

**Tyrone**<sup>®</sup>



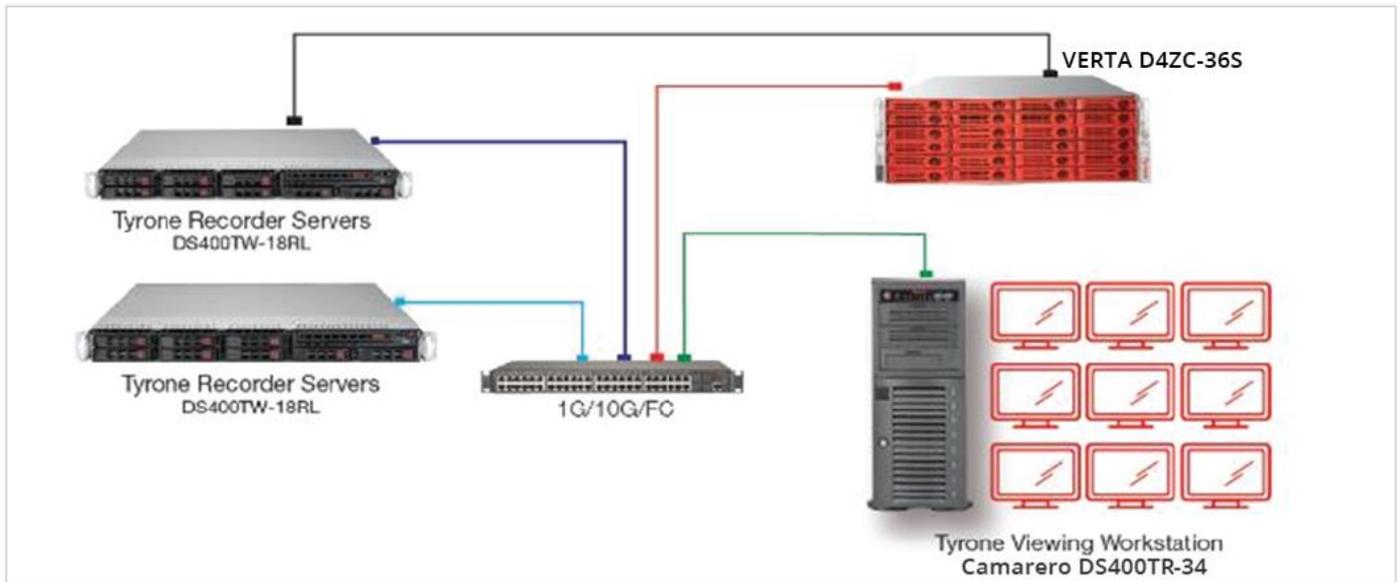
**milestone**

# VERTA

D4ZC-36S

**Installation Guide**

**Schematic Diagram**



**Tyrone**<sup>®</sup> VERTA  
D4ZC-36S



VERTA series from Tyrone Systems, consolidates all your storage requirements in a single all-in-one storage solution which is the most flexible solution around. Apart from offering flexibility, it bundles enterprise class features such as extremely high.

-   
DEDUPE
-   
DUAL  
CONTROLLER
-   
COMPRESSION
-   
ACCELERATION
-   
UNIFIED  
STORAGE
-   
REDUNDANCY
-   
SCALABILITY

**Specifications - VERTA D4ZC-36S**

<b>File Protocols</b>	CIFS/SMB, AFP, FTP, NFS & NFS over RDMA
<b>Block Protocols</b>	iSCSI Target, FC Target, SRP Target
<b>Interface Ports (per controller)</b>	<b>Gigabit Ethernet:</b> Up to 12 ports (RJ45) <b>10G,25G,40G,100G Ethernet:</b> Up to 4 ports (SFP+) <b>40G Ethernet:</b> Up to 2 ports (40GBASE-CR4) <b>Fibre-Channel:</b> Up to 4 ports <b>EDR InfiniBand:</b> Up to 4 ports (QSFP) <b>Intel Omni-path:</b> Up to 2 ports (In development)
<b>Advanced Features</b>	SSD Acceleration Snapshot Deduplication Replication Tape Emulation (VTL)
<b>System Hardware</b>	<b>Processor:</b> 2 Xeon <b>Memory:</b> 32GB (Max 512GB) <b>RAID Levels:</b> 0/1/5/6/10/50/60, with flash backed cache <b>HDD/SSD Bays (Hot-plug):</b> 36 LFF <b>HDD/SSD Type:</b> SAS/SATA <b>Max Expansion (JBOD):</b> 450 <b>Form Factor:</b> 4U

## **TYRONE VERTA ISCSI DISK CREATION**

### **INTRODUCTION**

#### **Log in**

To log in to the system, first acquire the IP address of the box. The default IP of OPSLAG FS2 is 192.168.0.60 After Logging, run a browser (preferably Mozilla Firefox) from any machine on the same network and access the IP.

#### **OPSLAG Verta**

Default IP: 192.168.0.60

User Type: Full Access Default

Password: opslag

## RAID

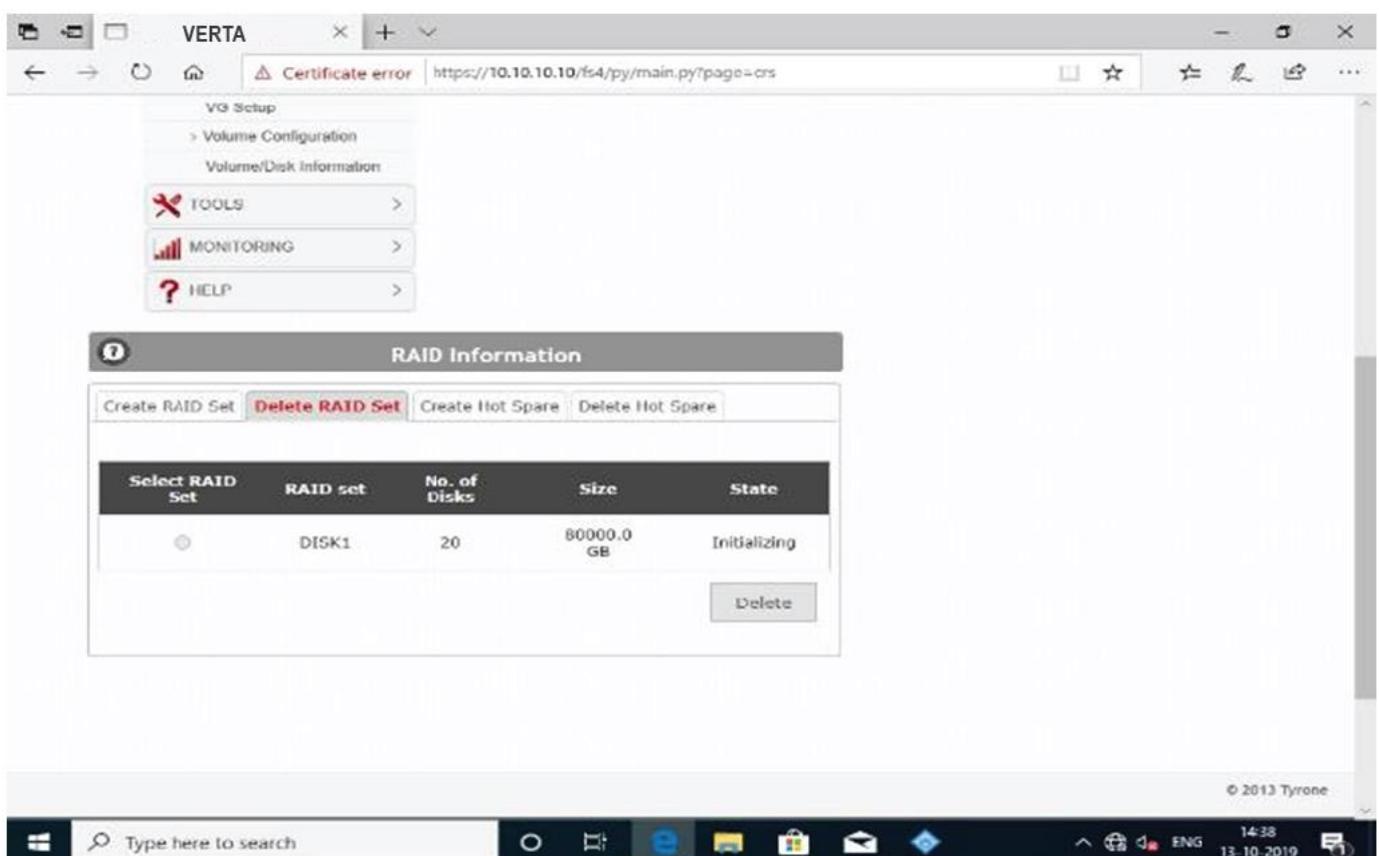
RAID (redundant array of independent disks; originally redundant array of inexpensive disks) is a way of storing the same data in different places on multiple [hard disks](#) to protect data in the case of a drive failure. However, not all RAID levels provide [redundancy](#).

### RAID Set Function:

In this tab we have the option to create/delete Raid set and create/delete Hot Spare. By the help of these tabs we can Configure Raid.

### Create Raid Set:

Here it shows hard disk and help to Create Raid Set. For Creating NAS Storage you have to Create RAID of the disks and then Add volume then it will show in Disk Configuration.



For Milestone we have created 1 raid set having 20 disks.

