

IGEL OS(RPI4) for NComputing RX420(IGEL) STEP-BY-STEP GETTING STARTED GUIDE



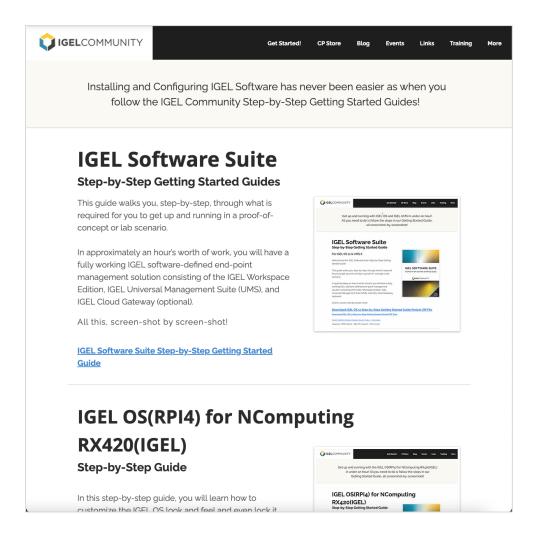


Version 1.01 - March 11, 2021

Current Released Software: IGEL OS (RPI4) 11.01.100

IMPORTANT

Please verify you have the latest version of this 'Getting Started Guide' and the others, as things do change. The newest versions are available **here**.



NOTICE

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IGEL Endpoint Management. Designed in Germany, Made from Genius!

The above legalese aside, this is a product of the IGEL Community. Please feel free to do with it as you choose; share it, contribute to it, and use it! But, please do not Sauté!

Changelog

This guide is always a work in progress. Below is the list of changes added to each version. Please stay tuned for future releases **here**.

Date	Version	Description of Changes
2/25/2021	1.0	 First Version
3/11/2021	1.01	 Updated known limitations Fixed misc. typos Updated links in additional resources section Fixed numbers mistakes

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Introduction

1. IGEL OS(RPI4) for RX420(IGEL) Overview

Welcome to the IGEL OS(RPI4) for NComputing RX420(IGEL) Getting Started Guide. This document aims to 1) introduce you to the new RPI4 device from IGEL and 2) walk you through getting the RPI4 setup and running.

As noted, IGEL has released an Arm version of the IGEL OS, the next-gen edge OS for cloud workspaces, in collaboration with NComputing and their RX420 Raspberry Pi device.

IGEL OS(RPI4) is purpose-built for enterprise access to Citrix environments.

The IGEL OS (RPI4) is:

- Citrix Ready HDX optimized
- Easy, efficient enterprise management & control
- Ships with a Chromium browser
- Supports native dual 4K displays
- Experimental support for Citrix Workspace Hub & Casting (Coming soon)
- Optimized for GPU offloading
- 802.1x (PEAP, EAP-TLS, EAP-TTLS) support
- Much more...



2. NComputing RX420(IGEL) Hardware Details

The NComputing RX420(IGEL) ships with the following hardware specifications:

- Embedded IGEL OS for Arm with 30-day Starter license (90-day license is available when registering the RPI4 during the Welcome Wizard)
- Built-in 5GHz & 2.4GHz 802.11 a/b/g/ ac Wi-Fi
- 2GB system RAM
- 16 GB internal Micro SD card
- 2x USB 3.0 ports and 2x 2.0 ports
- Dual micro-HDMI video ports supporting resolutions up to 4K @ 60Hz single display or 4K@30Hz dual display.



- Integrated Gigabit Ethernet and 802.11 a/g/b/ac Wi-Fi (5GHz & 2.4GHz)
- 2 USB 3.0 and 2 USB 2.0 high-speed ports with transparent USB redirection
- Integrated power button
- Active thermal cooling solution (yes, a fan)
- Enterprise-grade casing enclosure
- Less than 10W power consumption
- Power adapter with sleep mode
- VESA mount kit included in the box
- FCC/CE commercially certified

For a detailed list of hardware specifications, visit the NComputing RX420(IGEL) product page at https://www.ncomputing.com/products/RX-series/RX420%28IGEL%29

3. Known Limitations

The IGEL OS(RPI4) for NComputing RX420(IGEL) operating system is a new release for IGEL and has a few known limitations. Also, it is not at feature parity with the IGEL OS x86 version. Please refer to the **Unsupported Feature List** in the Appendix of this guide.

Below are a few common questions. Please reach out to your IGEL Presales engineers, NComputing, or feel free to ask inside the **IGEL Community** if you have any questions.

What is the maximum resolution the NComputing RX420(IGEL) can support?

NComputing RX420(IGEL) thin clients support screen resolutions up to 3840 x 2160 (4K) @ 60Hz with a single display, up to 2x 1920 x 1080 (FullHD) @ 60Hz in dualdisplay setups, or 2x 3840 x 2160 (4K) @ 30Hz in dual display setup.

What is the maximum resolution used in Citrix sessions configured for full-screen video codec (H.264)?

The full-screen video codec (the H.264 codec) works most effectively when the decoding will be accelerated with the client's hardware. The H.264 hardware acceleration on the client for the Citrix session supports resolutions up to 1920x1080 @ 60Hz. Any Citrix session with higher resolutions will have to be configured not to use the full-screen video codec. The HDX protocol decoding on the client will be solely done by software means, which can cause suboptimal performance in some scenarios. NComputing and IGEL generally recommend using screen resolutions up to 1920x1080 for the best Citrix experience when using either single or dual display.

Important Information:

- Use the NComputing RX420(IGEL) hardware, adapters, and power supply as nothing else is supported by IGEL support.
- Setting up an NTP Server is crucial as the RX420(IGEL) does not contain a CMOS Battery
- H.264 is available but on one display output and limited to Full HD
- Custom Partitions developed for the x86 version of the IGEL OS are not supported on the IGEL OS(RPI4). If you want to use them, you will need to change them to support the correct Arm architecture
- It is best practice to first connect the RX420(IGEL) via a Network before booting the device for the first time.
- Please try first cabled HID devices before starting with wireless versions
- If you want to (re-)install IGEL OS on your RX420 please don't use the OSC. A separate recovery Guide will follow.
- If you want to (re-)image your RX420 via PXE / TFTP, this isn't available on Rapsberry Pi Platform.
- There is no BIOS Settings you can access, so you can't press DEL Key to access the BIOS.

4. Unboxing

When you purchase the RX420(IGEL) with IGEL OS(RPI4), you will receive it in a fancy little box, as shown below.



The following items are comes packaged with the NComputing RX420(IGEL):

- 1. The NComputing RX420(IGEL) Raspberry Pi thin client
- 2. Safety information, a notice of certification, and two pages of important notes you will want to read
- 3. VESA mounting brackets
- 4. USB power cord, with the corresponding outlet plugs for your region of purchase



If you are connecting your RX420(IGEL) device to a monitor, you will also need to purchase the Micro HDMI to HDMI Adapter kit, as shown below. Inside the box, you will receive two Micro HDMI to HDMI cables that will allow you to connect two HDMI compatible displays to your NComputing RX420(IGEL) device.

Beware, make sure the Micro HDMI to HDMI cable is fully inserted into the port on the RX420(IGEL). If not, you may experience issues with flashing or dysfunctional displays.



Important! Be careful when disconnecting the RX420(IGEL) from its power source before proper shutdown as it may damage the device.

To properly shut down the device, use the shutdown menu item within the IGEL OS. If you must, hold the power button down for more than 7 seconds until the device powers down.

5. IGEL Software Suite Getting Started

If you are new to IGEL software and installing the IGEL suite of products for the first time, it is highly recommended you take a lo **Ok** at the **IGEL Software Suite: Step-by-Step Getting Started Guide**.

This guide aims to provide you no with the tools, knowledge, and understanding to download IGEL's software and perform basic installation and configuration without being forced to read many manuals and numerous web support articles.

This guide walks you, step-by-step, through what is required for you to get up and running fast.

In approximately an hour's worth of work, you will have a fully working IGEL software-defined endpoint management solution consisting of the IGEL OS (x86 LIGEL DELE SOFT WARE SUITE STEP-BY-STEP GETTING STARTED GUIDE STEP-COMMUNITY

edition), IGEL Universal Management Suite (UMS), and IGEL Cloud Gateway (optional).

All this, screen-shot by screen-shot!

At a minimum, the IGEL Software Suite: Step-by-Step Getting Started Guide helps you install the required IGEL UMS management tool and leaves you with a basic understanding of the rest of the IGEL Software stack. It is highly recommended for anyone new to IGEL.

To learn more and download the IGEL Software Suite: Getting Started Guide, please visit **https://www.igelcommunity.com/igel-getting-started-guide**.

6. First Boot

You are ready to get started. Time plug in the displays, keyboard, mouse, network cables, and the power cable (last). How exciting!

The following defines the best practices for setting up the NComputing RX420(IGEL):

- 1. It is crucial to note that the RX420(IGEL) will power on automatically when you plug in the power cable. Be ready for it. It is critical to connect all cables (displays, keyboard, mouse, and network) before attaching the power cable.
- 2. Once the RPI4 starts up, you should see the following boot screen. If you see anything else, please contact your local IGEL Presales Engineer.



3. Once NComputing RX420(IGEL) with IGEL OS(RPI4) boots, you will be brought to the desktop, and the Welcome Wizard should launch.



4. However, if you do not have a wired keyboard and mouse plugged in, you will need to configure it.

By default, IGEL OS will try to auto pair your keyboard and mouse, though if you run into trouble, you might see the following screen. If you do, please refer to the **Using Bluetooth Tool** KB article - https://kb.igel.com/igelos-11.05/en/using-bluetooth-tool-42011232.html.

It is a best practice first to use cabled HID devices before configuring your Bluetooth devices.



The next step is to register the IGEL OS RPI4 with the IGEL UMS and get some apps, sessions, and configurations installed.

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Device Registration

1. IGEL OS(RPI4) Registration

The IGEL OS was designed to be paired with and managed by the IGEL Universal Management Suite (UMS) tool. Though you can configure most settings and sessions locally, it is best to register the IGEL RPI4 with an IGEL UMS server to get centralized management's full benefits.

The following section details the different methods for registering an IGEL OS endpoint with the IGEL UMS.

2. Registering the IGEL OS with the Welcome Wizard

When you first boot any IGEL OS-based device, you will be presented with a **Welcome Wizard**. This wizard allows the user to perform basic configuration, register for the full 90-day evaluation license, and register the IGEL OS with the IGEL Cloud Gateway. In most cases, you will register the devices from the UMS, but it can come in handy to do it locally.

If you plan on registering the IGEL RPI4 from the IGEL UMS, please skip this section and advance to the **Registering the IGEL RPI4 through the IGEL UMS** section.

The following steps detail how to register your new RPI4 with the IGEL UMS from the device:

1. Select the desired language and click the **Next** button to continue.



2. Select the keyboard layout the devise's users require and click the **Next** button to continue.

	K	eyboard layout		
🔿 Language	Sele	ect the keyb	oard layout o	f your keyboard.
Keyboard layout	Keyboard layout			
↑ Timezone continent/area	English(US)	*		
Time and Date	Brazil(Portuguese)	Croatian	Czech	
Q Wireless	Danish	Dutch	Dutch(Belgium)	
Activate your IGEL OS	English(International)	English(South Africa)	English(UK)	
CG Agent Setup	English(US)	Estonian	Finnish	
O Finish	French	French(Belgium)	French(Canada)	
	French(Switzerland)	German	German(IBM)	
	German(Switzerland)	Hungarian	Icelandic	
	Italian	Japanese	Latin America	
	Latvian	Lithuanian	Norwegian	
	Polish	Polish(Programmers)	Portuguese	
∕\\//// ∕·IGFĽ	Romanian	Slovak	Slovenian	
ZIGEL	Spanish	Swedish	Turkish(F)	Cancel Back Next
	Turkish(Q)	Welsh		
	~	0	() 	

3. You are prompted to select the time zone. This can be done during the **Welcome Wizard**, but it is also a best practice to configure it via IGEL UMS profile as the RX420(IGEL) does not have an onboard CMOS battery. We will document how to configure NTP time later in this guide. Stay tuned.

Select the desired time zone and location and click the **Next** button to continue.

	Timezone continent/area	
Q Language	Choose a timezone accord	ding to your location.
Keyboard layout	Timezone continent/area	
Timezone continent/area	Europe	
Wireless	Location	
Activate your IGEL OS	Berlin 👻	
CG Agent Setup		
ر،۱ <i>۱۱</i> ۲ LIGEL		
 上IGEL		Cancel Back Next

4. As with the time zone, you can configure the time and date centrally. Though, for now, let's set the NTP time server locally.

Click to check the **Use NTP Time Server** text box and enter an NTP server into the associated text box. Once finished, click the **Next** button to continue.

e s		Time and	Date					×
Q Language		Ent	er the co	orrect tim	e and da	ite.		
Keyboard layout	Date							
C Timezone continent/area	< February >						< 2021	>
ime and Date	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
Wireless	31	1	2	3	4	5	6	
Ϋ́	7 14	8 15	9 16	10 17	11 18	12 19	13 20	
Activate your IGEL OS	21	22	23	24	25	26	27	
O ICG Agent Setup	28 7	1	2	3 10	4	5 12	6 13	
	Time 08:12 - +							
	Use NTP Time S	Server						
ر <i>اللار</i> Ligel					C	ancel Bac	k Next	
o y	Ý	o,					1	

5. If you are using wireless access, please select the correct access point. For this example, the RX420(IGEL) is connected via a network cable, and hence you are not required to configure wireless.

Configure as required and click the **Skip** or **Next** button to continue.

uality Connected
uality Connected
wality Connected
•
Back Skip

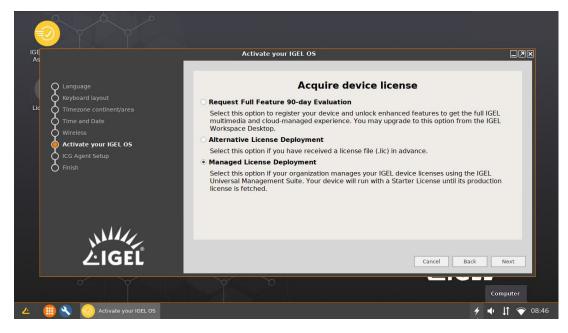
6. Now for the thousand-dollar question, what type of license will you use? This all depends on and has user experience consequences. Let me explain.

