



IP DIRECTOR APPLICATION NOTE

DNS configuration

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DNS SERVER

A DNS Server is a service that centrally stores Computer names <-> IP address translations.

This server will be available on a new DB Server and could be installed on an existing one (it's part of the Windows Server operating system).

The two main reasons to use a DNS server instead of Hosts file are that DNS Server is dynamic and that a change must be made only once (on the DNS Server) to be reflected on all the EVS Stations.

The DNS Server name resolution is the second step in the Windows name resolution process (after the Hosts file), so if you want to use a DNS Server you have to be sure that no records are stored in the Hosts file anymore. The Remote Installer can clean the hosts file to avoid having name resolution conflicts.

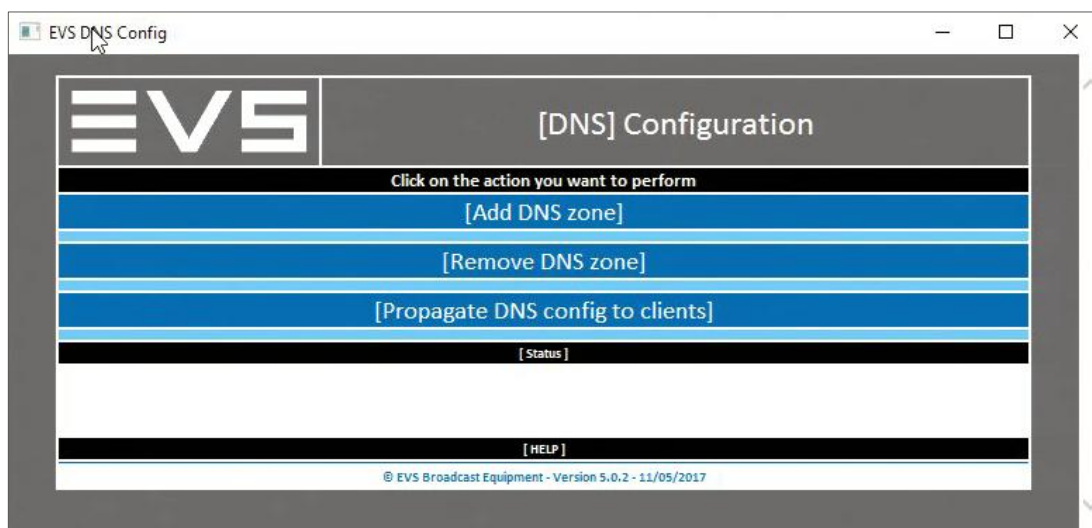
DNS CONFIG IN THE DB TOOLBAR



This tool has been designed for DNS Server installation and configuration.

You will find 3 functionalities in this tool :

- > **Add DNS zone** : adds a DNS domain configuration in a DNS Server
- > **Remove DNS zone** : disable a DNS domain in a DNS Server
- > **Propagate DNS config to clients** : configures the DNS domain and DNS server IP address on a list of windows clients.



This tool can then be used to install a DNS Server, configure a DNS Server, add a zone to the DNS server and configure the clients with the corresponding DNS configuration (everything remotely)

Remark : this tool has been designed to manage Windows DNS Servers only (Windows 2008/2016). A Windows DNS Server **can not** be installed on a Windows 7 or 10.

ADD DNS ZONE

This part of the tool configures a DNS Server on one or two servers.