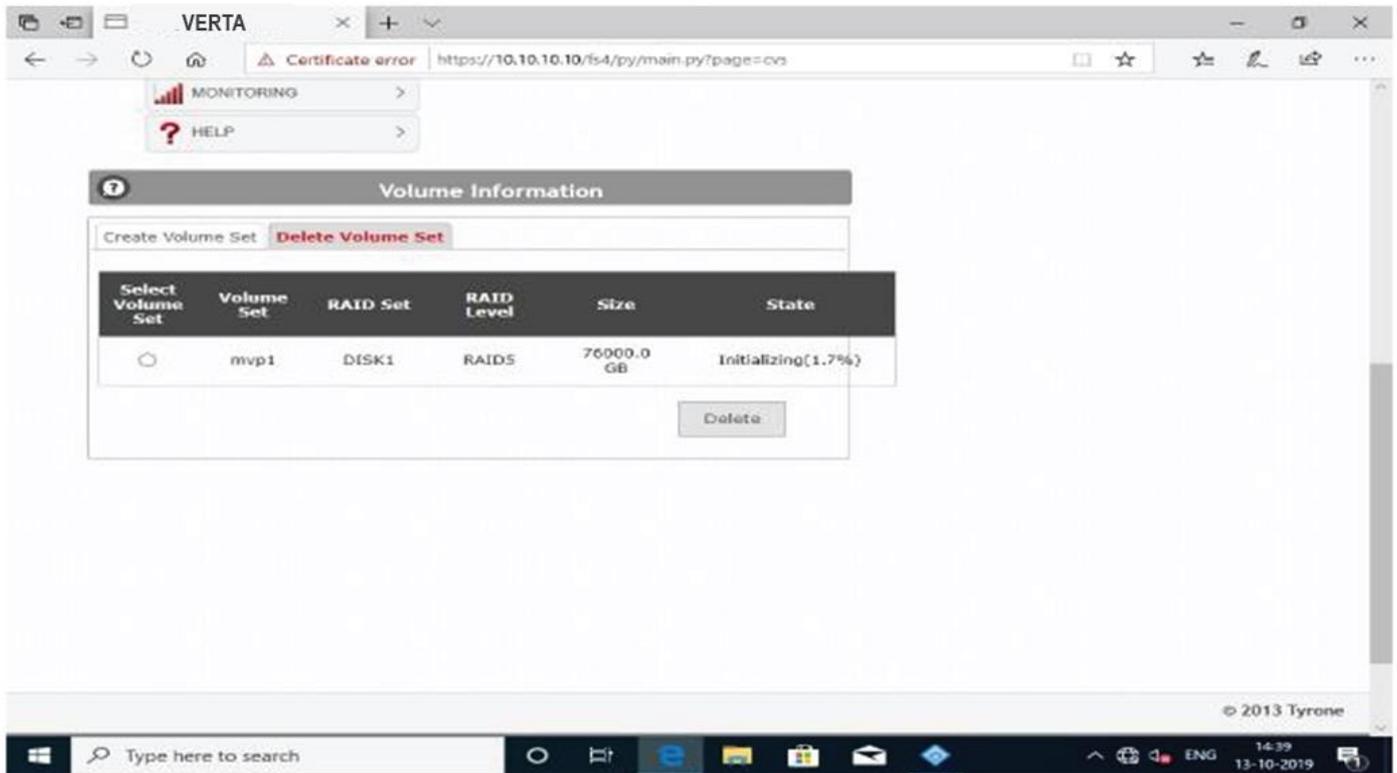
## Volume

### Volume Set Functions:

Volume set function is created by the help of Raid Set so if you want to create Volume set then first you need to create Raid Set. In Volume Set Function are two options first Create Volume set and Delete Volume Set.

### Create Volume Set:

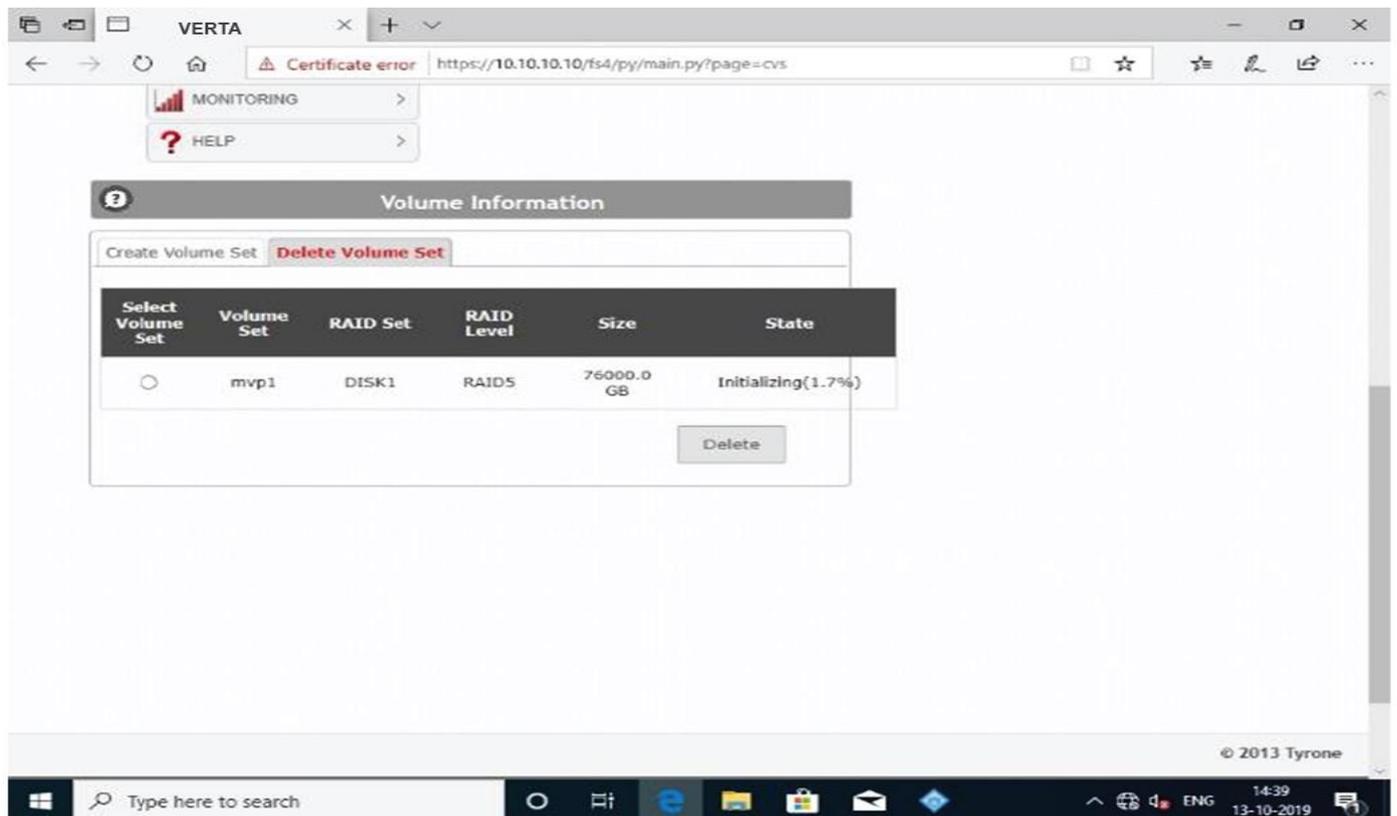
If you select Raid Set then you will have this info put volume Set Name and click on create and you can change Raid Level according to your wish.



VG setup:

In the Volume creation Section create the Volume. This can add only if VG is set up before. Otherwise No free disk available option will come.

Here we have added 1 volume for milestone:



## ADD Volume:

Here We add the Volume Group Which is set by volume set Function.

## **Volume Configuration**

### Disk Configuration:

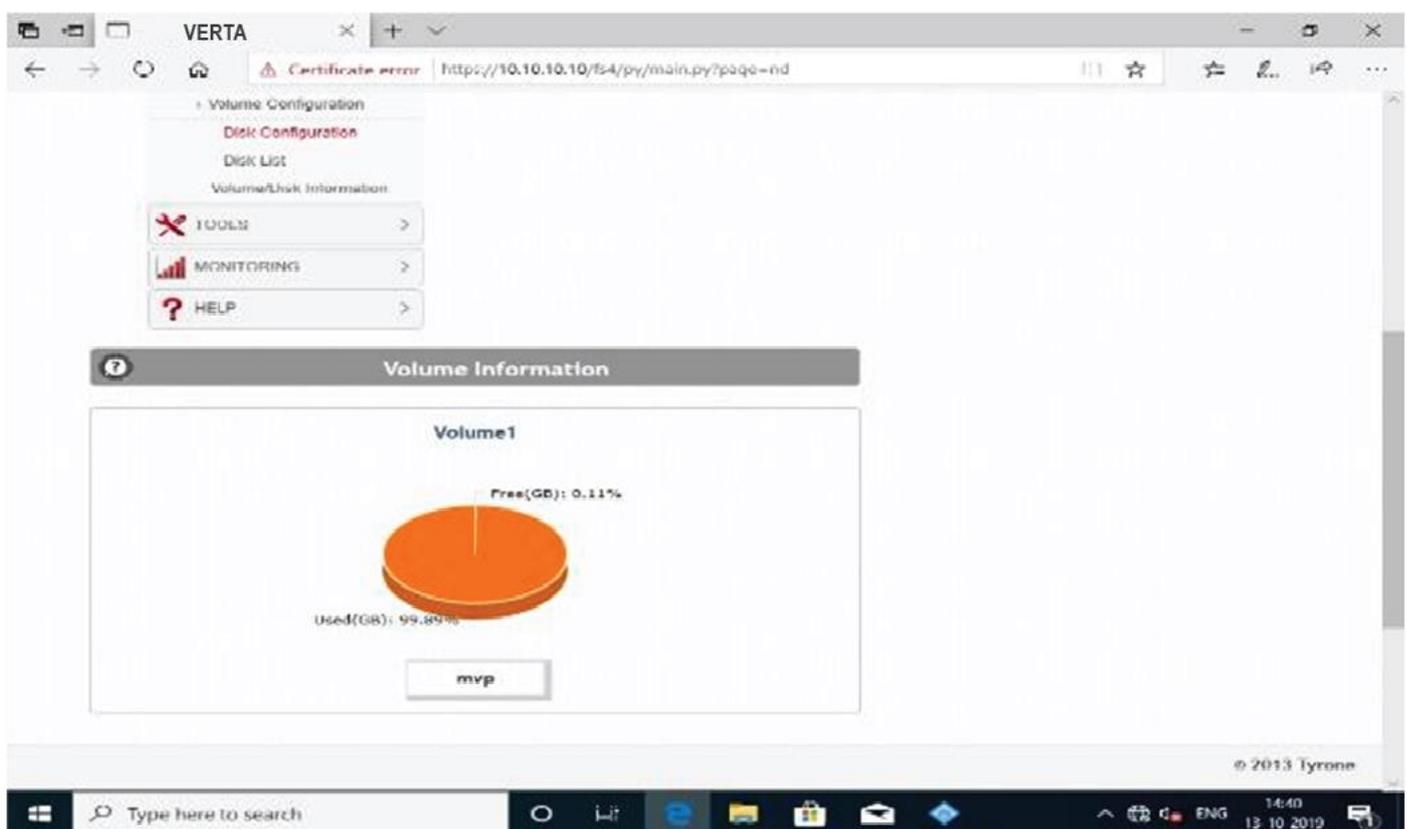
In this Section display the volume Information, and show the information of used and free size.

### Disk Creation option:

In this Section, when Click on the bottom of volume Configuration the a pop-up box is open and an option like NAS Disk,VTL Disk,Bio Disk and FIO Disk is pop-u.

### Disk Creation:

When click on the NAS disk option then a fancy-box is open for creation of NAS disk creation. On every option click like VTL BIO and FIO the same fancy-box will be open. Disk name cannot be more than 8 Char.



