

The background of the entire page is a photograph of a modern building's interior. It features a large glass facade on the right side, reflecting the sky. In the foreground, there is a wide staircase with a glass railing and a blue handrail. Several people are seen walking on the stairs and in the lower level. The lighting is bright, suggesting a well-lit, open-plan space.

NUCLEUS

3D Unified Management System for Smart Buildings & Cities

NUCLEUS Setup Training

Version 4.6

#	Topic
1	Introduction
2	Server and Client Installation
3	Backup Tool
4	Support

Introduction

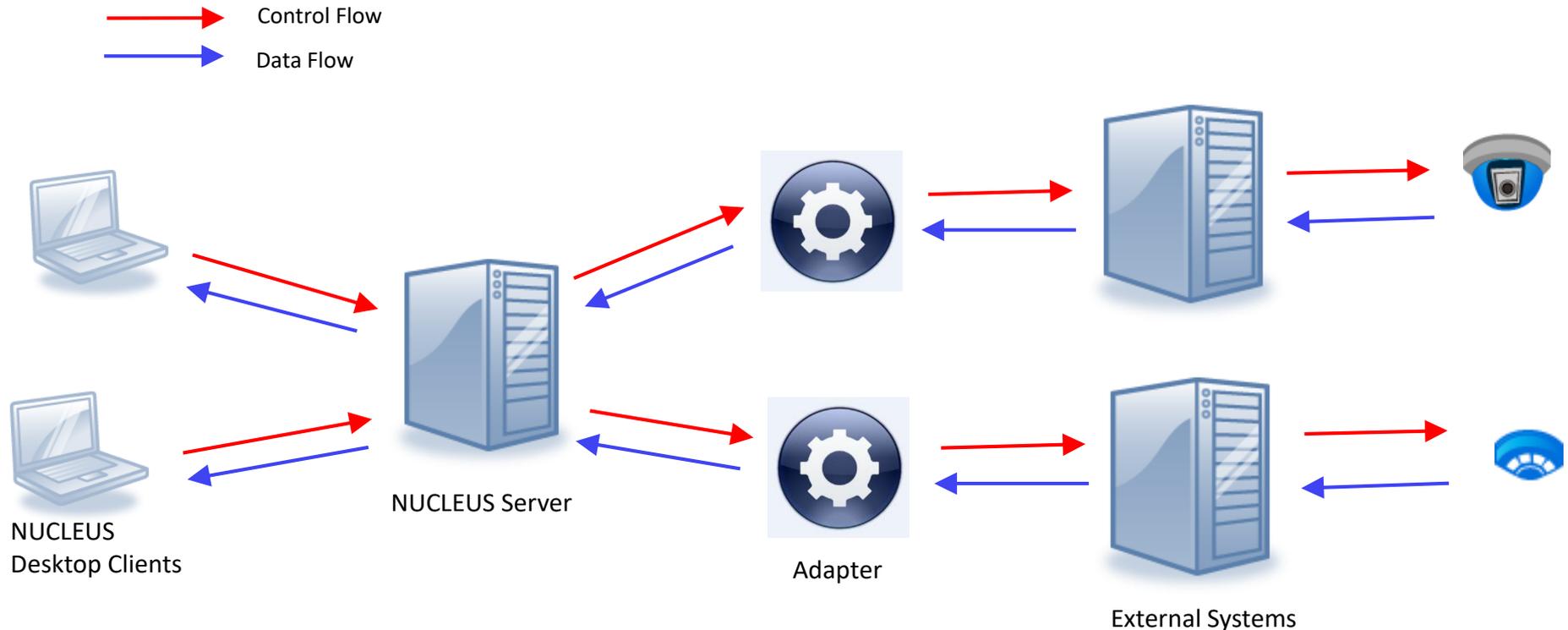
Introduction

- What is **NUCLEUS**?
 - A 3D unified management system for effective **visualization**, **consolidation** and **convergence** of operational systems with 3D building to provide comprehensive situation awareness.



Introduction

A typical deployment architecture



Server and Client Installation

2. Server and Client Installation

2.1 Hardware/Software Requirements

2.2 Server Setup

2.3 Server Activation

2.4 Client Setup

2.5 Uninstallation

2.1 System Requirements

Server:

- **Operating System:** (64 bit only)
Windows 7, 8, 10, Server 2012 / R2, Server 2016
- **CPU:** Intel Core i3 and above
- **RAM:** 2GB and above
- **Hard Disk:** 5GB and above free space
- **Network:** 100 Mbps and above

Note: This specification is for a **trial** server. For production server, we suggest you contacting support@gelement.com for advice.

2.1 Hardware/Software Requirements

Client:

- **Operating System:** Windows 7, 8 or 10
- **CPU:** Intel Core i5 and above
- **RAM:** 2GB and above
- **Hard Disk:** 10 GB and above free space
- **Display:** 1600×900 and above
- **Graphics card:**
 - Minimum: 512MB graphics card that supports OpenGL 1.6 and above.
 - Recommend: It depends on the complexity of the 3D site. For a few multi-storeyed buildings with photorealistic interior, we recommend NVIDIA GeForce *60 and above (eg. 960, 1080).

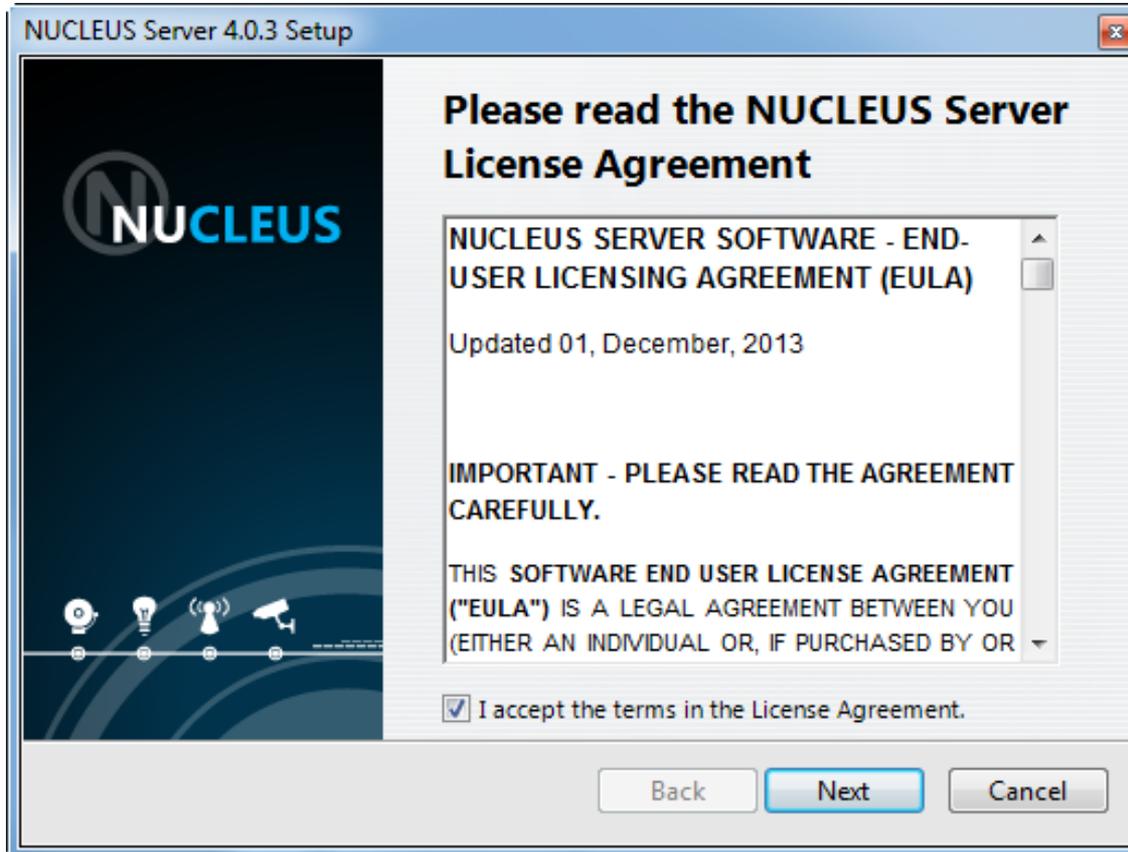
2.2 Server Setup

Important: On some Windows with Smartscreen enabled, the following prompt may appear. Please click on More info and continue to run the installer.