All IGEL OS instances come with a starter license. This is a license that allows you to work for 30 days without being required to license the device. If you would click Cancel to the Welcome Wizard, you will utilize the Starter license and can still use the IGEL OS, but you will miss one critical feature, the multimedia codec (MMCP). This is very important as today's world is graphically intense and includes an abundance of multimedia content. To give the best user experience in a virtual environment, it is best to render audio and video content locally on a device when multimedia content is encountered; however, doing so requires the appropriate codecs to decode media content rendered on the device.

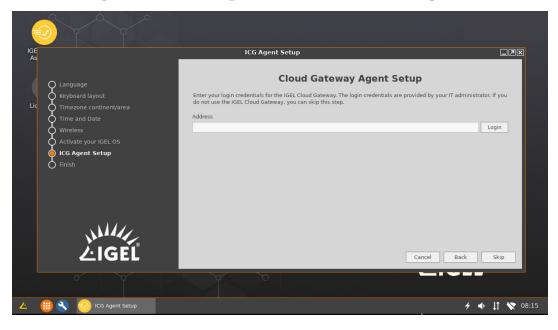
It is highly recommended you add a license by requesting a fully-featured 90-day evaluation license via the Welcome Wizard or purchase a full license from IGEL Sales.

In this guide, we will be deploying a full IGEL OS license to the device. One more thing to remember, the IGEL RPI4 might run the IGEL OS for the Arm architecture, but it is still the IGEL OS, and it uses the same license as an x86 IGEL OS device does. You can always move an existing license to an IGEL RPI4 device.

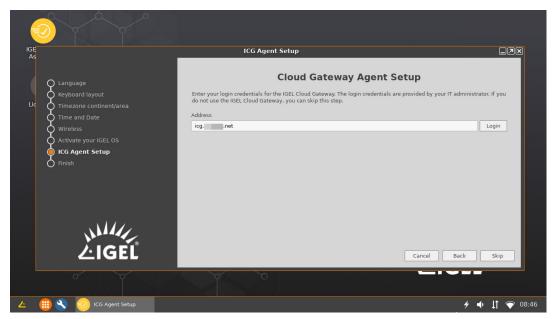
Select the **Managed License Deployment** radio button and click **Next** to continue.



7. Next, you are prompted to connect to the IGEL Cloud Gateway (ICG). If you will not be utilizing ICG, click the **Skip** button and fast forward to step 11.



8. To connect to a Cloud Gateway server, enter the domain name of the ICG server in the **Address** text box and click the **Login** button.



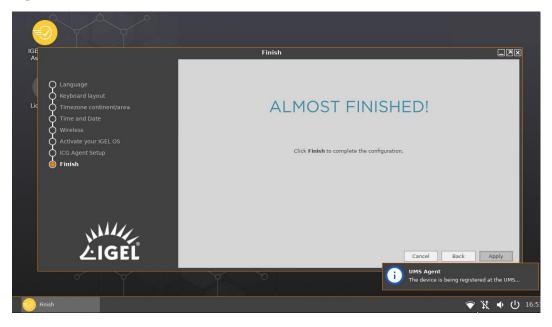
9. Next, you are prompted to authenticate with the IGEL Cloud Gateway. Depending on how your ICG server was set up, enter an ICG server certificate fingerprint or ICG One-Time password and click the **Login** button.

E	ICG Agent Setup
O Language	Cloud Gateway Agent Setup
Keyboard layout	Enter your login credentials for the IGEL Cloud Gateway. The login credentials are provided by your IT administrator. If you do not use the IGEL Cloud Gateway, you can skip this step.
Time and Date	Address
Wireless Activate your IGEL OS	
ICG Agent Setup	ICG Server certificate fingerprint
O Finish	UMS Structure Tag
	ICG One-Time Password
	••••••••
LIGEL	ICG connection ready!
스IGEL	Cancel Back Next

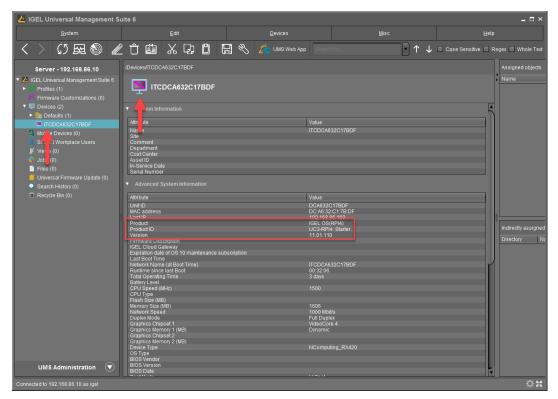
10. If the stars align, you should be prompted with the **ICG connection ready** text! Click **Next** to continue.

GE As	ICG Agent Setup
O Language	Cloud Gateway Agent Setup
Keyboard layout	Enter your login credentials for the IGEL Cloud Gateway. The login credentials are provided by your IT administrator. If you do not use the IGEL Cloud Gateway, you can skip this step.
Time and Date	Address
↓ Wireless	
Activate your IGEL OS	ICG Server certificate fingerprint
Finish	
	UMS Structure Tag
	ICG One-Time Password
ر، <i>۱۱۱۸</i> ۲.IGEL	ICG connection ready!
ZIGEL	Cancel Back Next

11. You are "Almost Finished!" If you choose to connect to an IGEL Cloud Gateway server, you should see a notification popup notifying you the RPI4 is being registered with the IGEL UMS.



12. Flip back to the IGEL UMS, and you will see your newly registered device listed. Though, you will notice the device image is purple, meaning the device is not fully licensed. Please do not fret. We will add a full license later in this document.



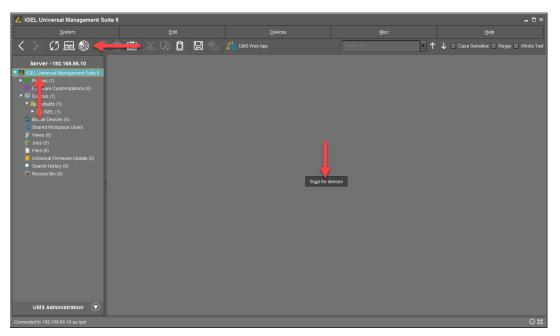
3. Registering the IGEL OS from the IGEL UMS

You are ready to register your IGEL RPI4 with the IGEL UMS server.

Note: If you are connecting to a UMS server via an ICG, you are not required to register the device as that process is performed when setting up the ICG session on the client device.

The following details how to configure the UMS to find and register IGEL OS instances and import them into the UMS:

1. Click to select the **IGEL Universal Management Suite 6** node to expose a big button prompting you to scan for devices, thus find all new devices.



Click the Scan for devices button to continue.

2. The **Scanning for devices** windows opens, prompting you to define the network you wish to scan.

For more information on importing and managing IGEL devices, please refer to **Managing Thin Clients in IGEL UMS 5 (Universal Management Suite)** video along with the **Searching for Devices** KB article.

If the UMS experiences problems finding your clients, please verify you have connectivity between hosts. UDP should be open between the IGEL OS and UMS. Try the checkbox **Use TCP for scanning** to help with figuring out if this is the problem. You can try scanning a specific IP Range when **Use TCP for scanning** is checked.

For more information, refer to the **Registration of a Device fails** and **Device Scan or Online Check fails** KB articles.

Click the **Scan** button to scan for devices on the specified network.

Scanning for devices	×					
O Local Network of the UMS Server						
🔿 IP Range						
C List of IP Ranges	Edit List					
Use TCP for scanning						
<u>S</u> can	Cancel					

3. The UMS scans the desired network(s) for any available IGEL OS device.



4. The **Found devices** window opens, listing the IGEL OS devices that were found during the scan. If you do not see your device, make sure port 30005 is not blocked within your network. If the **Certificate stored** column states **Yes**, the device has already been imported or is connected to another IGEL UMS sever.

ound devices	nd	Filter		_		
					_	
	Unit ID	MAC address	Name	IP address	Product	Include
	DCA632C17BDF	DC:A6:32:C1:7B:I	F ITCDC4632C17BDF	192.168.86.169	IGEL OS(RPI4) UC3-RPI4 Starter	
Reso	can	Invert Se	lection	Select New Ones	Export Unit ID	list
Put in directory:						
						Ok Canc

5. Click to check the **Include** checkbox of the IGEL OS device you wish to import and click the **Ok** button to continue.

Found devices					×
One device was found.	Filter				
Certificate stor Unit ID	MAC address	Name	IP address	Product	Include
No DCA632C178DF	DC:A6:32:C1:7B:DF	ITCDCA632C17BDF	192 168 86 169	IGEL OS(RPI4) UC3-RPI4 Star	Î
Rescan	Invert Selection]	Select New Ones	Export Unit	ID list
Put in directory: /Devices/					
					<u>O</u> k Cancel

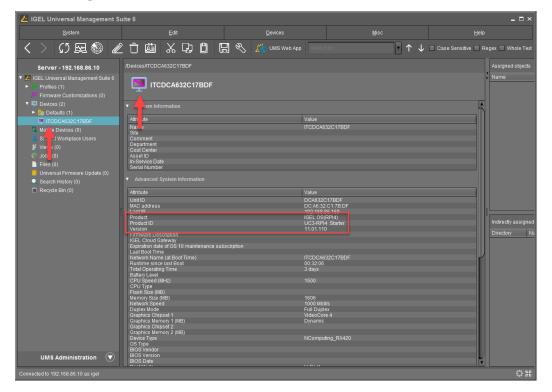
6. The **Result** window opens and lists your newly registered device.

If you do not see a lovely green **Ok** text, please refer to the **Registration of Devices fails** knowledgebase article - https://kb.igel.com/endpointmgmt-6.06/en/registration-of-a-device-fails-37281897.html.

Click the **Ok** button to continue.



7. Flip back to the IGEL UMS, and you will see your newly registered device listed. Though, you will notice the device image is purple, meaning the device is not fully licensed. Again, no worries. We will add a full license later in this document.



8. The next step is to add a bit of organization. Of course, if you are an existing customer and this is not your first device, then you might not need this step. If you built your IGEL UMS using the steps in the IGEL Software Suite - Step-by-Step Getting Started Guide, it is recommended to complete the following steps to allow some organization of the different device architectures.

When you created the devices folder structure, you did so with x86 in mind, but now you have Arm devices. It is recommended to make a couple of new folders to house the x86 devices and your Arm devices.



9. Where you create these new folders is up to you. We will make the new folders under the folder that currently contains your x86 devices.

Right-click on the device's root folder and click the New Directory link.

👍 IGEL Universal Management Suite 6 🛛 💷 🗠						
<u>S</u> ystem				Help		
く 〉 🗘 🖳 🕲 🖉 🗅	1 🕮 🗶 🖓 🗘 (🔜 🔌 🎽 UMS Web App 🛛 Search	a for • ↑ ↓	Case Sensitive Regex Whole Text		
Server - 192.168.86.10				Assigned objects 🥒 🖶 🖯		
Models Devices (0) Access certe Schard Worgloco Use Access certe Access certe Acc	C TOSHO27AAAOS2 192	trown IP address MAC address 168.86.170 080027AGKC82	Product Vension GEL 03 11 11.04.240 01	Name Wikewe Horbon New Indrectly assigned objects et al. (* 1990) Directory Rame		
UMS Administra Specific Devi	ce Comma <u>n</u> d					
Messages Export Device	e Settings					
Time	lies for support	Results	State			
2/20/21 3:54 AM Logging						
New Device						
2/20/21 2:43 AM	ces					
2/20/21 2:10 AM		The action ended s				
2/20/21 1:58 AM	Reboot devices	The action failed.		ished		
Connected to 192 198 86 10 as ipel						

10. The **New Directory** window opens. Since you will be creating two new folders, one for x86 and one for Arm, you will need to create two new folders. For the first, assign the desired name, for example, RPI4.

Once finished, click the **Ok** button to create the directory.

New Directory			×
Directory Name	RPI4		
		<u>O</u> k Ca	ancel

11. Create one more folder for your x86 devices until your folder structure looks somewhat as shown below.



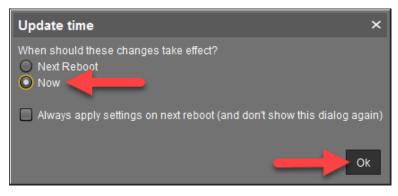
12. Now you are ready to move the devices into the newly created folders. All you need to do is drag them from their current location to the new folder.

Upon moving a device, you will receive a popup, like the one shown below. Click the **Yes** button to confirm your desire to move the device.



13. You are prompted to specify at what time the new settings will take effect. You can have the profile take effect the next time the user reboots the OS or can make the changes take effect right NOW! Yes, it is that powerful: real-time changes, no reboots required! This is up to you and your organizational policies.

For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



14. Move any remaining devices to the correct folders now.



You are done and ready to create some basic UMS profiles to start configuring your new NComputing RX420(IGEL) with IGEL OS(RPI4) devices. Yippie, we are moving right along!

Profiles and Licensing

1. Basic Configurations and Profiles

It is time to start creating some basic configurations for your new NComputing RX420(IGEL) with IGEL OS(RPI4) device(s). Of course, with the IGEL UMS, there are six ways till Sunday to customize the IGEL OS so you can go crazy, but for this guide, we will create only a couple.

- Setup centralized time and date configuration via an NTP Server
- Enable the ability to shadow IGEL OS devices.

In future revisions of this guide, we will add more, but for now, this is a good start.

2. How to Configure NTP Server via UMS Profile

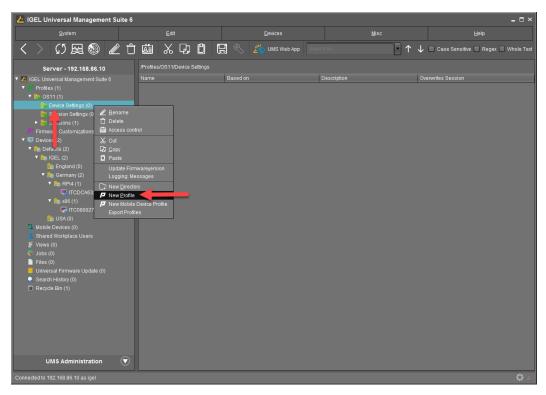
It is best to configure your IGEL OS devices' time and date to an NTP Server using the Network Time Protocol via an IGEL UMS profile. The Network Time Protocol (NTP) is used to synchronize a computer client or server to another server known as a reference time source.