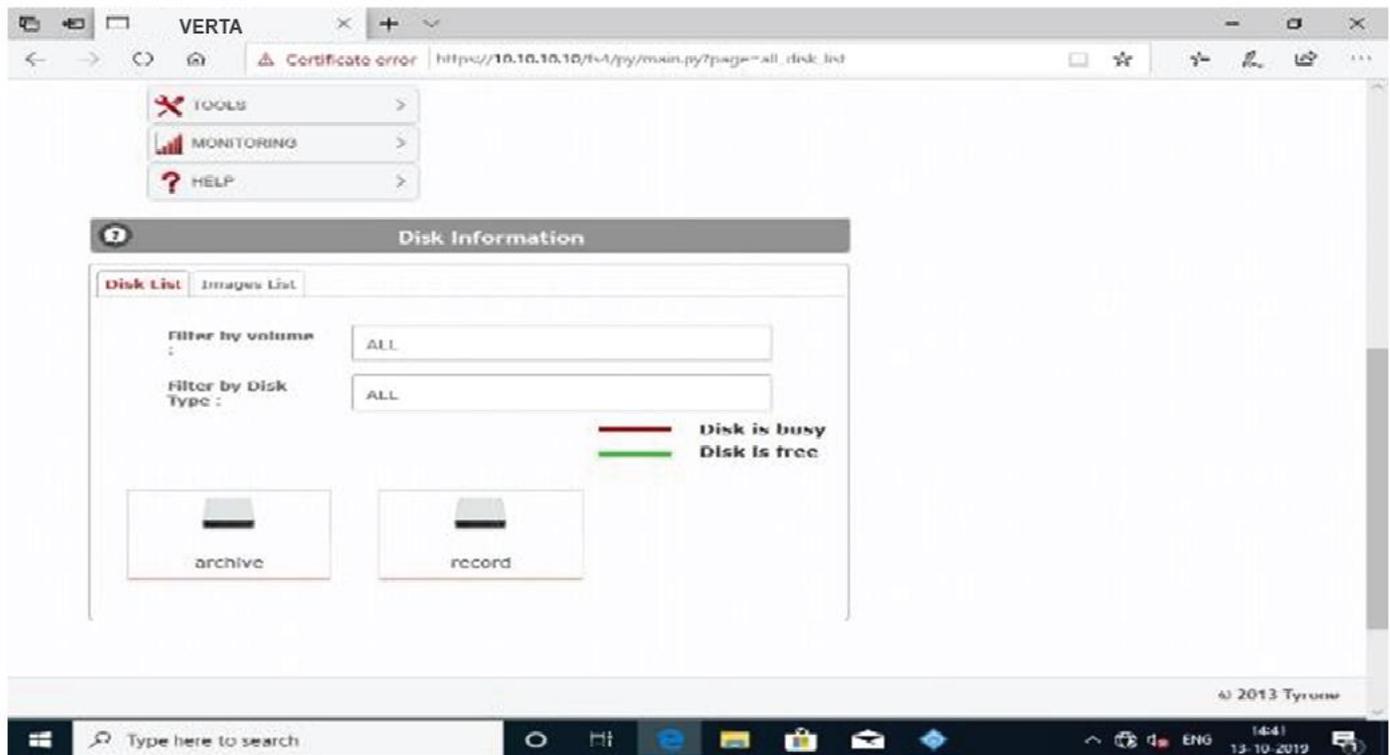
The screenshot displays the VERTA web interface. The browser window title is 'VERTA' and the address bar shows 'http://10.10.10.10/ES4/py/main.py?paqo=nd'. A navigation menu on the left includes 'Volume Configuration', 'Disk Configuration', 'Disk List', and 'Volume/Disk Information'. Below the menu are buttons for 'LOGOUT', 'MONITORING', and 'HELP'. The main content area is titled 'Volume Information' and shows a pie chart for 'Volume1'. The chart indicates 'Free(GB): 0.11%' and 'Used(GB): 99.89%'. A button labeled 'mvp' is positioned below the chart. The footer of the interface shows '© 2013 Tyrone'. The Windows taskbar at the bottom displays the search bar, system tray, and date/time '14:40 13/10/2019'.

## Disk List

In this Section Display all the created Disk Information. Click on the bottom of disk then an option will show like Increase size, Information and Delete. When you want Increase the disk size, click increase the small window will open and increase the size.

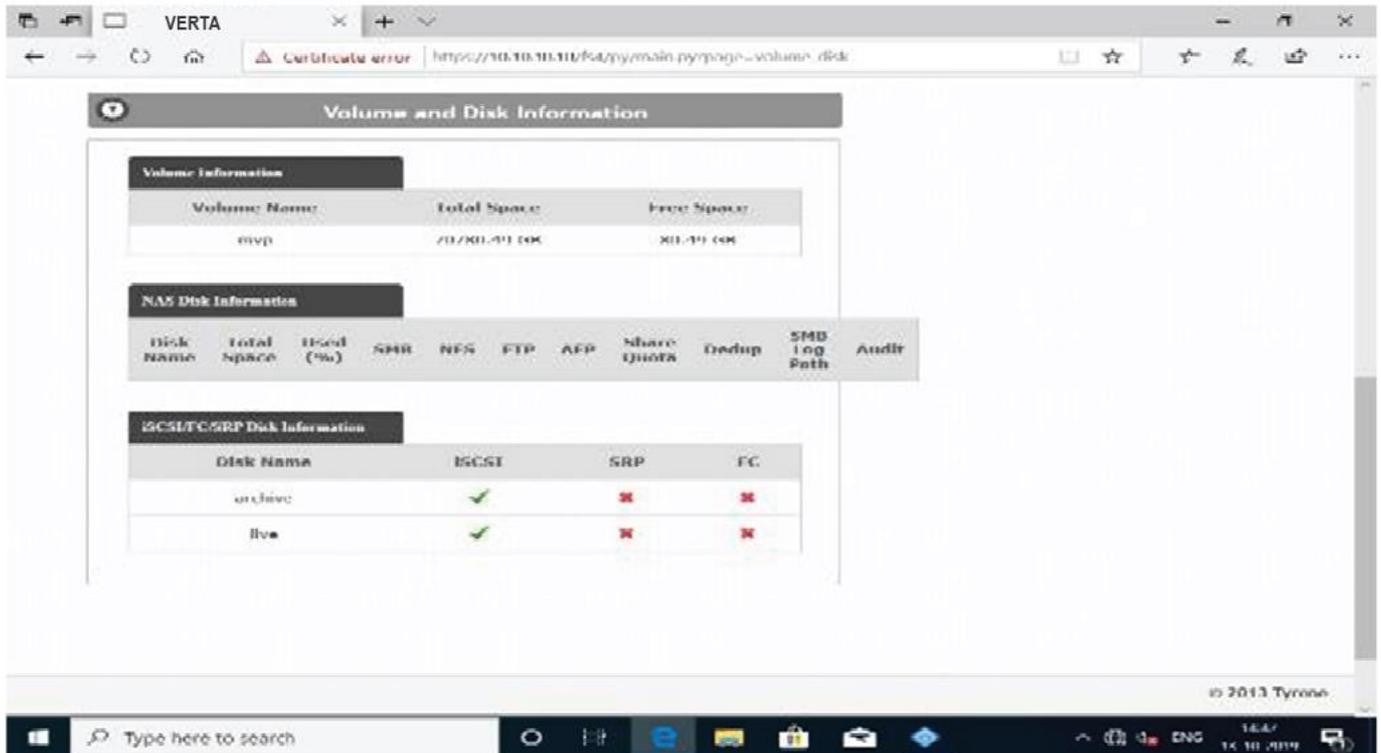
Record size- 30TB

Archive size- 40TB



## Volume Disk Information

Volume disk Information gave us basic idea about for the disk, volume and ISCSI/SRP/FC disk Information.

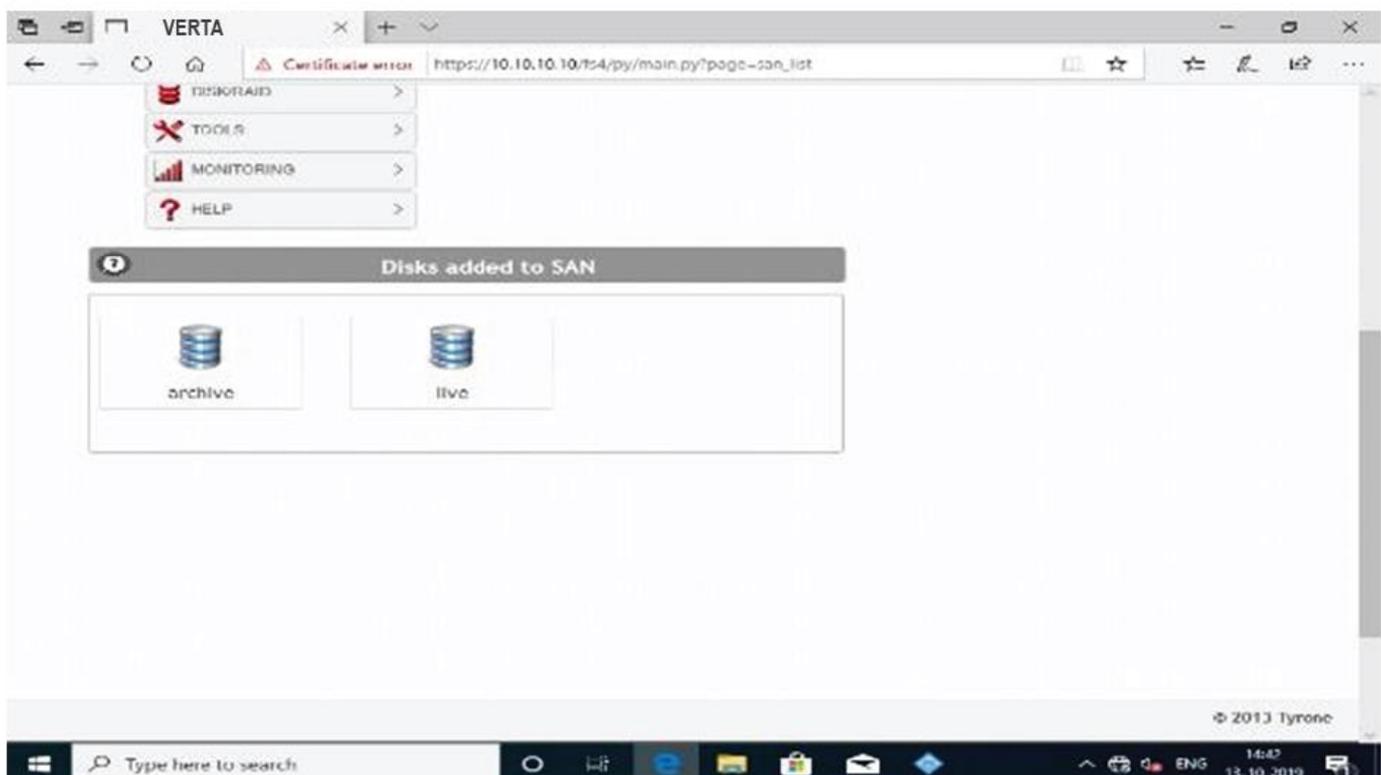


ISCSI/FC/SRP

A storage area network (SAN) is a dedicated network that provides access to consolidated, block level data storage. SAN are primarily used to enhance storage devices, such as disk arrays, tape libraries, and optical jukeboxes, accessible to servers so that the devices appear like locally attached devices to the operating system.

Volumes:

If we will add any disk to SAN from Disk list or from Image list it will come up here.