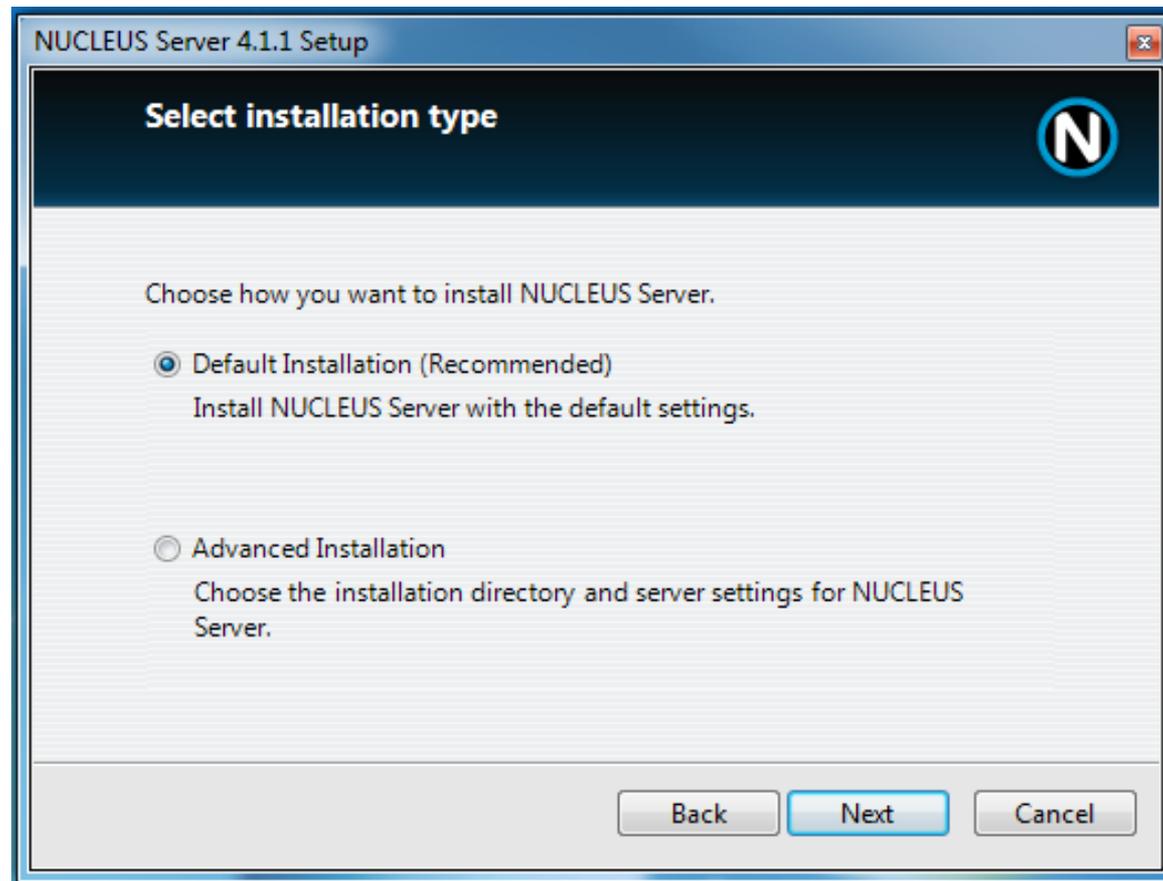
2.2 Server Setup

1. Double click to run NUCLEUS Server installer.



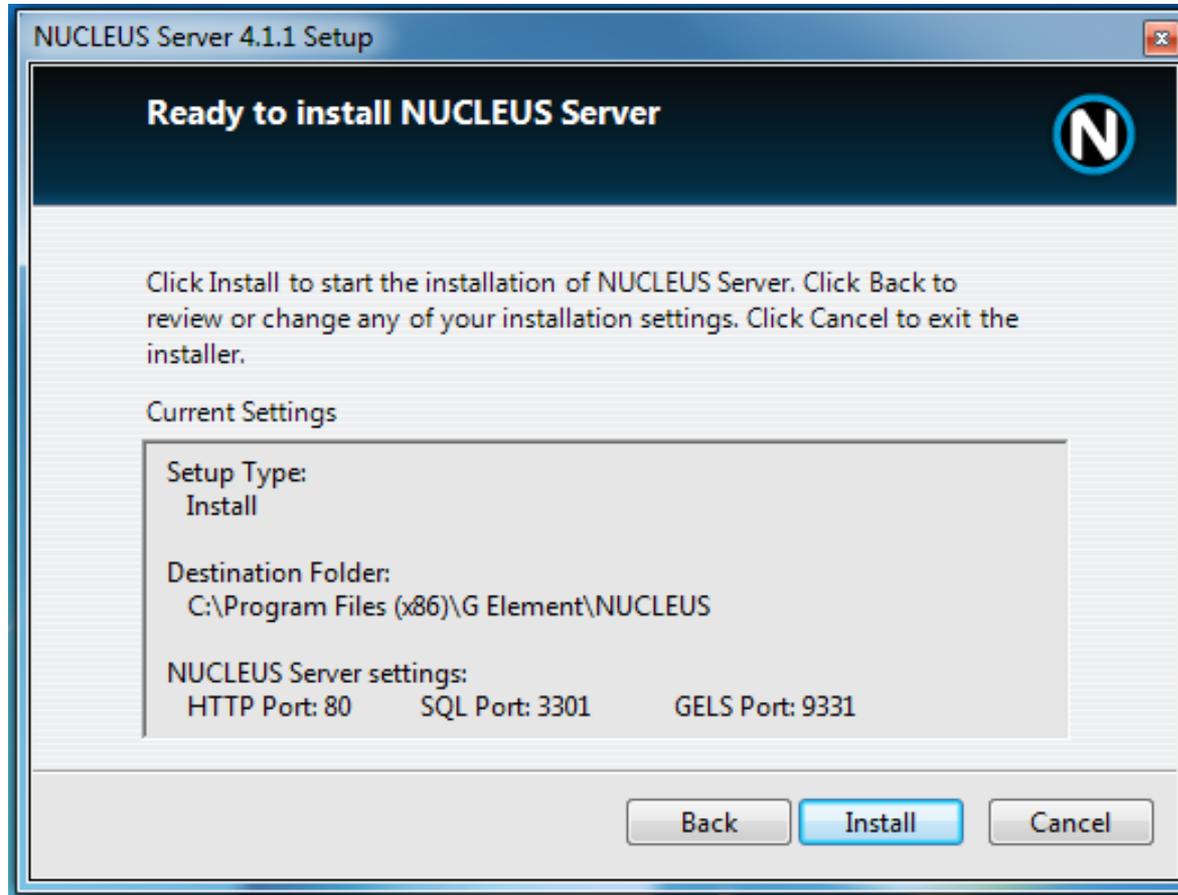
2.2 Server Setup

2. Choose Installation type: a). **default** or b). **advanced**.



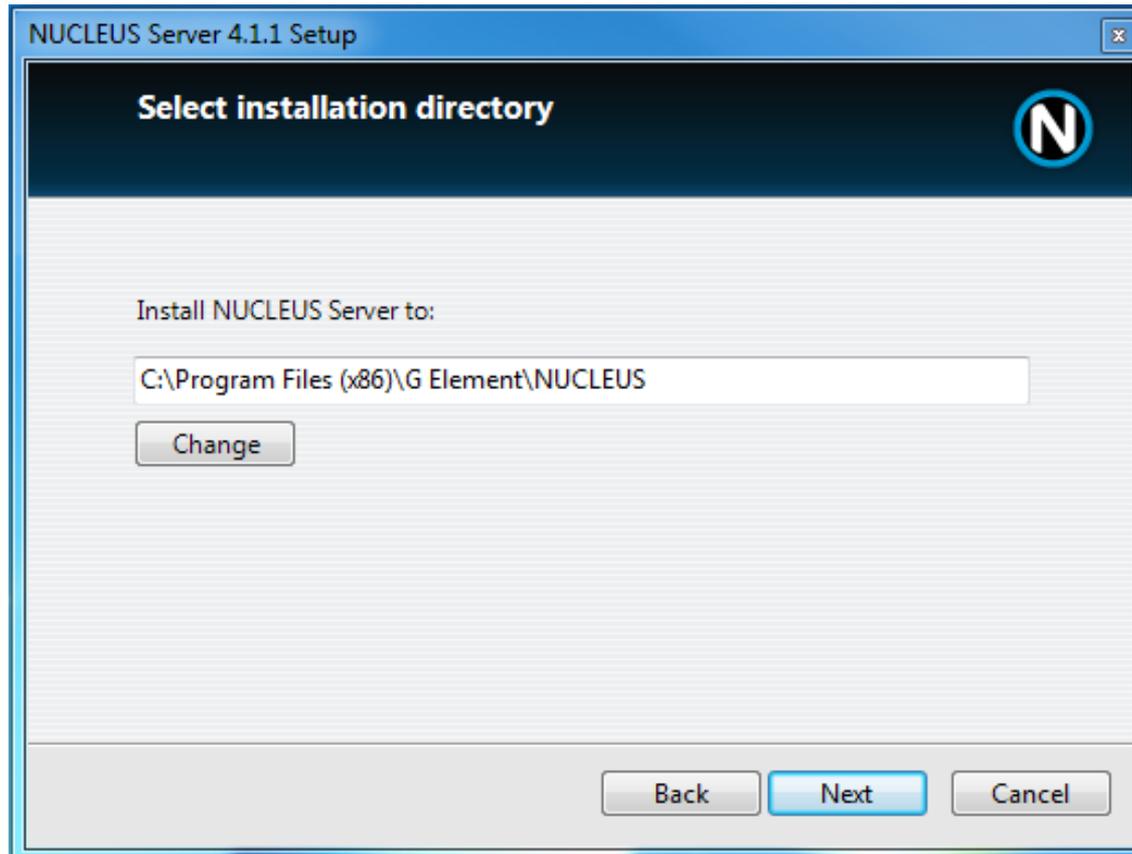
2.2 Server Setup

a). Default Installation.

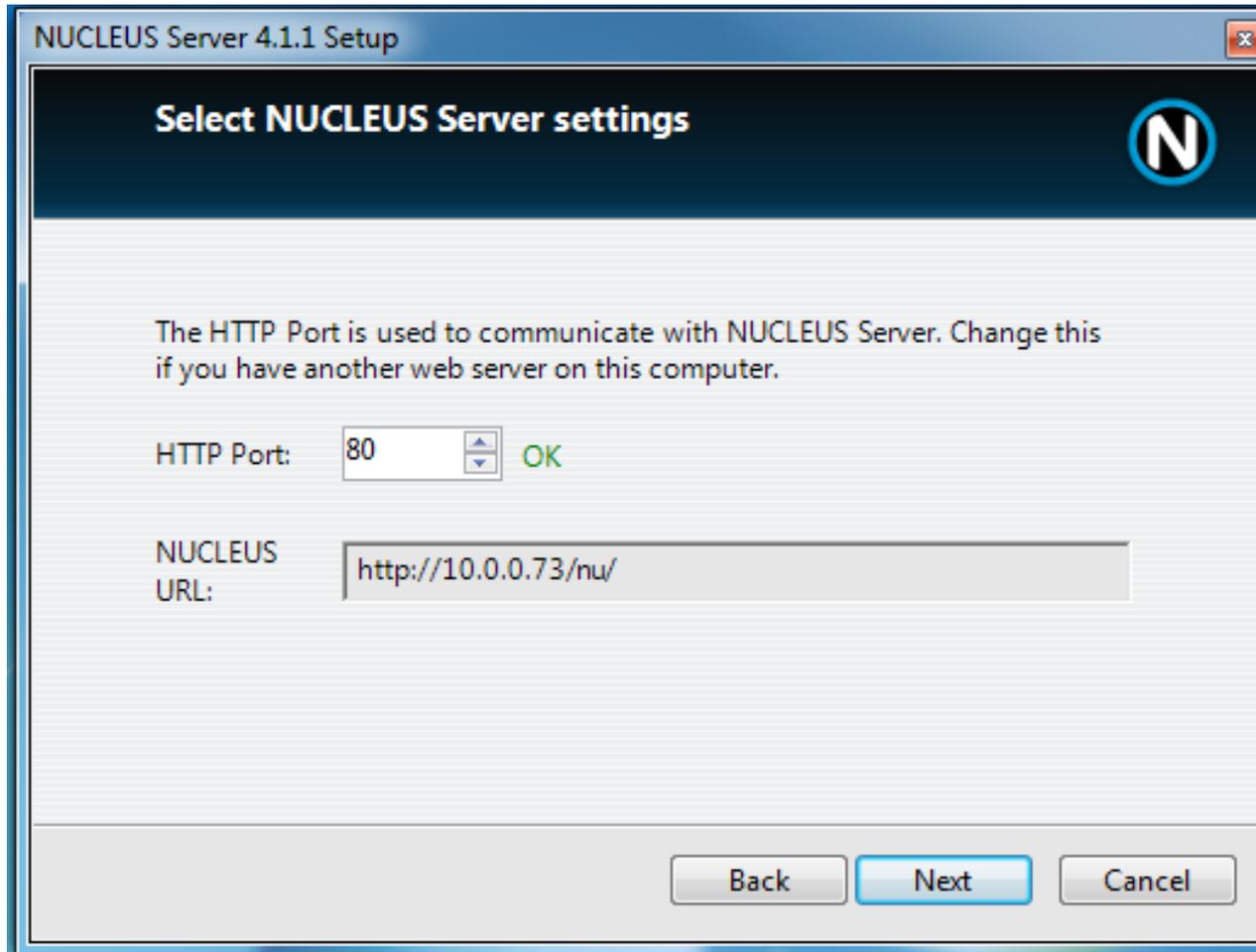


2.2 Server Setup

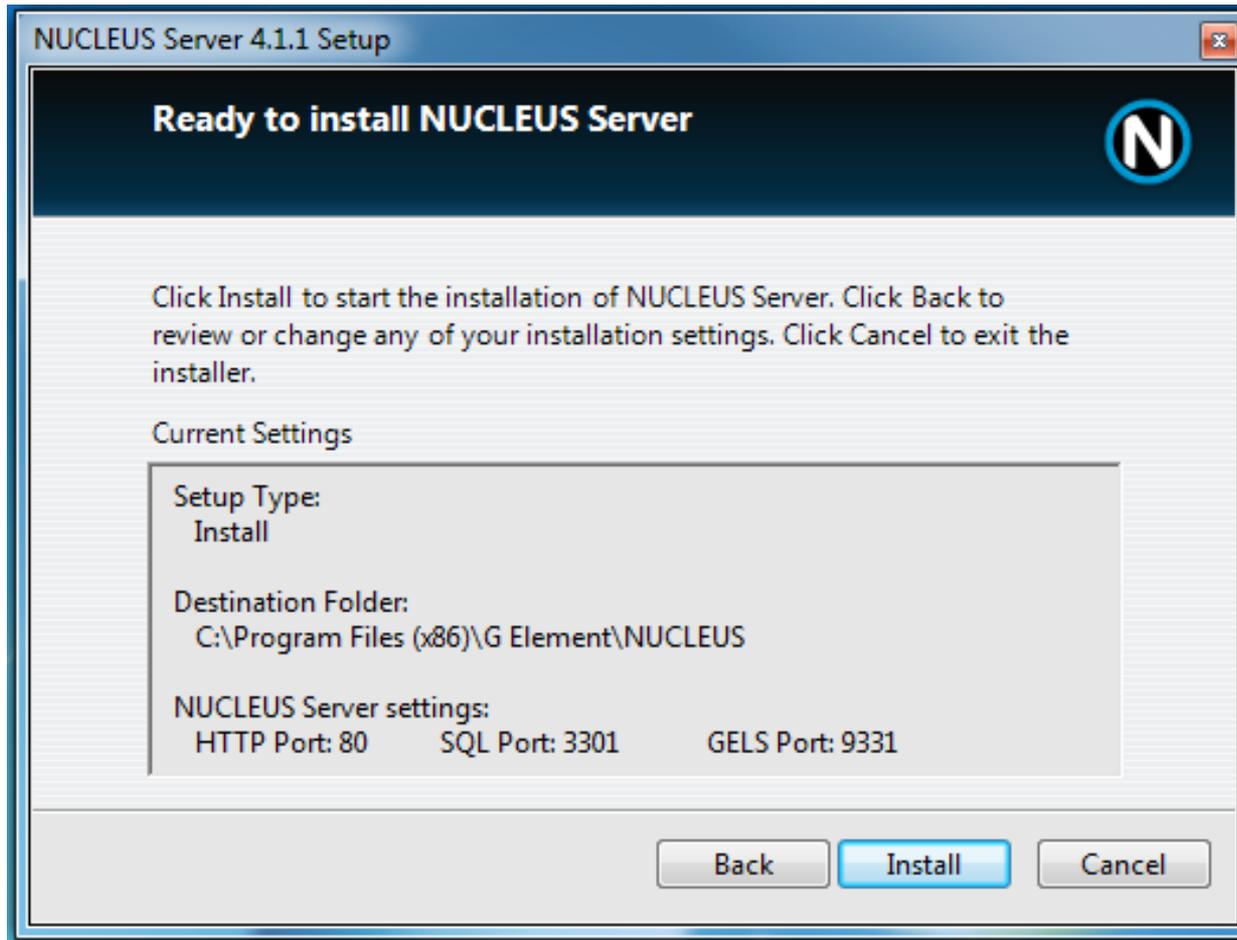
b). **Advanced Installation.** You will be asked to set the installation directory as well as set the HTTP Port.



