

## Installation & Configuration

# TechGuide



## Wyse ThinOS Thin Clients

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### **Unique Thin Computing Experience**

With Wyse ThinOS (WTOS) in addition to Linux, Windows CE and Windows XPE, we offer the broadest line of Thin Computing Solutions in the industry. WTOS has been designed to deliver the maximum ROI for the IT department, while maintaining a magnificent user desktop experience. Especially the enrichment features that are available, such as Dual Monitor, video playback and USB virtualization, provide the end user with a similar experience as their PC.

### **Near-Zero Computing Architecture**

Through an enhanced combination of DHCP option tags and FTP services, the WTOS devices are updated and configured automatically. No management application needs to be installed for these basic services, making it the quickest and easiest in the industry. For further desktop control features (remote shadow, reboot, shutdown, boot, rename, etceteras) a management application (Wyse Device manager) is provided for free.

### **Boot time < 10 seconds**

The fastest Thin Computing OS in the industry! Boot time normally takes around 6-9 seconds, improving the user's productivity and usability. Also the graphic display is quick and provides an overall fast performance.

### **Entire OS Upgrade < 20 seconds**

The Wyse ThinOS requires only 2MB (S10) and is therefore transferred quickly, reducing downtime and possibility of failures. After the upgrade it will pick up the exact same configuration file that has been used in the past for a previous version of this OS.

### **True Thin Computing Experience**

The Wyse ThinOS device is able to automatically connect to a Virtualized Server environment (Citrix, Microsoft TS or VMWare), immediately after the device has booted. As soon as the user shuts down the last session (normally they only use one), the device turns itself off. This provides a "true" computing experience, just like working with a local OS. With other devices (CE, Linux, XPE) you need to shutdown twice (remote and local OS), every time.

### **Virus-free OS**

The OS is more a network appliance (ICA/RDP) and therefore no viruses can attack these devices. No anti-virus software is needed and no viruses are distributed by this OS, adding more value to the Near-Zero computing architecture.

### **Complete Desktop Control**

Wyse Device Manager Workgroup or Enterprise software is available for further asset management, remote shadowing and boot/reboot/shutdown capabilities. This provides more control and visibility over the existing devices that are installed. Via a DHCP option tag, Wyse ThinOS devices check themselves in automatically after they startup, which eliminates time consuming discoveries over the network, tracing these thin clients.

## First Steps

All Wyse WTOS based units can be configured in two different ways. Most of all settings can be done locally on the unit but only centrally all settings can be set. Local settings can either be done via Control Panel or Connection Manager. Central settings are done via a configuration file that is stored on an FTP Server. The IP address of the FTP server and the path can be adjusted wither locally in the network settings or via DHCP option tags. We strongly recommend use central management with DHCP option tags.

## Change BIOS settings

While starting a Wyse client you will see a Wyse logo for a short period of time. Press "Del" to enter the BIOS. Enter "Fireport" as the password to get access. Older system may not have a BIOS at all.

## Create local connections

Although we recommend using a central configuration file, it is possible to add ICA or RDP sessions locally. To do this open the Connection Manager and select Add. The wizard will ask for the details then.

## Terminal-Reset

If you have configured the terminal with settings that put the terminal in an unwanted state, it is possible to reset the unit to a factory default state. To do that simply press the key "G" while the system is booting or select „Reset to factory default" in the shutdown dialog. When using Privilege Level set to „None" this option is not available.

### How it works

In order to get to the Near-Zero Computing Architecture, one needs to setup the environment for the Wyse ThinOS devices. This is done in the following order:

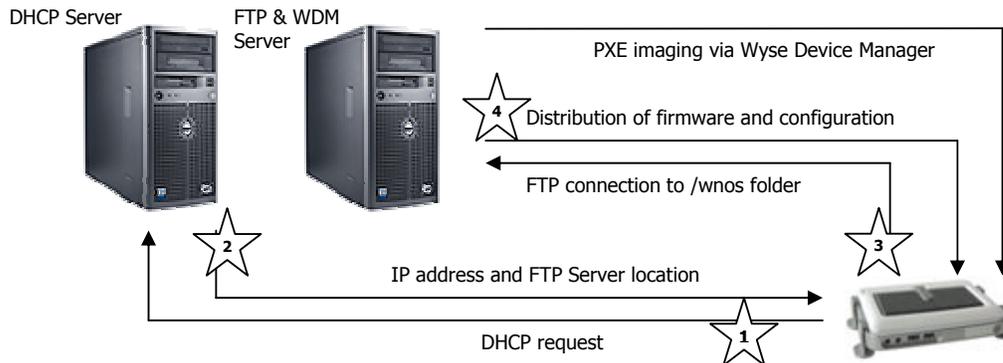
- Install Wyse Device manager (optional, for further desktop control)
- Create Folder Structure on FTP Server
- Add DHCP options on DHCP Server
- Install Configuration Generator/create wnos.ini

