IGEL Technology
Universal Desktop
Windows Embedded Standard v2/v3

User Guide

Important Information

Copyright

This publication is protected under international copyright laws, with all rights reserved. No part of this manual, including the products and software described in it, may be reproduced, manipulated, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of IGEL Technology GmbH.

Disclaimer

The information in this document is subject to change without notice. IGEL Technology GmbH makes no representations or warranties with respect to the contents hereof and specifically disclaim any implied warranties of merchantability or fitness for any particular purpose. Further, IGEL Technology GmbH reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of IGEL Technology GmbH to notify any person of such revision or changes.

Trademark Recognition

- IGEL is a registered trademark of IGEL Technology GmbH.
- Microsoft™ Windows™ is a registered trademark of Microsoft Corporation.
- VMware™ is a registered trademark of VMware, Inc.
- ThinPrint™ is a registered trademark of ThinPrint AG.
- PowerTerm™ WebConnect™ and PowerTerm™ InterConnect™ are registered trademarks of Ericom Software.

All other products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owner's benefit.

Specifications and information contained in this manual are intended for informational use only, and are subject to change at any time without notice, and should not be construed as a commitment by IGEL Technology GmbH. IGEL Technology GmbH assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual, including the products and software described in it.

Table of Contents

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **5**

1   Introduction

Welcome

Congratulations on purchasing an IGEL Thin Client. IGEL Thin Clients with Universal Desktop are composed of state-of-the-art hardware and an operating system either based on the IGEL Flash Linux Technology, Microsoft Windows Embedded™ Standard or Windows CE. We have done our best to deliver an excellent product and we promise to provide support and service of the same quality.

The IGEL Universal Desktop

The software, or firmware, embedded in every IGEL Universal Desktop is highly multifunctional and contains the industry's largest collection of server-based protocols or "digital services" for connecting you to all your centralized applications. There is only one version of firmware for each operating system we offer. So that you only pay for what you need, the digital services are available in three packs; *Entry*, *Standard* and *Advanced*.

W7 – *Windows Embedded Standard 7* is available with *Advanced* package only.

The IGEL Setup application structure now is the same on all devices and the *(UMS)*; so you will have no problems switching between the local and remote configuration tools, all configuration parameters are to be found in the same tree structure now.

Each Universal Desktop comes with IGEL's *Universal Management Suite*; an extremely powerful yet easy to use software application that allows you to remotely deploy and manage your Thin Client estate.

How to use this Guide

All screen shots and descriptions refer to the *Advanced* firmware status of the IGEL Universal Desktop Series (UD-ES firmware version 2.09.10x and UD-W7 firmware version 3.00.100). Changes coming with *Windows Embedded Standard 7* are marked (**W7**) within this document, a summery can be found in the annex.

This guide is divided into the following chapters:

- ■ **Introduction**   Welcome and User Guide Information
- ■ **Quick Installation**   Instructions for a Quick Installation
- ■ **Boot Options**   Information about the Boot Process
- ■ **GUI and Setup**   Configuration of the System and Session Settings
- ■ **Support Information**

2   Quick Installation

If you carry out the following steps, the terminal can be installed in your network environment within a few minutes.

■   Connect the terminal to a VGA or DVI monitor, an AT compatible keyboard with PS/2 or USB connector, a USB mouse, the LAN via RJ45 and finally connect AC power.

■   Turn on the terminal and wait until the graphical desktop has started. You are now logged in as user named *user* (password is *user*).

■   Log in as *administrator*:

   o   Select *Start → Log Off (**W7***: with Shift key pressed)

   o   Hold the *Shift* key pressed and click on *Log Off*

   o   Keep *Shift* pressed until the log on window shows up

   o   Log in as user *administrator*, password is *administrator*

   Note: Please change the administrator's password to secure your system!

■   The Windows Task Bar shows an *IGEL Quick Setup* icon, right mouse click on this opens a pop up menu that allows you configuring the most basic system settings:

   o   Change Network Settings

   o   Change Display Settings

   o   Change Keyboard Layout

■   Confirm each changed setting by clicking *OK* on the pop up window.

The unit will reboot now and will come up with the new settings.

Note: All these basic settings can be configured in the *IGEL Setup* application as well. Nearly every setting is equipped with a meaningful Tool Tip. Simply move the mouse pointer over the setting/option you want to know more about and wait a second.

3   Boot Options

The secondary stage loader provides the user with a menu, which is reached by pressing the ESC key when the message *booting, please wait* appears on the screen.

You can choose between three boot options:

■   **Windows Embedded Standard –** When choosing this option a normal system boot procedure will run.

■   **Download Firmware Image –** The *Firmware Download* menu will show up. Please add the required connection data to download a snapshot file from your web server or USB device attached.

■   **Start Rescue Shell –** You can access the underlying Linux system e.g. for system recovery purpose.

4   User Interface

4.1   IGEL Info

To get a quick overview of your unit's most basic settings, just launch the IGEL *Device Information* (Information icon in Windows Task Bar).
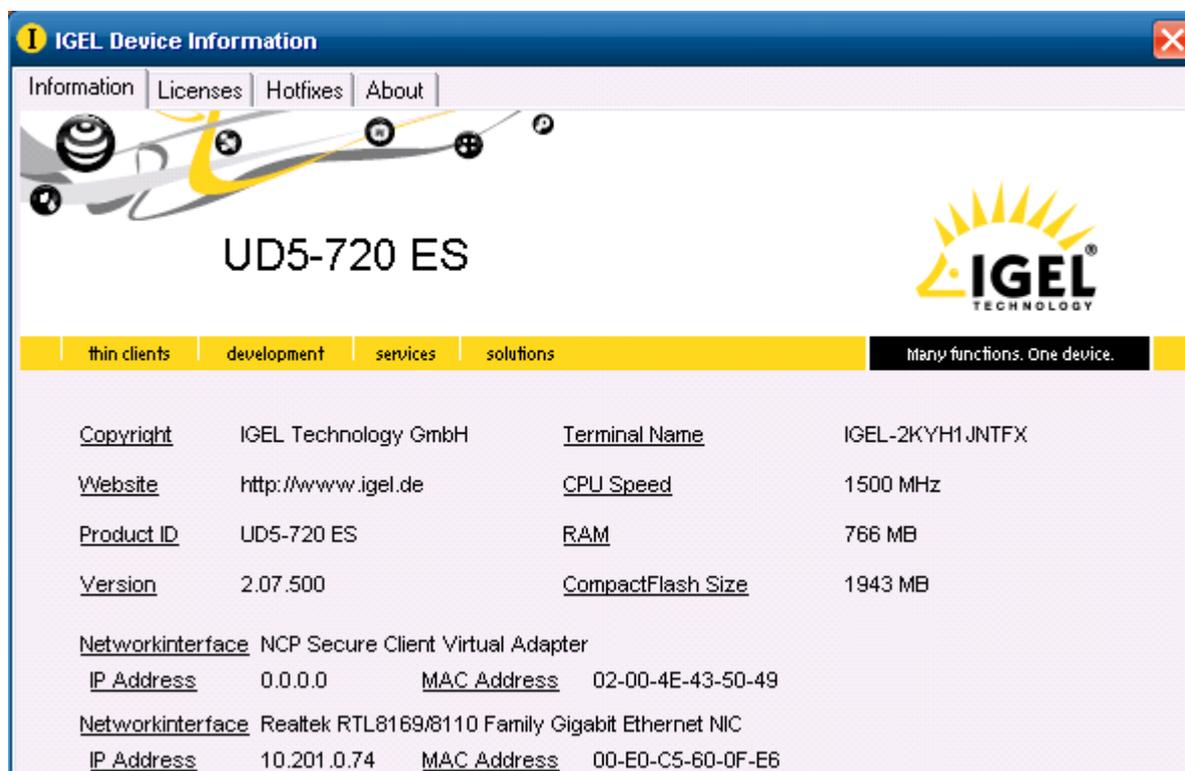
Information – Informs about product name, firmware version, IP address and some hardware data such as CPU and RAM.

Licenses – Lists all software licenses included in the firmware such as the GNU General Public License.

Hotfixes – Displays all Microsoft Windows system patches such as security updates.

About – Gives a more detailed overview on your Thin Client's hardware and software. Especially the licensed *Digital Services* coming with the firmware are listed.