2.2 Server Setup

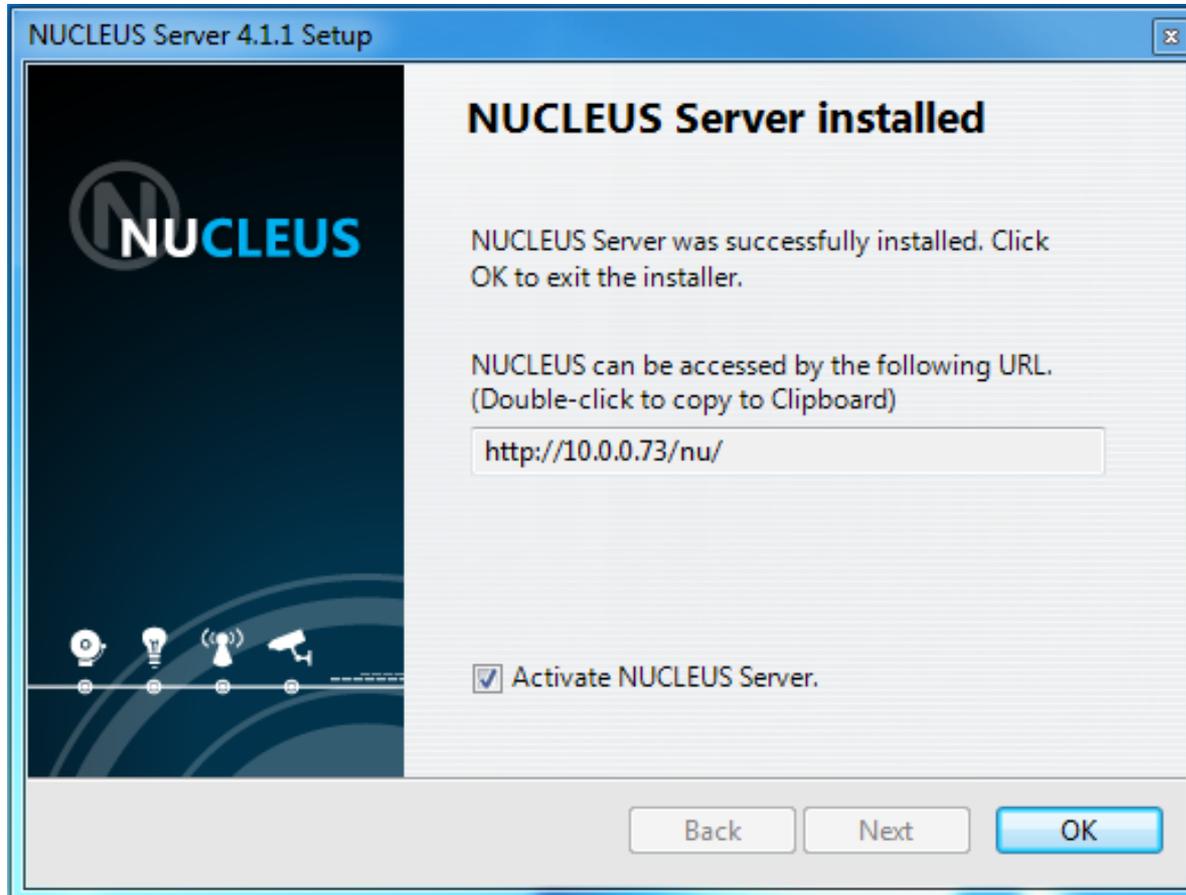


2.2 Server Setup



2.2 Server Setup

3. After finishing installation, you can exit the installation.



2.3 Server Activation

The installed NUCLEUS Server can be activated in a either **automatic** or **manual** way.

1. Automatic

This method requires **the NUCLEUS Server** to have an Internet connection.

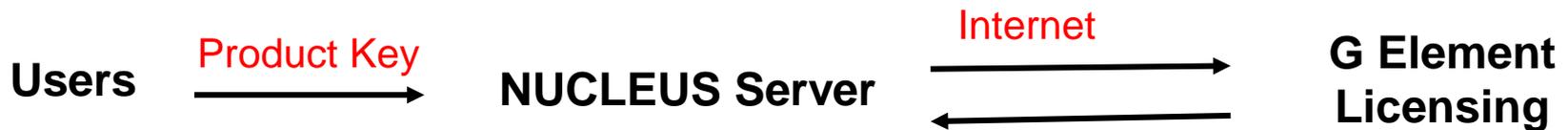
2. Manual

If the NUCLEUS Server does not have a direct Internet access, you can activate NUCLEUS manually.

2.3 Server Activation

Automatic Activation

This method requires **the NUCLEUS Server** to have a direct Internet connection.

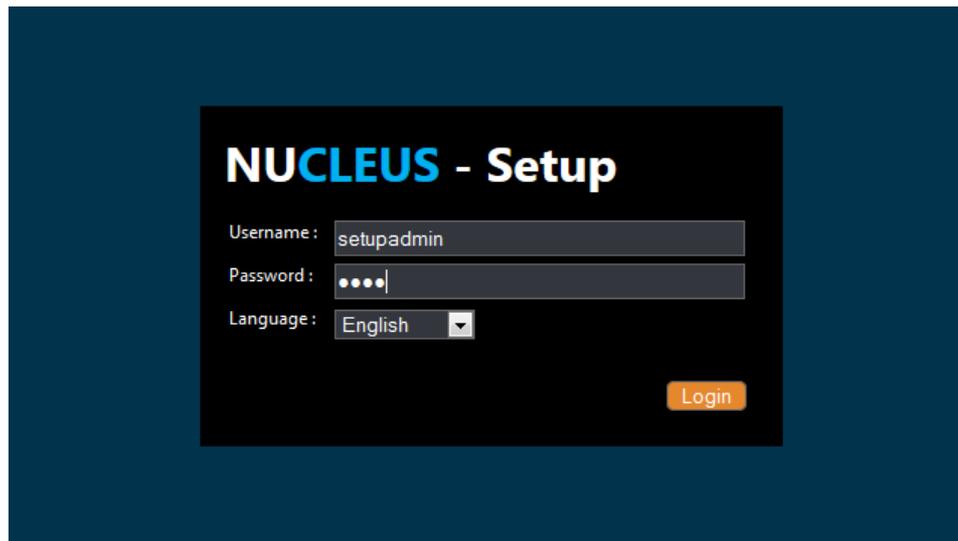


3.3 Server Activation

Automatic Activation

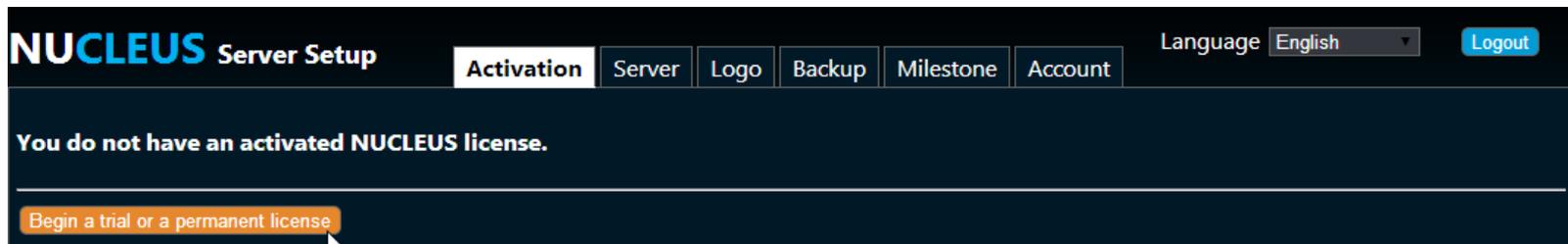
1. Start web browser and login to <http://NUCLEUS-Server-IP/nu/setup> (or <http://NUCLEUS-Server-IP:<port>/nu/setup>);
2. Login to Setup page by:

Username: **setupadmin** Password: **pass**

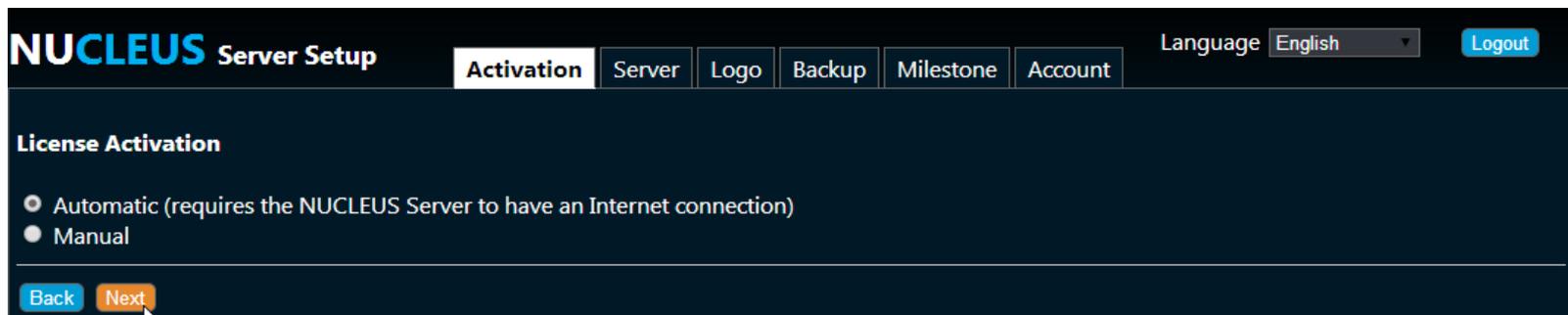


2.3 Server Activation

3. You will see the below interface if you do not have a NUCLEUS license activated, click "Begin a trial or a permanent license".



4. Select "Automatic" activation method and then click "next".



2.3 Server Activation

5. Input the product key and other information to activate.

NUCLEUS Server Setup

Activation | Server | Logo | Backup | Milestone | Account

Language English

License Activation - Automatic

Please provide valid and genuine information for Contact Person, Email and Organization name. Submitting invalid or non-genuine information may lead to the rejection of your request or invalidation of your license.

Registration info:

Product key: - - -

Contact Person: *All license-related news will be sent to this person.*

Email:

Repeat email:

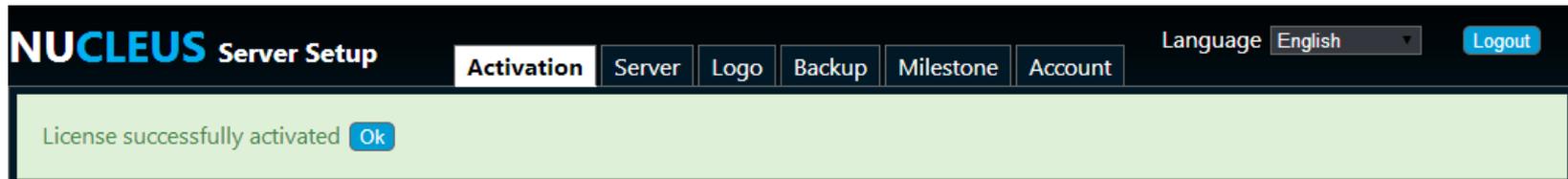
Organization:

Telephone:

Address:

2.3 Server Activation

6. You will see a screen below once the activation is successful; click "OK" to finish the license activation process.



After the NUCLEUS license has been activated, the activation page will show details of the license.

2.3 Server Activation

NUCLEUS Server Setup

Language English [Logout](#)

Activation Server Logo Backup Milestone Account

Your existing NUCLEUS license:

Product key: **NUC-400-xxxxx-01**

NUCLEUS Trial Edition for VM

Version: 4.5.0

License activated on Sep 14 2015 6:00 PM+08:00

Trial version - Expires on Sep 13 2016 6:00 PM+08:00

Limit type	Licenses
3D sites	100
Device placemarks	
Passive	1000
Active	1000
Fusion upgrades	1000
Object placemarks	1000
Feature Allowed	
Virtual machine support	Yes
3D multi-touch control	Yes
Smart tour module	Yes
Planning module	Yes

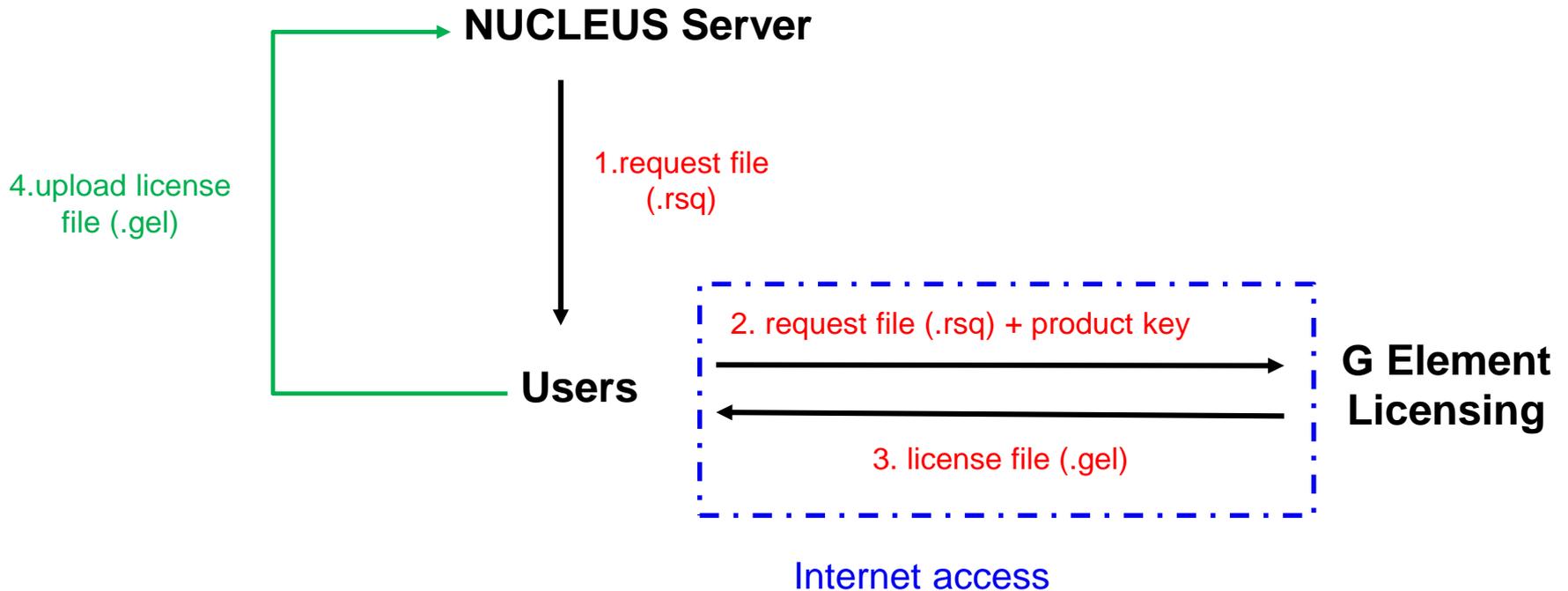
2.3 Server Activation

A NUCLEUS Server does not always can access Internet directly. For example, a NUCLEUS Server may locate at a military camp with only Intranet network.