Important! Configuring your IGEL RPI4 devices with an NTP Server is crucial as the NComputing RX420(IGEL) device does not have an onboard CMOS battery. Thus, upon powering off the device, you will lose the correct time and date.

The following steps detail how to configure the IGEL OS time and date using an IGEL UMS profile:

From the IGEL UMS console, you will need to make a new profile. Where this
Profile is stored is the first question. If you are new to IGEL and followed the IGEL
Getting Started Guide, you would have created a basic folder structure, as seen in
the image below. If you a long-standing IGEL customer, you would have built out a
profile folder structure of your own. At the end of the day, where you store the
profile is up to you but please remember, some order is a good thing.

Right-click on the folder you wish to store the NTP profile and click the **New Profile** link.



2. Enter a descriptive name in the **Profile Name** text box. Next, from the **Based on** combo box, select the firmware version of the device you will be applying this profile. For this guide, we are configuring the new IGEL OS RPI4. You will need to select the **IGEL OS(RPI4)11.01.110** entry.

Once finished, click the **Ok** button to continue.

New Profile	×
Profile Name	LX_System_Set_NTP_Server
Description	
Based on	IGEL OS 11 11.04.240.01
► Expert mo	IGEL OS 11 11.04.240.01 IGEL OS(RPI4) 11.01.110
	<u>O</u> k Cancel

3. The profile properties window opens, prompting you with the many possible configurations you can make with the IGEL UMS. To configure the NTP, click to expand the **System** node and then click on the **Time and Date** link.

LX_System_Set_NTP_Server			×
✓ Y Y I System			
Configuration Sessions Accessories Us interface V Us interface V System System System Remote management Remote management Remote management Remote management Remote management Remote Access Remote management Registry			
Search 💌			
	Apply and send to device	<u>S</u> ave	<u>C</u> ancel

4. The **Time and Date** profile settings page allows you to define the time zone, location, and if you would like to use an NTP Time Server. Yes, we do!

Click on the yellow triangles for the **Timezone continent/area** and the **Location** to enable editing. Select the desired setting from the corresponding combo box.

Click on the yellow triangle next to the **Use NTP Time Server** to enable editing and check the checkbox. Enable the corresponding text box and enter your desired NTP Server's DNS name, as shown below.

 LX_System_Set_NTP_Server
 ×

 Image: Contiguration
 Image: Contiguration

 Sessions
 Image: Contiguration

 Accessories
 Image: Contiguration

 User Interface
 Image: Contiguration

 Sessions
 Image: Contiguration

 Accessories
 Image: Contiguration

 User Interface
 Image: Contiguration

 Sessions
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 Sessions
 Image: Contiguration

 Network
 Image: Content contineent/area

 Devices
 Image: Content contineent/area

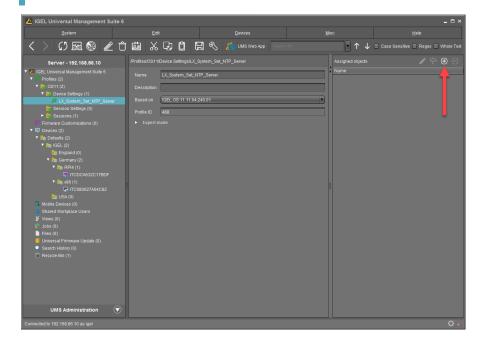
 Security
 Image: Content contineent/area

 Image: Content contineent/area
 Image: Content conten content content content content conten co

Once finished, click the **Save** button to continue.

5. The profile is created and is ready to be assigned to your new devices. Click the + icon located in the top right of the IGEL UMS.

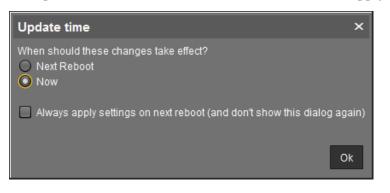
Note: IGEL UMS profiles can be assigned in numerous ways. For example, you can assign them one at a time or in bulk. You can assign a device to a profile folder or a specific profile to a particular device. You can assign based on the specific situation. It is truly flexible, and the sky is the limit. For this example, we are simply assigning our new profile to our devices after it is created to keep it simple.



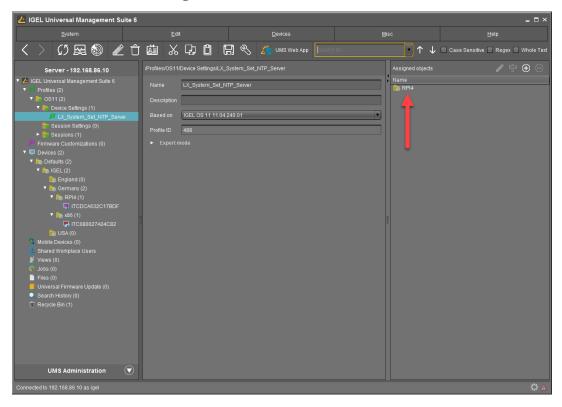
6. The Select assignable objects window opens, prompting you to select the device folders or devise you wish to assign to the selected profile. All you need to do is select the desired level of configuration, click the > button to move it to the Selected objects pane, and then click Ok to save the assignment.

Select assignable objects	×
	Selected objects
 Devices (2) Defaults (2) IGEL (2) England (0) Germany (2) ITCDCA632C17BDF 1TCDCA632C17BDF 1TCDCA632C17BDF TR6 (1) USA (0) Files (0) 	C RPI4
	Qk Cancel

7. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



8. The new profile is created, saved, and assigned, as shown below. If you flip over to your NComputing RX420(IGEL), you might see the correct time, time zone, and date have been set. Life is good, or at least on time.

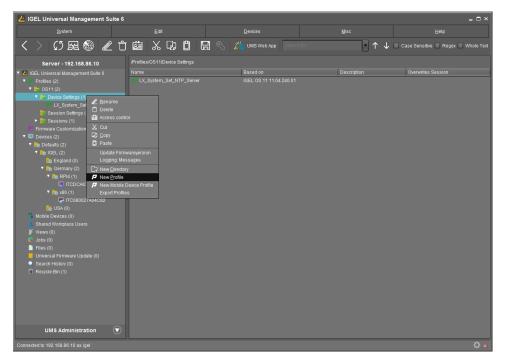


3. How to Configure Shadowing via UMS Profile

The next area you might want to configure is to add the ability to shadow or remotely view and control the NComputing RX420(IGEL) device. No problem, we can do that too.

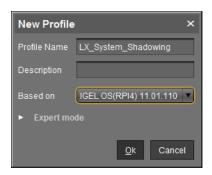
The following steps detail how to create a UMS profile to configure shadowing of an IGEL OS device.

1. From the left window of the UMS, expand the **Profiles** node and right-click on the desired folder, and click **New Profile**.



2. The **New Profile** window opens. Enter the name of the profile in the **Profile Name** text box. Make this title descriptive, so you and others understand its purpose. Next, don't forget to select the correct firmware version from the **Based on** combo box.

Click the **Ok** button to continue.



Search

3. You are brought to the profile settings windows screen. Click to expand the System > **Remote Access** nodes and click to open the **Shadow** configuration page.

The **Shadow** profile properties window opens, displaying the many settings you have at your disposal. The first thing you need to do is enable shadowing. To do this, click the yellow triangle to the left of the Allow remote shadowing entry and click to check its corresponding checkbox.

If you would like your remote session to be encrypted, click the yellow triangle, and check the Secure mode checkbox.

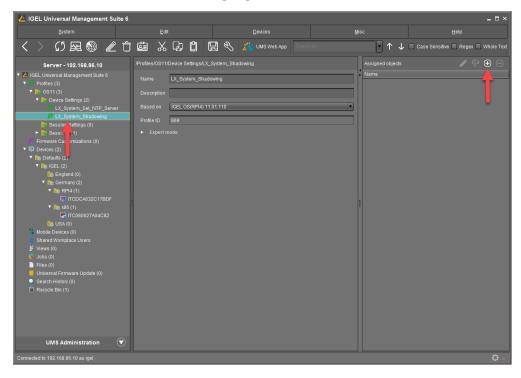
Next, for testing purposes, you might want to uncheck the **Prompt user to allow** remote session checkbox. This will enable you to verify shadowing is working without a user at the endpoint accepting the connect. Do not forget to re-enable this setting before using it on a company network since users want to get notified before getting shadowed, as it might be required by law.

LX_System_Shadowing 🖸 \land 🗹 Allow remote shadowing ┥ Configuration 🖸 🙏 🗹 Secure mode 🔸 Liser Interface Networ

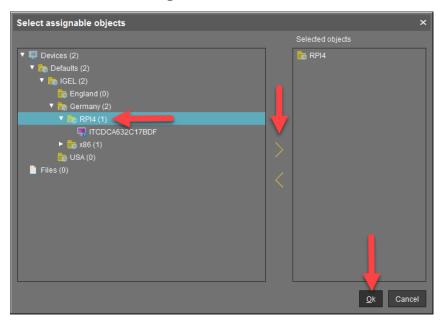
Apply and send to device Save

Once finished, click the **Save** button.

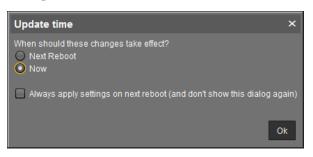
4. The shadowing profile is created, and you are ready to assign it to your devices. Click the + icon located in the top right of the UMS.



5. The Select assignable objects window opens, prompting you to select the device folders or devise you wish to assign to the selected profile. Select the desired level of configuration, click the > button to move it to the Selected objects pane, and then click Ok to save the assignment.



6. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



7. You are ready to test! Right-click on the desired device and click the **Shadow** link.

👍 IGEL Universal Management Sui	ite 6			_ 🗆 ×
System	Edit	Devices	Misc	Help
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 Files (0) Unhersal Firmware Update (0) Sach History (0) Recycle Bin (1) 	Devices/Defaults/IGEUGermany/RPI4/ Devices/Defaults/IGEUGermany/RPI4/ Department Control Attribute Name Control Con		:	Assigned objects Name Name Indirectly assigned objects I
Connected to 192.168.86.10 as igel		110		

8. The **Connect with** window opens. Based on our simple shadow profile, there is no need to enter any details. All you need to do is click the **Connect** button to start shadowing the device.

Connect with		×
ITCDCA632C17BDF	: 0 + Password	Secure VNC Connection V S
		Connect Cancel

9. If this is the first time, you are prompted to accept the certificate. As you have not configured a signed certificate of known origin, you must accept the default UMS certificate. You can trust us. Click the **Accept** button to start shadowing.

Certificate Dia	Certificate Dialog ×							
Unknown Certifi	icate!							
Version	3							
Serial Number	5315150739403807196							
Issuer	O=IGEL, L=Bremen, C=DE							
Subject	O=IGEL, L=Bremen, C=DE							
Start Date	January 1, 2014 1:00:01 AM CET							
Encipate	January 1, 2037 1:00:01 AM CET							
Fin <u>c</u> rprint	09:42:48:CF:27:6F:25:CB:2C:2E:4F:34:4C:88:45:C2							
Accept [) Deny							

10. Yippie! The **IGEL VNC Viewer** opens, and you should see the device's desktop. You are in like Flynn.



4. Licensing

By default, the IGEL OS(RPI4) for NComputing RX420(IGEL) is delivered with the 30-day Starter license. This license is a full Workspace Edition and Enterprise License Pack license that allows you to get up and running quickly. But it does NOT include the multimedia codec pack. This means your users will not get the best experience in the highly graphical and media-rich world we live in today.

IGEL also provides a 90-day evaluation license. This is a full license with both Workspace Edition and Enterprise License Pack but includes the multimedia codec pack. To get this license, all you need to do is configure it within the IGEL OS Welcome Wizard.

Of course, contact your local IGEL representative and buy a license. This is the best way to go. It lasts for the period of your license, and it comes with no limits, of course.

For this guide, we have documented using a retail license. This is a getting started guide, so we do not go through everything. Please refer to the IGEL Knowledge base for an explanation of all the different licensing options and configurations.

For more information on licensing, visit the following resources:

- IGEL License Portal (ILP) User Guide https://kb.igel.com/licensesmore-igelos11/en/the-igel-license-portal-ilp-userguide-10325018.html
- Set up Automatic License Deployment (ALD) with ALD Token https://kb.igel.com/licensesmore-igelos11/en/set-up-automatic-licensedeployment-ald-with-ald-t Ok en-26029121.html

1. Once you have received your IGEL OS Workspace Edition license (Enterprise Licensing Pack optional), you are ready to license the IGEL OS(RPI4) operating system.

Open your favorite browser and browse to **http://activation.igel.com,** and log in to the IGEL License Portal.

Note: if you do not already have an account, you will need to register.

••• III < >	0	activation.igel.com		© ₫ + Ⴊ
	IGEL	IGEL icense Portal	Username (aduat: e-wall address may b Username (aduat: e-wall address) Password Login Register Forgot password?	e used).
	Legal No	tice Terms and Conditions Privacy Polic IGEL License Portal 2.10.6	ry Contact	

2. You are brought to the IGEL License Portal Home page for your license packs, consumption, and upcoming expiring licenses.

Click the **Register Delivery Token** button to start the process of procuring a .lic file.

brown@igel.com ~ Home Orders Co-Term/Renewal UMS Licensing ID Search hardware	DABC C C C C	See all Product P Register Delivery No immediate ac	r Token		Next expiral	tion date in 364 day	O No Product	t Pack is expired. t Pack will expire v	within 90 days.
 Product Packs Archived packs 	100%		PR	ODUC	T PACK	S AND COM	SUMPTION		
	75% 50% 25%								
			WE	MARCIN F			EMP		
	All products Manage	V Sea	Addons	Produ	Filter by date	Status	Expiration date	Volume	Comment
	e	EMP		EMP-2		NEW	NO END DATE YET	0/3	
	۲	WE		WE-N	5REM	ACTIVATED	2022-02-20	1/3	

3. The **Register Delivery Token** window opens, prompting you to enter your Delivery Token. If you do not have a delivery token, you will need to contact IGEL Sales.

Please enter a valid Delivery Token in the text box and check the **I have read and agree to the license terms stated in the IGEL EULA** checkbox. Once completed, click the **Send** button.

Register Delivery Token	+	×
Please enter your Delivery Token. send I have read and agree to the licence terms		
stated in the IGEL EULA.		

4. Your Delivery Token is activated, and you are brought to the Order Details page. Click the **Product Packs** link in the left menu.