4.2   IGEL Setup Application

4.2.1   General

There are several different methods to configure the IGEL Thin Client to your needs, which are

- ■   Via the built-in *Administrative Tools* of the Windows Embedded system
- ■   Using the local IGEL *Setup* application
- ■   By connecting through VNC towards the unit (*Shaddowing*)
- ■   Working with the IGEL Universal Management Suite

and / or combinations of the above.

The Windows Administrative Tools are considered to be well known (besides that it has its own documentation already), so this part will not be addressed within this manual. We do not recommend configuration of the Thin Client using Windows system tools – the settings can not be stored as a profile and will not persist when updating the system with a snapshot.

Logged in as administrator you can run the *IGEL Setup* application from the Windows Start Menu. The Setup structure now is the same as on the IGEL Linux Thin Clients and within the IGEL *Universal Management Suite* (IGEL UMS). A desktop icon to start Setup can be created.

You can provide parts of the setup to restricted users, e.g. system language or keyboard layout – as default the user can not enter setup application.

Changes made to setup settings can be confirmed with buttons *Apply* or *OK* (*OK* terminates the application), button *Cancel* terminates *Setup* without saving the modifications.

4.2.2   Setup Sections

The Setup application does provide the following main sections:

- ■   Sessions
- ■   Accessories
- ■   User Interface
- ■   Network
- ■   Devices
- ■   Security
- ■   System

A mouse click on one of the sections will open a sub tree. The tree structure allows to navigate through all setup options. Three navigation buttons let you step backwards and forwards within the Setup pages you did visit or get up to the next higher level of the structure.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **9**

The Setup options are described more detailed later – this is a short overview:

- **Sessions –** The section *Sessions* allows to create and configure application sessions such as ICA, RDP, Terminal Emulation, Browser and other.

- **User Interface** – Configure the display settings, input devices and behavior of Desktop and Start Menu.

- **Network** – All network settings for your LAN / WLAN interfaces can be set here.

- **Devices** – Set the parameters for your devices attached to the Thin Client such as printer or USB storage devices.

- **Security** – Set passwords for the administrator and user, define a user for auto log on procedure and enter domain information for your Active Directory to be used.

- **System** – Some basic system parameters are set here such as the time and date, firmware update information, *File Based Write Filter* (FBWF) configuration and others.

4.2.3 Search for Setup pages

A search functionality allows to find parameter fields or values within the setup. Please select one of the hits and click on *Show Result* to get to the corresponding Setup page. The parameter or value found will be highlighted as shown in the picture below.
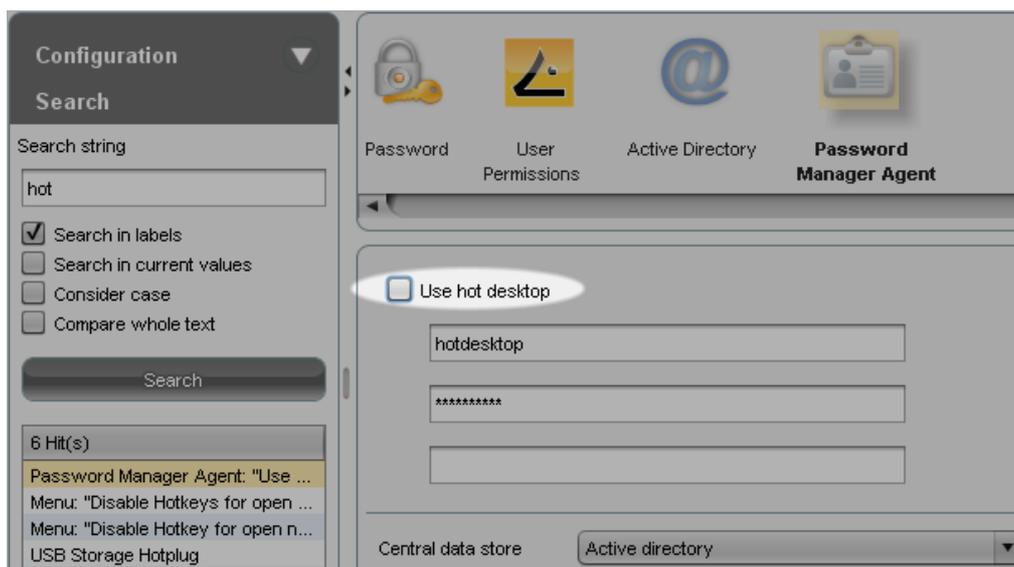
5 System Settings

As mentioned above, some basic system settings can be set within the subtree.

5.1 Time and Date

Choose your time zone and if a Time Server is available in your network, you may also use the "Network Time Protocol" (NTP) to request the proper time and date automatically during each boot up.

5.2 Remote Management

Define a Remote Management server (IGEL UMS Server) to register the device at. You can disable Remote Management within IGEL registry:

Setup → System → Registry → Path: *system.remotemanager.allow_remote_management* .

When receiving new settings or shutdown command from UMS server a message can be shown to the user (Enable User Information).

5.3 Shadowing (VNC)

For help desk purposes, you can shadow the client via the IGEL Universal Management Suite or any other VNC client (e.g. TightVNC). By default VNC server of the terminal is disabled.
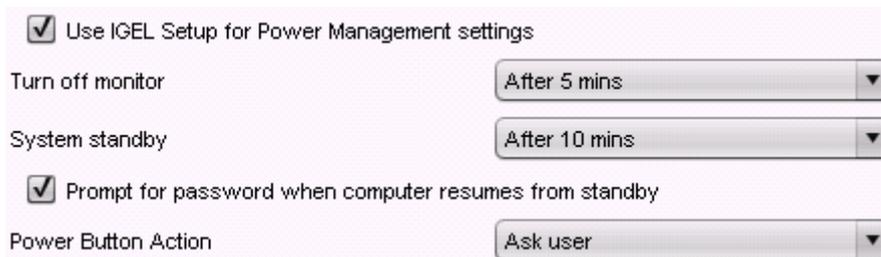
Note: Comply with applicable law regarding protection of privacy when using VNC !

5.4 Power Management

You can configure the Windows Power Safe options within the IGEL Setup application:

If activated these settings override the Windows Embedded settings. In addition to standby mode of monitor and system you can configure behavior of the device when power button is pressed.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **11**

5.5   IGEL System Registry

You can manipulate nearly every parameter of the firmware within the registry. Refer to the tool tips for details on the single items.

Note: Only very experienced administrators should make modifications to the Thin Client's configuration via the registry! By setting wrong parameters, you can easily ruin the configuration, ending up with a stalled system. With such a misconfiguration, the only way to recover your Thin Client is to restore the default factory settings.

You can search for setup parameters within the IGEL registry by clicking the button *Search parameter*. If you are looking for the WPA encryption settings to secure your wireless network, you can search for the parameter name *wpa* - the parameter found in the registry structure will be highlighted:
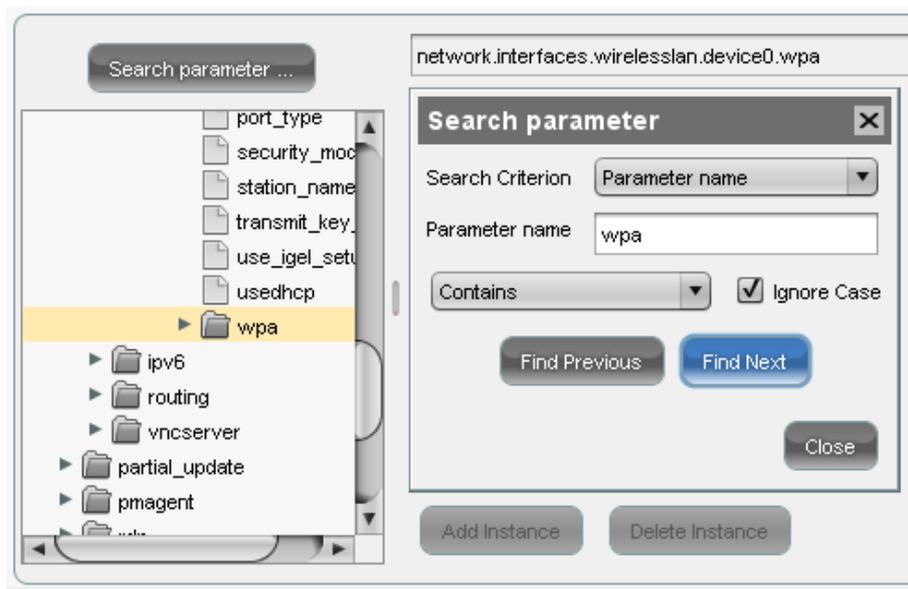
5.6   File Based Write Filter (FBWF)

IGEL Thin Clients with Microsoft Windows Embedded Standard include the Microsoft *File Based Write Filter* (FBWF). A description of the functionality of FBWF can be found at http://msdn.microsoft.com/en-us/library/aa940926.aspx .