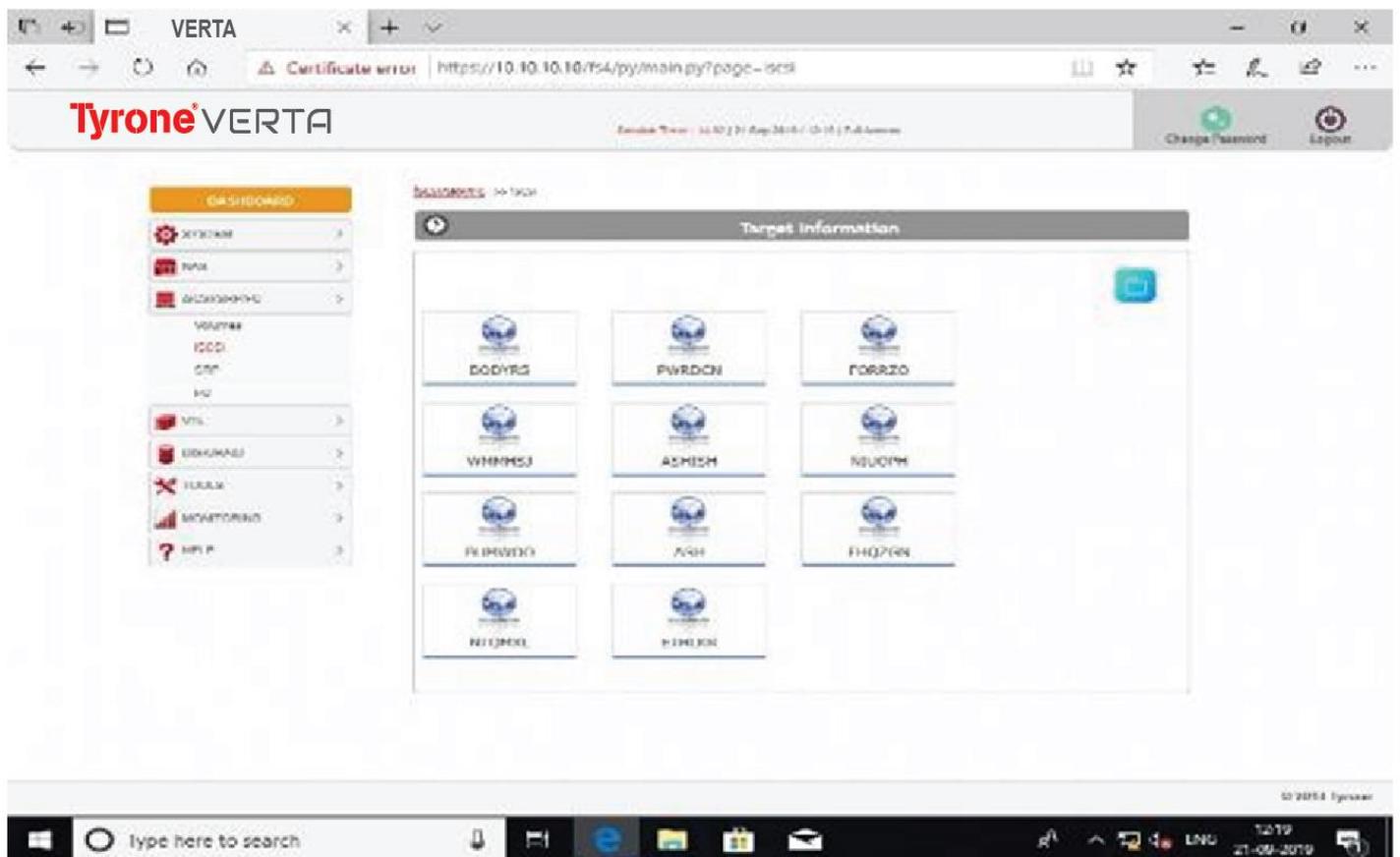


## ISCSI

ISCSI is an acronym for Internet Small Computer System Interface, an Internet Protocol (IP)- based storage networking standard for linking data storage facilities. By this option we can check ISCSI status, ISCSI target, Disk to Target Properties Target Information, Session Information.

### Create ISCSI Target:

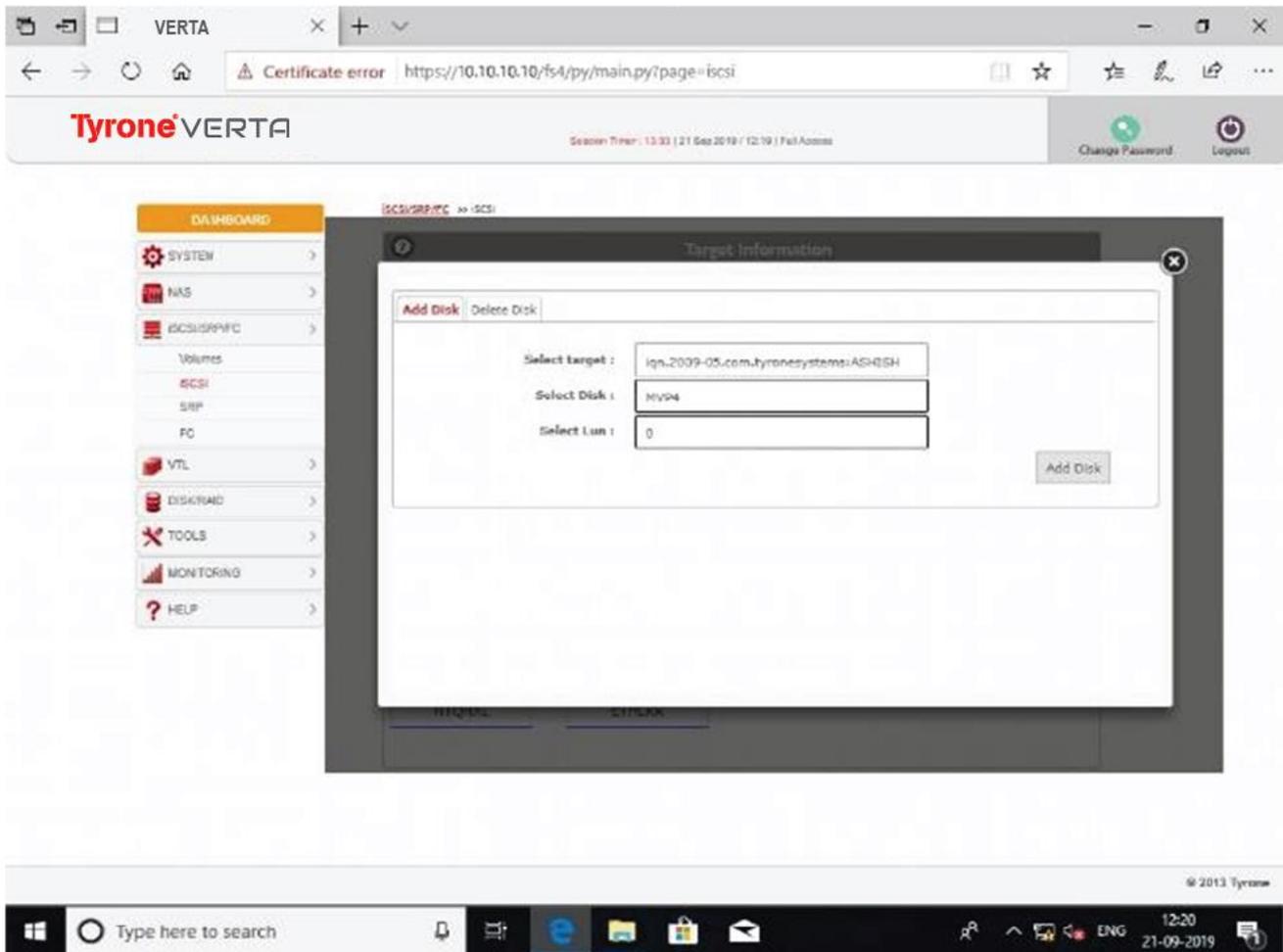
An ISCSI target is often a dedicated network-connected hard disk storage device, but may also be a general- purpose computer, since as with initiators, software to provide an ISCSI target is available for most mainstream operating systems. ISCSI Target is the option to create new Target or you can Delete the target.



ISCSI Disk to Target:

In the ISCSI disk to target, we have to add a disk and LUN number in the target but before that make sure BIO disk is added and disk is added to SAN otherwise disk will not appear here and remove a disk from the target option is also present here before removing disk make sure initiator is not added to the disk, otherwise you will not able to remove disk from target.

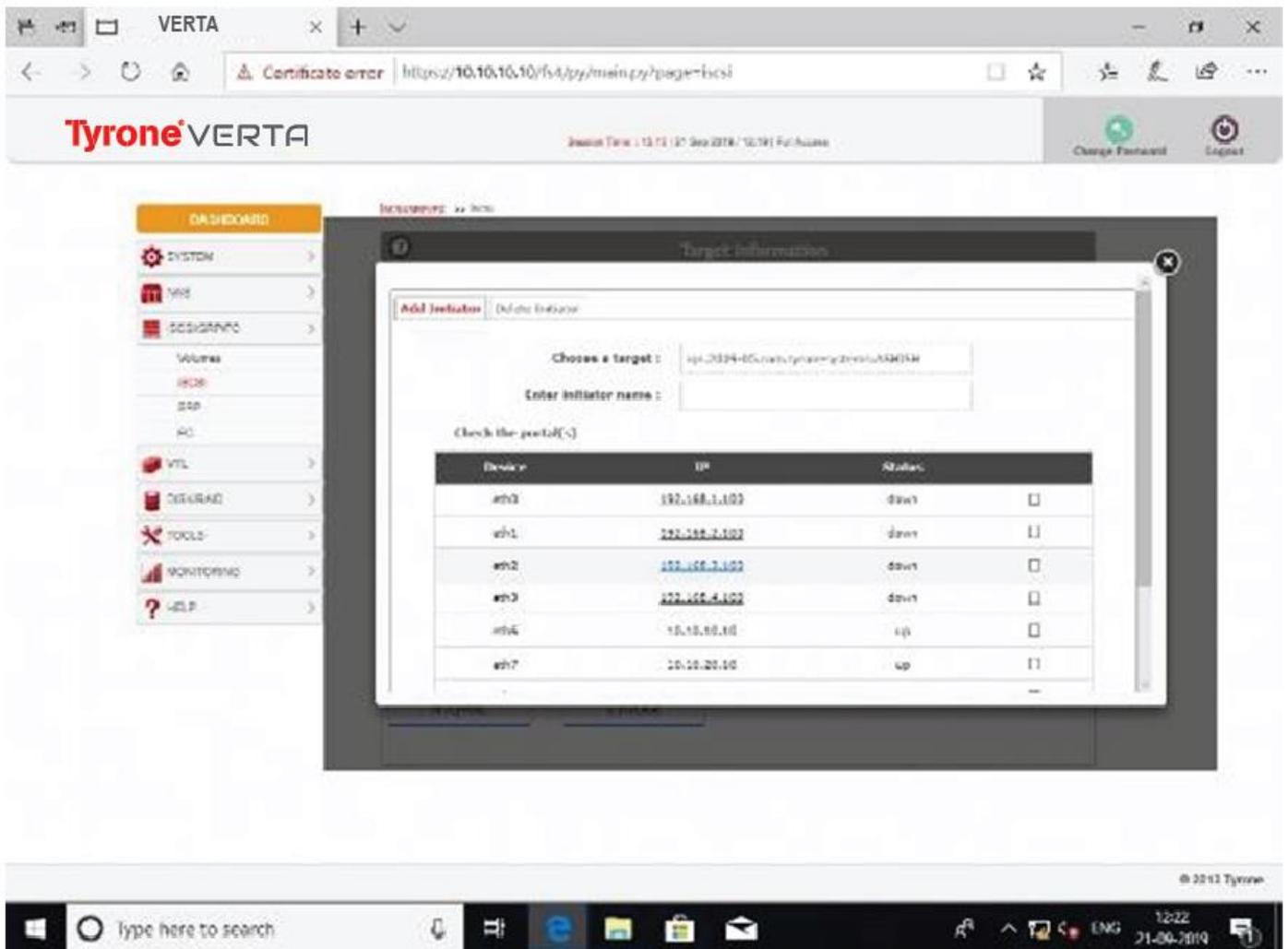
Here is image showing how to add disk to a Target:



ISCSI Authentication:

It is the act of confirming the truth of an attribute of a datum or entity. This might involve confirming the identity of a person or software program, tracing the origins of an artifact, or ensuring that a product is what its packaging and labeling claims to be. Authentication often involves verifying the validity of at least one form of identification.