	Jaa IGEL License Portal								
	≗ brown@igel.com ∽	Order Details							
	Home Orders Co-Term/Renewal UMS Licensing ID	Overview of order a28f5f94-4a46-4a3b-bb43-a9cb466i2273							
Q		Delivery Token:		Order time:		Description:			
¢;	Product Packs	and a second second	C1	2021-02-19					
0	Archived packs	Status:		On:		By user:			
0	IGEL Knowledge Base	Consumed		2021-02-20		brown@igel.com			
		SAP order ID #2000 WE 62- BMYIL000000000 > WE-NSREM			#3000EMP 62-BSYIL000 > EMP-2AV40	00000000 1-YEARS			

5. The **Product Packs** page lists all the IGEL products you have registered. You will see all the new products you just licensed. You will see a WE pack (for Workspace Edition) that consists of three licenses, and zero have been activated in the example below. You will also see three inactive EMP (Enterprise License Pack) licenses.

To license the IGEL RPI4 for use, you first need to add a Workspace Edition license. Click the **Manage** link located in the **WE** box.

A IdeL License Portal brown@igel.com v Home Corters Corters Corters/Renewal MI product Packs Registered to DABCC AII product Packs Registered to DABCC AII product Packs Registered to DABCC AII product Packs AII product Packs AII DMS Licensing ID Search Product Pac Filter by date WE Manage NEW O/3 Corters O/	· ① + ① ④	Gip &	activation.igel.com	0	••• • • < >
All Product Packs Registered to DABCC All Product Packs Registered to DABCC Co-Term/Renewal UMS Licensing ID Q Search hardware Product Packs All products All UMS Licensing IDs Search Product Pac X Filter by date VE WE-NSREM IGEL Knowledge Base NEW 0/3 BD Duration: 1 Year(s) NEW 0/3 BD Duration: 1 Year(s)					
Orders Co-Term/Renewal UNS Licensing ID Search hardware Product Packs Filter by date Filter by date Filter by date Filter by date IGEL Knowledge Base NEW 0/3 Duration: 1 Year(s) NEW 0/3 Duration: 1 Year(s)			ks Registered to DABCC	All Product Packs	Diowneeigencom +
 Co-Termy/Renewal UMS Licensing ID Search hardware Product Packs Archived packs IGEL Knowledge Base NEW O/3 Duration: 1 Year(s) 					
 UMS Licensing ID Search hardware Product Packs Archived packs IGEL Knowledge Base NEW O/3 Duration: 1 Year(s) NEW O/3 					
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Product Packs Archived packs IGEL Knowledge Base NEW 0/3 Ø Uration: 1 Year(s) NEW 0/3 Ø Uration: 1 Year(s)	Filter by date	ch Product Pac X Fil	All UMS Licensing IDs V Sea	All products	
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LIGEL	 0/3 Duration: 1 Year(s) 	(s) • NEW	Ø 0/3 🔀 Duration: 1 Yea	NEW	
Legal Notice Terms and Conditions Privacy Policy Contact					

6. The Workspace Edition box opens, and you are presented with more items to view and configure. Though, we are concerned with only one.

To assign a license to a device, you will need to set it to the MAC address(es) of the IGEL RPI4(s) you wish to license.

🙉 IGEL License Portal	Product Packs	5				
å brown@igel.com ∽	All Product Packs Reg	istered to DABCC				
备 Home						
P Orders						
Co-Term/Renewal						
UMS Licensing ID	All products 🖌 🗸	All UMS Licensing IDs 🗸	Search Pr	oduct Pac 🗙 Filt	er by date	
Q Search hardware						
C Product Packs						
Archived packs	I WE	4 W	E-N5REM	C EMP		
⑦ IGEL Knowledge Base	- Manage	•		+ Manage		•
		WE-N5REM	D	• NEW	Ø 0/3	Duration: 1 Year(s)
	Comment:		1			
	ALD Token:		Ch.			
		Generate ALD Token				
	UMS Licensing IDs:	Manage UMS Licensing IDs				
	Hardware:	Show hardware				
		Add hardware 🔶	-)		
		Remove hardware				
	a Archive:	Archive Product Pack				
	% Split:	Split Product Pack				
	NEW	Ø 0/3 ☐ Duration	1 Year(s)			

Click the **Add Hardware** button.

7. There are a few ways you can add Mac addresses to the IGEL License Portal. You can upload a CSV file or enter each manually. If you have many devices to license, uploading is for sure your best choice. Though, the purpose of this document we only have one, so adding one is not a big choir. Click the + icon to continue.

Upload Choose or drag & drop a CSV file with a hardware list that will be uploaded. The hardware list will be processed and prepared for adding as new hardware. Drag & Drop Upload Add hardware Select the hardware you want to add. New hardware: (0/3) The formation of the formation of the product of the product of the formation of the product of the formation of the product				
Add hardware Select the hardware you want to add. New hardware: (0/3)	Upload			
△ Drag & Drop Upload Add hardware Select the hardware you want to add. New hardware: (0/3)	hardware.	p a CSV file with a hardware list that will be uplo	baded. The hardware list will be processed and prepared for addir	ng as new
Add hardware Select the hardware you want to add. New hardware: (0/3)				
Select the hardware you want to add. New hardware: (0/3)	i.	- 51390		
Select the hardware you want to add. New hardware: (0/3)	1			
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Il Search hardware X				
		you want to add.		
Set hardware Unit ID Product	Select the hardware ye			
	Select the hardware ye New hardware: (0/3)			=
	Select the hardware ye New hardware: (0/3)		Product	=
	Select the hardware yo New hardware: (0/3)	hardware	Product	=
	Select the hardware yo New hardware: (0/3)	hardware	Product	=
	Select the hardware yo New hardware: (0/3)	hardware	Product	

8. The **Add hardware** window opens, asking you to enter the Unit ID (or MAC address) of the device you wish to license.

The default option is to license a UD hardware device (which would be the same as an IGEL RPI4) or OSC (IGEL OS Creator). If you click to expand the list, you will see you can also choose UD Pocket from the list.

Product *	
UD, OSC	~
Unit ID* !	
112233445566 / FF:FF:FF:FF:FF:FF	

9. If you don't have the MAC address memorized, and who does? Or you don't have it written down anywhere. You will need to go back to the IGEL UMS and procure it, simply enough.

Click to select the IGEL RPI4 device from the left menu. The device's properties will be listed on the right, and you will be able to copy the MAC address from there.

Highlight the MAC address and hit the **CTRL C** key to add the MAC address to your computer's clipboard.

🛃 IGEL Universal Management Su	lite 6			_ = ×
<u>S</u> ystem				
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		PLAITEDCA632C17BDF DF Value ITCDCA632C17BDF Value ITCDCA632C179 ITCDCA632C179 ITCDCA632C17		Help Case Sensitive Regex Whole Tex Assigned objects Name Indirectly assigned objects Regex Directory Name Germany Vieware Horizon New
UMS Administration	CPU Speed (Http) CPU Type Flash Size (MB) Memory Size (MB) Network Speed Dupter Modes at 1 Graphics Memory 1 (MB) Graphics Memory 2 (MB) Device Shipsel 2 Craphics Memory 2 (MB) Device Type BIOS Vendor BIOS Vendor BIOS Vendor BIOS Vendor	1500 1605 Full Dupts Full Dupts Volscore 4 Cynamic NComputing_RW	120	
Connected to 192.168.86.10 as igel				1

10. Flip back to your browser, paste the MAC address in the **Unit ID** text box, and then click the **Ok** button to add your RX420(IGEL) hardware to the license pack.

Add hardware	×
Product *	
UD, OSC	1
Unit ID •	
DC:A6:32:C1:7B:DF	
Сал	cel

11. You will be brought back to the **Add hardware** form, and you will see your newly added device in the list of assigned hardware. If all looks good, click the **Ok** button to continue.

NSREM - Add hardware				
Upload				
	SV file with a hardware list that will be uploaded. The hardware	list will be processed and prep	ared for adding as new hardware.	
	4.0	the local		
	츠 Drag & Drop	Upload		
1				
Add hardware				
Select the hardware you	ant to add.			
New hardware: (1/2)				
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Select hardware	Unit ID		Product	
	DC:A6:32:C1:7B:DF		UD, OSC	
			ок	Ca

12. You are brought back to the **Products Packs** page and are ready to finally download the license file to the IGEL UMS and hence the device itself.

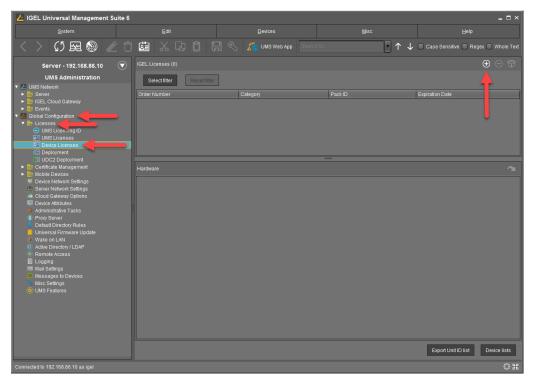
Click the **Download** button, and the .lic file will be downloaded to your local machine.

_										
	GEL License Portal	Product Packs								
	≗ brown@igel.com ∨	All Product Packs Regis	tered to DABCC							
*	Home									
<u>é</u> D	Orders	Show all × Remove	selection							
1	Co-Term/Renewal									
	UMS Licensing ID	All products 🖌 🗸	All UMS Licensing IDs	WE-N5REM	× Filter I	by date				
Q	Search hardware									
q	Product Packs									
0	Archived packs	Ø WE		WE-NSREM						
0	IGEL Knowledge Base	- Manage								
			WE-N5REM	CD						
		Comment:		1						
		ALD Token:		Ch						
		[Generate ALD Token							
		UMS Licensing IDs:	Manage UMS Licensing II	Ds						
		▲ License file:	Download 🔶							
		Hardware:	Show hardware							
		(Add hardware							
		(Remove hardware							
		Archive:	Archive Product Pack							
		% Split:	Split Product Pack							
		ACTIVATED	♠ 1/3	5 2022-02-20						

13. Flip back to the IGEL UMS and from the left menu, click to select the **UMS Administration** link at the bottom of the page.

🚣 IGEL Universal Management Suite 6				_ 🗆 ×
System				
< > い 🗟 🖉 🖞	ä X D Ö 6	🕙 🔏 UMS Web App Search	nor	Case Sensitive Regex Whole Text
Server - 192.168.86.10	/Devices/Defaults/IGEL/Germany/RPI	WITCDCA632C17BDF		Assigned objects 🥒 🕆 🕀 🕀
🔻 🔼 IGEL Universal Management Suite 6				Name
Profiles (3)	ITCDCA632C17BD	F		
Firmware Customizations (0)				
🔻 🖳 Devices (2)	 System Information 		A	
🔻 ዀ Defaults (2)				
🔻 ե IGEL (2)	Attribute	Value		
England (0)	Name Site	ITCDCA632C17BE		
Germany (2)	Comment			
V hn RPI4 (1)	Department			
ITCDCA632C17BDF	Cost Center Asset ID			
🔻 🏪 x86 (1)	In-Service Date			
F ITC080027A04C82	Serial Number			
USA (0)				
Mobile Devices (0)	Attribute	Value		
Shared Workplace Users	Unit ID	DCA632C17BDF		
🔰 Views (0)	MAC address			
🔹 Jobs (0)	LastIP	192.168.86.169		
Files (0)	Product Product ID	IGEL OS(RPI4) UC3-RPI4 Starter		Indirectly assigned objects 🥒 🛱 🍉
Universal Firmware Update (0)	Version			Directory Name
 Search History (0) 	Firmware Description IGEL Cloud Gateway			RPI4 / LX_System_Shadowing
	Expiration date of OS 10 maintenan	ce subscription		RPI4 / LX_System_Set_NTP
📋 Recycle Bin (1)	Last Boot Time Network Name (at Boot Time)		ne la	🔚 Germ /= VMware Horizon View
	Runtime since last Boot			
	Total Operating Time Battery Level	4 days		
	CPU Speed (MHz)			
	CPU Type			
	Flash Size (MB) Memory Size (MB)			
	Network Speed	1000 Mbit/s		
	Duplex Mode Graphics Chipset 1	Full Duplex VideoCore 4		
	Graphics Memory 1 (MB)	Dynamic		
	Graphics Chipset 2 Graphics Memory 2 (MB)			
	Device Type	NComputing_RX4	20	
	OS Type BIOS Vendor			
UMS Administration	BIOS Version			
	BIOS Date			
Connected to 192.168.86.10 as igel				

14. From the left menu, click to expand the **Global Configuration** node, click to expand the **Licenses** node, and finally click the **Device Licenses** link.

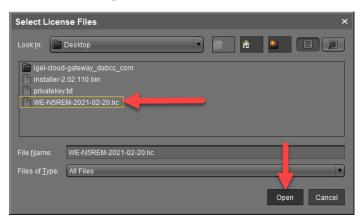


Click the + icon located on the top right of the UMS interface.

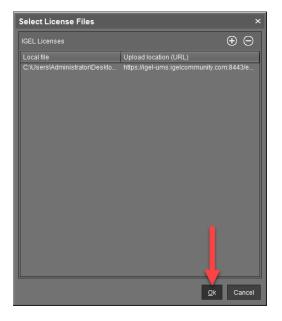
15. The **Select License Files** window opens. Click the **+** icon on the top right to upload the license file you downloaded a few steps ago.

Select License Files			×
IGEL Licenses		(Θ
Local file	Upload location (URL)	4	
		<u>Q</u> k	Cancel

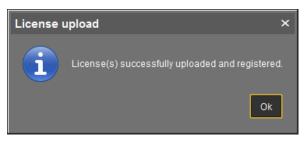
16. The **Select License Files** window opens, prompting you to select the .lic file for upload. Browse to the location you downloaded the .lic file, click to select it, and then click the **Open** button to continue.



17. You are brought back to the **Select License Files** window and will notice the license file is now listed. Click the **Ok** button to upload it to the IGEL UMS.



18. If all goes as you wish, you will be informed that the license file was successfully uploaded and ready to go. Oh, it is a good day. Click the **Ok** button to continue.



19. The desired RX420(IGEL) should receive the license information via the IGEL UMS quickly. Though, if you are the type that cannot wait, no worries, we have you covered. You can push it immediately by right-clicking on the device receiving the license and then clicking **Other commands** > **Refresh license information**.