FBWF protects your system against data changes or erasure and against malware. FBWF should be activated after system configuration is done, changes in IGEL setup are not blocked by the filter.

The FBWF status is visible in the task bar:

- ■   Red Icon – FBWF Disabled (Default!)
- ■   Green Icon – FBWF Enabled

FBWF can be configured either within the local IGEL Setup or using the IGEL Universal Management Suite UMS. The FBWF configuration can be found in the local IGEL Setup, section *System*.

☑ Toggle the FBWF
☑ Enable the compression of the overlay
Threshold for FBWF   64

Excluded directory   ⭐ 🗑 📝
Excluded directory
\RegfData
\WINDOWS\system32\config\SYSTEM
\WINDOWS\system32\config\SYSTEM.LOG
\IGEL\upd
\Program Files\NCP\SecureClient\ncpphone.sav
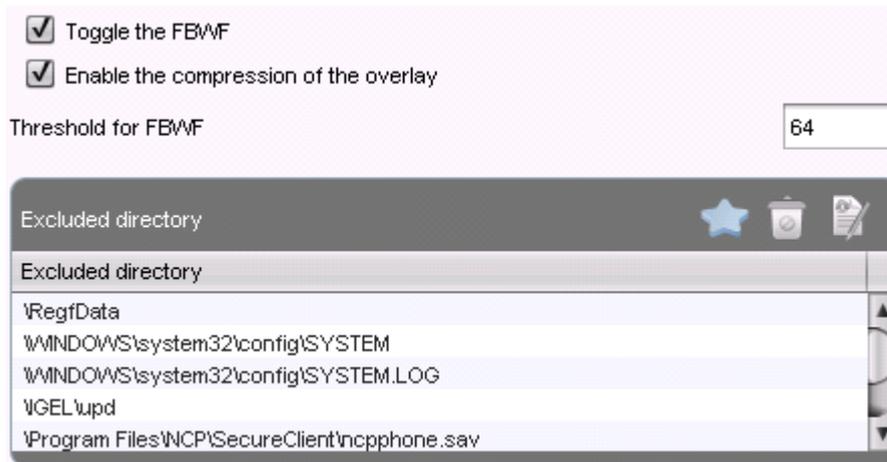
The FBWF and compression are enabled on default. Specify overlay cache size (threshold); defaults to 64 MB, maximum is 1024 MB. To exclude files and directories from FWBF you can add them to the list shown above. Changes to these objects will pass the *File Based Write Filter*. To assure system stability do not delete the objects shown above from the list.

Note: If FBWF overlay cache is exhausted, the system displays the error message, "*There is not enough disk space on the disk.*" Following the error message, the system may become unstable and data loss may occur. Perform a hard reboot to recover the device.

Note: FBWF must be <u>enabled</u> for regular use of the device! Disable write filter for administrative tasks only. Permanent use with disabled FBWF is not supported by IGEL. Define exclusions as narrow as possible to protect as much of the system as possible.

5.7   Update

Two system update procedures are available:

■ *Snapshots* to update the Windows Embedded system itself including the IGEL firmware features.

■ *Partial Update* to add new functionality such as additional system language packs.

5.7.1   Snapshots

A *Snapshot* is an image of the first partition (volume C:) that contains the Windows Embedded Standard operating system. You can either use this image to spread towards other IGEL Windows Embedded units (prerequisite: same hardware base) or for recovery purposes. IGEL firmware updates will be provided as snapshot as well.

To create and install Snapshots you can use *Tomcat Webserver* within IGEL UMS server, more information can be found in UMS documentation (Create/Usage of Web Resources).

Creating Snapshots

Define a protocol to transfer a new or stored snapshot file to / from server (HTTP or FTP) or choose *file* to save/load a snapshot to/from attached USB device.

Note (using *file* protocol): USB device must provide at least 1 GB free disk space. Make sure path *igel**snapshot*s exists and define only file name in snapshot configuration (*new snapsho*t).

The system can prepare a USB device as snapshot storage, the drive chosen will be formatted and file path will be created automatically – press button *Prepare USB Device* to start this process.
Attention: All data stored on drive chosen will be deleted by this process!

Option *Leave domain before snapshot* can be useful when planning transfer of the new snapshot to further devices.

Once you completed all the required fields you can click *New Snapshot*, this will result in the terminal rebooting and then writing the image to the specified directory on your Web Server or USB device.

Firmware-Update with Snapshot

Firmware updates as snapshot can be found on IGEL's download server http://myigel.com . Download zipped *.snp* file and povide this either within your network (own FTP/HTTP server) or on USB storage device. Start *Snapshot Download* function on the Thin Client to update.

Alternatively use *Universal Firmware Update* mechanism of *Universal Management Suite* (see UMS documentation).

Installing (Downloading)Snapshots

Installing a snapshot created before works in a similar way: Choose protocol for transfer (HTTP, FTP or FILE) and define server path. (FILE will search for snapshot specified in *\igel\snapshots* on USB device attached – so define *snapshot* only with file name, no path.)

Option *Reset terminal settings* will set all parameters in IGEL Setup to default and delete UMS certificate (client certificate). All data in USER partition (Volume F) will be deleted. Firmware license (feature set) will persist.

Note: Do not interrupt download or installation process of snapshot mechanism to avoid inconsistent system state!

5.7.2 Partial Updates

The IGEL partial update mechanism allows to make changes on IGEL Thin Clients running Microsoft Windows Embedded Standard operation system. The changes are made with scripts that are downloaded to clients and then executed by a script engine based on the Lua script language. Basically, this is a mechanism that distributes scripts from a server to clients. The Lua language was extended by IGEL with modules which allow access to system services such as Windows registry, file system operations, IGEL setup data interface, execution of a process, reboot or shutdown of the operation system, HTTP and FTP access. The extensions called *Luna* and the full reference can be found in the *Luna Reference Manual*.

You can use Tomcat Webserver of IGEL UMS to provide Partial Update files – e.g. to share updates as profile. See UMS documentation for more information.

Apply Partial Updates:

- Go to configuration panel in IGEL Setup (*System → Updates → Partial Update*) and enable update mechanism.
- Choose protocol and server / path on USB storage and apply settings.
- Press button Search for updates to find update files on the source specified. Available updates can be installed immediately, the system will restart for update process. After successful update the system will restart again.

Options:

> *Update on Boot* – Partial update files on the source will be applied on next boot of system. This option is useful when configuring updates using UMS.

> *Show installed packets* – Already installed updates will be displayed.

Note: In case Microsoft IIS (Internet Information Services) will be used as HTTP server to provide the Partial Update files, you will have to configure the server to accept download requests for all files independent from their MIME types. When using FTP for the file transfer there is no such limitation.

thin clients | development | services | solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **15**

5.8   Service Information

☑ Enable Microsoft Internet Explorer
☑ Enable NoMachine NX Client
☑ Enable vWorkspace Client
☑ Enable Citrix ICA Client
☑ Enable NCP Enterprise VPN Client
☑ Enable Spice client
☑ Enable VMware View Client
☑ Enable Citrix Xen Desktop
☑ Enable Fabulatech USB redirection
☑ Enable Microsoft Media Player
☑ Enable ThinPrint
☑ Enable Citrix Hotdesktop
☑ Enable Ericom PowerTerm WebConnect Client (VDI, TS, Legacy)
☑ Enable vWorkspace AppPortal
☑ Enable Ericom PowerTerm InterConnect Terminal Emulation
☑ Enable Adobe Acrobat Reader
☑ Enable rotation support
☑ Enable Microsoft RDP
☑ Enable Quest vWorkspace Multimedia Redirection
☑ Enable SAP Gui
☑ Enable Citrix Online plug-in
☑ Enable Voice over IP (Ekiga)
☑ Enable Leostream Connect

This list of available services allows you to quickly enable or disable firmware services (session types) such as Powerterm, Media Player and other.

If a service has been disabled the corresponding session type is no longer available after reboot – already existing sessions will be hidden (not deleted!).

6 User Interface

## 6.1 Display

The basic and extended display settings are set within the IGEL Setup – you can disable these settings and use the Windows Display Properties instead.