In such a scenario, NUCLEUS can still be activated, albeit **manually**.

2.3 Server Activation

Manual Activation



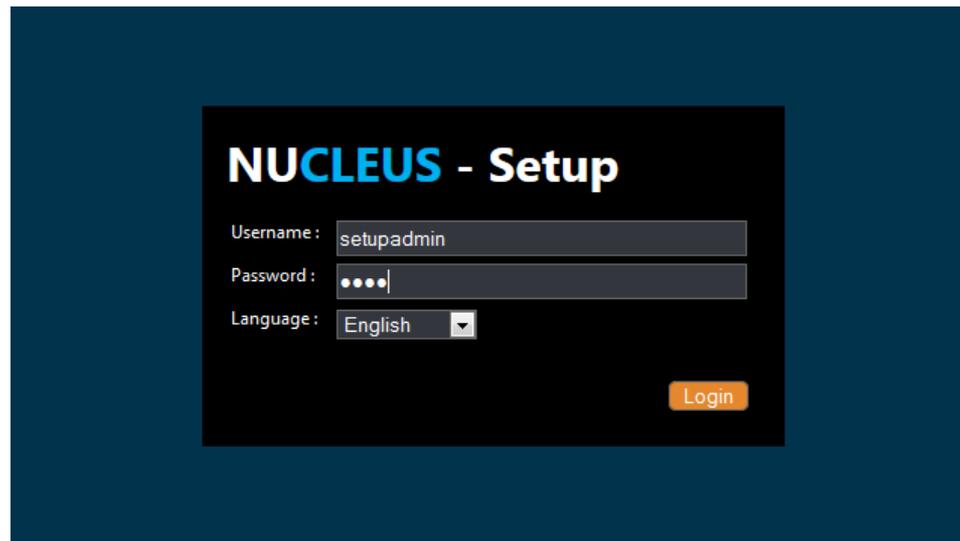
2.3 Server Activation

Manual Activation

1. Start browser and login to <http://NUCLEUS-Server-IP/nu/setup>
(or <http://NUCLEUS-Server-IP:<port>/nu/setup>);

2. Login to Setup by:

Username: **setupadmin** Password: **pass**



NUCLEUS - Setup

Username : setupadmin

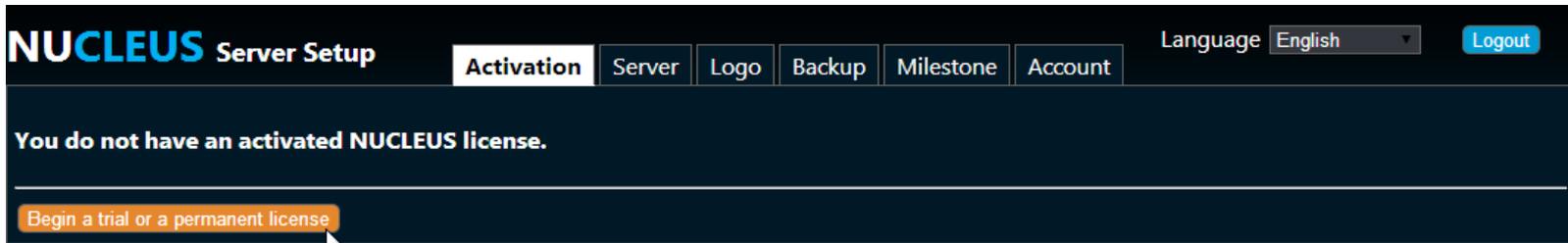
Password : ●●●●

Language : English ▼

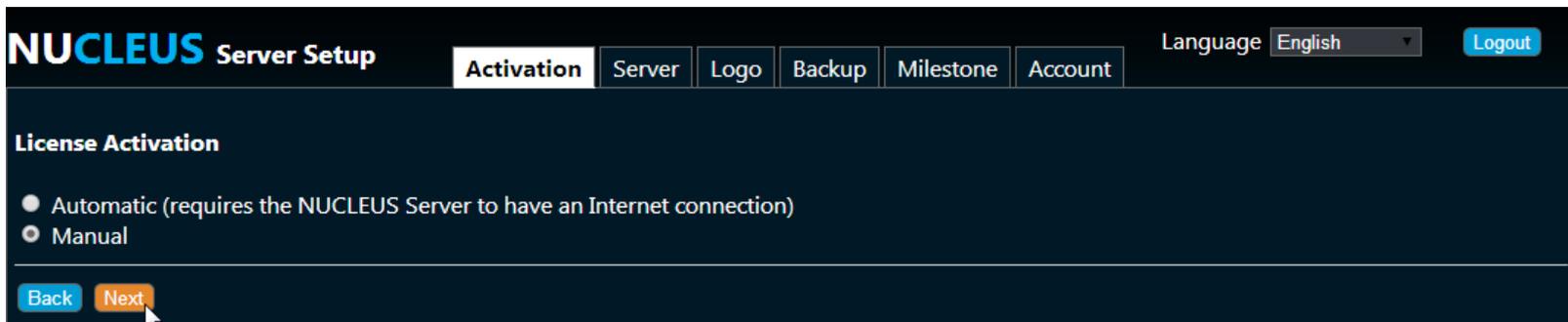
Login

2.3 Server Activation

3. You will see the below interface if you do not have a NUCLEUS license activated, click "Begin a trial or a permanent license".

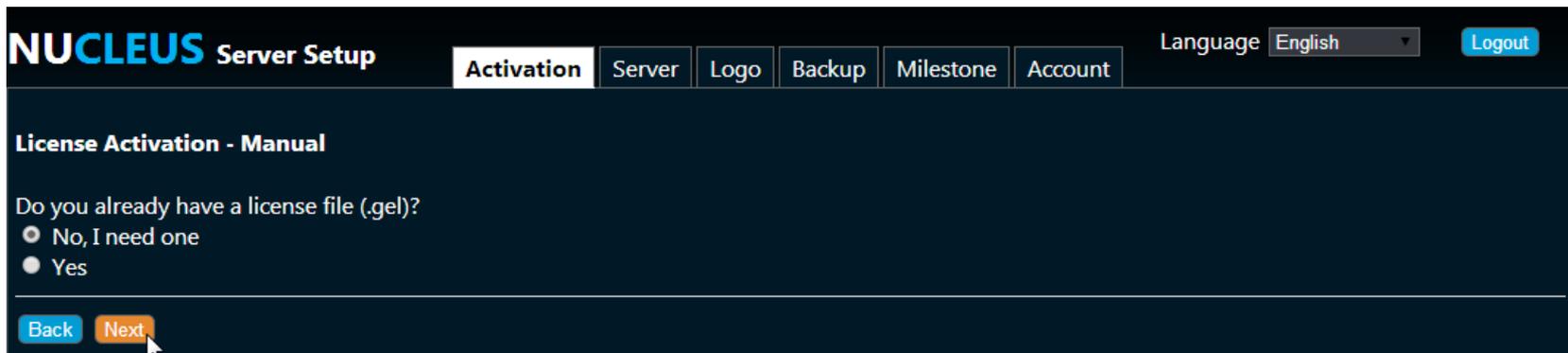


4. Select "Manual" activation method and then click "next".



2.3 Server Activation

5. Select "No, I need one".



NUCLEUS Server Setup

Activation Server Logo Backup Milestone Account

Language English Logout

License Activation - Manual

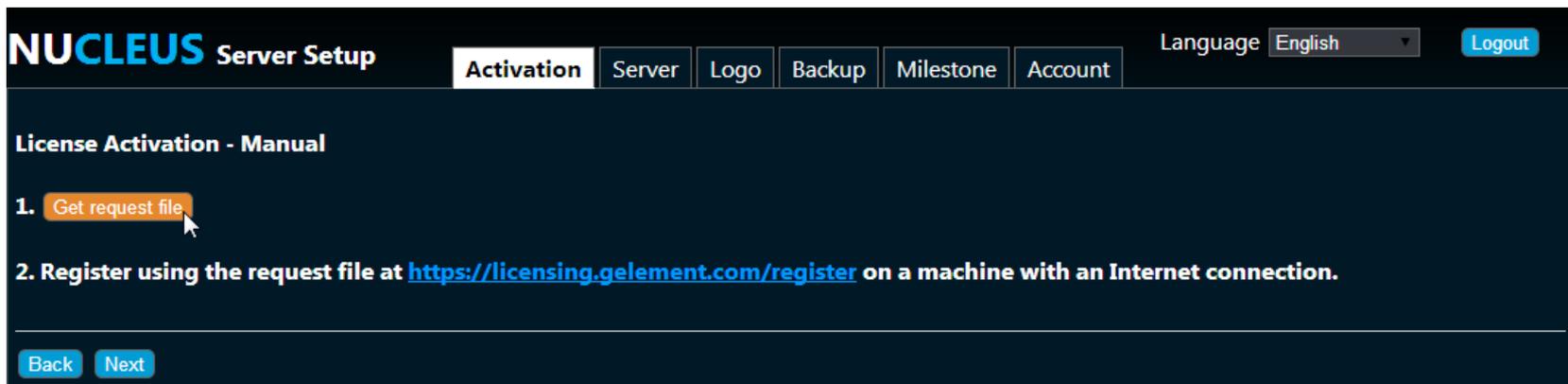
Do you already have a license file (.gel)?

No, I need one

Yes

Back Next

6. Click "Get request file".



NUCLEUS Server Setup

Activation Server Logo Backup Milestone Account

Language English Logout

License Activation - Manual

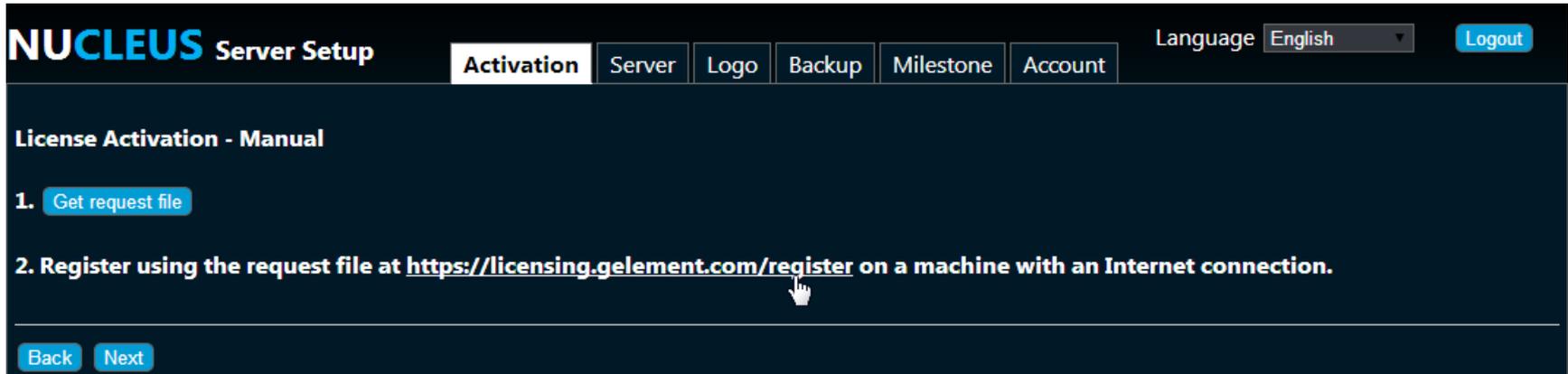
1. Get request file

2. Register using the request file at <https://licensing.gelement.com/register> on a machine with an Internet connection.

