

ENHANCED SUPPORT FOR WYSE THIN OS

Virtual Access Suite (VAS) support for Wyse Thin OS (WTOS) is now available from Provision Networks and WYSE. In order to support WTOS-based thin clients in an existing VAS 5.8 (Release 8) environment, you must follow the steps below.

DHCP Server Configuration

You should set the DHCP server's option tags 161 and 188 to the IP address(es) of the Connection Broker(s) using the following syntax:

<protocol>://<iplist>:<port>

protocol: http or https. This parameter is optional. If omitted, http is automatically assumed.

iplist: list of IP addresses corresponding to the Connection Brokers. The specified IP addresses must be separated by commas or semi-columns.

port: the TCP port that the Connection Broker(s) is/are configured to listen on. This parameter is optional. If omitted, ports 80 (http) and 443 (https) are automatically assumed.

Examples:

10.0.0.22	One Connection Broker (10.0.0.22), protocol = http, port = 80
http://10.0.0.22:8080	One Connection Broker (10.0.0.22), protocol = http, port = 8080
http://10.0.0.22;10.0.0.23:8080	Two Connection Brokers (10.0.0.22 and 10.0.0.23), protocol = HTTP, port = 8080
https://10.0.0.22	One Connection Broker (10.0.0.22), protocol = https, port = 443
https://10.0.0.22:8081	One Connection Broker (10.0.0.22), protocol = https, port = 8081

Please note that option tag 161 is used to specify the servers from which the WTOS firmware updates can be downloaded to the thin client, while option tag 188 is used to specify the VDI brokers. Since the VAS Connection Brokers are capable of fulfilling both functions, option tags 161 and 188 may be configured identically.

Enabling HTTP and HTTPS Support

Prior to this release, it was only possible to configure the Connection Broker to accept either http or https requests. Starting with this new release, the Connection Broker can be configured to accept http and https requests simultaneously. To configure the Connection Broker's http and https ports, follow these steps:

1. In the *Provision Management Console (PMC)*, expand the *Servers* node and right-click on *Connection Brokers*. Select *Properties*. Select one or both protocol options (http and/or https) and specify the corresponding TCP port numbers. If IIS is installed on the same server, be sure to select non-conflicting TCP ports.
2. For https support, a Web server certificate must be obtained for each Connection Broker. The certificate can be issued by an internal CA (i.e., Microsoft Certificate Server) or an external one (i.e., Verisign, Entrust, etc). Once the certificate has been installed onto the Connection Broker, expand the *Connection Brokers* node in the PMC and right-click on the node corresponding to the Connection Broker whose certificate you just installed. From the *General* Tab, click the *Configuration* button and then click *Server Certificate*. Finally, select the desired certificate from the list.

New Files and Folders

On each Connection Broker, please create a directory named *WYSE* under the VAS installation directory, a directory named *WNOS* under the *WYSE* directory, and two directories named *bitmap* and *ini* under the *WNOS* directory.

```
C:\Program Files\Provision Networks\WYSE  
C:\Program Files\Provision Networks\WYSE\WNOS  
C:\Program Files\Provision Networks\WYSE\WNOS\bitmap  
C:\Program Files\Provision Networks\WYSE\WNOS\ini
```

A zip file named *wtos_sample_files.zip* is copied by this hotfix into the VAS installation directory (i.e., *C:\Program Files\Provision Networks*). Please extract its contents and place the sample files in the following directories as follows:

```
C:\Program Files\Provision Networks\WYSE\WNOS\WNOS.INI  
C:\Program Files\Provision Networks\WYSE\WNOS\RDP.INI  
C:\Program Files\Provision Networks\WYSE\WNOS\ini\JoeUser.INI
```

The use of these files is described in the following sections.

WNOS.INI

This file, which contains various WYSE commands and parameters, is sent from the Connection Broker to the thin client upon device boot-up. Please refer to *table 2* of the *WYSE Administrators Guide* for detailed information on how to customize *wnos.ini*.

Please note that the *bitmap* directory created by this hotfix is used to store optional bitmap files (i.e., corporate logo to be displayed on the thin client) referenced in *wnos.ini*.

{USERNAME}.INI

Upon successful user authentication, the Connection Broker dynamically generates a user-specific configuration file named *{username}.ini* (i.e., *peggy.ini*, *john.ini*) and sends it to the thin client. This file is generated entirely in memory and contains a list of RDP connection strings referencing the user's authorized published desktops.