Multiscreen can be configured within IGEL Setup as well, simply increase the number of displays, specify resolution and relative position of second screen.

Supported max. display resolution for each IGEL device can be found in the chart at the end of this document.

W7 – Set video memory to at least 128 MB in BIOS (default 64 MB) to enable display rotation (Pivot). (*BIOS → Integrated Peripherals → VGA Share Memory Size*)
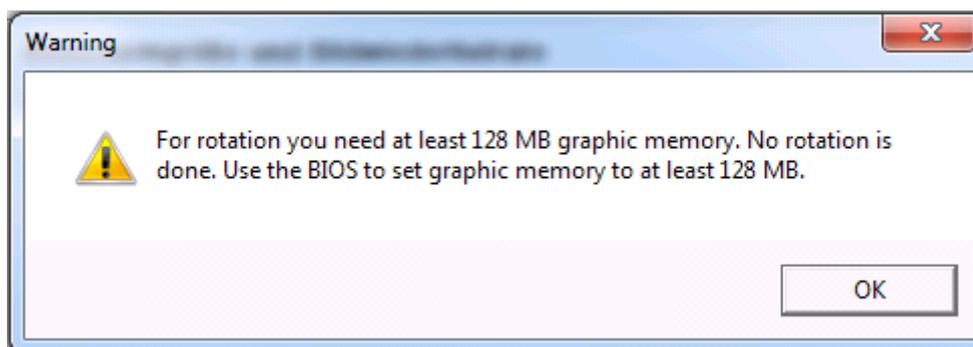
6.2 Desktop and Start Menu

Following options can be configured:

- *Show recycle bin* – As default recycle bin is disabled on desktop.

- *Lock Taskbar* – Fixes Taskbar in current position on desktop.

- *Disable Lock Workstation* – Prevents user from locking desktop with *Win+L* or *Ctrl+Alt+Del*.

- **W7** – Enable Aero Glass (Translucent windows, window miniatures in task bar).

- Show notification in task bar.

- *Arrange items in Start menu* – Assorts items in Start menu in alphabetical order.

6.3   Language

Choose a language for Setup application, keyboard layout and configure local settings such as format of time, numbers etc.

Note: On IGEL download server you will find partial updates with language packages to change system's language as well.
W7: The installation of language packs for UD-W7 can take up to 45 minutes; do not stop the process prematurely to avoid inconsistent system status!

6.4   Input

Choose a language for Setup application, keyboard layout and configure local settings such as format of time, numbers etc.

7   Network

In this section you configure parameters of all available network devices (LAN / WLAN), network drives can be connected as well.

7.1   LAN and WLAN (Wireless)

Set the needed network configuration like IP, name service etc here or keep using DHCP if applicable. (DHCP is the pre-configured default.)
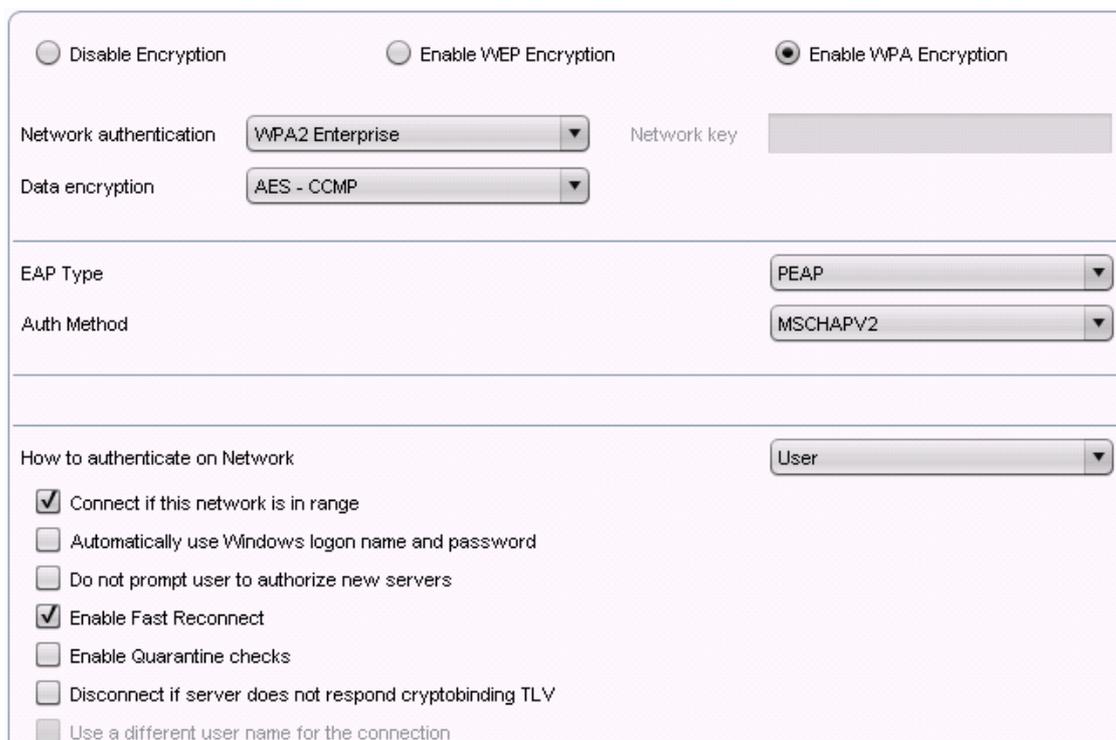
On setup page *Wireless* you will find all parameters regarding WLAN connection including security options such as encryption.

Note: As default Windows system settings are enabled for wireless network configuration – to configure WLAN within IGEL Setup enable checkbox *Use IGEL Setup* on Setup page *Wireless*.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **18**

7.2   VPN

Create a session with NCP Secure Enterprise Client to connect to a Virtual Private Network VPN. Configure VPN connection within GUI of NCP client software, NCP provides software to remote-control the client as wall, more information on configuration and usage of NCP Secure Enterprise Client is provided by NCP:

http://www.ncp-e.com/en/support/library/manuals.html

Note: *NCP Secure Enterprise Client* has to be licensed separately by NCP for permanent use.

7.3   Routing

Define a gateway to use a particular network route; parameter Interface is optional, the route does affect all network devices installed.

7.4   Network Drives

Add network drives to be connected at system boot including logon data and drive letter. If no drive letter is specified you have to connect this drive manually later. In case a drive letter is already reserved only the drive connected first will show up and the system will create an error entry in *Eventlog*.

8 Sessions

Configure sessions with many available session types (depending on license (feature set) of your IGEL Thin Client). For an overview of the functionality of each license level please refer to the product list on our website http://www.igel.com

Section *Session Summery* lists already configured sessions of any type, add new sessions by pressing button *Add*. Or to to requested session type in navigation tree and create a new session.

Each session configuration provides topic *Desktop Integratio*n – define session's name and start options (automatically or by hand) and list the session's icon on desktop or in Start menu.

8.1 Citrix ICA

8.1.1 Citrix Global Settings

Standard parameters to be used (or changed) in all Citrix sessions can be defined here. More detailed information on each topic can be found within the original documentation at Citrix (http://support.citrix.com/proddocs/index.jsp).

- **Server Location (Master Browser)** – Define HTTP Master Browser for your ICA connections
- **Window** – Set default window size and color
- **Keyboard** – Keyboard layout within ICA session can be different from system's layout. Hotkey commands of server can be mapped to Function keys or key sequences on local keyboard
- **Firewall –** Define ICA connections to pass firewall or SOCKS proxy server.
  - *Use Alternate Address* – To connect to a Citrix server behind a firewall you have to enable this option because the server's IP address in internal network usually differs from its "public" address. More information can be found in your Citrix server manual (topic *altaddr*).

Note: After activating alternate address you have to add the server to address list in *Server Location.*
  - *SOCKS / Secure Proxy* – Define if the session connects to the Citrix server via SOCKS proxy or via *Citrix Secure Gateway* (relay mode).

- **Options –** Set global options such as Automatic Reconnect or size of cache etc.
- **USB Redirection –** Define rules for usage of local attached USB devices in XenDesktop and Citrix VM session. Depending on class or sub-class of the device you can enable or disable the device within the session, combinations of rules are possible. Devices can be defined by their vendor ID and product ID as well, no classification is necessary in this case.

8.1.2 Citrix Session Settings

Some parameters of sessions can be pre-defined by global settings, others are available only in session configuration such as logon data or desktop integration.