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20. If you look at the console of the affected RX420(IGEL), you should see the IGEL License Upgrade box, as shown below. If you don't receive it, you might need to reboot the device. Give a reboot a try before worrying too much.

	IGEL License	Upgrade	_ . 7×			
()	Upgrade license is successfully assigned to the device. The new license will take effect after reboot. Do you want to reboot now?					
	17 s	econds remain				
		✓ Ok	× Cancel			

21. Once the desired device receives its license, its properties icon on its UMS page should turn green.

You will also notice the device is now listed as licensed. Though you see it still needs an Enterprise Management Pack license, do not fret, we will do that behind the scenes.

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IGEL OS Sessions

IGEL OS(RPI4) for NComputing RX420(IGEL) - Getting Started Guide - www.igelcommunity.com

1. Add Sessions to IGEL OS(RPI4) Device

Now it is time to deploy applications to your new NComputing RX420(IGEL) with IGEL OS(RPI4). This is done by creating IGEL UMS profiles.

In the following section, you will learn how to install and configure the subsequent sessions and recommended configurations:

- Chromium Web browser
- Chromium Web browser in kiosk mode
- Citrix access via the Chromium Web browser
- Citrix access via Citrix StoreFront
- Citrix access via Self-Service
- How to Turn Citrix Native USB Redirection Off
- How to enable Citrix HDX Realtime Webcam Redirection

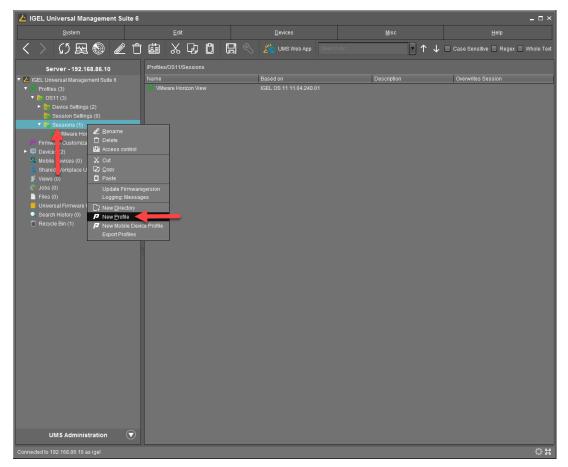
Let's get to it! No time to waste, and you are so close to the finish line.

2. How to Create a Chromium Session

The IGEL OS(RPI4) for NComputing RX420(IGEL) ships with the Chromium Web browser. This will come in handy for typical web browsing, your corporate SaaS applications, and connecting to services such as Citrix.

The following section details how to deploy the Chromium Web browser to the IGEL OS(RPI4):

1. Open the IGEL UMS and expand the **Profile** node. Then right-click the **Sessions** folder and click the **New Profile** link.

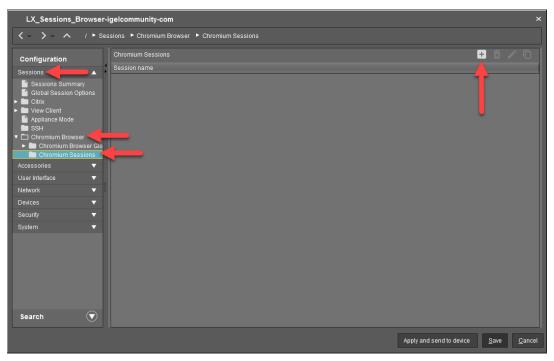


2. Enter a descriptive name for the profile in the **Profile Name** text box. Click to open the **Based On** combo box and click to select the **IGEL OS(RPI4)** entry. Once finished, click the **Ok** button to continue.

New Profile	×
Profile Name	LX_Sessions_Browser-igelcc
Description	
Based on	IGEL OS(RPI4) 11.01.110
 Expert mo 	de
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3. The profile settings window opens, and you are ready to add and configure the Chromium browser. From the left menu, click to expand the **Sessions** node, click to expand the **Chromium Browser** node, and select the **Chromium Sessions** item.

To create a Chromium Browser, click the + button on the top right of the page.



4. A new node named **Chromium browser** is added below the **Chromium Sessions** node. If you desired only a Chromium browser added to the IGEL OS desktop, you could click the **Save** button now, but you might want to make some modifications. The IGEL UMS has many configurations available.

By default, the Chromium browser is the default name assigned already, but you might want to change this to something else. In this example, we have changed it to igelcommunity.com as we will be preconfiguring the browser to use the igelcommunity.com webpage as the browser's home page. It is up to you if you would like to enter a custom name in the **Session name** text box. This name will appear under the Chromium icon on the IGEL OS desktop.

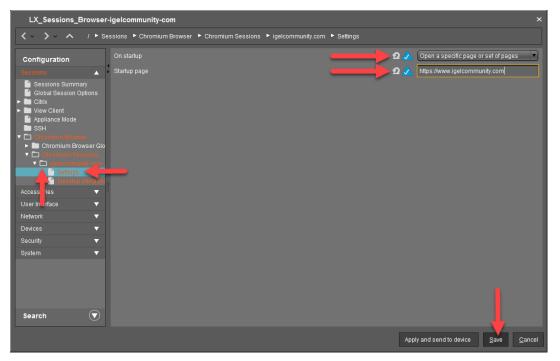
You can also define where the session will be displayed. For example, you can configure the system to place an icon on the user's desktop, the start menu, or maybe add it to the context menu displayed when the user right-clicks on the desktop. It is all up to you. Play around and have fun. As with everything IGEL does, the sky is the limit.

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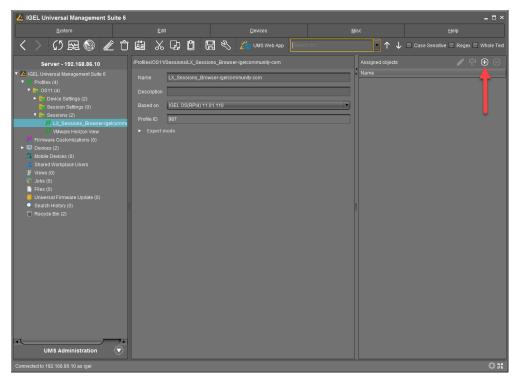
5. The next step is to choose the startup page. This is the web page that will be loaded when the browser is started. To configure a startup web page, click to expand the node named with the session name you defined above and click to select the **Settings** node.

Click to open the **On startup** combo box and select **Open a specific page or set of pages** item. In the **Startup page** text box, enter the URL of the web page you wish to set as your home page/startup page.

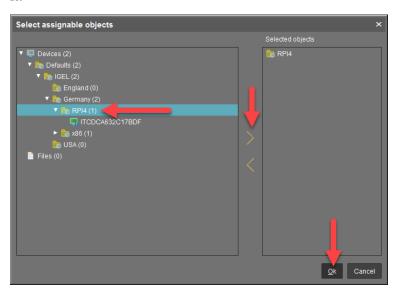
Once finished, click the **Save** button. Your Chromium Browser is ready to be assigned, deployed, and used!



6. You are brought back to the IGEL UMS. Click the + icon located on the top right of the screen.



7. The Select assignable objects window opens. Please select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.



8. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



9. The browser is configured, flip over to your NComputing RX420(IGEL) device, and you should see the Chromium icon.



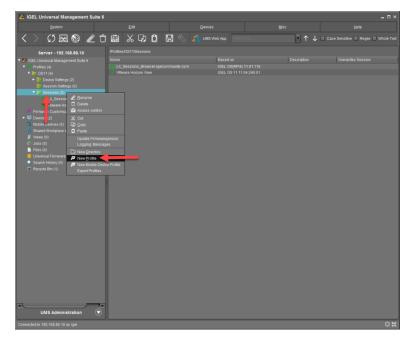
3. How to Create a Chromium Kiosk Session

The NComputing RX420(IGEL) with IGEL OS(RPI4) device works great in many use cases. For example, a check-in terminal, web kiosk, and even in-store displays for signage. That said, you might find you wish to configure the Chromium browser to perform as a locked-down browser in kiosk mode. No Problem, we got you covered.

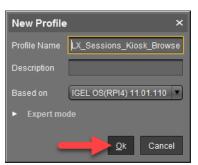
Learn more about **Chromium Browser Global** settings **https://kb.igel.com/igelos-11.05/en/chromium-browser-global-42011078.html**.

The following steps detail how to create a Chromium kiosk session:

1. From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.

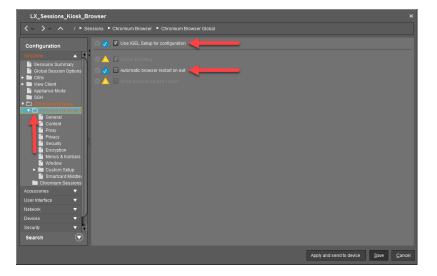


 Enter a descriptive name for the profile in the Profile Name text box. Click to expand the Based On combo box and click to select the IGEL OS(RPI4) entry. Once finished, click the Ok button to continue.

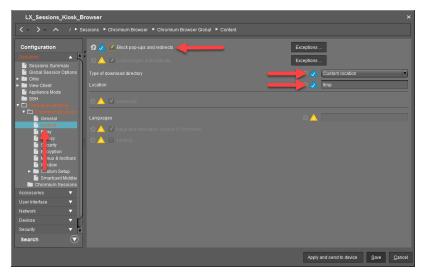


3. The profiles properties window opens, and you are ready to do some configuring. Click to expand the **Sessions** node, click the **Chromium Browser** node, and click the **Chromium Browser Global** entry.

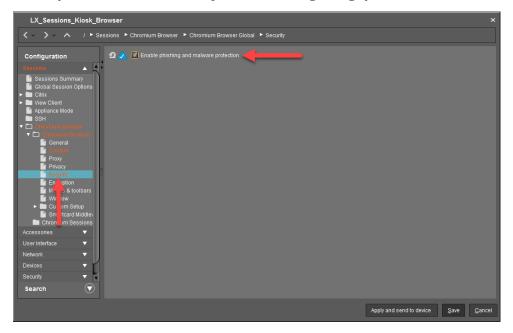
Click the yellow triangle to change it to blue (configurable) and then click the **Use IGEL Setup for configuration** checkbox. This allows you to configure the below settings. You can now configure a few items, such as H.264 decoding, the ability to restart the browser if it is closed and to show the browser splash screen when Chromium is started. Configure the settings as desired.



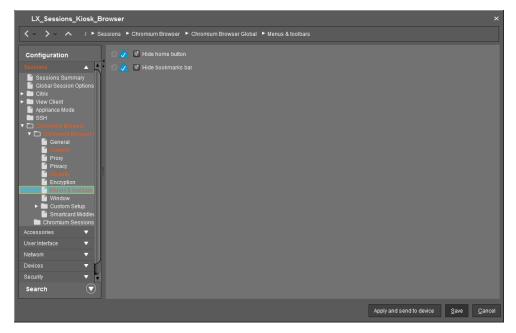
4. Click the **Content** link located below the **Chromium Browser Global** folder. On this page, you can configure how content is treated. For example, you can block pop-ups and redirects, load or disable images automatically, configure the location of the Java library and browser language settings. In this case, you will want to click the yellow triable to enable editing and then click to check the **Block pop-ups and redirects** and to set the download directory, as shown below.



5. Click to select the **Security** link under the **Chromium Browser Global** folder and click the yellow triable to enable editing. Next, click to check the **Enable phishing and malware protection** checkbox. This is always a best practice and will help secure your environment from potential lurking bad guys on the dark web.

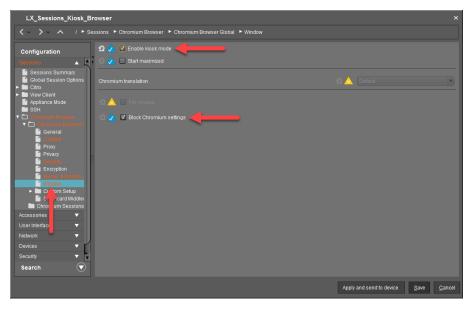


6. Click to select the **Menus & toolbars** link under the **Chromium Browser Global** folder. Here you can configure if the home button is viewable and if you wish to hide the bookmarks bar or not. Since we are creating a kiosk, it is best to hide both. Click the yellow triangle next to both settings and check the checkboxes, if so desired.



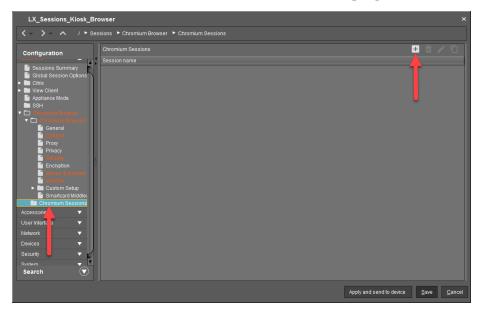
7. Now you can configure how the browser opens. Next, click the **Window** link below the **Chromium Browser Global** folder. Here you can either configure Chromium in kiosk mode by checking the **Enable kiosk mode** checkbox or start the browser in full-screen mode by checking the **Start maximized** checkbox or startup the browser as a windowed app by unchecking both.

Next, click the **Block Chromium settings** checkbox to disable the Chromium menu accessibility.



8. You have successfully locked the browser down, and now you are ready to deploy the Chromium browser.

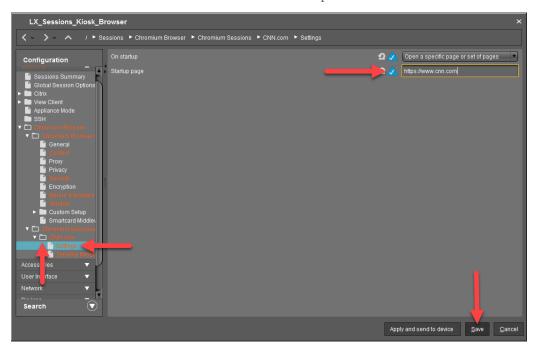
Click to select the **Chromium Sessions** link under the **Chromium Browser** folder in the left menu, and then click the **+** button on the top right of the IGEL UMS.



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Configuration							
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9. Enter the name of the kiosk browser in the **Session name** text box.

10. Click to expand the newly created cnn.com link and click the **Settings** link. Click to open the **On startup** combo box and select **Open a specific page or set of pages** item. Enter the URL of the website to open upon starting the browser in the **Startup page** textbox.