Back Next

2.3 Server Activation

7. Get the **.rsq** file, visit <https://licensing.gelement.com/register> from a machine with an Internet connection.



The screenshot shows the NUCLEUS Server Setup interface. The top navigation bar includes the NUCLEUS logo, "Server Setup", and a series of tabs: "Activation" (highlighted), "Server", "Logo", "Backup", "Milestone", and "Account". On the right, there is a "Language" dropdown menu set to "English" and a "Logout" button. The main content area is titled "License Activation - Manual" and contains two numbered steps:

1. [Get request file](#)
2. Register using the request file at <https://licensing.gelement.com/register> on a machine with an Internet connection.

At the bottom of the main content area, there are "Back" and "Next" buttons.

8. Upload the **.rsq** file and fill in other information to submit. Then, you will be directed to a confirmation page.

2.3 Server Activation



Product Key Registration

Please provide valid and genuine information for Contact Person, Email and Organization name. Submitting invalid or non-genuine information may lead to the rejection of your request or invalidation of your license.

Product key*

Request file* NUC-400.rsq



Contact person*

Email*

Organization*

Telephone

Address

Email a copy of the license file to me

2.3 Server Activation

element

Product Key Registration

Please provide valid and genuine information for Contact Person, Email and Organization name. Submitting invalid or non-genuine information may lead to the rejection of your request or invalidation of your license.

Product key* NUC-40
Request file* Choos
Contact person* Angelin
Email* angelin
Organization* Acme O
Telephone 123456
Address 2822 Marqu
 Em
Submit

Confirmation

Please review the following information which will be used to register your product key:

Product key	NUC-400-XXXXX-XX
Contact person	Angeline
Email	angeline@mail.com
Organization	Acme Org.
Telephone	12345678
Address	2822 Railroad Street Marquette, MI 49855

Go

* Note that fields marked with an asterisk (*) is mandatory

2.3 Server Activation

8. You will see this page once registration is successful; you can download the **license** file.



Product Key Registration

Registration for product key **NUC-400-XXXXX-XX** is successfully completed. A copy of the license file may be [downloaded here](#). Please use it for activating the license on **TULLY**.

Your trial license will be valid for 30 days starting from 7-Mar-2014.

If you wish to purchase a permanent license, please contact sales@element.com.

For licensing enquiries, please contact licensing@element.com.

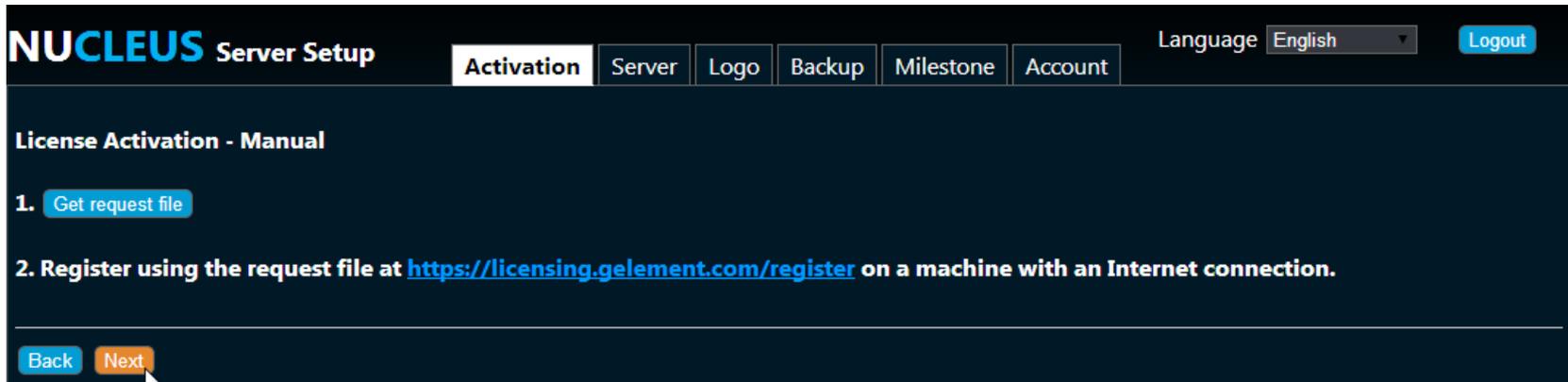
Registration Details

Name: Angeline
Organization: Acme Org.
Email: angeline@mail.com
Telephone: 12345678
Address: 2822 Railroad Street Marquette, MI 49855

[Go back](#) to register another product key.

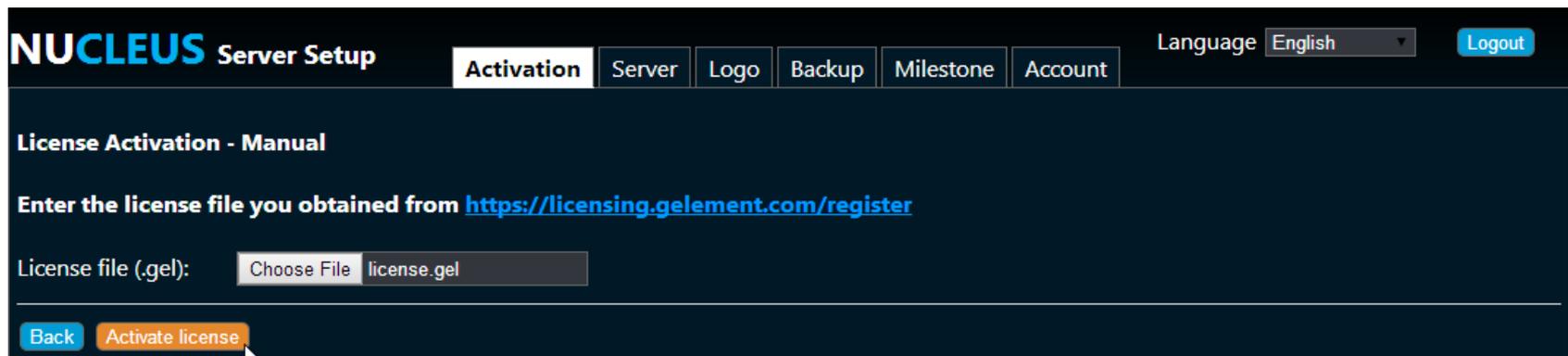
2.3 Server Activation

9. Return to the NUCLEUS Server setup page and click "next".



The screenshot shows the 'NUCLEUS Server Setup' interface. The 'Activation' tab is selected in the top navigation bar. The page title is 'License Activation - Manual'. The first step is '1. Get request file', with a 'Get request file' button. The second step is '2. Register using the request file at <https://licensing.gelement.com/register> on a machine with an Internet connection.' At the bottom, there are 'Back' and 'Next' buttons, with a mouse cursor pointing to the 'Next' button.

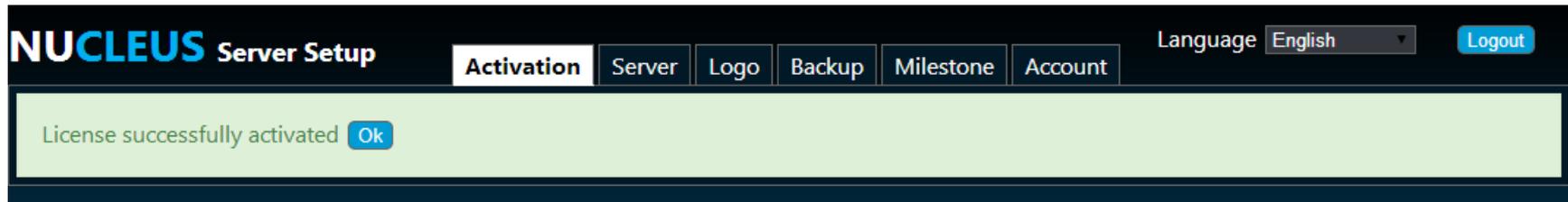
10. Upload the license file and click "activate license".



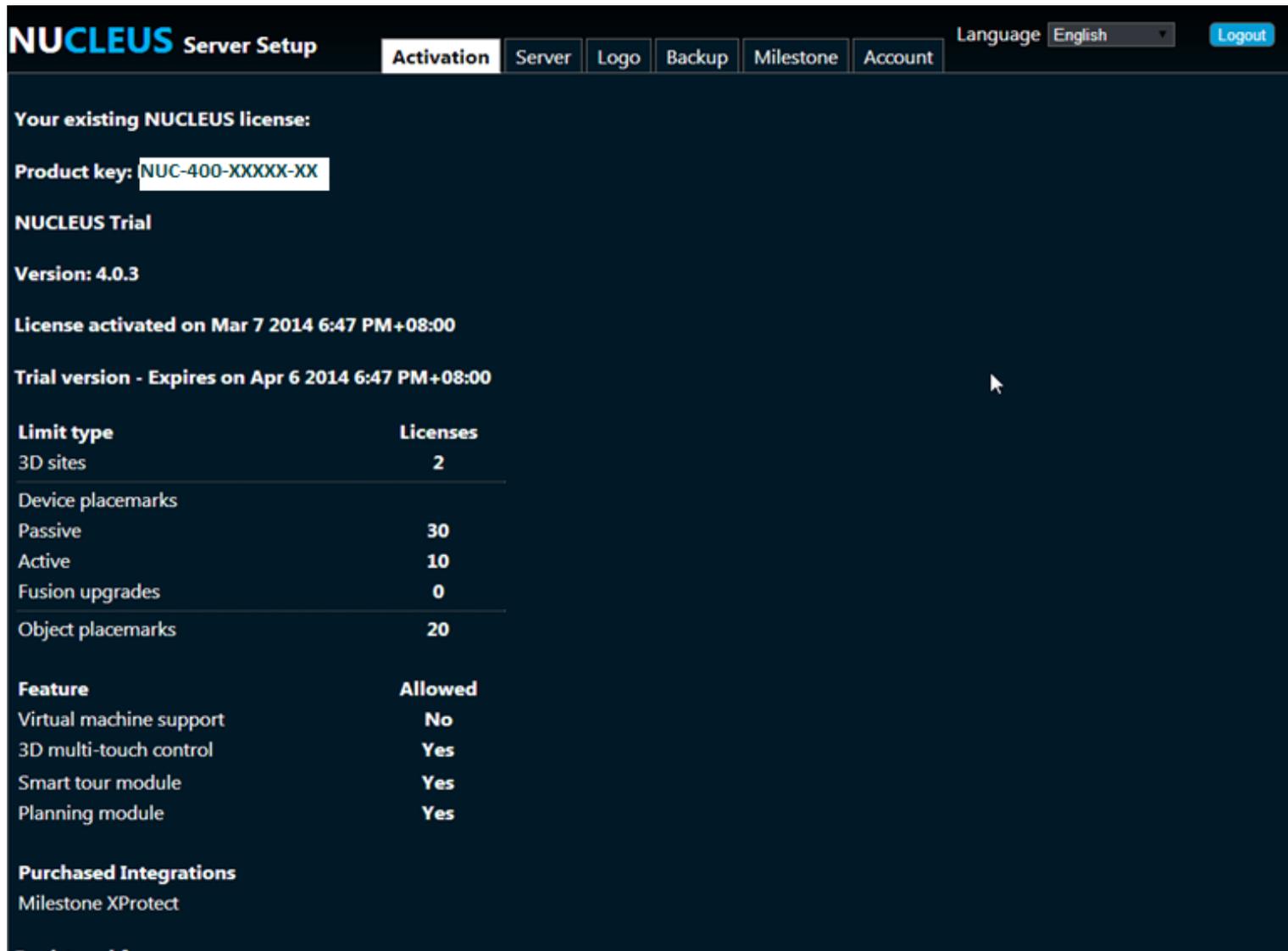
The screenshot shows the 'NUCLEUS Server Setup' interface. The 'Activation' tab is selected. The page title is 'License Activation - Manual'. The instruction is 'Enter the license file you obtained from <https://licensing.gelement.com/register>'. Below this, there is a text input field labeled 'License file (.gel):' with a 'Choose File' button and the filename 'license.gel' displayed. At the bottom, there are 'Back' and 'Activate license' buttons, with a mouse cursor pointing to the 'Activate license' button.