After adding disk to target we have to create or add an initiator and select the particular eth port for initiator.

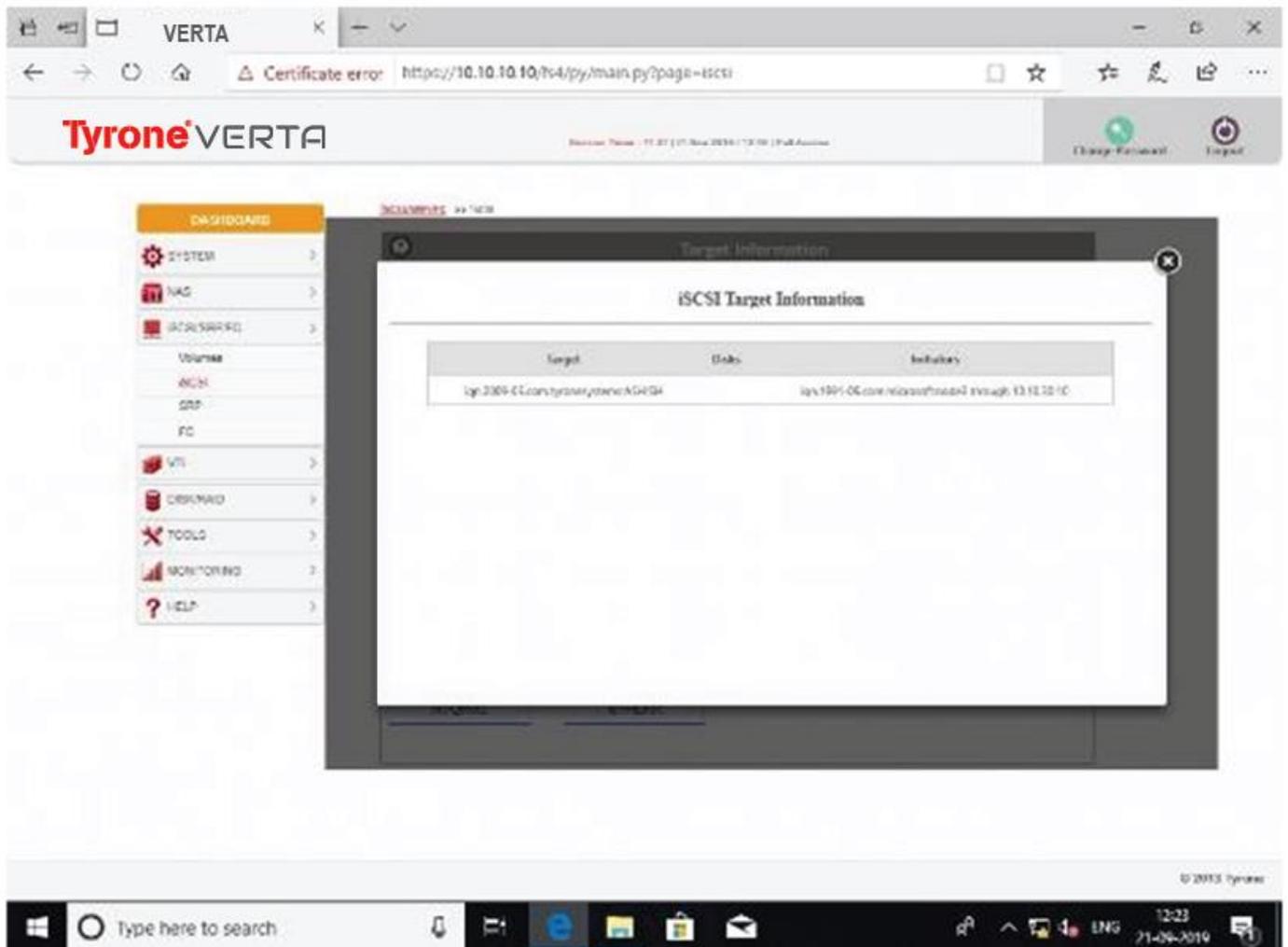


ISCSI Target Information:

As the name suggest targets Target name, Disk, Initiator.

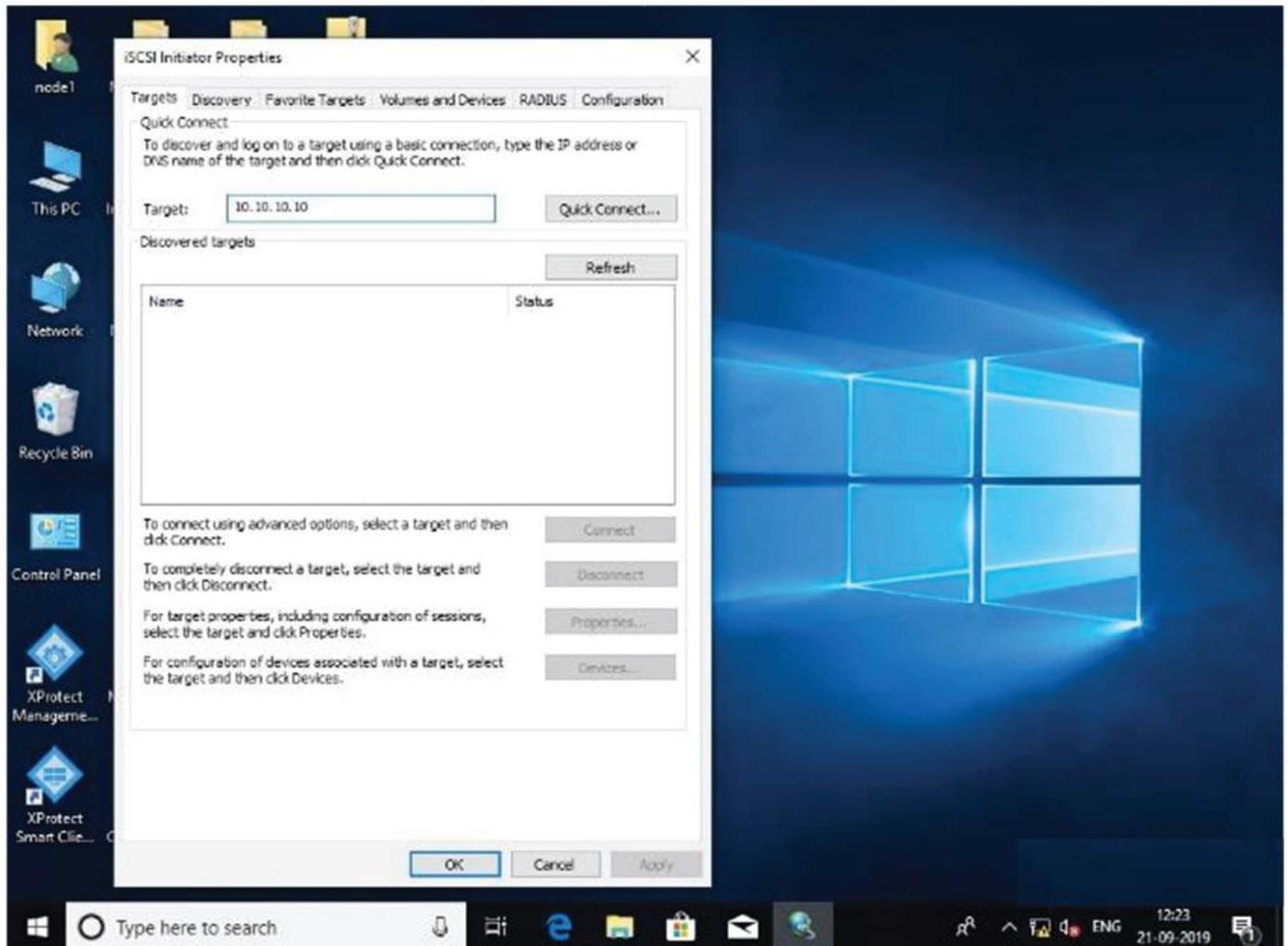
ISCSI Session Information:

In this section get a target information of the target- Target name, Disk name and Initiators name.



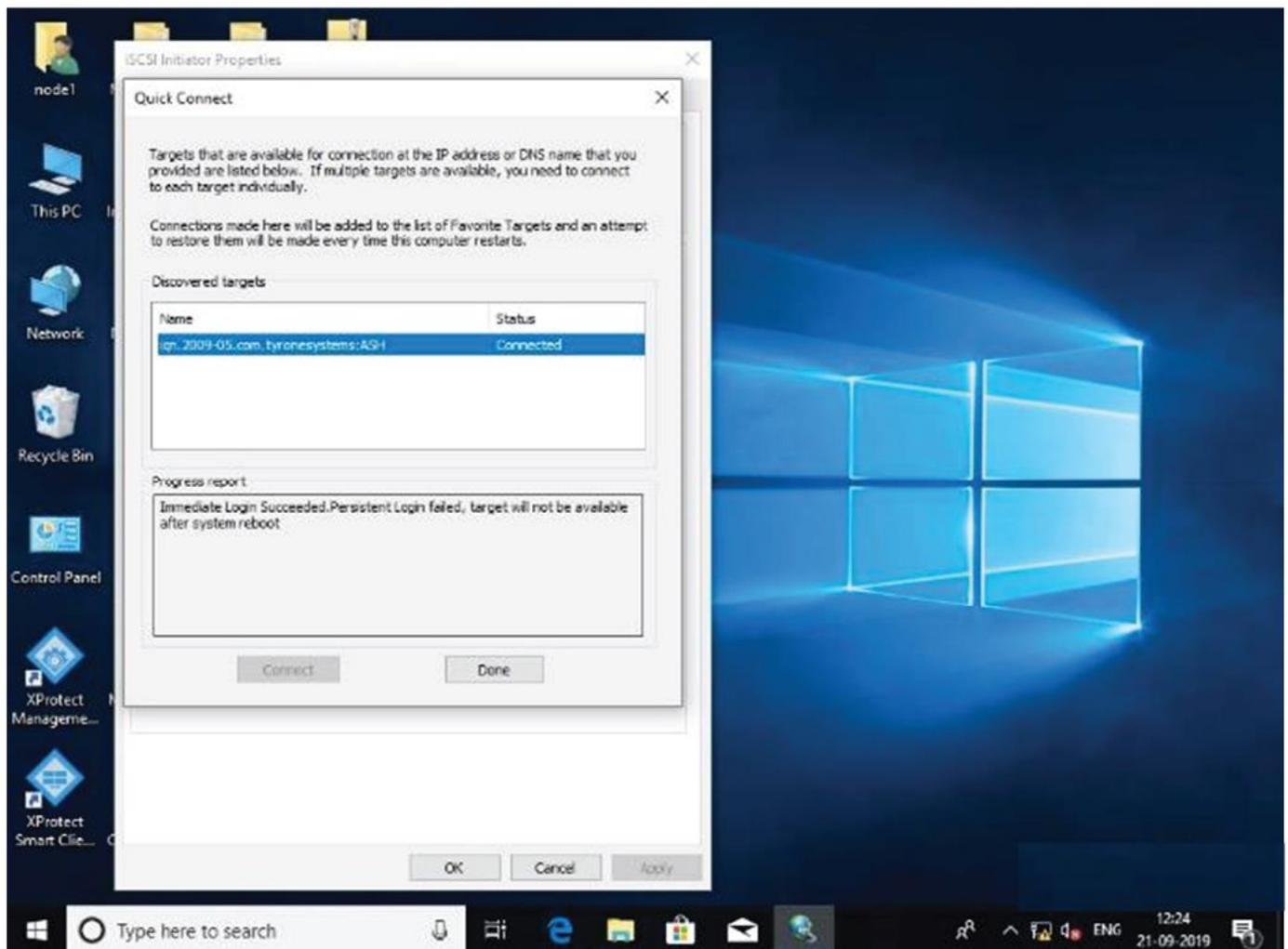
## How to use iSCSI Targets on a Windows