### How it looks

Once all the components are installed and configured (activated), the devices will automatically:

- Upgrade their OS
- Get their configuration
- Connect to the terminal server environment
- Shutdown (if configured) once the session has ended

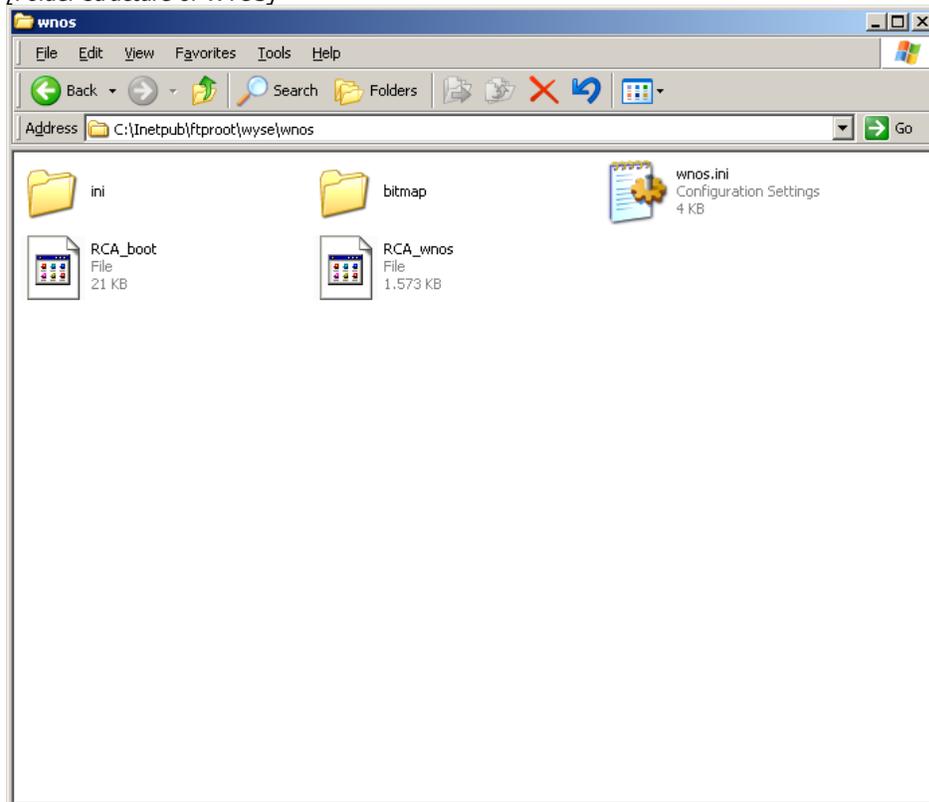
*The underneath drawing shows how the WTOS device communicates with the several servers*



### Create folder structure on FTP server

The folder structure that is required by the WTOS devices will become \wyse\wnos and this folder will be placed under the FTP root folder (if DHCP option tag 162 is not used) or under the folder which has been specified by DHCP option 162. For instance if DHCP option tag 162 has been configured with the name ThinClients and DHCP option tag 161 has been configured with IP address 192.168.1.1, then the WTOS device will check the folder <FTPRoot>\ThinClients\wyse\wnos for a wnos.ini and firmware on the FTP server with the above IP address (192.168.1.1). The subfolder \bitmap will be placed under the \wnos folder and can contain graphical images for icons and background images.