3.3 Server Activation

11. Once the license is activated, you will see this page.



2.3 Server Activation



NUCLEUS Server Setup

Language English [Logout](#)

Activation Server Logo Backup Milestone Account

Your existing NUCLEUS license:

Product key: **NUC-400-XXXXX-XX**

NUCLEUS Trial

Version: 4.0.3

License activated on Mar 7 2014 6:47 PM+08:00

Trial version - Expires on Apr 6 2014 6:47 PM+08:00

Limit type	Licenses
3D sites	2
Device placemarks	
Passive	30
Active	10
Fusion upgrades	0
Object placemarks	20

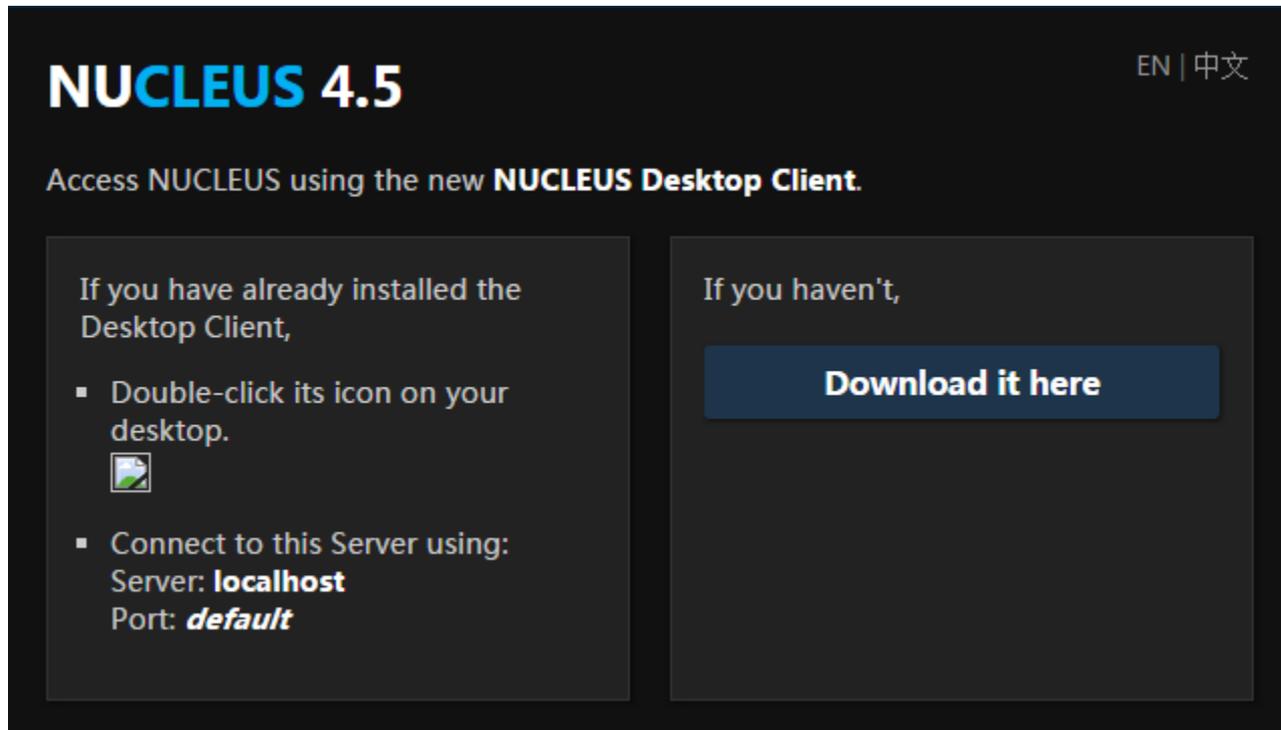
Feature	Allowed
Virtual machine support	No
3D multi-touch control	Yes
Smart tour module	Yes
Planning module	Yes

Purchased Integrations

Milestone XProtect

2.4 Client Setup

1. On your client machine, open a web browser to visit: <http://NUCLEUS-Server-IP/nu> (or <http://NUCLEUS-Server-IP:<port>/nu>); and you will see this page:



The screenshot shows the NUCLEUS 4.5 Desktop Client setup page. The page has a dark background with white and blue text. At the top left, it says "NUCLEUS 4.5" in large blue and white letters. At the top right, there are language options "EN | 中文". Below the title, it says "Access NUCLEUS using the new NUCLEUS Desktop Client." There are two main sections: one for users who have already installed the Desktop Client and one for users who haven't. The first section includes instructions to double-click the icon on the desktop and connect to the server using "localhost" and "default" port. The second section has a prominent "Download it here" button.

NUCLEUS 4.5 EN | 中文

Access NUCLEUS using the new **NUCLEUS Desktop Client**.

If you have already installed the Desktop Client,

- Double-click its icon on your desktop.

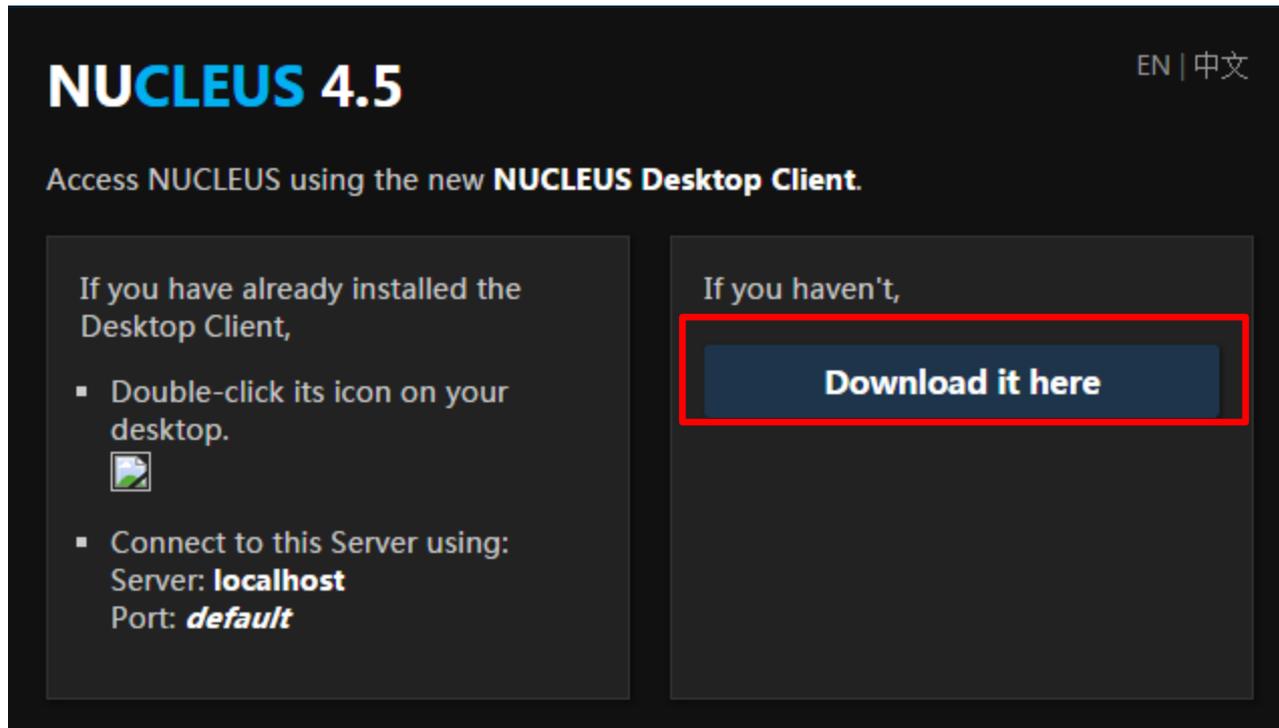
- Connect to this Server using:
Server: **localhost**
Port: **default**

If you haven't,

[Download it here](#)

2.4 Client Setup

2. Click the "Download it here" to obtain the Desktop Client installer.



NUCLEUS 4.5 EN | 中文

Access NUCLEUS using the new **NUCLEUS Desktop Client**.

If you have already installed the Desktop Client,

- Double-click its icon on your desktop.

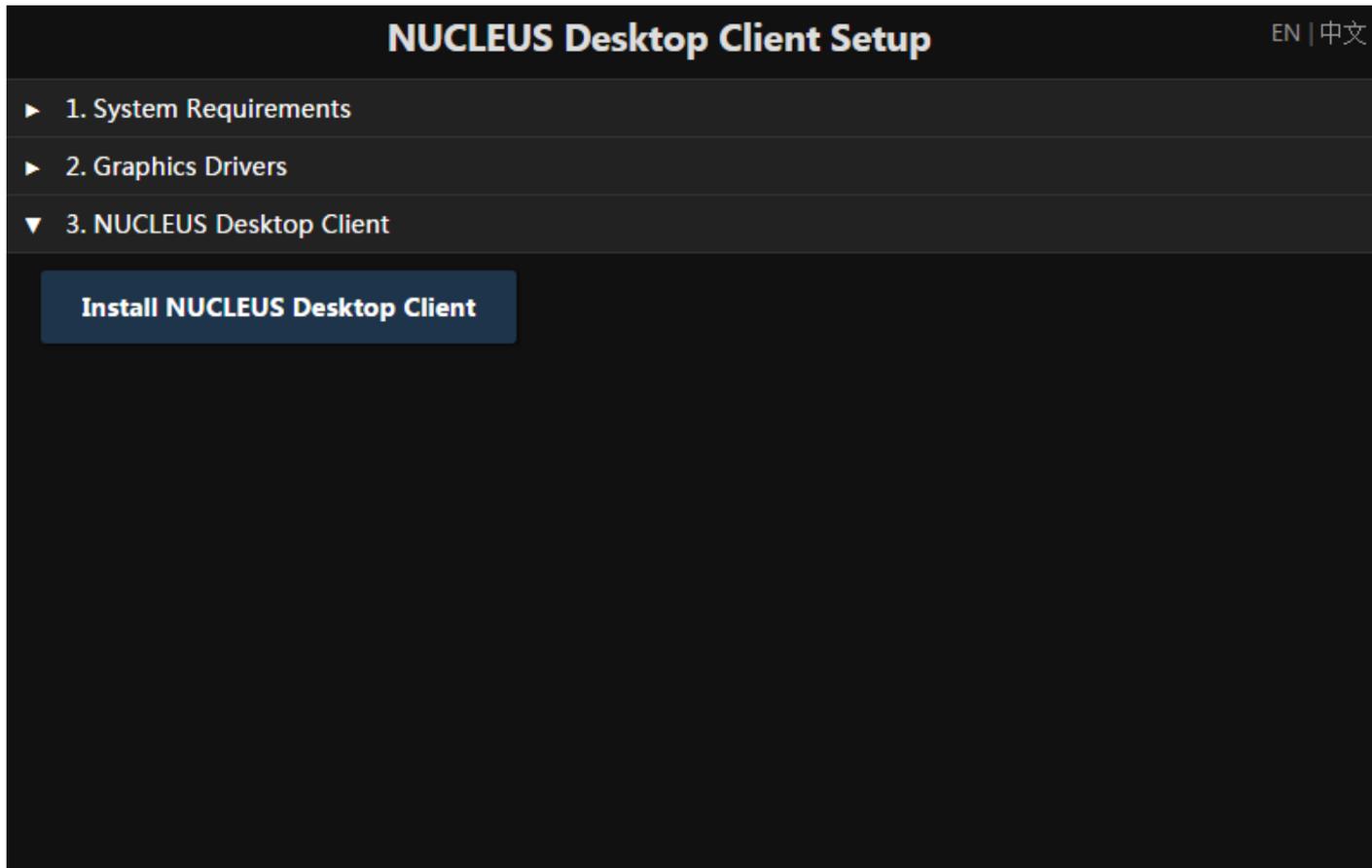
- Connect to this Server using:
Server: **localhost**
Port: **default**

If you haven't,

[Download it here](#)