1. Open iSCSI Initiator in Windows under Control Panel > Administrative tools.
2. Go to Discovery tab and click on Discover Portal.
3. Enter the IP Address or the DNS Name of which is hosting the iSCSI Target, then click on OK.

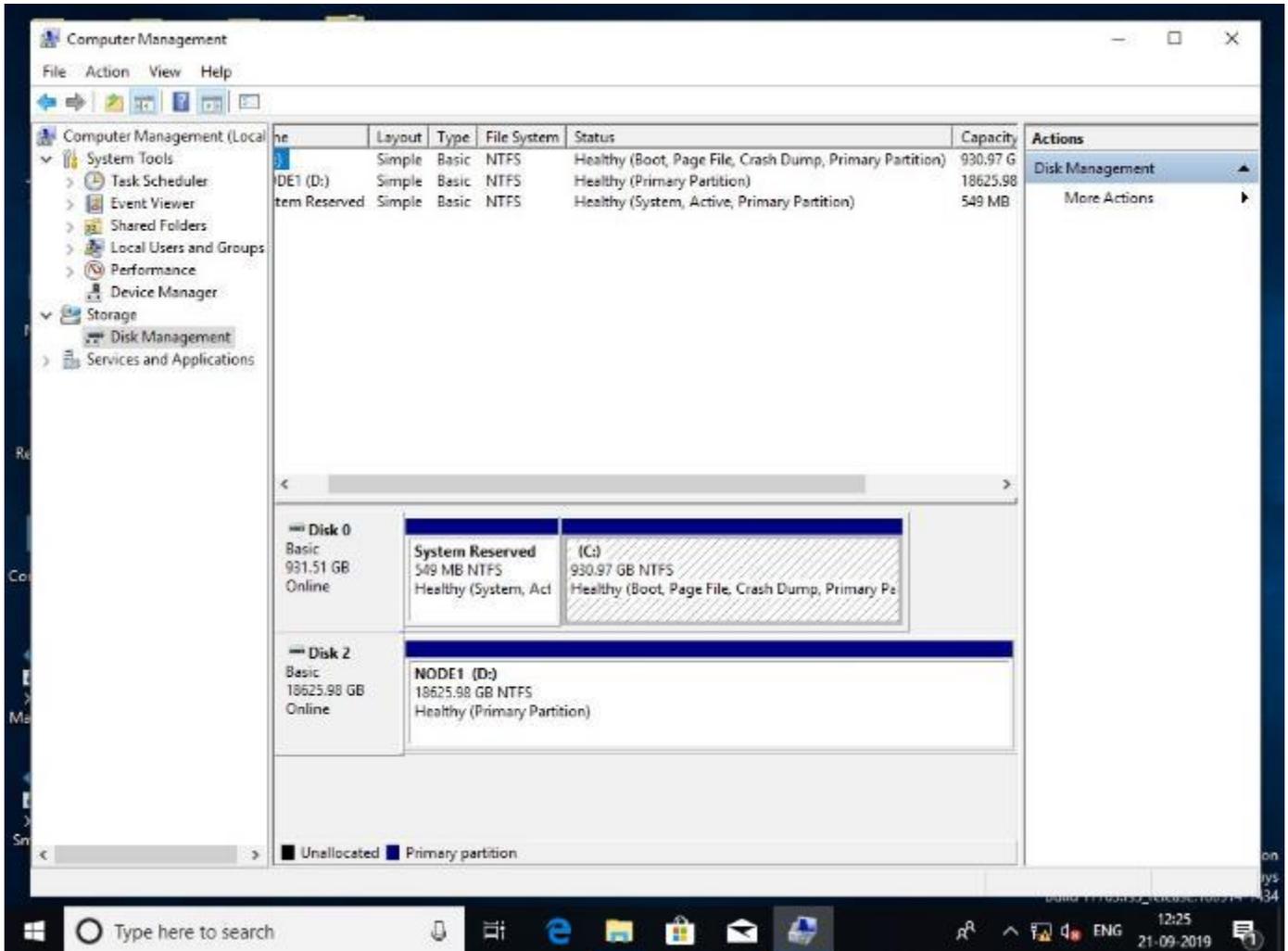


### Format iSCSI Target for Use on Windows:

1. Open Computer Management under Control Panel > Administrative tools.
2. Select Disk Management on the left panel. Right click on the iSCSI Target (Disk1) and choose Online.
3. Right click on the iSCSI Target (Disk1) again and choose Initialize Disk.
4. A prompt will be displayed to initialize the newly added virtual drive. Please select a partition style most appropriate for the disk to be used then click on OK.



5. After the disk has been initialized, right click on the new disk (indicated by the black field), and select New Simple Volume.
6. Now your Windows system has an additional drive NODE1.



## Milestone Management Client Configuration

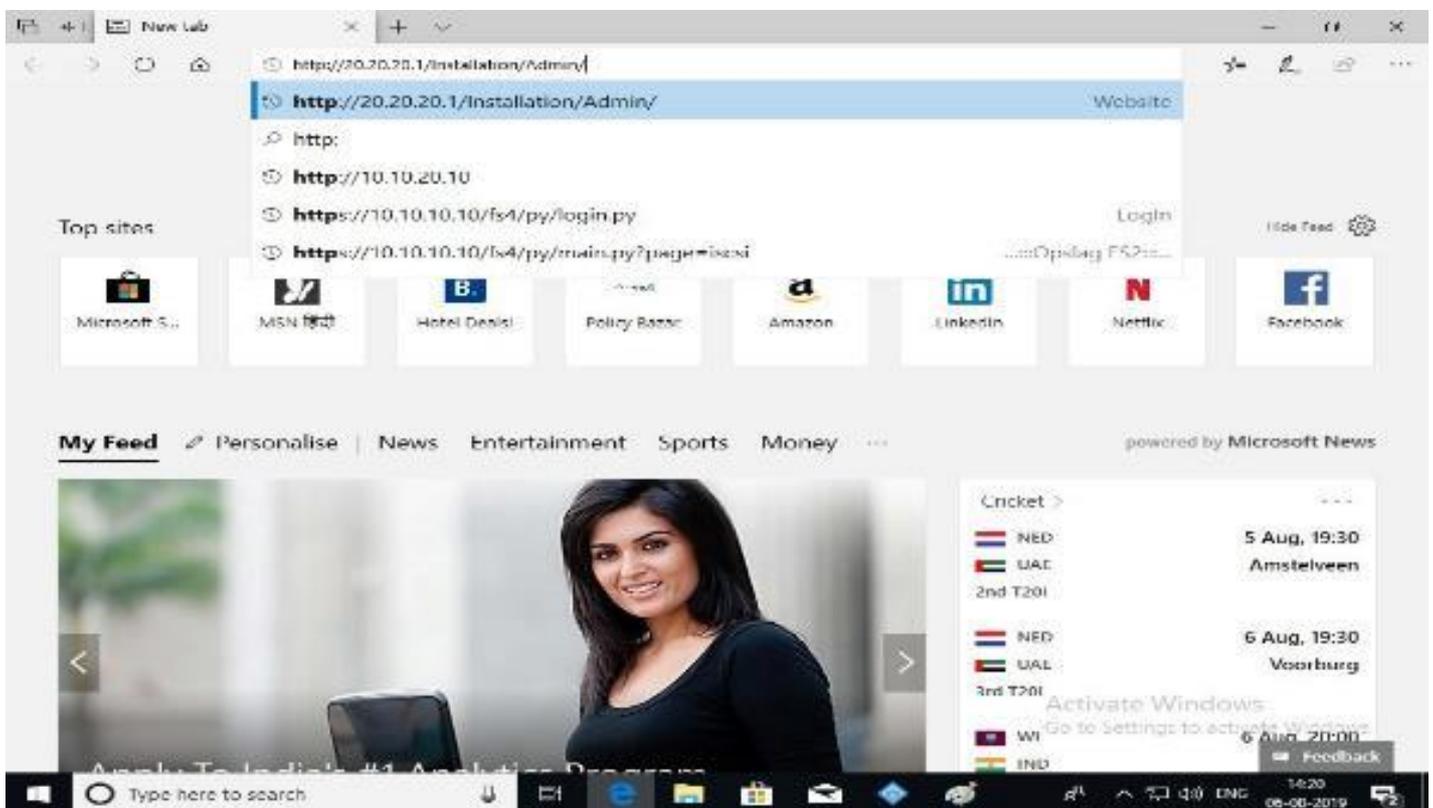
### Install the Management Client

To install the Management Client the X Protect VMS has a built-in administrative installation web-page. From this web-page administrators can download and install the Management Client or the X Protect system components to any other computer on same network.