You are done. Click the **Save** button to save the profile.

11. The Chromium kiosk profile is created, you are ready to assign it to your devices. Click the + button located in the top right of the UMS.

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12. The Select assignable objects window opens. Select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.



Page 71

13. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



14. Flip over to the NComputing RX420(IGEL), and you should see the new kiosk browser icon has been added to the desktop.



4. How to Create Citrix Access via a Chromium Browser

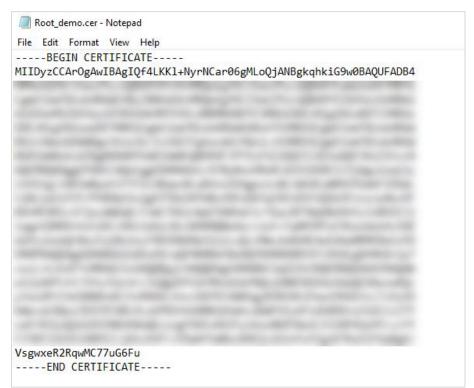
Now that you have learned how to deploy the Chromium browser, it is time to use it to launch Citrix sessions. To do this, the same process you learned above is used. All you need to do is replace the URL to your Citrix StoreFront or Citrix ADC (NetScaler) address.

The following steps detail how to enable Citrix access via the Chromium browser on IGEL OS:

 The first step is to procure the Certificate Authority Certificates that will be uploaded to the IGEL UMS. If you have trouble getting your Certificate Authority Certificates, please be aware that this process might be best achieved with your PKI / Certificate Management administrator.

Note: Root Certificate Authorities and/or SubCAs need to fit in BASE64 format.

It is imperative, once you procure the certificate, you will want to make sure it valid. The following is an image of how a certificate should look when you open it using a text editor.

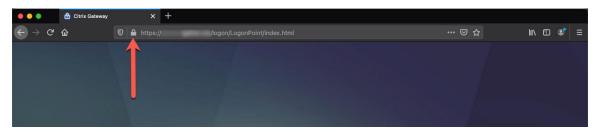


The following is an image of how a certificate should NOT look. If your certificate looks like this, get another as it will NOT work.

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		Unix (LF)	Ln 1, Col 1	100%	

2. If you wish to procure the root certificate yourself, a straightforward way is to use Firefox (or any other Browser that can export Certificates in BASE64) and follow the next few steps.

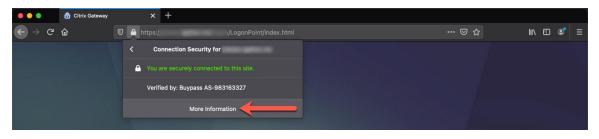
Browse to the StoreFront or Citrix ADC login page and click on the padlock to the URL's left.



3. If you are using Firefox, click the > icon to the right of the **Connection secure** link.

🛑 😑 🌑 🔠 Citrix Gater	way X	+		
← → ♂ ŵ	🛛 🔒 https://		⊡ ☆	⊪\ ⊞ 💣 📄
	s	ite Information for		
	💁 Conne	iction secure		
	≌ 5 Permi You have	ssions not granted this site any special permissions.		

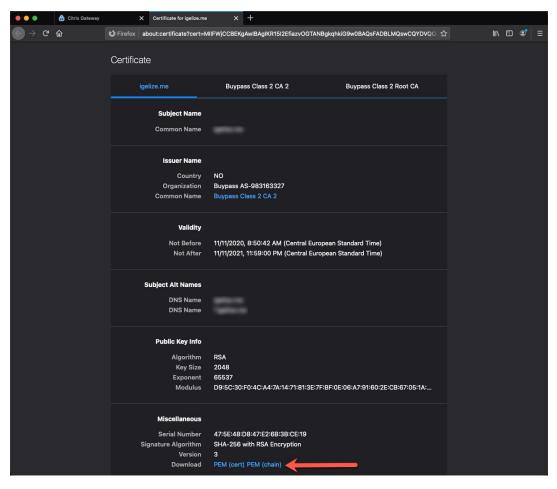
4. Click the **More information** link at the bottom of the dropdown.



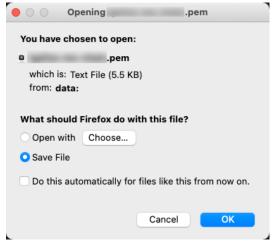
5. The **Page info** screen will open. Depending on the OS you are using, it should look something like the following. Make sure you are on the **Security** page and click the **View Certificate** button.

•••	Page Info — /logon/LogonPoint/index.html				
		General Media	Permissions	Security	
Website Ide Website: Owner: Verified by: Expires on:	please.igelize	does not supply owners 983163327	hip information.	_	View Certificate
Privacy & Hi Have I visited	istory d this website p	rior to todav?	No		
		mation on my computer			ar Cookies and Site Data
Have I saved	any password	for this website?	No)	View Saved Passwords
The page yo Encryption n	Encrypted (TLS u are viewing w nakes it difficul	_RSA_WITH_AES_256 as encrypted before be for unauthorized peop he read this page as it t	ing transmitted of le to view information	over the Interne	

6. Your browser will open the **Certificate** page. Scroll down the page until you find the download link. Click the **PEM** (chain) link to download the certificate chain.



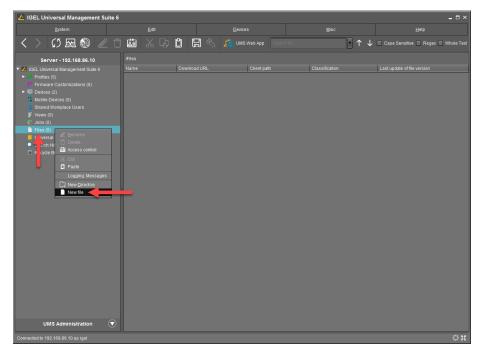
7. You are prompted to save the certificate file. Click to select the **Save File** radio button and click the **Ok** button.



8. Once you have downloaded the certificate chain, open it in a text editor and verify it looks like the following. If not, try the above steps again or contact your Certificate administrator for help.



9. The next step is to upload the certificate file to the IGEL UMS. Right-click on the **Files** node in the left menu and click the **New file** link.



Page 77

10. Click the ... icon to the right of the local file text box.

New file	×
File source Upload local file to UMS	Server
Local file	
Upload location (URL)	https:// <server.port>/ums_filetransfer</server.port>
Select file from UMS set	ver
File location (URL)	
File target	
Classification Uno	defined
Devices file location /wfs	ł
Access rights	
Read Write Exe	cute
Owner 🗸 🗸 🗄	
Others 🗌 🗌 [
Owner User 🔻	
	<u>Q</u> k Cancel

11. The **Open** window opens. Browse to the location you saved the certificate chain .pem file and click to select it. Click the **Open** button to continue.

Open					×
Look <u>I</u> n:	Desktop	•			E
installer-2	I-gateway_dabcc_com _pem 2.02.110.bin 7.txt EM-2021-02-20.lic EM-2021-02-20.zip				
File <u>N</u> ame:	.pem				
Files of <u>T</u> ype:	All Files		_	_	•
				Open	Cancel

12. Next, you need to tell the IGEL UMS the type of file you are uploading. To do this, click to open the **Classification** combo box and click to select **Common Certificate** (all purpose) located at the bottom of the list.

New file	×
File source Upload local file to UI	MS server
Local file	C:\Users\Administrator\Desktop\pem
Upload location (UF	RL) https:// <server.port>/ums_filetransfer</server.port>
Select file from UMS s	server
File location (URL)	
File target	
Classification L	Indefined
Devices file location	Indefined Veb Browser Certificate
Access rights	SL Certificate ava Certificate
Read Write	BM iAccess Certificate
Owner 🗸 🗸 🕻	Common Certificate (all purpose)
Others	
Owner User 🔻	
	<u>Q</u> k Cancel

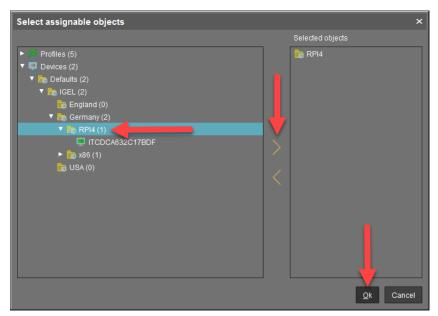
13. Your **New file** window should look like this. If all looks good, click the **Ok** button to upload the certificate to the IGEL UMS.

New file	×
File source Upload local file to UMS s	i aniar
S opioad local life to omo a	
Local file	C:\Users\Administrator\Desktop
Upload location (URL)	https:// <server:port>/ums_filetransfer</server:port>
Select file from UMS serv	er
File location (URL)	
File target	
Classification Common C	certificate (all purpose)
	<u></u> k Cancel

14. The certificate is uploaded, you are ready to assign it to your devices. Click the + button located in the top right of the UMS.

🛃 IGEL Universal Management Suite 6				_ = ×
System		Devices	Misc	Help
く 〉 い 🖂 🏐 🧷 亡	1 🖆 🕺 🖓 🗘 🕻	🔜 🔌 💥 UMS Web App 🛛 Searc	ch for 💽 🕇	👃 🔲 Case Sensitive 🔲 Regex 🔲 Whole Text
Server - 192.168.86.10	/Files/igelize-me-chain.pem		Assigned	
 IGEL Universal Management Suite 6 Profiles (5) 			Name	†
Firmware Customizations (0)	Classification Common Certif	icate (ali purpose)	•	
 Devices (2) Mobile Devices (0) 	 Assigned Firmware Customi 			U
Shared Workplace Users Views (0)				
🖗 Jobs (0)				
▼ 🖺 Files (1)				
Universal Firmware Update (0) Search History (0)				
TRecycle Bin (2)				
UMS Administration				
Connected to 192.168.86.10 as igel				5.7 195
Connected to 132.100.00. To as igen				÷4€ 12 51

15. The Select assignable objects window opens. Please select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.

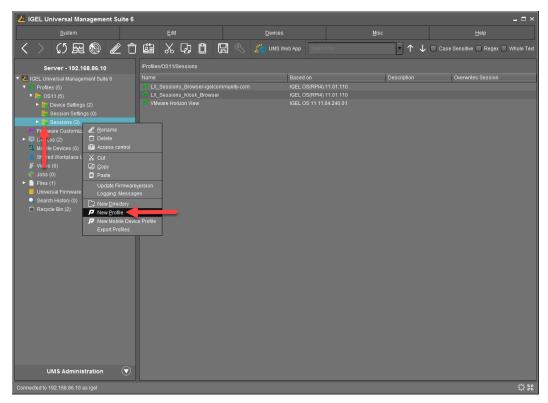


16. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



17. The certificate is uploaded and deployed to the desired IGEL OS devices. You are ready to create a profile to deploy the Chromium browser pointing to your Citrix backend.

From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.



18. Enter a descriptive name for the profile in the **Profile Name** text box. Click to expand the **Based On** combo box and click to select the **IGEL OS(RPI4)** entry. Once finished, click the **Ok** button to continue.

New Profile ×				
Profile Name	LX_Sessions_Citrix			
Description				
Based on	IGEL OS(RPI4) 11.01.110			
► Expert mode				
<u>O</u> k Cancel				

 Click to expand Sessions > Chromium Browser and click to select the Chromium Sessions link. Click the + button located on the top right of the window.

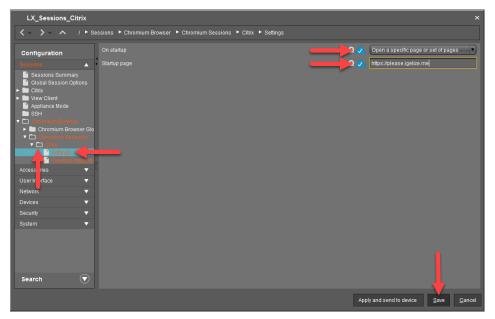
LX_Sessions_Citrix			×
<-> > < / > < </th <th>essions 🔸 Chromium Browser 🔸 Chromium Sessions</th> <th></th> <th></th>	essions 🔸 Chromium Browser 🔸 Chromium Sessions		
Configuration	Chromium Sessions		+ 🖬 🖊 🖸
Sessions Sessions Summary Global Session Options Citrix Citrix Appliance Mode SSH Chromium Browser Chromium Browser Glo Chromium Sessions A essories U ar Interface Network	Session name		
Devices Security			
System 🔻			
Search 💽			
		Apply and send to device	<u>S</u> ave <u>C</u> ancel

20. The Citrix profile window opens, you can give the session icon a name and select where it will be displayed on the IGEL OS. Enter a friendly name for the Citrix sessions in the **Session name** text box.

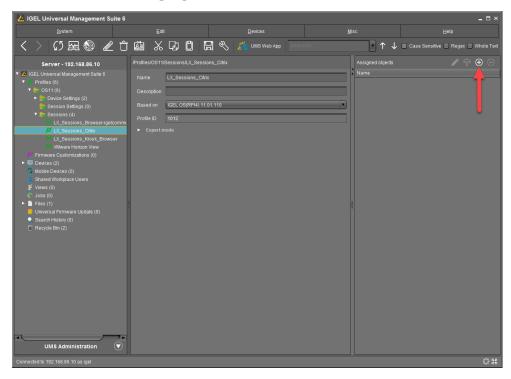
You can also define where this session will be placed on the IGEL OS, select the desired locations. This is up to you.

LX_Sessions_Citrix ×					
	ssions ► Chromium Browser ► Chromium Sessions ► Citrix				
Configuration		Citrix			
Sessions Summary Global Session Options Cithit View Client Appliance Mode SSH Chromium Browser Glo Chromium Browser Glo Chromium Browser Glo Concentration	Starting Methods for Session	 Start menurs system tab Application Launcher's system tab Application context menu 			
User Interface Vetwork Vetwork	Desktop folder 🛛 🏑 Password protection 🖉 🎪 None				
Devices V Security V	2 🔬 🗌 Hotkey				
System V	Notifiers Key Autostart	2 A None Y			
Search 💌	Autostart delay	۵ 🛦 💿			
search V		Apply and send to device <u>S</u> ave <u>C</u> ancel			

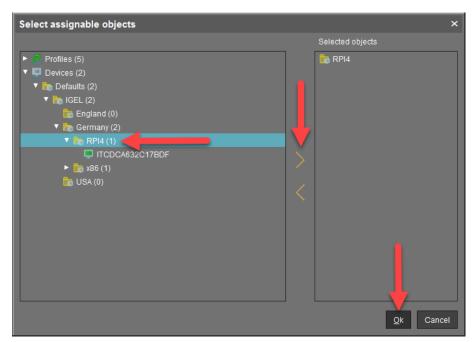
21. Click to **Settings** node below the **Citrix** folder. Here you will define the web page the browser will open upon startup. Click to open the **On startup** combo box and select **Open a specific page or set of pages** item from the list. Next, enter the URL of the Citrix login web page in the **Startup page** text box. Once finished, click the **Save** button.