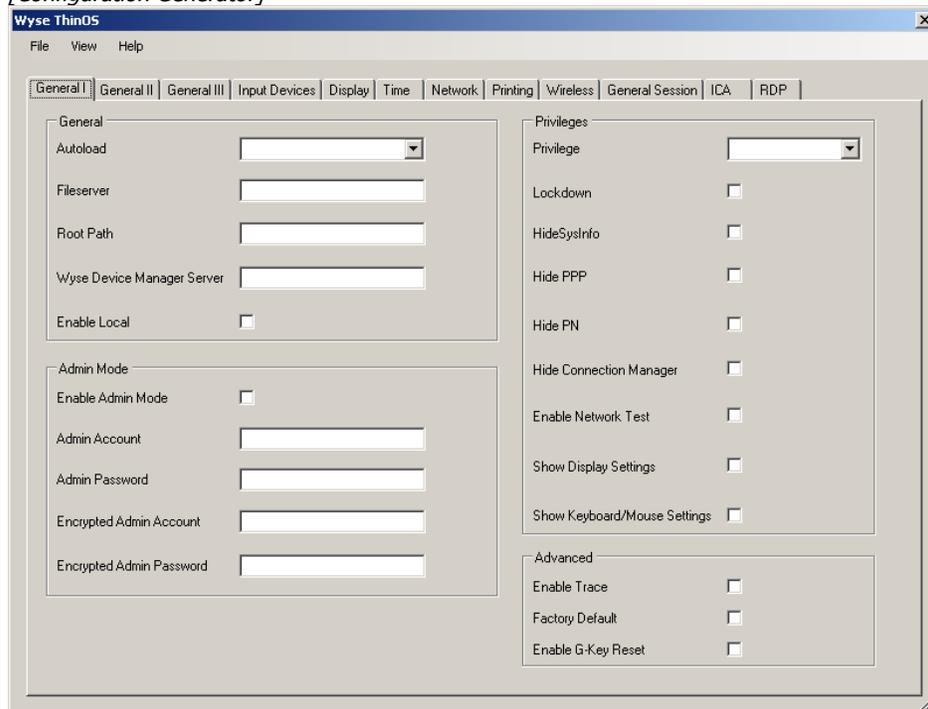
*[Folder structure of WTOS]*



### Install Configuration Generator/Create wnos.ini

The Configuration Generator creates the wnos.ini, through an intuitive GUI. All sections are covered and the ICA and RDP sessions can be created multiple times. The output is well segmented for easy adjustments afterwards, using a default editor like notepad. The wnos.ini file needs to be copied in the <FTPRoot>\wyse\wnos folder.

#### [Configuration Generator]



Download location of Configuration Generator <http://www.technicalhelp.de/ConfGen/ConfGen.zip>.

The Configuration Generator requires .NET Framework 2.0. It is a freeware product not covered by Wyse. Therefore we will not support this tool.

### Example wnos.ini

This is an example of a wnos.ini file which locks down the user, set the display and screensaver settings, enables printing and creates one ICA and one RDP session

#### # Example - General wnos.ini

```

*****
/*
/*      This wnos.ini file was generated with the      *
/*      Configuration File Generator                  *
/*      Copyright by Thomas Moellerbernd              *
/*
*****

/*      General 1                                     *
*****

autoload=1
Rapportserver=172.16.60.1
Privilege=None Lockdown=no

/*      General 2                                     *
*****

Language=De

/*      Display                                       *
*****

Resolution=1280x1024 Refresh=60
DeskColor="0 128 192"
Screensaver=10 LockTerminal=yes Type=2

/*      Time                                           *
*****

Timeserver=time.nist.gov timeformat="24-hour format" Dateformat=dd/mm/yyyy
TimeZone='GMT + 01:00' ManualOverride=yes

/*      Network                                       *
*****

SignOn=No
MaxVNCD=1
VncPassword=password
VncPrompt=Yes

/*      Printing                                       *
*****

Printer=LPT2 Name=HPLaser PrinterID="HP LaserJet 4" Enabled=yes
DefaultPrinter=LPT2
ThinPrintEnable=yes

```

```

*****
/*          ICA          *
*****

```

```

Seamless=yes
PnliteServer=172.16.60.1
DomainList=Wyse

```

```

-----
;-          ICA Session 1          -
;-      Each line but the last must end with a ' \' -
-----

```

```

CONNECT=ICA \
BrowserIP=172.16.60.1 \
Application=Word \
Description="WinWord 2003" \
Resolution=seamless \
LocalCopy=yes

```

```

*****
/*          RDP          *
*****

```

```

-----
;-          RDP Session 1          -
;-      Each line but the last must end with a ' \' -
-----