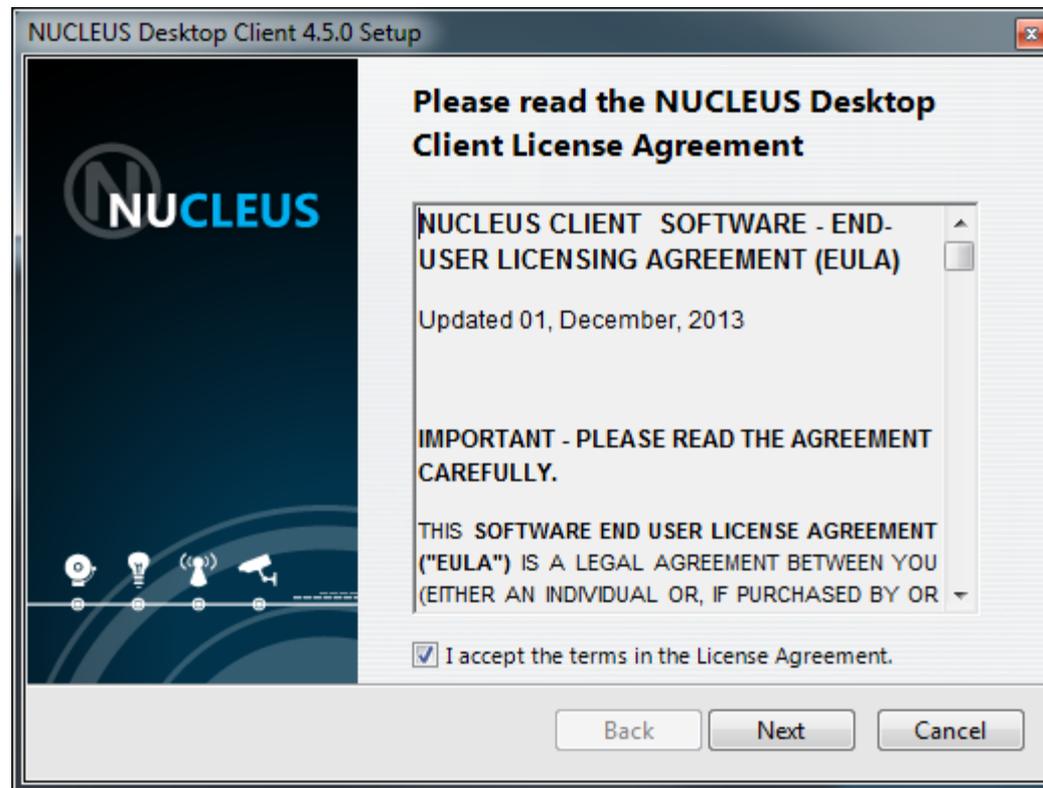
2.4 Client Setup

3. Click “Install NUCLEUS Desktop Client” button to download the installer.



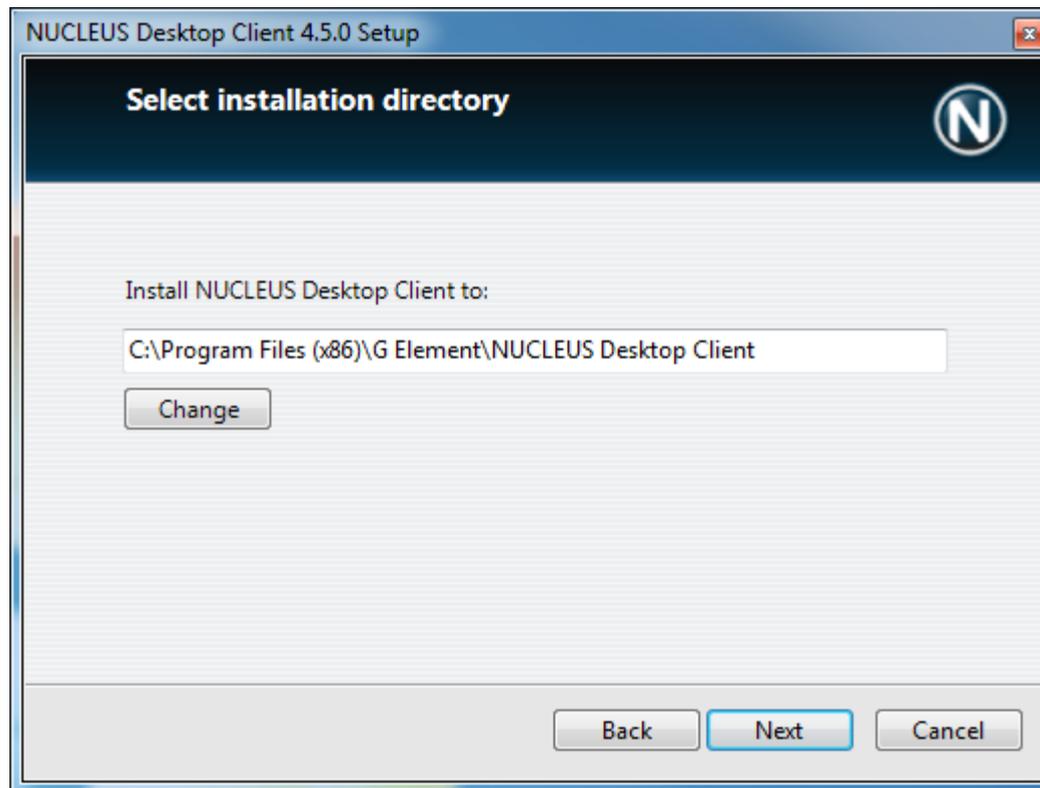
2.4 Client Setup

4. Double-click the installer to start to install the NUCLEUS Desktop Client.



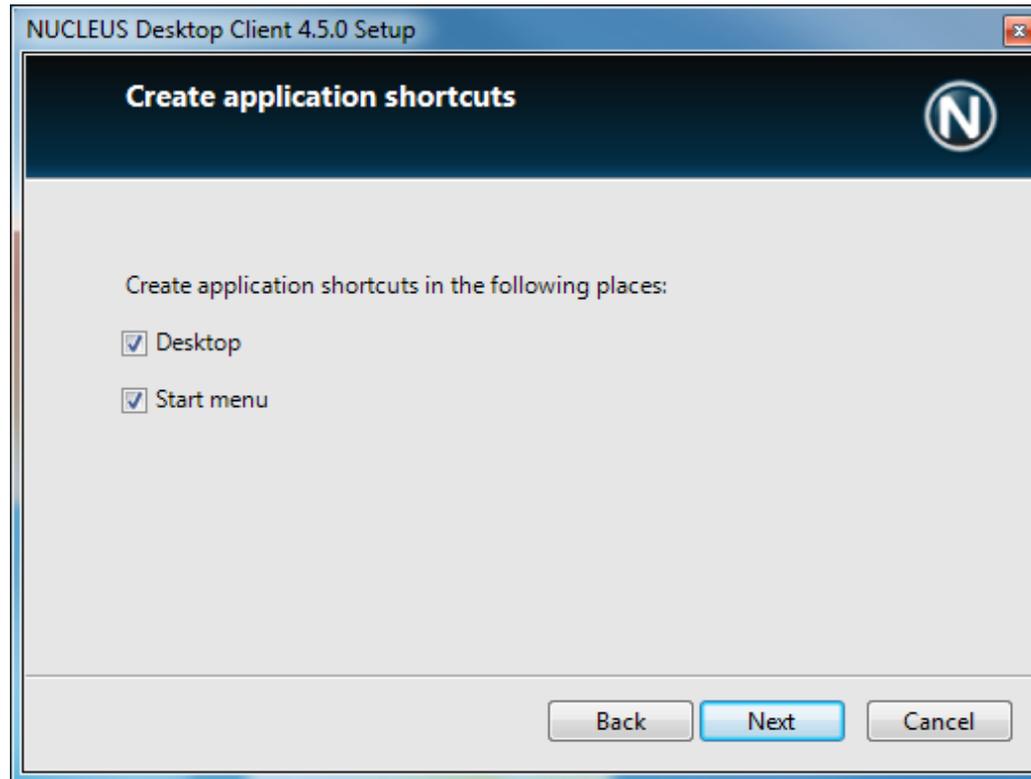
2.4 Client Setup

5. You can change the default installation directory.



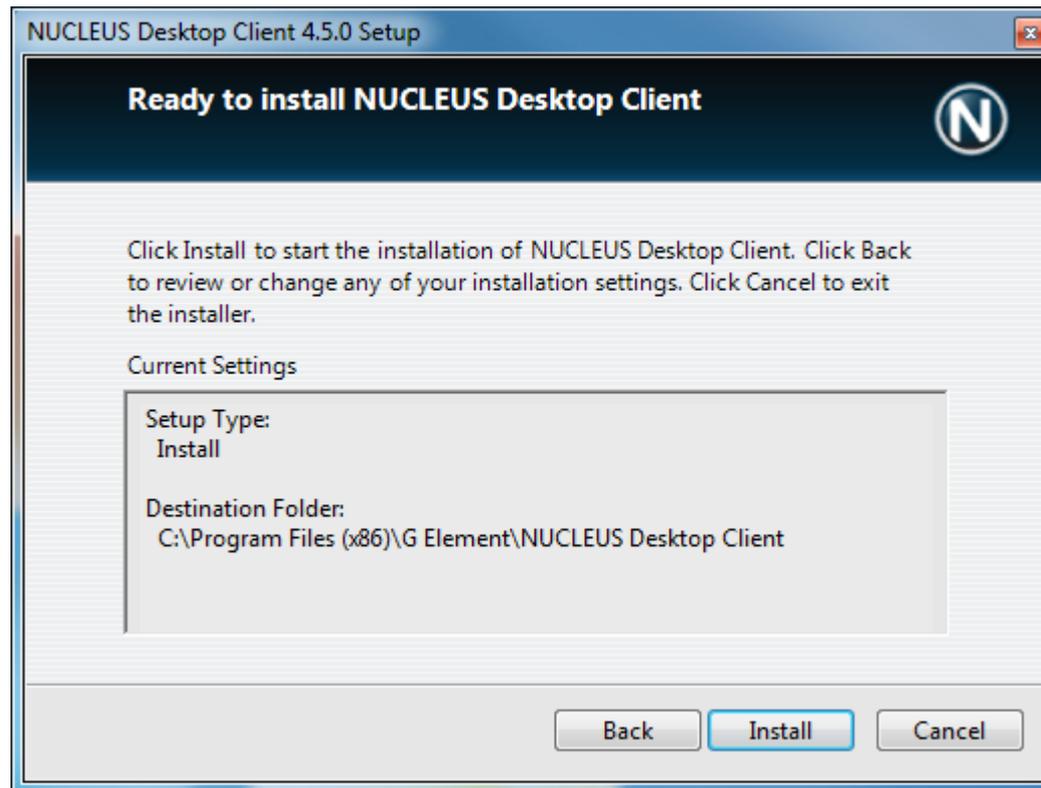
2.4 Client Setup

6. You can select where to put the Desktop Client shortcut.



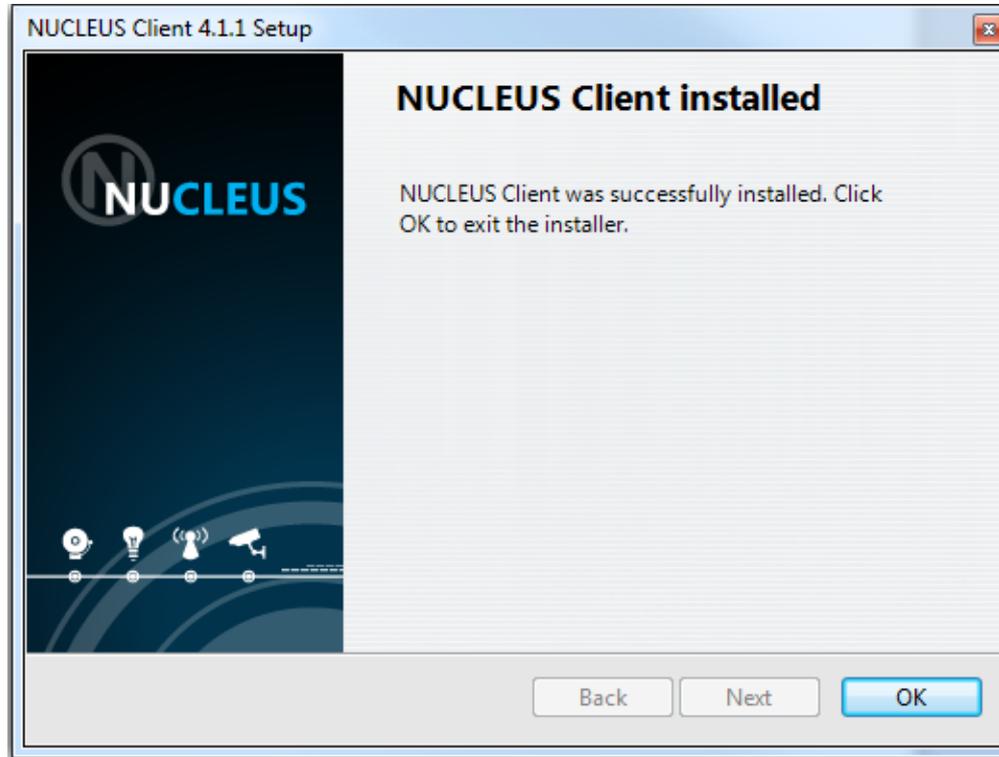
2.4 Client Setup

6. Confirm the installation information and then click “install” to start process.



2.4 Client Setup

7. Click "OK" to finish the NUCLEUS Client installation.



Note: **restart your browser** after installing the NUCLEUS client.

2.5 Uninstallation

If you wish to uninstall your NUCLEUS Server or client:

Start->Control Panel->Programs and Features->NUCLEUS Server
->Uninstall->**remove**

If you wish to **change the NUCLEUS Server's HTTP Port number**, Start->Control Panel->Programs and Features -> NUCLEUS Server ->Uninstall->**repair**

Note that: this uninstallation **will not remove your NUCLEUS license**. If you re-install NUCLEUS Server, your license will still be usable (if your license has not expired) unless the operating system is re-installed too.

3. Server Data Backup

3. Server Data Backup

3.1 About Backup

3.2 Create a Backup

3.3 Transfer a Backup

3.1 About Backup

The backup feature can help you store a NUCLEUS state and quickly restore it when necessary.

The backup can be downloaded and transferred between NUCLEUS Servers.