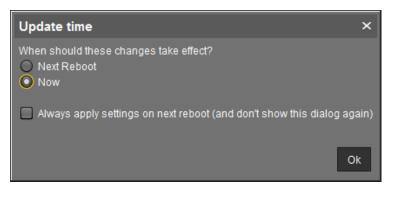
22. The profile is created, and you are ready to assign it to your devices. Click the + button located in the top right of the UMS.



23. The Select assignable objects window opens. Please select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.



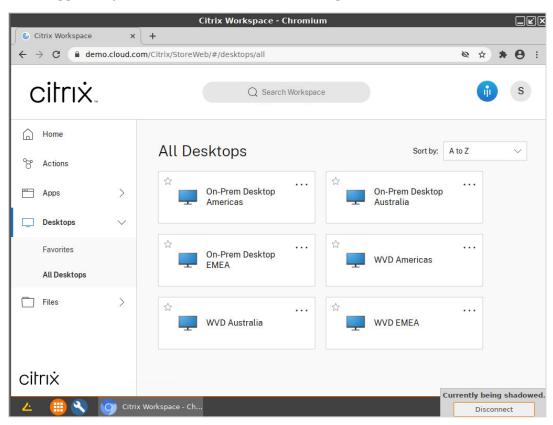
24. You are prompted to specify at what time the new settings will take effect. Select the desired setting and click **Ok** to apply the new settings.



25. You have successfully deployed access to your Citrix environment via the Chromium browser. Your desired users will see a new icon on their desktop. Once double-clicked, the Chromium browser will open to the Citrix login page.

	Citrix Workspace - Chromium				ĸ×
Citrix Workspace 🗙	+				
← → C ▲ demo.cloud.com	/Citrix/StoreWeb/#/login	ø	\$ \$	• •	1
	citrix				
	CIT IX.				
	User name:				
	Password:				
	Log On				
	Log on				
	citrix				
		Currently	y being	shado	wed.
🗠 🜐 🕙 🚫 Citrix W	forkspace - Ch		Disconn	ect	

26. Once logged in, you will see a list of resources assigned to the user.



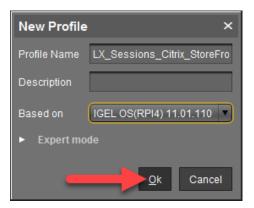
5. How to Create a Citrix StoreFront Session

The following steps define how to create a Citrix StoreFront session and assign it to the IGEL OS(RPI4) for NComputing RX420(IGEL).

1. From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.

👍 IGEL Universal Management Suite 6				_ 🗆 ×
System	Edit	Devices	Misc	Help
く 〉 い 🖂 🌚 🥒 亡	° 🛍 🗶 🖓 🖞 🖪	🛛 🔧 🚜 UMS Web App 🛛 Search	Mor 🔽 🕇	↓ Case Sensitive Regex Whole Text
Server - 192,168.86.10		Based on Nunity-com IGEL OS(RPI4) IGEL OS(RPI4) IGEL OS(TPI4) IGEL OS 1111/	11.01.110 11.01.110	Overwrites Session
Messages				
Time	Description	Results	State	
2/22/21 6:24 PM				inished
2/22/21 6:18 PM	Save device's Configuration	The action ended su	ccessfully. 🔅 F	inished
Connected to 192.168.86.10 as igel				5.0 25

2. Enter a descriptive name for the profile in the **Profile Name** text box. Click to expand the **Based On** combo box and click to select the **IGEL OS(RPI4)** entry. Once finished, click the **Ok** button to continue.



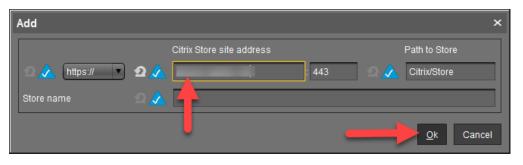
3. Click to expand Sessions > Citrix > Citrix StoreFront node. Here you will give the session a name and define where the session icon will be stored. Enter the desired session name in the Login session name text box. In the Starting Methods for Session section, define where you would like the session icon to be added on the IGEL OS.

LX_Sessions_Citrix_StoreFront ×				
	ssions ► Citrix ► Citrix StoreFront			
Configuration	Login session name	Citrix StoreFront		
Sessions Summary	Starting Methods for Session			
Global Session Options	🖸 📩 🔲 Start Menu	🙍 🙏 🔲 Start Menu's System tab		
Citrix Client Selection	💁 📩 🔲 Application Launcher	💁 📐 🔲 Application Launcher's System tab		
Citrix Global Citrix StoreFront	2 🔬 🗹 Desktop 🔫	n 💭 🔔 📄 Desktop Context Menu		
Server Login	2 🛕 🗌 Quick Start Panel			
Appearance Reconnect	Menu folder 🛛 🛆			
Refresh	Application Launcher folder 🛛 🙍 📐			
Logoff	Desktop folder 💿 📩			
Desktop Integratio Citrix Self-Service		-		
View Client	Password protection 🛛 🖉 📩 None			
Appliance Mode	n 🔬 🗖 Hotkey			
Chromium Browser		2 📐 None		
Accessories 🔻				
User Interface 🔹 🔻		2 🔺		
Network 🔻	2 📐 🗌 Autostart		- 11	
Devices V			_ []	
Security 🔻 🗸		☑ 📐 2		
System 🔻	🖸 🛕 🔲 Autostart notification		J	
Search 🔍	💁 📐 🔽 Autostart requires network			
		Apply and send to device Save	Cancel	

4. Click the **Server** node located below the **Citrix StoreFront** folder and click the **+** button.

LX_Sessions_Citrix_StoreFront ×						
<	sions 🕨 Citrix 🕨 Citrix StoreFi	ront 🕨 Server				
Configuration						Related Configurations
Sessions	Server location			+	i 🖉 🖊 🔽	Citrix Client Selection
Sessions Summary	Protocol	Store address	Path to Store	Store nar		
Global Session Options						
 Citrix Client Selection Citrix Global 						
Clinx StoreFront				U		
Server						
Login						
Appearance						
Refresh						
Logoff	Domains			+	x / D	
Desktop Integratio	Dumains					
Citrix Self-Service View Client						
Appliance Mode						
SSH						
Chromium Browser						
Accessories 🗸	Handling of domain in login wir	ndow 🛛 📐 🛛 normal			T	
User Interface 🛛 🔻						
Network 🔻						
Devices 🔻						
Security 🔻 🗸						
System 🔻 🔽						
Search 🔍						
				An	bly and send to device	Save Cancel
				Apt	ny and send to device	<u>Dave</u> <u>C</u> alicel

5. Enter the Citrix Store URL of the **Citrix Store site address** text box. You do not need to enter the HTTP(s) part. Once finished, click the **Ok** button.



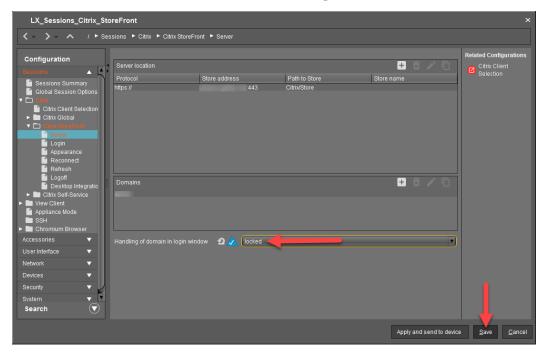
6. You are brought back to the **Server** properties page. Click the + icon located in the **Domains** section of the page.

LX_Sessions_Citrix_StoreFront ×					
	ssions ► Citrix ► Citrix StoreFr	ront ► Server			
Configuration					Related Configurations
Sessions 🔺	Server location				Citrix Client Selection
Sessions Summary	Protocol	Store address	Path to Store	Store name	
Global Session Options	https://	:443	Citrix/Store		
Citrix Citrix Client Selection					
Citrix Global					
Citix StoreFront					
Server					
Appearance					
Reconnect					
Refresh					
Logoff	Domains			+ 🖬 🧪 🤅	
► Citrix Self-Service					
View Client					
Appliance Mode					
SSH Chromium Browser					
Accessories V	Handling of domain in login wir	idow 🛛 📐 normal			
User Interface 🔹 🔻					
Network 🔻					
Devices 🔻					
Security 🔻 🗸					
System 🔻					
Search 🔍					
				Apply and send to	device <u>S</u> ave <u>C</u> ancel

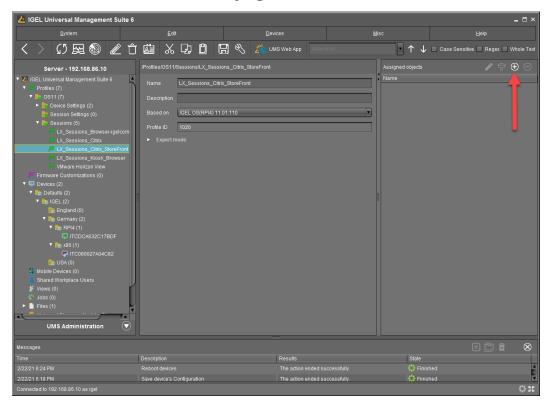
7. Enter the domain of the Citrix Store in the **Domain** text box. For example, igelcommunity.com. Click **Ok** to save the domain name and return to the **Server** properties page.



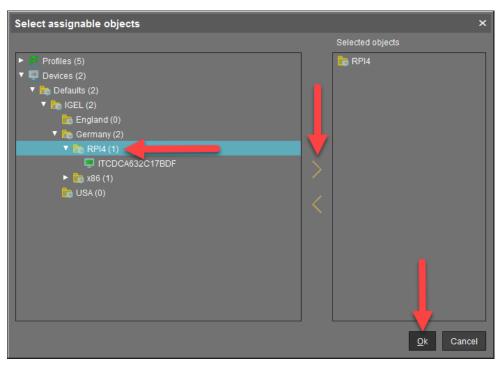
8. Select the **locked** entry from the **Handling of domain in login window** combo box and click the **Save** button to save the StoreFront profile.



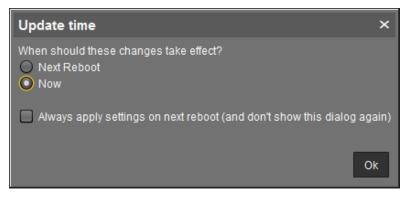
9. The shadowing profile is created, and you are ready to assign it to your devices. Click the + button located in the top right of the UMS.



10. The Select assignable objects window opens. Please select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.



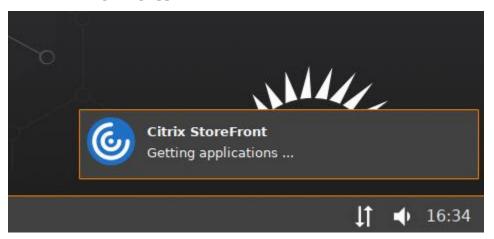
11. You are prompted to specify at what time the new settings will take effect. Select the desired setting and click **Ok** to apply the new settings.

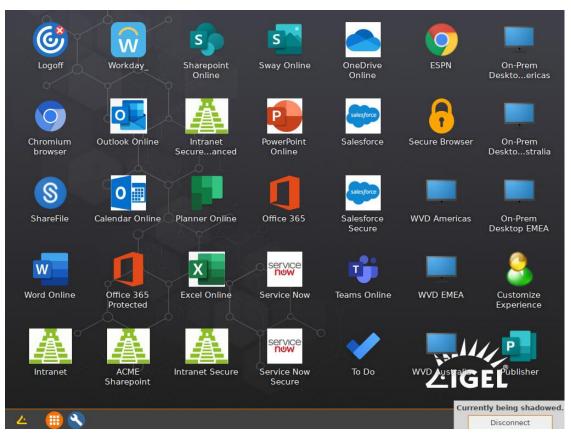


12. Flip over to the RX420(IGEL) device, and you will notice the new Citrix icon has been added to the desktop. Yippie. Double-click to launch it and log in.

Citrix-Cloud Citrixer Chromium browser		Citrix Login	
		workspace	
	User name	sperusat	
	Password	••••••	
	Domain	democloud	
		✓ OK X Cancel	
			LIGEL
			ZIGEL
			Currently being shadowed.
🗠 🜐 🌂 🌀 Citrix Login			Disconnect

13. Once authenticated, a notification message should popup notifying you Citrix StoreFront is "getting applications."



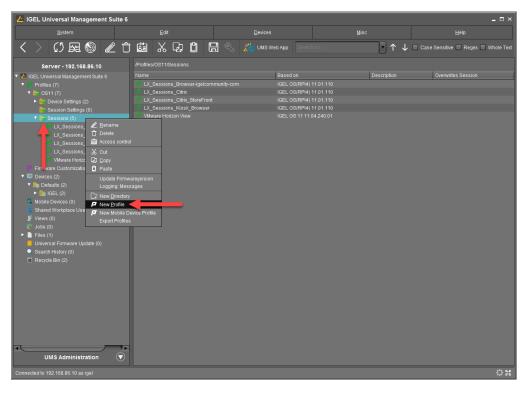


14. Once logged in, the IGEL OS desktop should be populated with the application icons you have defined to the authenticated user.

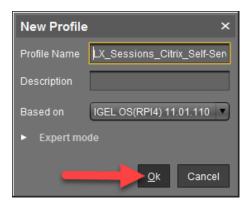
6. How to Create a Citrix Self-Service Session

Next, you might want to configure Citrix Self-Service access. No problem, IGEL does that too. The following steps details how to deploy a Citrix Self-Service Session to the IGEL OS desktop.