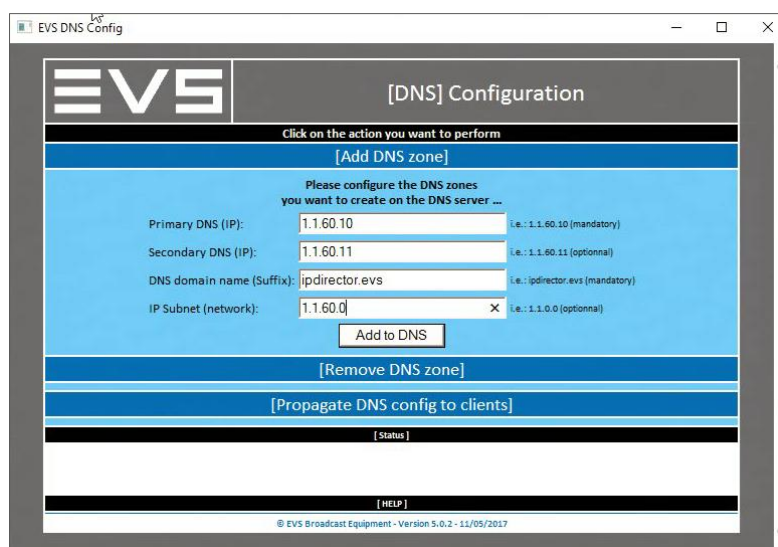
Fields description :

- > Primary DNS (IP) : IP address of the main DNS Server
- > Secondary DNS (IP) : IP address of the secondary DNS server (if exists)
- > DNS Domain name (Suffix) : Domain name that will be used on the network. A DNS Domain name is mandatory in order to have a fully operational DNS name resolution. This field should be a valid DNS domain (i.e. ipdirector.evs, evs.tv, myevent.tv,...)
- > IP Subnet (network) : IP Subnet identification address (i.e. 1.1.0.0 or 172.16.1.0 or 192.168.0.0 or...)

The mandatory fields are : Primary DNS (IP) and DNS Domain name

Once you have pressed on "Add to DNS" the tool will execute the following steps :

- > Verify that the DNS Server is installed and started on the primary server
- > Install and configure the DNS Server on the primary server (if needed)
- > Verify that the DNS Server is installed and started on the secondary server (if an IP has been provided)
- > Install and configure the DNS Server on the secondary server (if needed)
- > Change the primary DNS suffix on the primary (and secondary) server with the configured DNS domain name.
- > Add a primary DNS forward lookup zone to the primary DNS Server with the configured DNS domain name.
- > Add a secondary DNS forward lookup zone to the secondary DNS Server replicated from the primary DNS Server (if needed)
- > Add a primary DNS reverse lookup zone to the primary DNS Server related to the configured IP subnet.
- > Add a secondary DNS reverse lookup zone to the secondary DNS Server replicated from the primary DNS Server.
- > Configure the Dynamic update on all the DNS zones.

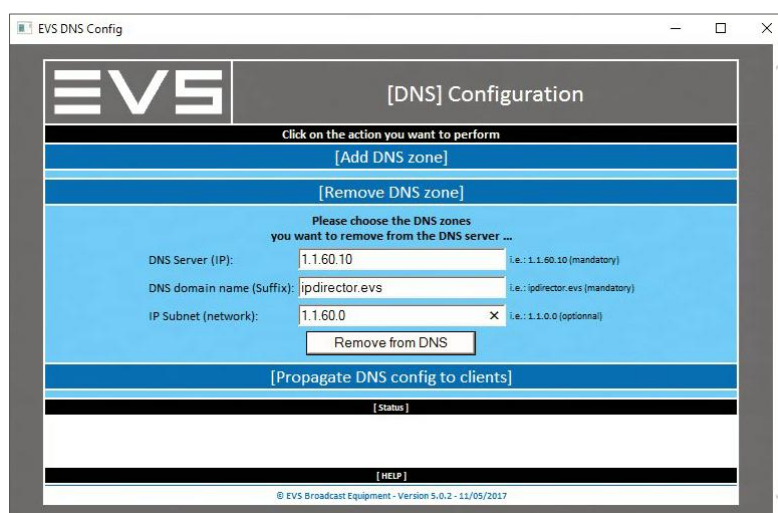


REMOVE DNS ZONE

This part of the tool disable a DNS zone on the configured DNS Server

Fields description :