Optionally, additional parameters can be automatically appended to the dynamically generated *{username}.ini*. This is accomplished by manually creating a per-user configuration file, also named *{username}.ini*, under the *ini* directory. Please refer to *table 3* of the *WYSE Administrators Guide* for the list of optional parameters that can be specified in *{username}.ini*.

The following takes place upon authenticating a given user: if a custom *{username}.ini* exists in the *ini* directory, the Connection Broker will merge its contents into the dynamically generated *{username}.ini*. The final *{username}.ini* sent to the client contains the list of authorized RDP connections, as well as the parameters specified in the custom *{username}.ini*.

RDP Connect Commands and Parameters

As stated earlier, upon authenticating a given user, the *{username}.ini* file is dynamically generated by the Connection Broker and downloaded to the thin client. This file contains a list of RDP connect commands specifying the following mandatory parameters:

<i>application</i>	Name of published desktop
<i>description</i>	Description published desktop
<i>icon</i>	Icon displayed on WYSE desktop
<i>username</i>	User account name
<i>password</i>	User password
<i>domainname</i>	Windows domain

These mandatory parameters, as well as additional (but optional) parameters, are described in *table 4* of the *WYSE Administrators Guide*. Please note that in order to specify additional parameters, a custom *RDP.INI* file must be configured as described below.

RDP.INI Parameters

RDP.INI is used to specify additional RDP connect parameters to be appended to the RDP connect commands in *{username}.ini*. If *RDP.INI* exists under the *WNOS* directory, the Connection Broker will automatically append the contents of this file to the RDP connect commands. For a list of valid RDP connect parameters, please refer to *table 4* of the *WYSE Administrators Guide*.

Supporting Environments with Multiple Subnets

In environments entailing multiple subnets, it is possible to specify unique *WNOS.INI* and *RDP.INI* files on a per subnet basis. This is accomplished by making use of DHCP option tag 162 to specify a unique subnet identifier per subnet. For example, given *SUBNET1* and *SUBNET2*, the DHCP option tags for these two subnets would be configured as follows:

SUBNET1:

161: http://<iplist>:<port>

162: subnet1

188: http://<iplist>:<port>/subnet1/wyse

In this case, *WNOS.INI* and *RDP.INI* must be stored on the Connection Broker under:

C:\Program Files\Provision Networks\WYSE\subnet1\wyse\WNOS

SUBNET2:

161: http://<brokerip>:<port>

162: subnet2

188: http://<brokerip>:<port>/subnet2/wyse

In this case, *WNOS.INI* and *RDP.INI* are stored on the Connection Broker under:

C:\Program Files\Provision Networks\WYSE\subnet2\wyse\WNOS

Furthermore, by appending the \$ symbol to the end of the subnet identifier, the “\wyse” component of the path following the subnet identifier can be omitted. In this case, reconfigure the subnets as follows, noting the omission of “\wyse” in option tag 188:

SUBNET1:

161: http://<iplist>:<port>

162: subnet1\$

188: http://<iplist>:<port>/subnet1

In this case, *WNOS.INI* and *RDP.INI* must be stored on the Connection Broker under:

C:\Program Files\Provision Networks\WYSE\subnet1\WNOS

SUBNET2:

161: http://<brokerip>:<port>

162: subnet2\$

188: http://<brokerip>:<port>/subnet2

In this case, *WNOS.INI* and *RDP.INI* are stored on the Connection Broker under:

C:\Program Files\Provision Networks\WYSE\subnet2\WNOS

Updating the WYSE Thin OS Firmware

In order to update the thin clients with the latest WTOS firmware, obtain the latest WTOS firmware file, *RCA_wnos*, and store it the *WNOS* directory. Upon rebooting the thin clients, the firmware will be automatically updated if necessary. Please note that option tag 161 must already be configured as discussed above for the firmware update process to work.

Please note that the Connection Broker only supports HTTP-based firmware updates, and therefore does not respond to FTP-based update requests. In order to update existing thin clients running older WTOS firmware, an FTP server is required. For this purpose, it would be possible to install the Microsoft FTP service on the Connection Broker(s). Please note that newer WTOS firmware releases do support HTTP-based upgrades, thus obviating the need for an FTP server in order to perform future firmware updates.