- **Server** – Define the *Citrix Server* or *Published Application* to be connected and set the browser protocol to be used for application browsing.
-
- **Logon** – Set the user credentials for the server logon or let the user enter the logon data when connecting the session.
-
- **Window** – Set the color mode for the session and the window size. For Published Applications the seamless window mode can be enabled.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **20**

■   **Reconnect** – Enable automatically reconnect to the session and limit the number of retries.

■   **Options** – This is the page to tweak the performance and behavior (see below for descriptions).

- o   *Compress* - Use data compression to reduce the amount of data transferred across the ICA session. This lowers the network traffic at the expense of CPU performance. If you connect your server(s) through WAN, it's recommended to use the compression. If your server is a bit weak and you're in a LAN only, disable this option.

- o   *Persistent Cache Enabled* - You have the option to enable the cache (configured in the global ICA settings) for any session. This is useful when using several ICA sessions but only one or two are critical regarding network bandwidth or are heavily used during the day. In that case, you should reserve the cache for those sessions.

- o   *Encryption Level* - Encryption increases the security of your ICA connection. By default, basic encryption is enabled, so ensure that the Citrix server supports RC5 encryption before you choose any higher encryption level.

- o   *Client Audio* - If enabled, the system sounds and audio from your applications will be transmitted to the Thin Client and emitted out of attached speakers. The higher the audio quality you choose, the more bandwidth is required to transfer the audio data.

- o   *Speed screen Latency Reduction* -This improves performance over high latency connections by providing instant feedback to the client in response to keystrokes or mouse clicks. Both improve the user's sense of sitting in front of a normal PC.

- o   *Mouse click Feedback* - This provides visual feedback of a mouse click by immediately changing the mouse pointer into an hourglass indicator.

- o   *Local Text Echo* - Accelerates display of the input text, effectively shielding you from experiencing latency on the network. Select a mode from the drop down list:

  - o   Set the mode to *"ON"* for slower connections (connection over a WAN) to decrease the delay between user input and screen display.
  - o   Set the mode to *"OFF"* for faster connections (connection over a LAN).
  - o   Set the mode to *"AUTO"* if you are not certain of the connection speed.

Note: Speed screen has to be enabled and configured on the Citrix server first in order to work.

8.1.3 Citrix Online Plugin

Define the Master Browsers to be browsed for published applications. You can set up to 5 Master Browsers per domain. In case the first one is not reachable, the second one will be consulted and so forth. Please note that multi-farm browsing is supported! So you can define Master Browsers for several server farms.

Configure additional options such as window size, audio band width or mapping of local drives. Citrix' support website mentioned above provides more information on configuration and usage of Online Plugin as well.

8.2 RDP

The Thin Clients uses Microsoft RDP client for *Remote Desktop Protocol* (RDP) connections – all configuration parameters of the client can be found in IGEL Setup. Detailed information on Microsoft RDP can be found at http://technet.microsoft.com .

8.2.1 RDP Global Settings

Standard parameters to be used (or changed) in all RDP sessions can be defined here. Two of them can only be set globally for all RDP sessions: *Clipboard* and *Hotkeys.*
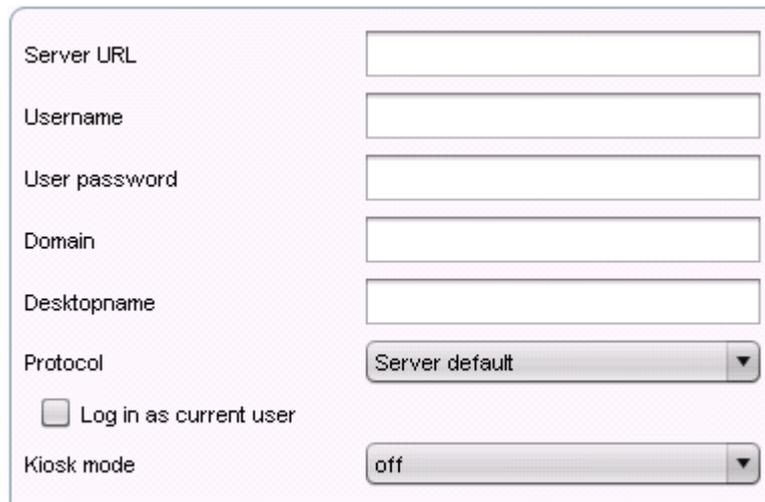
8.2.2 RDP Session Settings

Create a new RDP session by clicking the Add button in the Session menu. The following configuration pages allow the detailed setup of the session:

- **Server and Logon** – Define a server and initial application for the Terminal Server session and configure the necessary logon information (otherwise the TS logon window will be displayed to enter the user and password).
- **Window** – Set the session window to full screen or a fixed size and define the color mode to be used. You can set the local task bar to stay visible during full screen session.
- **Performance** – In case of performance problems, disable some not necessarily needed graphical features such as themes and window animation etc.
- **Mapping** – Define your sound output device (local / remote) and decide how to deal with keyboard strokes and clipboard content. Enable the mapping of serial ports as well as mapping of local drives to the session.

- If you have mass storage devices attached, make them available to the user by mapping them here. Check the "Enable" box, select the drive letter to be used and finally choose the device to map.
- **Options** – Some additional session data can be defined here: Set an initial application and working directory to be used within the session and define how to deal with authentication errors during logon process. If a Terminal Server gateway should be used when connecting to the server you can define its settings here (default is *No Gateway*).

thin clients | development | services | solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **22**

8.3   VMware View Client

Create a new View Client session by clicking the *Add* button in the Session menu. The Connection Settings page will be displayed to enter the necessary server data including optional configuration data such as Kiosk Mode, window size and mapping of local USB devices.

A detailed description of the client's parameters can be found in the original documentation for View client at http://www.vmware.com/support/pubs/view_pubs.html .

8.4   Appliance Mode (XenDesktop and View)

The Appliance Mode session can be enabled for XenDesktop and View connections. When running an Appliance Mode session no other application access is possible. Only the server session to the defined Delivery server will be visible.

**W7 Note:** UD W7 version 3.00.100 does not support appliance modes.

Leave the appliance mode: During logon to XenDesktop or View Appliance keep *Shift* key pressed to display local logon window. Logon as local administrator and IGEL Setup application will start automatically.

8.5 Leostream Connection Broker

Define Server, User and Domain for login with Leostream Connection Broker. As default *RDP* client will be used for the connection – please check if server uses *RDP* (with priority 1) as well.
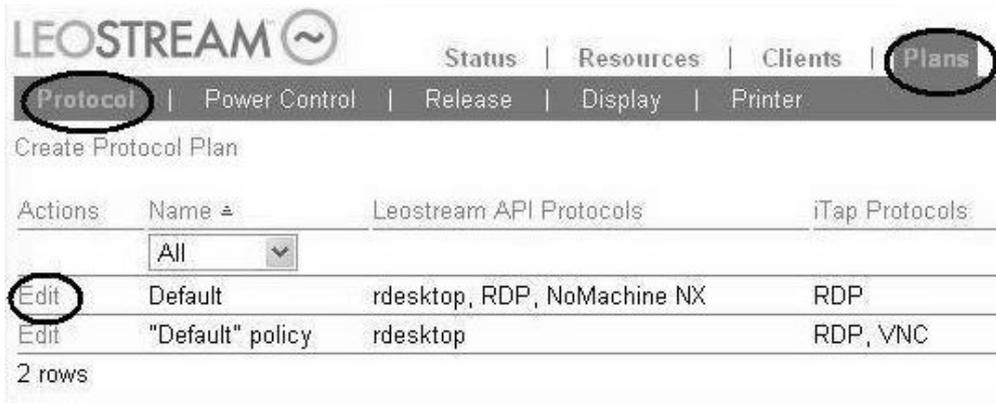
More information on Leostream Connection Broker can be found at:
http://www.leostream.com/resources/downloads.php

8.6 Nomachine NX

Parameters will be available depending on session type chosen (*Unix, Windows, VNC, Shadow*). IGEL Setup pages for NX represent all configuration parameters of Nomachine NX client.