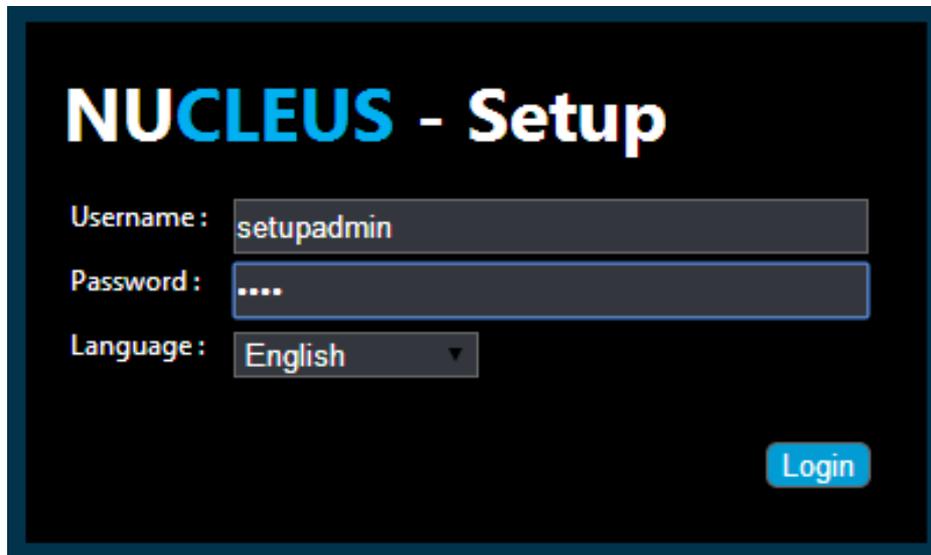
NUCLEUS Setup Administrator has the permission to manage backups.

3.1 About Backup

- A backup **includes** the data:
sites, profiles, devices, objects, bookmarks, tours, custom icon/3D placemarks/device types, user account and audit trails (User data)
- A backup data **excludes** the data:
license, HTTP port, setupadmin account, system logo, Milestone adapter settings. (Server configuration).

3.2 Create a Backup

1. To create a backup, you should log in as a setupadmin at:
<http://<NUCLEUS-Server-IP>/nu/setup> (or <http://<NUCLEUS-Server-IP>:<port>/nu/setup>).
2. Username: **setupadmin** Password: **pass**



NUCLEUS - Setup

Username :

Password :

Language :

3.2 Create a Backup

3. Click on the “backup now” button to back up your data.

NUCLEUS Server Setup

Activation Server Logo **Backup** Milestone Account

Language English [Logout](#)

NUCLEUS Data Backup and Restore (beta)

Note: This tool will backup your data (sites, profiles, devices, objects, bookmarks, tours, user accounts), it **will not backup** the server configuration (license, HTTP port, setupadmin password, system logo, Milestone integration settings, etc).

Backing up Data

[Backup Now](#)

Upload Backup

Choose a backup file to upload No file chosen

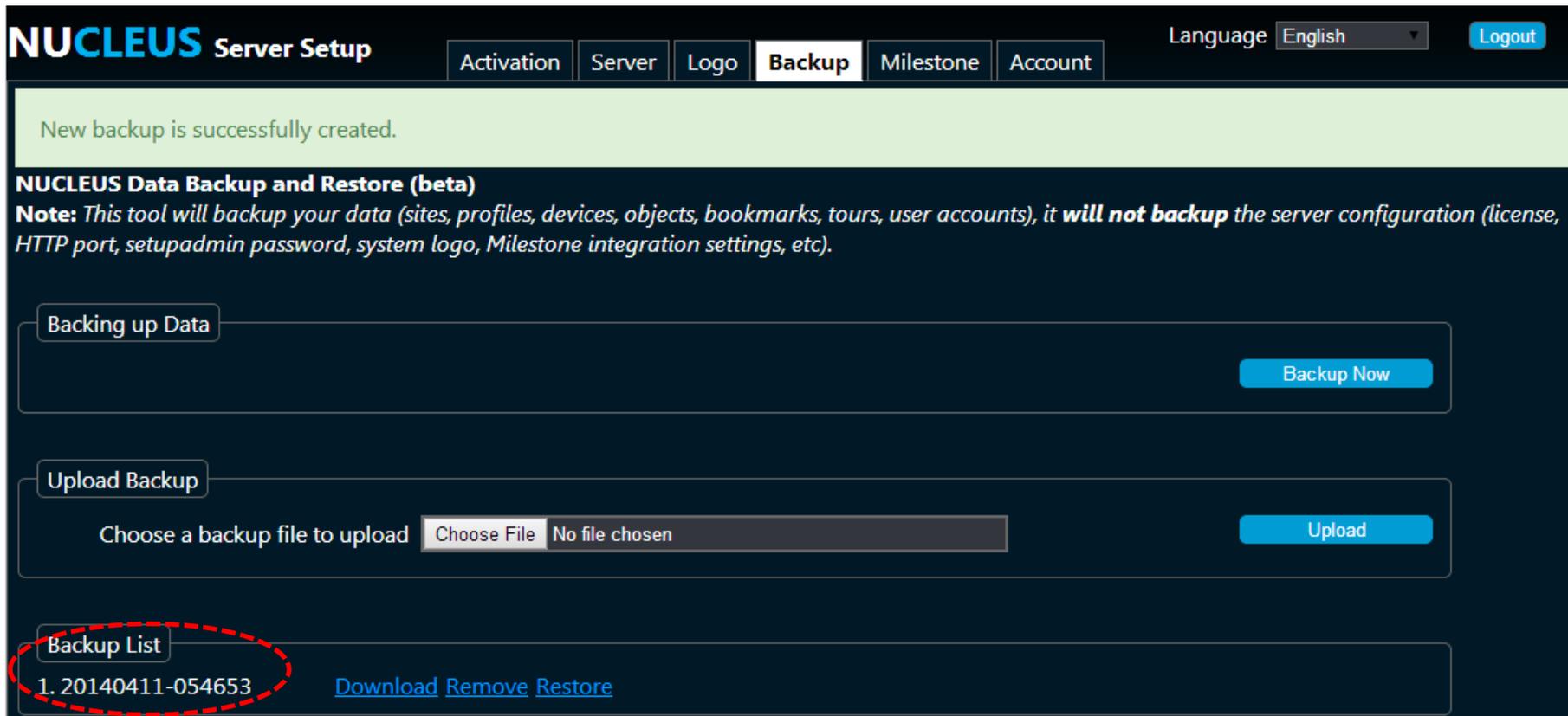
Backup List

There is no existing backups.

Please wait when the backup is in progress.

3.2 Create a Backup

4. An item will be added to the “Backup list” when a backup is successfully created.



The screenshot shows the NUCLEUS Server Setup interface. At the top, there is a navigation bar with tabs for Activation, Server, Logo, Backup (selected), Milestone, and Account. The Language is set to English, and there is a Logout button. A green message box states "New backup is successfully created." Below this, the section is titled "NUCLEUS Data Backup and Restore (beta)" with a note: "Note: This tool will backup your data (sites, profiles, devices, objects, bookmarks, tours, user accounts), it **will not backup** the server configuration (license, HTTP port, setupadmin password, system logo, Milestone integration settings, etc)." There are three main sections: "Backing up Data" with a "Backup Now" button; "Upload Backup" with a file upload area showing "Choose File" and "No file chosen" and an "Upload" button; and "Backup List" which contains a table with one entry: "1. 20140411-054653" with links for "Download", "Remove", and "Restore". The "Backup List" section is circled in red in the image.

Language English Logout

Activation Server Logo Backup Milestone Account

New backup is successfully created.

NUCLEUS Data Backup and Restore (beta)
Note: This tool will backup your data (sites, profiles, devices, objects, bookmarks, tours, user accounts), it **will not backup** the server configuration (license, HTTP port, setupadmin password, system logo, Milestone integration settings, etc).

Backing up Data Backup Now

Upload Backup Choose a backup file to upload Choose File No file chosen Upload

Backup List

1. 20140411-054653	Download Remove Restore
--------------------	---

3.2 Create a Backup

5. A backup in the list can be **removed**, **downloaded** as a transferable file, or accessed for restoration.

NUCLEUS Server Setup Activation Server Logo **Backup** Milestone Account Language English Logout

New backup is successfully created.

NUCLEUS Data Backup and Restore (beta)
Note: This tool will backup your data (sites, profiles, devices, objects, bookmarks, tours, user accounts), it **will not backup** the server configuration (license, HTTP port, setupadmin password, system logo, Milestone integration settings, etc).

Backing up Data Backup Now

Upload Backup
Choose a backup file to upload Choose File No file chosen Upload

Backup List

1. 20140411-054653	Download Remove Restore
--------------------	---

3.3 Transfer Backup

A backup can be transferred from the source server to a target server that runs NUCLEUS of the same version.

1. Download the backup.

NUCLEUS Server Setup Language English [Logout](#)

Activation Server Logo **Backup** Milestone Account

Downloading backup file. If the download doesn't start, please click [here](#)

NUCLEUS Data Backup and Restore (beta)
Note: This tool will backup your data (sites, profiles, devices, objects, bookmarks, tours, user accounts), it **will not backup** the server configuration (license, HTTP port, setupadmin password, system logo, Milestone integration settings, etc).

Backing up Data [Backup Now](#)

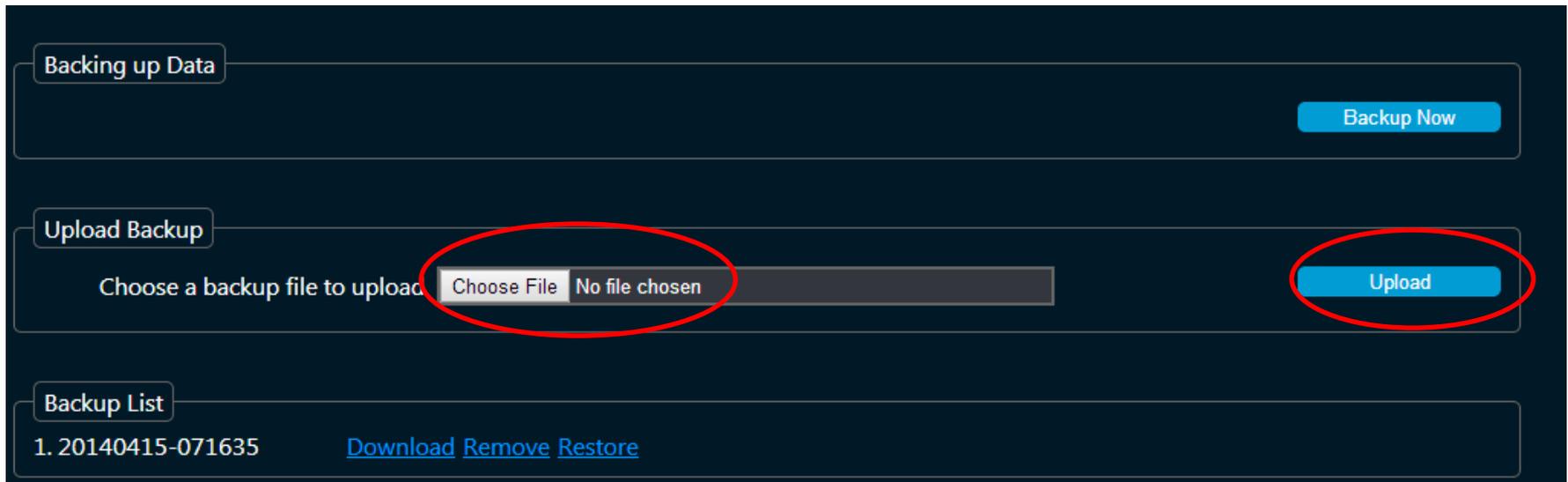
Upload Backup
Choose a backup file to upload [Choose File](#) No file chosen [Upload](#)

Backup List

1. 20140429-035613	Download	Remove	Restore
--------------------	--------------------------	------------------------	-------------------------

3.3 Transfer Backup

2. Migrate the backup file to the target NUCLEUS Server.
3. Upload the backup package into the NUCLEUS Server.



The screenshot displays the NUCLEUS backup management interface. It is divided into three main sections:

- Backing up Data:** Features a blue button labeled "Backup Now".
- Upload Backup:** Contains a file selection area with the text "Choose a backup file to upload" and a button labeled "Choose File" (which is circled in red). To the right of the file selection area is a button labeled "Upload" (also circled in red).
- Backup List:** Shows a list of backup entries. The first entry is "1. 20140415-071635" with three links: "Download", "Remove", and "Restore".

3.3 Transfer Backup

4. The result of the upload is to add a backup record in the list.

The screenshot displays a user interface for backup management, divided into three main sections:

- Backing up Data:** A section with a blue button labeled "Backup Now".
- Upload Backup:** A section with a text prompt "Choose a backup file to upload", a file selection button labeled "Choose File" (with "No file chosen" text), and a blue button labeled "Upload". Below the file selection area, there is a small grey box containing the text "No file chosen".
- Backup List:** A section containing a list of two backup records. Each record consists of an ID and three action links: "Download", "Remove", and "Restore".
 - Record 1: ID "20140415-071635", with links "Download", "Remove", and "Restore".
 - Record 2: ID "20140415-080225", with links "Download", "Remove", and "Restore".The second record and its associated links are highlighted with a red dashed border.

Note that: the uploading of a backup package does not restore directly. To restore, you need to explicitly click the "restore".

Warning:

Restoration using a backup will wipe out the original user data in the target NUCLEUS Server!

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