1. From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.



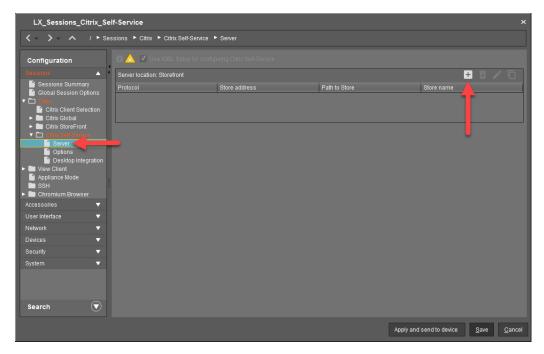
2. Enter a descriptive name for the profile in the **Profile Name** text box. Click to expand the **Based On** combo box and click to select the **IGEL OS(RPI4)** entry. Once finished, click the **Ok** button to continue.



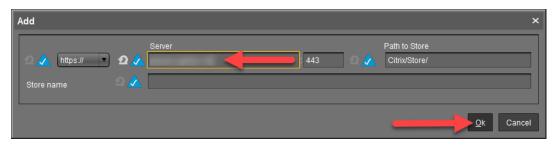
3. Click to expand Session > Citrix > click to select the Citrix Self-Service node. Click the yellow Self-Service Session triangle and then enter a name for the desktop icon in the associated textbox. Next, define where you would like the Self-Service icon to be located. In the following example, we are placing it only on the desktop. Of course, this is up to you. After all, as I like to say, the sky is the limit with IGEL!

LX_Sessions_Citrix_S	LX_Sessions_Citrix_Self-Service ×						
Configuration	Self-Service Session			_	Citrix Self-Service		
Sessions Summary	Starting Methods for Session						
Global Session Options	🖸 点 🔲 Start Menu			- 2 📐 🕻			
Citrix Citrix Client Selection	💁 📐 🗔 Application Laun			2 🙏 🛛			
Citrix Clobal Citrix StoreFront	2 🔬 🗹 Desktop 🔫						
Citrix Self-Service	🔹 🔬 🔲 Quick Start Pane						
Server Options		2 🔺					
Desktop Integration							
▶ 🛄 /iew Client							
oppliance Mode		2 📐					
Chromium Browser	Password protection	🖸 📩 None	V				
Accessories V							
User Interface 🛛 🔻 🔻	🖸 📐 🔲 Hotkey						
Network 🔻					🖸 🛕 None		Ţ
Devices 🔻							
Security 🔻					2		
System 🔻	🖸 📐 🗌 Autostart						
	Delav				n 🔺 2		
	2 🔬 🗌 Autostart notificat						
Search 💎	 Autostart requires 						P
Search							
					Apply and send to device	<u>S</u> ave	<u>C</u> ancel

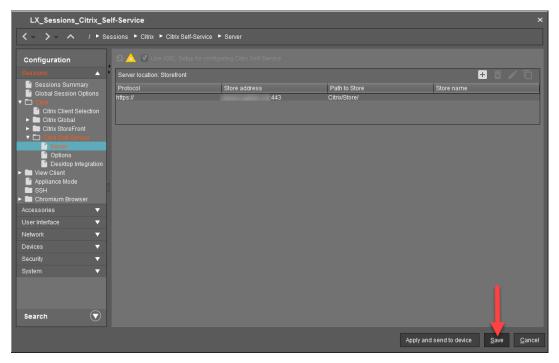
4. Click the **Server** node located under the **Citrix Self-Service** folder. Click the **+** button.



5. You are prompted to enter the server location of the Citrix Self-Service server. Enter the details in the box. When finished, click the **Ok** button to continue.



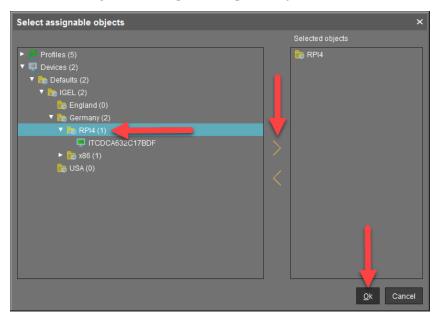
6. You are brought back to the Sever page, and the server you entered above is added to the **Server location: Storefront list**. You are done. Go ahead and click the **Save** button.



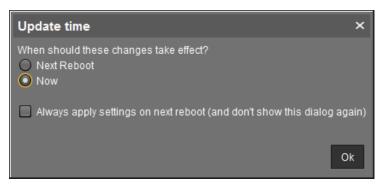
7. The profile is created, you are ready to assign it to your devices. Click the + button located in the top right of the UMS.

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Server - 192.168.86.10 Server - 192.168.10 Server - 192.168.10	Lea X 44 L C C Profiles/0011/Sessions/L/Sessi Name U/Sessions.Com Description Based on IGEL 05/RPH4 11 Profile ID 1025 • Expert mode	ons_Citrix_Self-Service x_Self-Service	Assigned objects Name	Case Sensitive
Connected to 192.168.86.10 as igel				1. 56

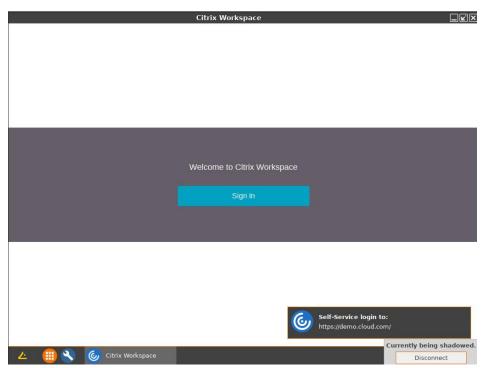
 The Select assignable objects window opens. Select the desired folders or clients and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the profile, you can click the Ok button to save it.



9. You are prompted to specify at what time the new settings will take effect. Select the desired setting and click **Ok** to apply the new settings.



10. Once the profile is deployed to the IGEL OS(RPI4) device, you can click on the icon, and you will be prompted to log into your Citrix Self-Service portal. Fun days indeed.

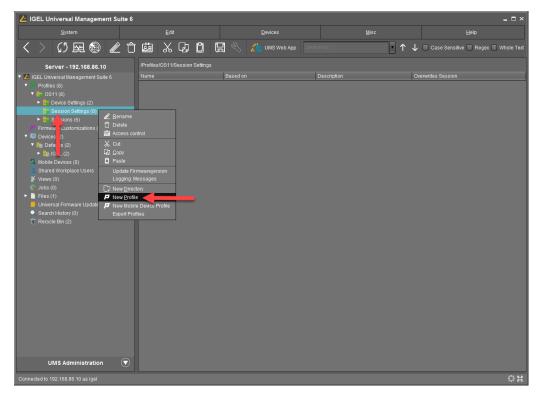


7. How to Turn Citrix Native USB Redirection Off & Enable HDX Webcam Integration

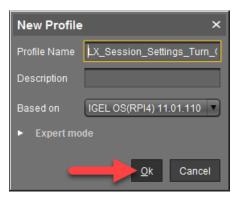
One more task to go! These last two items are a bit of optimization. It is a best practice to turn off Citrix Native USB redirection and enable Citrix HDX webcam integration.

Note: Currently, only 32-bit applications support webcam redirection. For more information, please refer to https://support.citrix.com/article/CTX132764?_ga=2.139819699.1432102408.1612870 773-1566574569.1612870773

 First, let us turn off the Citrix Native USB Redirection. From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.



 Enter a descriptive name for the profile in the Profile Name text box. Click to expand the Based On combo box and click to select the IGEL OS(RPI4) entry. Once finished, click the Ok button to continue.



3. Since Microsoft Teams and Zoom Optimizations are not available yet, you might want to evaluate how to use the webcam redirection instead. First, check that your webcam is not redirected by USB Redirection.

Click to expand **Session** > **Citrix** > **Citrix Global** and then click to select the **Native USB Redirection** node. Click the yellow triangle to enable it, and then uncheck the **Native USB redirection** checkbox.

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Configuration	🛯 🅢 🔲 Native USB redirection				
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Citrix Client Selection	Rule	Class ID		Name	
StoreFront Login					
Keyboard Mapping Firewall	Device Rules				
Options	Rule	Vendor ID	Product ID	Name	
Native USB Readin H X Multimedia H X Multimedia D Zirini Brownice Orini Brownice View Crint Appliance Mode SSH Chromium Browser					
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Once finished, click the **Save** button to continue.

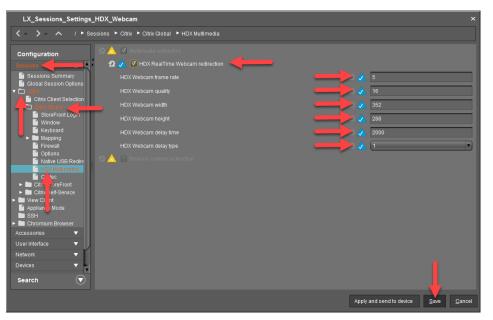
4. We are now ready to enable Citrix HDX Webcam Integration. From the IGEL UMS, expand the **Profiles** node, right-click on the **Sessions** folder, and click the **New Profile** link.

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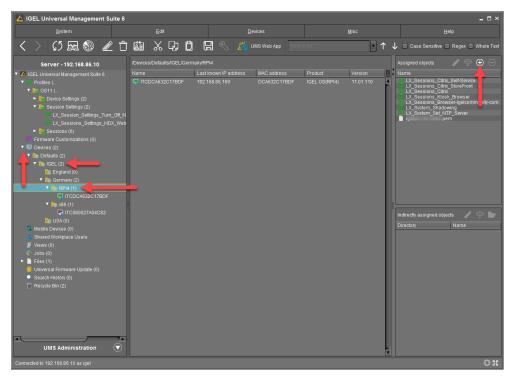
5. Enter a descriptive name for the profile in the **Profile Name** text box. Click to expand the **Based On** combo box and click to select the **IGEL OS(RPI4)** entry. Once finished, click the **Ok** button to continue.



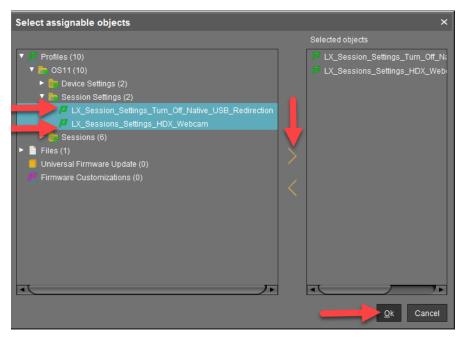
6. Click to expand Session > Citrix > Citrix Global folders and click to select the HDX Multimedia node. Click to enable the HDX RealTime Webcam Redirection checkbox and then check to enable it. Next, click each of the checkboxes to the right of the screen to enable them. You can keep the settings as is.



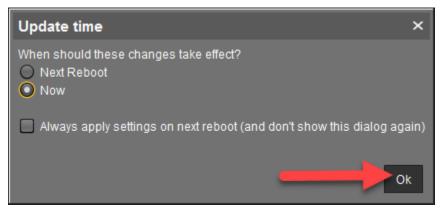
7. Instead of adding the profile to the device, let's try something different. Let's add the device to the new profiles. Click to expand the **Devices** folder and click to select the folder containing the devices or the device(s). Click the + button on the top right of the IGEL UMS.



 The Select assignable objects window opens. Please select the desired folders or profiles and click the > button to move it to the Selected objects section. Once you have defined the objects to assign to the devices, you can click the Ok button to save it.

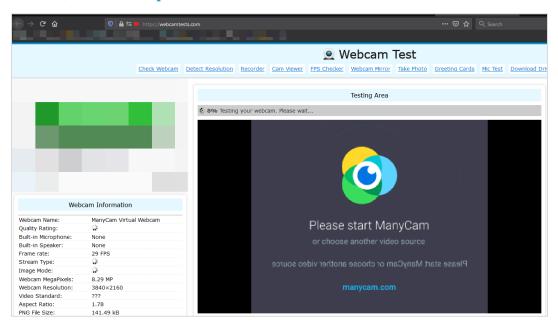


9. You are prompted to specify at what time the new settings will take effect. For this example, click the **Now** radio button and click **Ok** to apply this change in real-time.



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10. As stated above, only 32-bit applications support webcam redirection. To test your webcam, check out **https://webcamtests.com/**.



Appendix

1. Unsupported Feature List

The following features found in the IGEL OS for x86 architecture are currently not available in the IGEL OS(RPI4) for NComputing RX420(IGEL). Stay tuned. IGEL will be adding features and functionality as soon as possible.

Session	Citrix Channels
Browser Firefox	H264
IBM iAccess	Devicetrust
Imprivata	Diktamen
Media Player	Dlock
Horizon View	Drivelock
Powerterm	Digitalpersona
RDP / RDWeb	Fabulatech Scanner and USB
WVD	Grundig
NXClient	RTME
Redhat Spice	Lakeside
Thinlinc	Nuance
Twox	Olycom
VNC Viewer	Olympus
Deskmate	Philips Speechmkike
Xsessions	Stepover
Epos Audio	Kofax
	Signotec
	Cisco JVDI
	Cisco WebexMeetings
	Cisco Teams
	Teams Optimization
	Zoom Optimization
	Flash Redirection"

Only available in IGEL OS x86:

Accessories

Identify Monitors Systemviewer Touchscreen calibration Nettools In Session control bar

Devices

Devices Serial configuration Jabra Xpress ThinPrint Signature pads Printerlogic

Smartcard	System
cryptovision: use secure PIN entry	Debug Partition
Secure PIN entry for SafeSign	Devices Scanner Daemon
90meter	Monitoring Agent
cryptovision sc/interface	Filebeat
Gemalto SafeNet	Virtualbox
Gemalto IDPrime	Cron
Athena IDProtect	Bootsplash
Secmaker Net iD	Touchpad Config
A.E.T. SafeSign	Touchscreen Config

VPN

Openconnect Genucard VPN Page 107

2. Additional Resources

Please refer to the following essential IGEL technical resources to learn more.

Getting Started Guides:

- IGEL-Getting-Started-Guide.zip
- All IGEL Step-by-Step Guides

IGEL Community:

- Join IGEL Community on Slack
- IGELCommunity.com
- IGEL Community Blog
- IGEL Community Message Archives
- IGEL Community Videos Technical How-To Videos
- IGEL Community on GitHub

Web Resources:

- IGEL Knowledge Base
- IGEL OS(RPI4) KB Home
- IGEL OS 11 Manual
- IGEL Universal Management Suite (UMS) Manual
- IGEL Cloud Gateway (ICG) Manual
- IGEL Licensing
- Linux Third-Party Hardware Database
- IGEL Community HCL
- How to Secure Endpoints with IGEL OS White Paper
- How to Use a DigiCertificate SSL Certificate with ICG