Further information on configuration details (Server settings, Performance, Services etc.) can be found in the original documentation provided by Nomachine. http://www.nomachine.com/documents.php
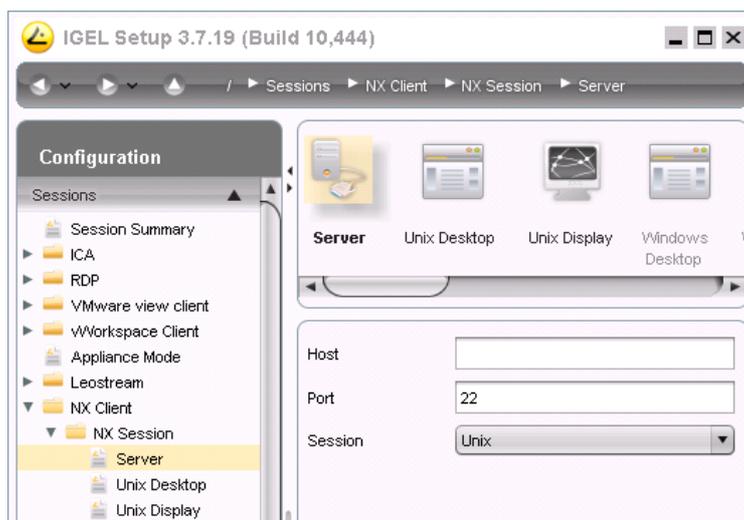
8.7   PowerTerm WebConnect

PowerTerm WebConnect is a solution that provides local and remote access to applications running on Windows Terminal Servers, Virtual Desktops (on top of hypervisors such as VMWare, Microsoft, Xen, and Virtual Iron), Blade PCs, and legacy hosts.

Enter the host name of the WebConnect server you want to connect to. The server configuration itself is described in the WebConnect documentation by Ericom (http://www.ericom.com/doc/QRG/WebConnectGettingStarted.pdf).

8.8   PowerTerm Terminal Emulation

The PowerTerm InterConnect software used on IGEL Thin Clients with Windows Embedded Standard is the official software version from ERICOM Software Ltd.
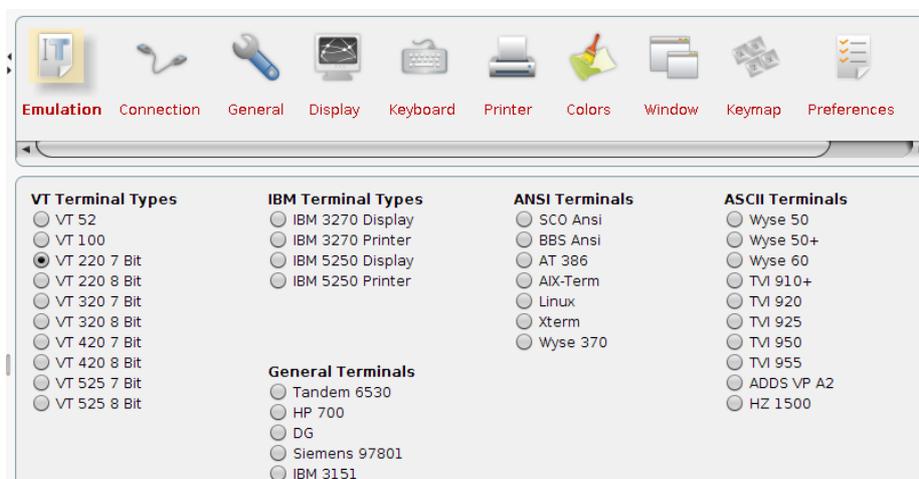
PowerTerm Emulation Setup

After you have chosen the "PowerTerm" session type in the "Add a New Session" procedure , the above "PowerTerm Emulation Setup" appears on the screen. (This is also a good overview of what emulation types are supported.)

We have tried to make the appearance of the setup pages used here as similar as possible to the appearance of the setup pages described in the original documentation of ERICOM Software Ltd. So for detailed information about configuring the PowerTerm Software please refer to the "PowerTerm Manual" available on the IGEL download server http://www.myigel.com → Partner Documentation or on the Ericom Documentation web page (http://www.ericom.com/help.asp).

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **25**

8.9 Microsoft Internet Explorer (Browser Session)

The Microsoft Internet Explorer browser application can be configured within the IGEL Setup. You can switch off the IGEL settings for MSIE so the original settings (within the IE menu) will become active.
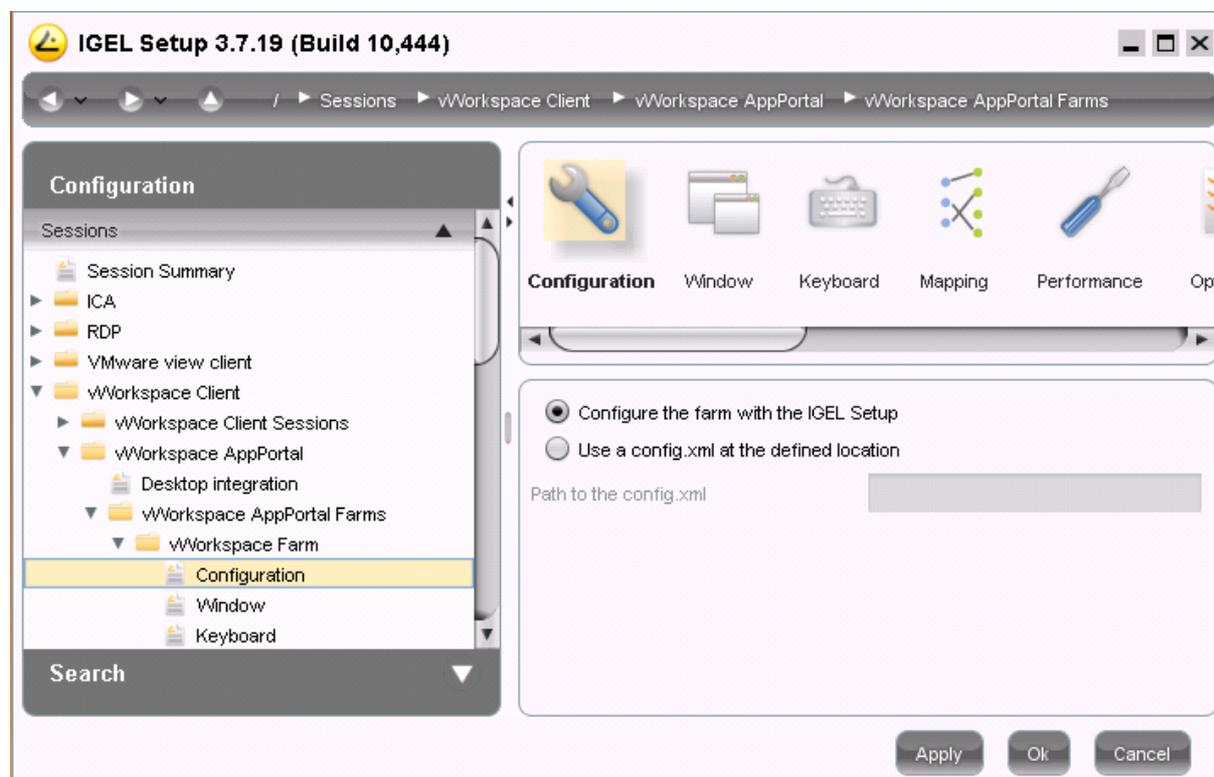
The following setup pages are available:

- **Global** – Set Global Browser data such as start page or download location etc.
- **Security** – Allow SSL encrypted connections and activate Zone Crossing Warning
- **Advanced** – Define how to deal with images and sounds embedded on web sites
- **Start** – Where should the browser application be accessible from
- **Window** – Set full screen mode and enable or disable the Theater mode
- **Proxy** – Configure the proxy settings if necessary
- **Menu** – Disable various menu parameters such as the print dialog and the close button
- **Toolbar and Toolbar Items** – Configure the toolbars shown within the browser application

Within the IGEL setup for the browser session you can configure most of the Internet Explorer's settings – in order to distribute this configuration via IGEL UMS to further IGEL Thin Clients.

8.10 vWorkspace Client and AppPortal

Quest vWorkspace client connects to some available hypervisors and is compatible to VMware vSphere, Microsoft Hyper-V and XenServer. All configuration parameters of vWorkspace Client and vWorkspace AppPortal Farm are described detailed in original documentation to be found at *Quest* : https://support.quest.com/Default.aspx .