- > **DNS Server (IP):** IP of the primary or secondary DNS server where the DNS zone must be removed.
- > **DNS Domain name (suffix):** DNS domain name that was used as the client primary DNS suffix. This should be the same as the one used in "Add DNS zone"
- > **IP Subnet (Network):** Subnet identification IP address. This address will be used to identify the client network interface where the DNS configuration was added. This should be the same as the one used in "Add DNS zone"



The screenshot shows the 'EVS DNS Config' window. The title bar says 'EVS DNS Config'. The main window has a header with the EVS logo and '[DNS] Configuration'. Below the header, there are buttons for '[Add DNS zone]' and '[Remove DNS zone]'. The '[Remove DNS zone]' button is highlighted. Below these buttons, there is a section titled 'Please choose the DNS zones you want to remove from the DNS server ...'. This section contains three input fields: 'DNS Server (IP):' with the value '1.1.60.10' and a note 'i.e.: 1.1.60.10 (mandatory)'; 'DNS domain name (Suffix):' with the value 'ipdirector.evs' and a note 'i.e.: ipdirector.evs (mandatory)'; and 'IP Subnet (network):' with the value '1.1.60.0' and a note 'i.e.: 1.1.0.0 (optional)'. Below these fields is a button labeled 'Remove from DNS'. At the bottom of the window, there are buttons for '[Propagate DNS config to clients]', '[Status]', and '[HELP]'. The footer of the window displays '© EVS Broadcast Equipment - Version 5.0.2 - 11/05/2017'.

If a secondary DNS was defined with the "ADD DNS ZONE" tool, this tool will be used twice remove the DNS Zone from Primary and secondary DNS servers.

PROPAGATE DNS CONFIG TO CLIENTS

This part of the tool will remotely connect to a list of EVS Windows (7 or 10) workstations, configure the DNS Server in the TCP/IP configuration and add the DNS domain name as the primary DNS suffix.

You should prepare a txt file with the list of the IP Director you want to configure (IP addresses or computernames) . this txt file should contain all the machines you want to update, one machine per line.

Fields description :

- > **Client list (file)** : path to the file containing the workstation list
- > **Primary DNS (IP)**: IP of the primary DNS server. This IP will be added in the client TCP/IP configuration.
- > **Secondary DNS (IP)**: IP of the secondary DNS server (if you have one). This IP will be added to the client TCP/IP configuration.
- > **DNS Domain name (suffix)**: DNS domain name that will be used as the client primary DNS suffix. This should be the same as the one used in "Add DNS zone"
- > **IP Subnet (Network)**: Subnet identification IP address. This address will be used to identify the client network interface where the DNS configuration should be added. This should be the same as the one used in "Add DNS zone"

Remark : it is very important to use the same DNS domain name on the clients and in the DNS Server.

Remark : The clients should be restarted after these changes to be sure that everything is taken into account

HOW TO MANUALLY DEPLOY DNS SERVER:

1. For an IPDirector setup, right-click on the workgroup name in the Remote Installer and choose "Clear Hosts files (network with DNS Server)". The Remote Installer will remove the records contained in the "IPD Entries" section on each IP Director and target configured in the workgroup.
2. Configure DNS Server IP address(es) in clients TCP/IP configuration (IP Directors, XML units, targets)
3. Add a DNS domain name as DNS suffix to clients (IP Directors, XML units, targets)
4. Create DNS zone with the same DNS domain name on DNS Server (with dynamic update enabled)
5. restart clients

HOW TO MANUALLY INSTALL A DNS SERVER (IF NONE INSTALLED ON DB SERVER YET)

ON WINDOWS 2008/2016

1. DNS Server is only available on Server Operating system (i.e. Windows 2008/2016 server on DB Server) not on Windows 7 or 10.
2. Go to the Server Manager
3. Choose "Add Roles"
4. Check "DNS Server" and finish Role installation.

The DNS Server is installed by default on EVS DB Server (DBS3-2D or DBS1-4S).