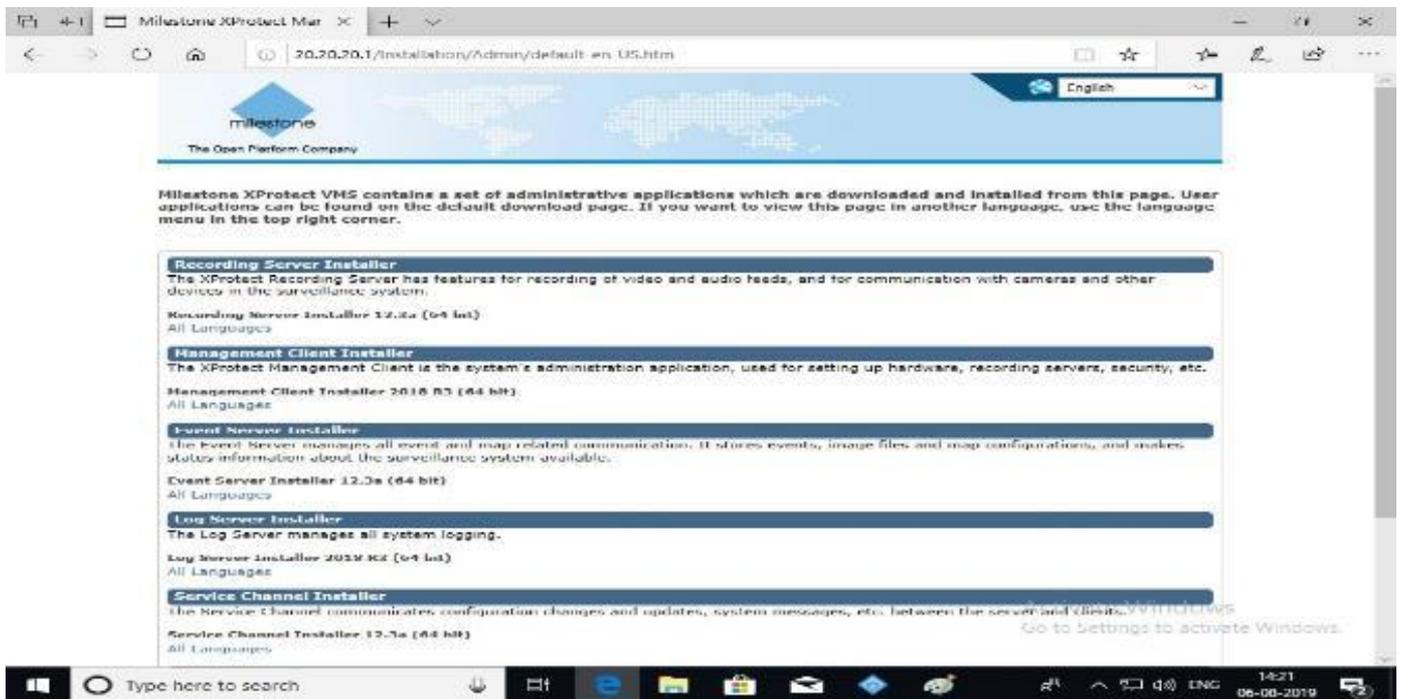
### Steps to install Management Client:

1. To access the administrative installation web-page, enter the following URL in your browser:

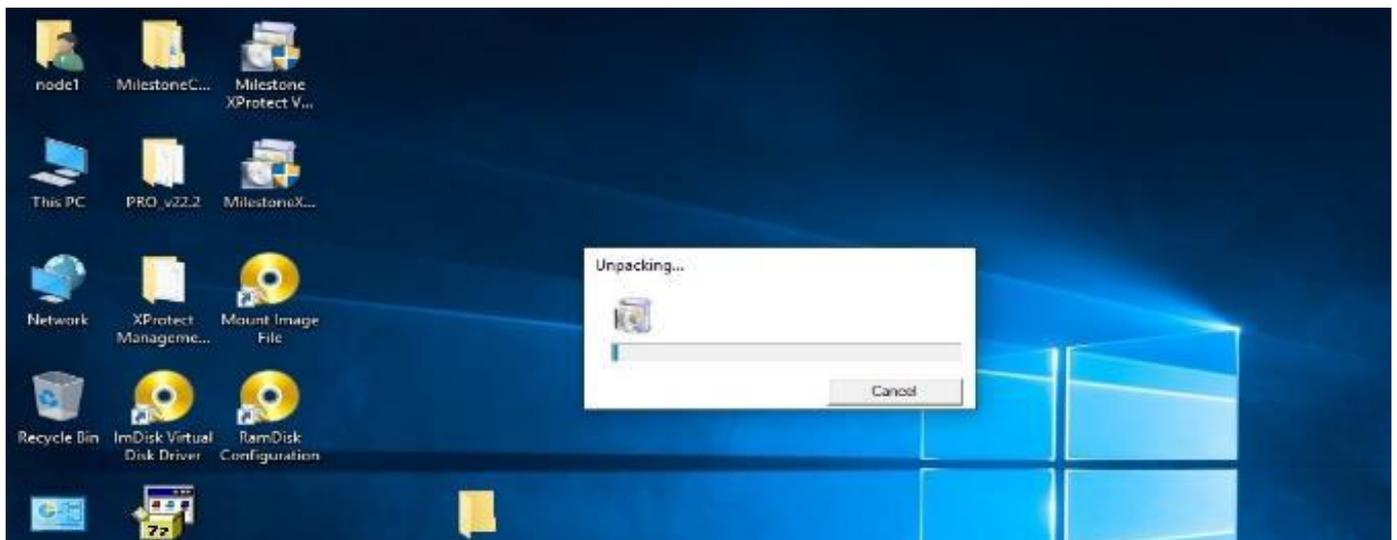
`http://[ip address]/Installation/Admin`



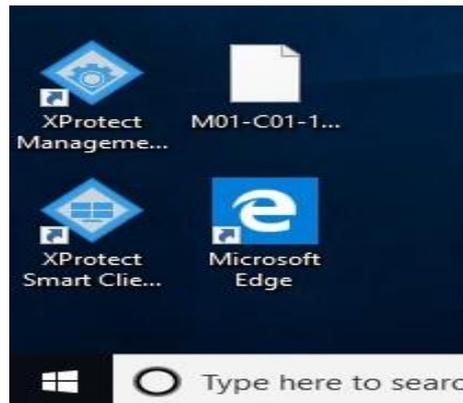
2. Click ALL Languages for the Management Client Installer. Run the download file.



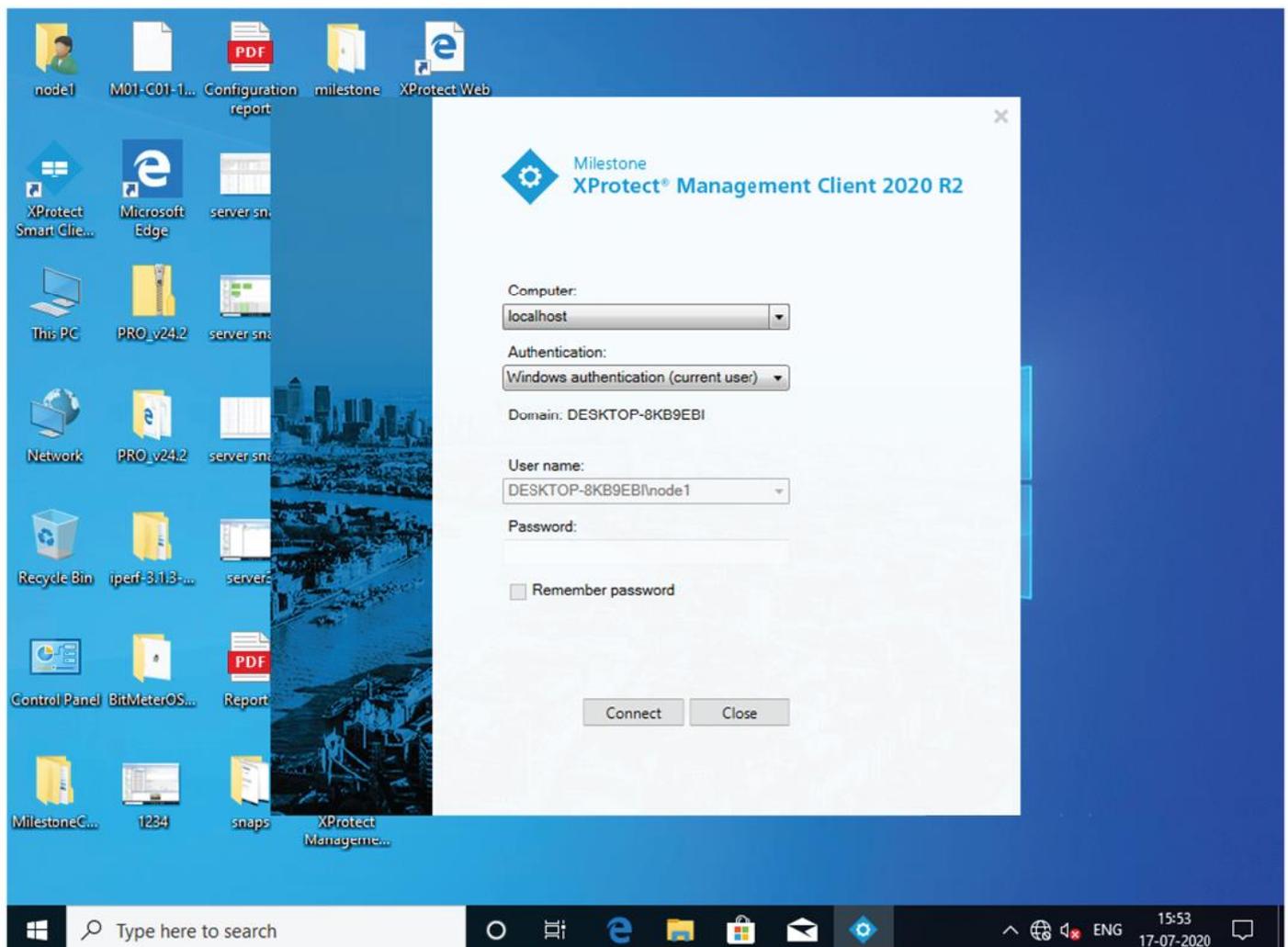
3. Click Yes to all warnings. Unpacking starts.