Note: You can configure all parameters for your farms either in IGEL Setup or referring to a XML document with configuration. Direct configuration without IGEL Setup is not supported.

| thin clients | development | services | solutions | Many functions. One device. |

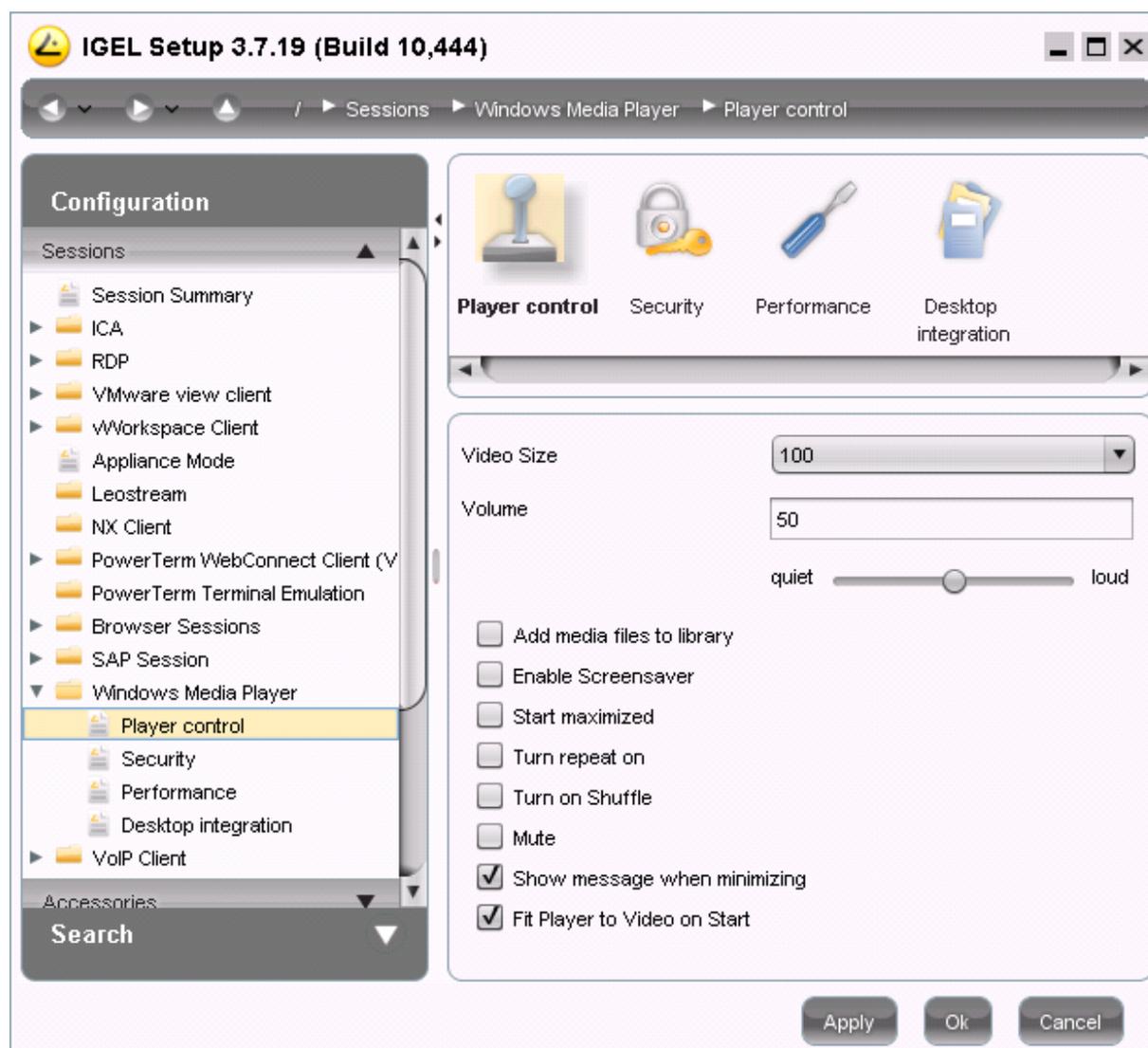**IGEL Technology GmbH**   IGEL Universal Desktop Windows Embedded   **26**

8.11 SAP Client

Log on to a SAP system using local JAVA SAP GUI. You can define a prepared configuration file, IGEL Setup does not provide any other parameters for SAP client.

8.12 Windows Media Player

Configuration parameters of Windows Media Player 11 have been transferred to IGEL Setup as well, more information on configuration and usage of WMP can be found at Microsoft:

http://www.microsoft.com/windows/windowsmedia/player/11/using.mspx

thin clients   development   services   solutions   Many functions. One device.

**IGEL Technology GmbH**   IGEL Universal Desktop Windows Embedded   **27**

8.13 Voice over IP (VoIP) Client

In section VoIP you can configure your device for using *Ekiga* VoIP client. This client allows SIP as well as H.323. In addition to local contacts you can use LDAP address books as well.

A detailed description of the client's parameters is available in original documentation at: http://wiki.ekiga.org/index.php/Documentation.
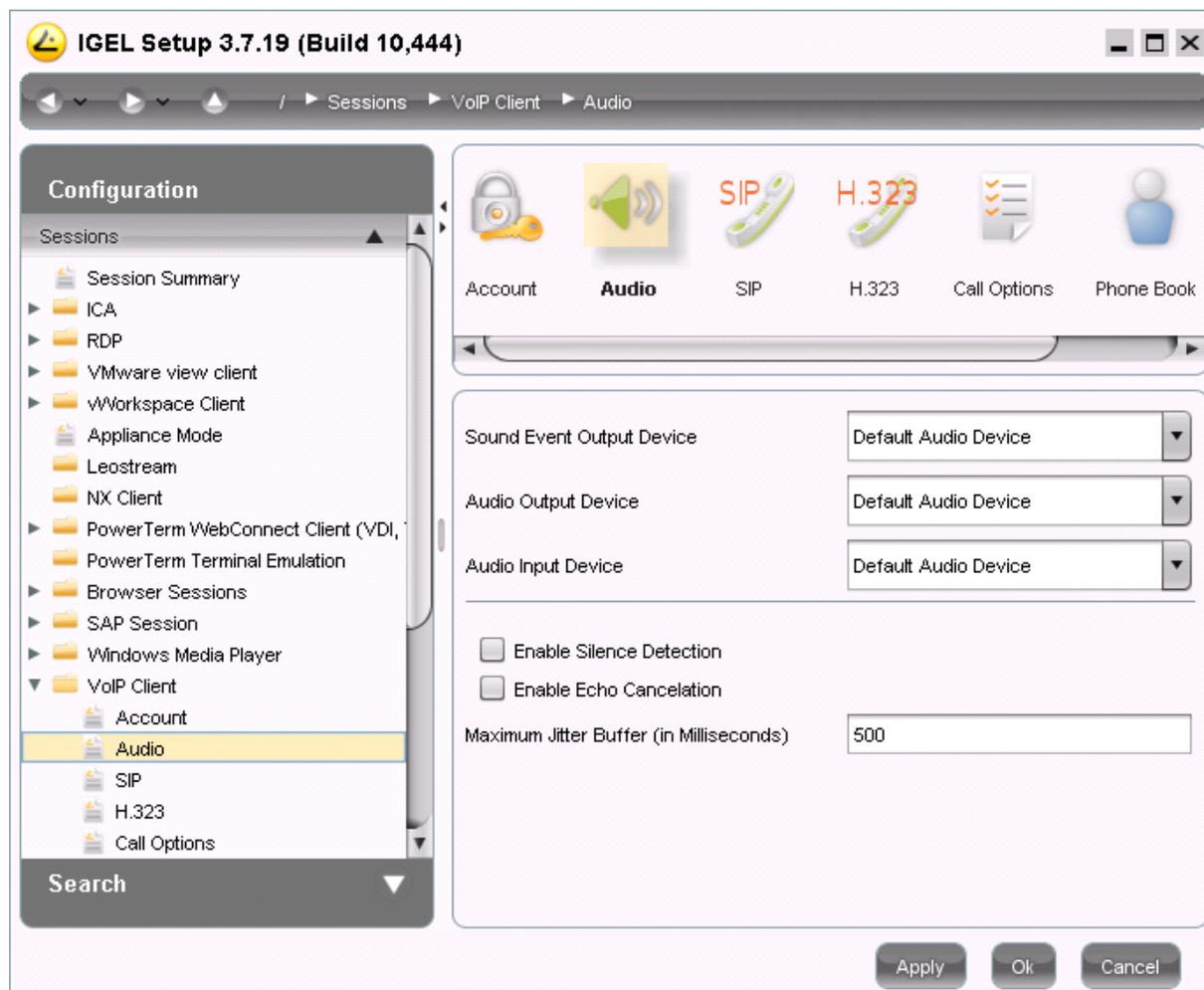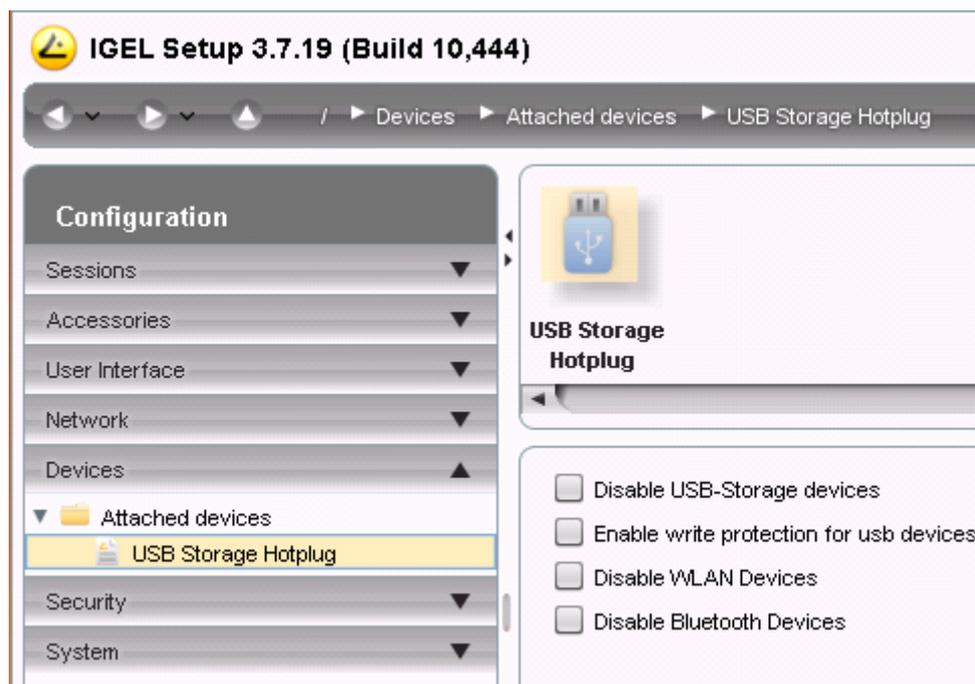
9   Devices

