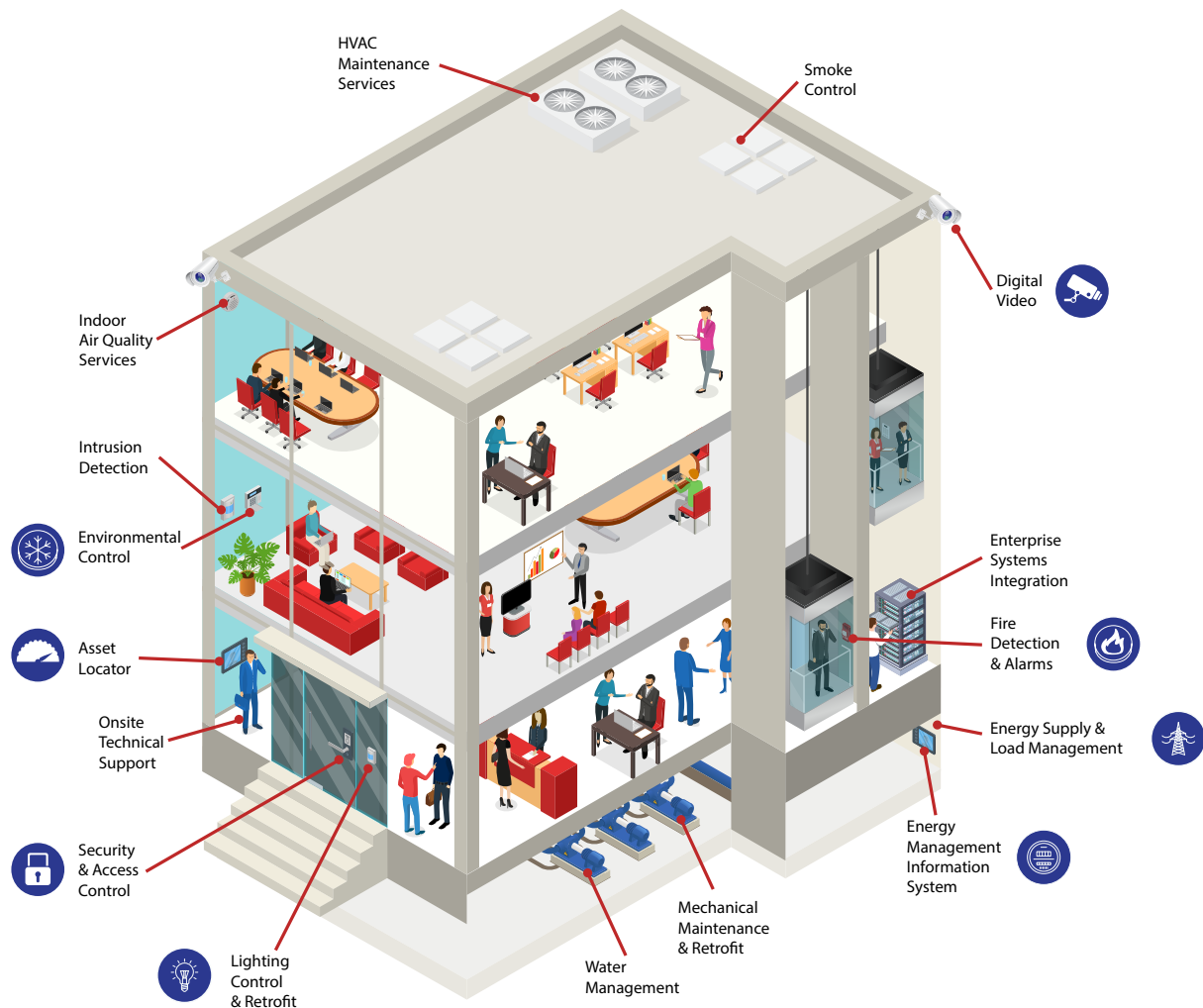
## DEFINITIONS

**ISP:** Internet Service Provider is an organization that provides services for accessing, using, or participating in the Internet

**Static IP Address:** This is the IP address of your network on the internet. It does not change. This type of IP address is recommended for any network that needs to be accessed from a remote location. Static IP addresses are recommended for enterprise networks and mission critical networks.

**Dynamic IP Address:** This is the IP address of your network on the internet. A dynamic IP address can change at the discretion of the ISP. When it changes it can make it difficult to access your site from a remote





location. These types of IP addresses are typically used for home networks and networks that do not require reliable remote access. They require an additional service called DDNS to update the hostname. HVAC does not provide this service and it would be up to the customer to maintain this and any problems associated with it.

**Hostname:** This is a user-friendly name that is used to point to an IP address of a website on the internet, such as your BAS/EMIS. It is the address you see in the Address Bar of any internet browser.

Some examples of this are <https://fidelitybsg.com> and <https://hvacc.net>. It is much easier to remember and type this friendly name instead of an IP address.

**DDNS:** This acronym stands for Dynamic Domain Name Service. It is usually configured on a computer or router and updates the hostname (mentioned above)

whenever the internet IP address of your network changes. It is typically used in home networks and is not considered to be secure or reliable. It is not recommended for enterprise networks, mission critical networks, or any site that needs to be accessed reliably from a remote location.

**VPN:** This acronym stands for Virtual Private Network. When connected to a VPN server, all internet traffic is encrypted. This means that no one can see what you're doing online, not even your Internet Service Provider (ISP). Encryption stops hackers from seeing sensitive information that you enter into websites, like your passwords. This is especially important if you're using public Wi-Fi because it's easy for cybercriminals to monitor your connection on public networks. But a VPN makes sure that even if someone stole your data, they wouldn't be able to decrypt it or even understand it.



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