```

```

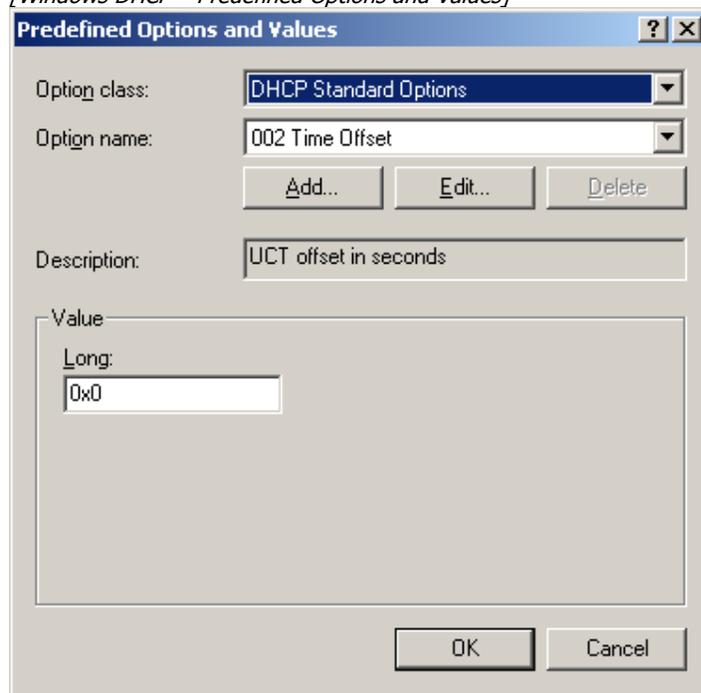
CONNECT=RDP \
Host=172.16.60.1 \
Description="Desktop" \
Colors=high \
Experience=15 \
Resolution=1024x768 \
LocalCopy=no

```

### Creating the necessary DHCP option tags

The Wyse ThinOS devices work with several DHCP option tags. These need to be added and activated within the DHCP scope(s) in order for the WTOS thin clients to use them. Underneath is the Windows DHCP Server dialog box, that will be displayed when right-clicking the DHCP server and choosing "Set Predefined Options". The most common used tags are **161** and **186**. Depending on the Terminal Server environment, more can be added.

*[Windows DHCP – Predefined Options and Values]*



When clicking on Add... the following options can be added.

#### Wyse ThinOS DHCP Option Tags

161	String	Wyse ThinOS FTP Server
162	String	Wyse ThinOS FTP Folder
181	String	PNAgent/PNLite Server list
182	String	NT Domain list
184	String	FTP User Name
185	String	FTP Password
186	IP Address	Wyse Device Manager Server
187	Number	Wyse Device Manager Server Port
188	String	Virtual Desktop Broker Port

#### Activating DHCP Option Tags

Now make sure that within the DHCP scope these option tags are activated. This can be done with the Configure Options command. Now add the new DHCP options that have been created.

### Installing Wyse Device Manager Workgroup Edition (optional)

Wyse Device Manager Workgroup Edition will add the following functionality for WTOS devices.

- Wake-On-LAN
- Shutdown/Reboot
- Remote Shadow (VNC)
- Change Device properties
- Inventory Management

### Download location of WDM: <http://www.wyse.com/bundle/download.asp>

Wyse Device Manager installs a Microsoft Management Console (MMC) snap-in, SQL Desktop Engine database and uses the <FTP root>\Rappport folder for package registration and distribution.

### Operating System Requirements:

- Windows 2000/XP Professional
- Windows 2000 Server
- Windows 2003 Server

All Operating Systems must have IIS installed, including an FTP and Web Server. Due to the FTP limitations a Server version is recommended.

### Unchecking the Return/FTP Ini At Checkin

Once WDM has been installed it changes the wnos.ini root path as soon as the WTOS device checks in. When the FTP folder structure has already been setup, WDM will redirect the WTOS devices to another location. To prevent this from happening the Return FTP/Ini At checkin can be unchecked in:

- Configuration Manager
- Preferences
- Blazer Preferences

### Activating the Workgroup License

By default WDM Workgroup Edition is installed with a 750 User Evaluation license, which needs to be activated. This can be done by right-clicking on the license number itself within the License Manager. Now choose "Activate" and follow the steps for registration.

### Working with WDM

WDM works with five Managers and with WTOS thin clients, the Device Manager and the Configuration Manager are the two most important ones. Within the Configuration Manager the possibility is offered to create groups. These groups can be used to create a segmented view per Image Version, Subnet, etceteras.

Within the Device Manager the WTOS device can be right-clicked to Wake-on-LAN, reboot or shutdown the device. Also the properties (name) can be changed and if VNC is enabled in the wnos.ini the device can be remotely shadowed.

**Contact us for more information**

This Quick Start Guide has been created to setup a WTOS environment quickly. However if you more information with regards to installing and configuring WTOS devices, do not hesitate to call us. A full WTOS admin guide can be found on our website under <http://www.wyse.com/products/winterm/reference/1series/index.asp>. Within this guide you can find a whole list of all possible parameters for the wnos.ini file, in case you do not want to use ConfGen ("System Administration" -> "Using the User Profile ini File Command Set")

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