9.1   Thin Print

The ThinPrint Client does start automatically when running an ICA or RDP session. The printer configuration menu is accessible via the ThinPrint task bar icon after the ThinPrint Client has started – there are no configuration parameters within the IGEL Setup.

9.2   USB Devices

You can enable or disable the usage of different types of USB devices on this setup page. The three distinguished types are

- ■   Storage devices
- ■   WLan devices
- ■   Bluetooth devices

You can disable each of the device types, additionally USB storage devices can be configured to be read-only.

10 Security

10.1 User Accounts

By default, two user accounts are already pre-configured: *Administrator* and *User,* both with pre-set password (password for Administrator = administrator, password for User = user). The Administrator has full access to the whole system while the User has got read-only rights

Note: It's strongly recommended, to set an administrator password right after the first boot! **Note:** Passwords can only be changed by an administrator.

To create new user accounts you have to use the *Computer Management* (Start → Control Panel → User Accounts), you can add new users to the Administrator's group.

10.2 Password Settings

You can set an administrator password to secure the IGEL Setup application. If a password is set (and activated) for the administrator user, the Setup only is accessible with this password.

Note: The administrator's system logon password and setup password can be different! Password changes will only be saved when pushing the *OK* or *Apply* button!

You can set a password for User as well – User can access IGEL Setup and configure Setup parameters the user is authorized for (Accessories → *Setup Session*).

Auto Logon – Define a user to be logged on automatically at system start. Default configuration is *user* to be logged on.

Note: When accessing the boot menu (by pressing *ESC* during boot) the administrator's password is requested as well.

10.3 Active Directory

Configure the access to your Active Directory Domain on this page. Add the necessary domain user information to get access to the AD domain.

 and

Note: Before creating a new snapshot of the system it is useful to leave the domain the client is registered at. This option can be set within the *Snapshot* menu of Setup.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **30**

10.4 Password Manager Agent

The Hot Desktop feature of Citrix Password Manager combines a permanently registered standard account with an additional level of authentication for applications deployed by Citrix. With the integration of Citrix Hot Desktop functionality in the IGEL thin clients shared Windows accounts become dispensable and regulatory compliance such as for health care is simplified. Logon and logoff events in the system and password changes can now be registered and logged for audit processes. In case of absence of the user from the desktop, the system is not vulnerable.

The usage of Citrix Hot Desktop functionality and the Password Manager Agent is described more detailed in a separate HowTo document to be found on the IGEL website (Document Center):

http://myigel.com/ftp/manuals/english/universaldesktop/Windows%20Embedded %20Standard/HOWTO%20Use%20Citrix%20Hot%20Desktop.pdf

More information on the Citrix Hot Desktop itself can be found on the Citrix website:
http://www.citrixnews.eu/citrixee/citrix.nsf/0/30D361FA0F89F03DC1257068005AC6BE

---

11 System Recovery

In case the system is not properly working anymore, you can easily recover it via the hidden boot menu. To enter it, press ESC shortly after powering on the unit. To reset all system configuration parameters you can download a previously made firmware snapshot and set the parameter *Reset Terminal Settings* to *true*. The download settings are equal to the procedure of system update described before (Snapshot mechanism).

Note: If a password is set to protect the local IGEL Setup application, this will affect the boot menu as well! Without the setup password you will have no access to this recovery tool and a system recovery will only be possible using the IGEL *Remote Management Suite.*

12 Support Information

If you already are an existing customer you should initially contact your Authorized IGEL Partner who will be happy to answer any questions you may have and is fully trained to deal with many issues.

If you are currently testing an IGEL product or if you are unable to get help from your Reseller please complete our Support Form after logging in at http://www.igel.com/members-area/login-logout.html and we will respond as quickly as possible.

In order to help IGEL thin client support team to help you please provide us with as much information as you can. Please look at our conditions note, reference the Support and Service Information.

13 Annex 1 – Supported max. resolutions

Windows	Singleview			Dualview			
Device	**DVI**	**VGA**	**colordepth***	**DVI**	**VGA**	**colordepth**	**shared memory (BIOS)**
UD2-x20	1920x1200	1600x1200	32 bit	1920x1200	1600x1200	32 bit	32MB
UD2-x21	1920x1200	1600x1200	32 bit	1920x1200	1600x1200	32 bit	32MB
UD2-x30	1920x1200	1920x1200	32 bit	1920x1200	1920x1200	32 bit	64MB
UD3-x20	1920x1200	1600x1200	32 bit	1920x1200	1600x1200	32 bit	32MB
UD3-x21	1920x1200	1600x1200	32 bit	1920x1200	1600x1200	32 bit	32MB
UD3-x30	1920x1200	1920x1200	32 bit	1920x1200	1920x1200	32 bit	64MB
UD5-x20	1920x1200	1920x1200	32 bit	1920x1200	1920x1200	32 bit	64MB

Linux	Singleview			Dualview			
Device	**DVI**	**VGA**	**colordepth***	**DVI**	**VGA**	**colordepth**	**shared memory (BIOS)**
UD2-x20	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	32MB
UD2-x21	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	32MB
UD2-x30	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	32MB
UD3-x20	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	32MB
UD3-x21	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	32MB
UD3-x30	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	64MB
UD5-x20	1920x1200	1920x1200	24bit	1920x1200	1920x1200	16bit	64MB

*Note: 24bit (Linux) is equivalent to 32bit (Windows) - both have 16 million colors (true color)

Note: This values represent the maximum accessible resolution for the UD device named, this does not include every resolution below is available also.

thin clients   development   services   solutions   Many functions. One device.

IGEL Technology GmbH   IGEL Universal Desktop Windows Embedded   **33**

14 Annex 2 – Important changes with Windows Embedded Standard 7

Windows Embedded Standard 7 differs from WES 2009, important changes are:

- Display rotation (Pivot) requires at least 128 MB video memory.
- Aero Glass effects such as translucent windows are supported.
- Press Shift button while logging off to display login window (change user), the confirmation window will no longer be shown.
- Currently appliance mode (Xen and View) can not be configured with WES 7.
- Installing language packs (partial update) takes much longer and may require up to 45 minutes.