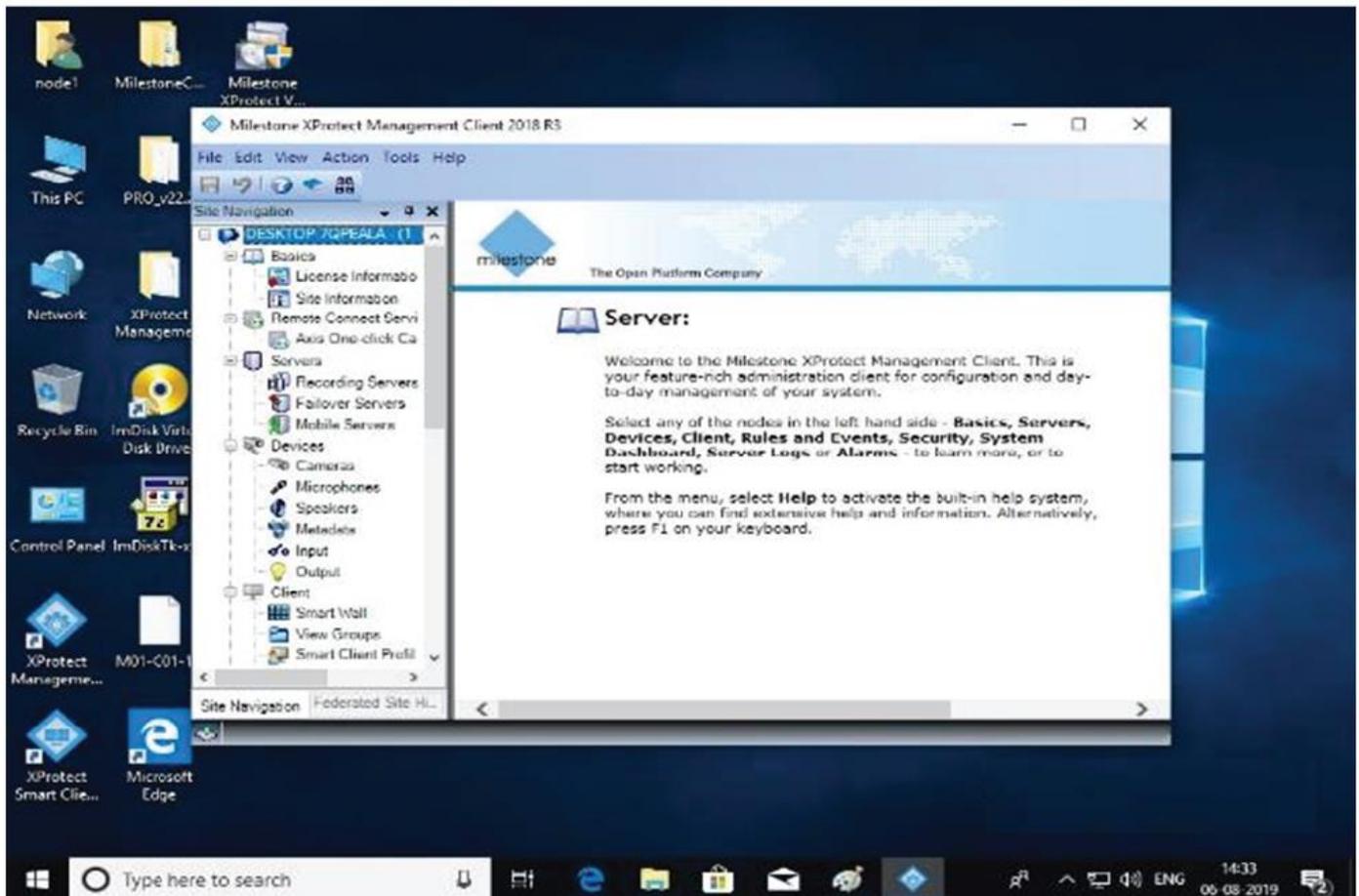
4. Select the language for installer. Click continue.
5. Read and accept the License agreement. Click continue.
6. Select the file location and product language. Click continue.
7. The installation is complete. A list of successfully installed components is displayed. Click close.
8. Click the icon on the desktop to open the Management Client.



9. The Management Client login dialog appears.



10. Specify the host name or IP address of your management server in the Computer field.
11. Select authentication, type your user name and password. Click Connect. The Management Client launches. To read in detail about the features in Management Client and what you can accomplish with your system, Click Help in tools menu.

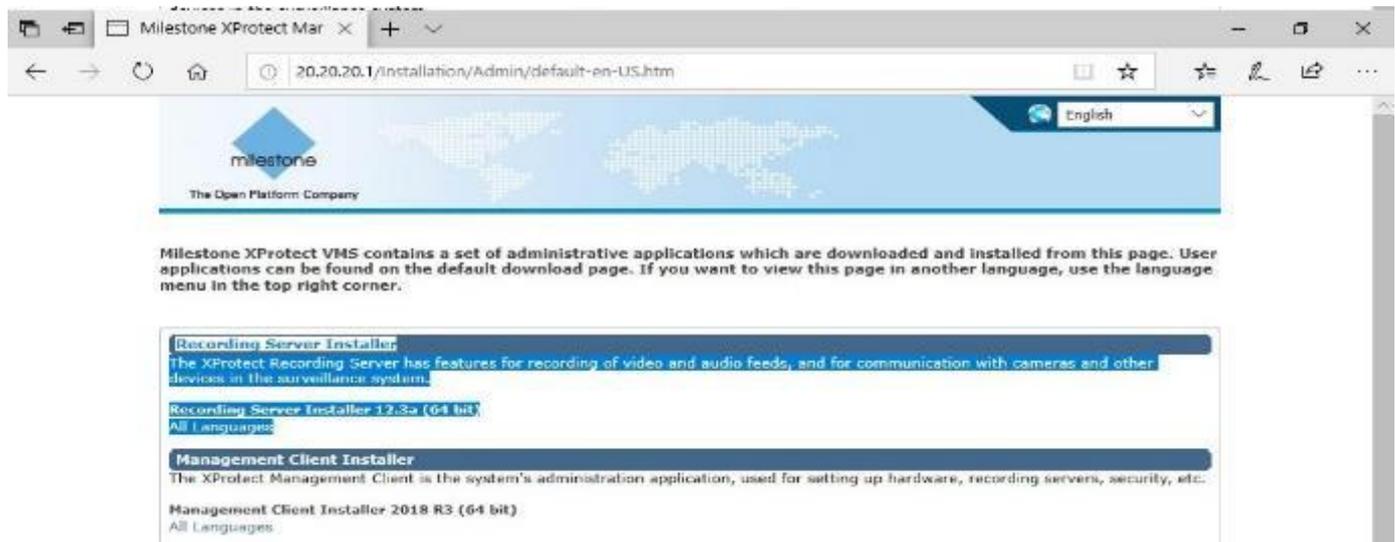


## To install Recording servers on a XProtect system

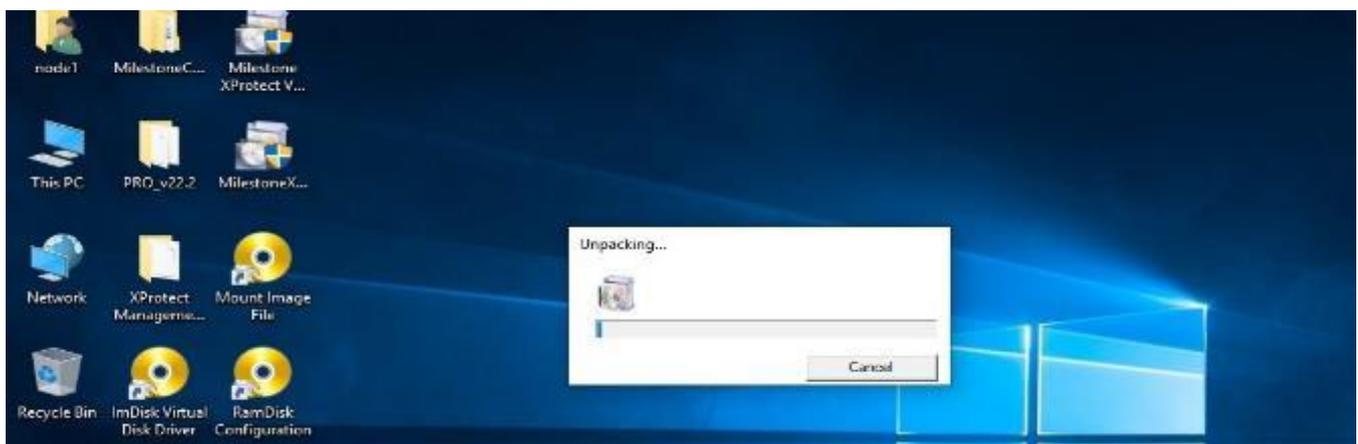
You must have at least one recording server running on any X Protect system. To add or install a recording server, do the following steps.

### Steps to install Recording server

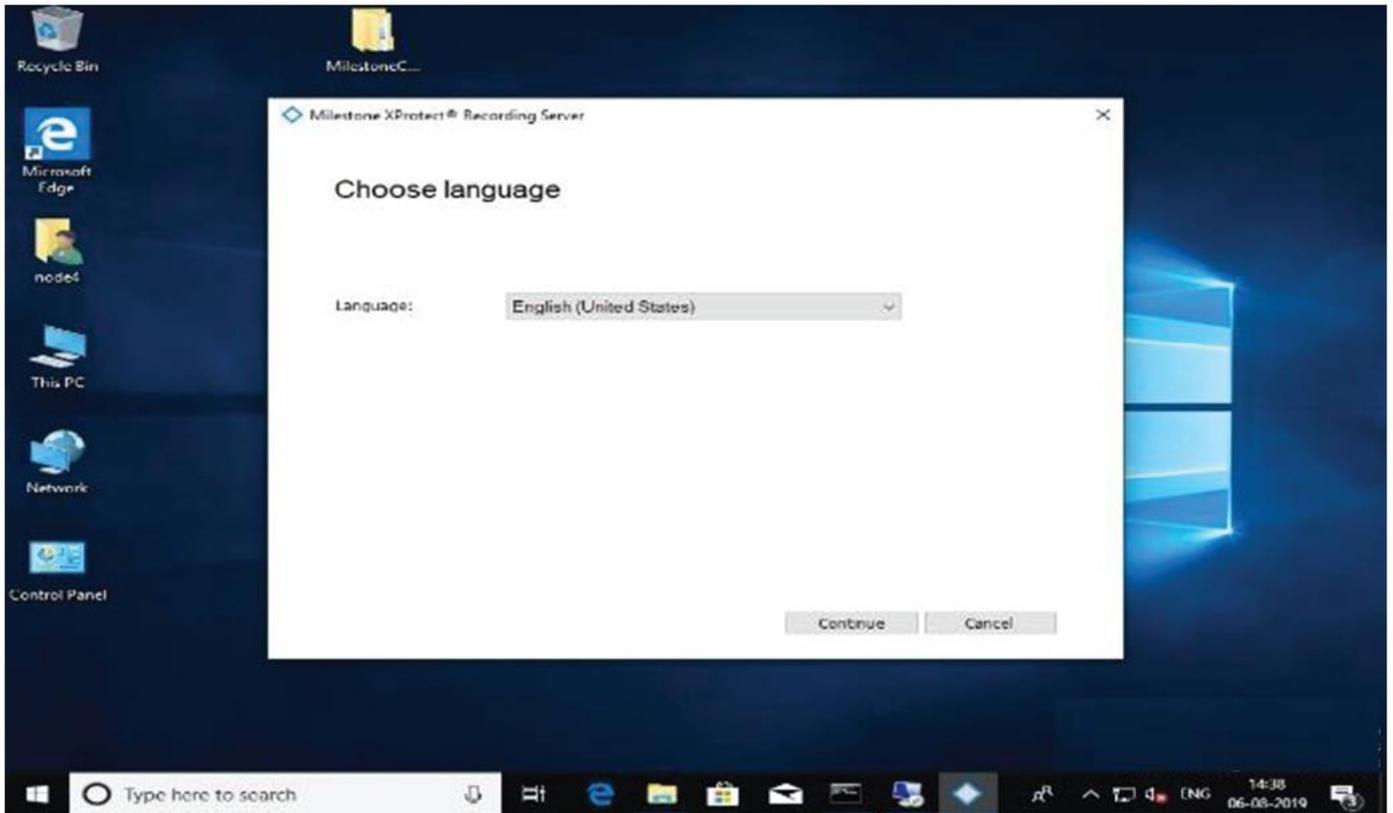
1. To add or install a recording server on a local or remote system, open a web browser and navigate to <http://<server>/Installation/Admin>. Login with credentials for a local Windows administrator when prompted, then click on the link to download and install record server.



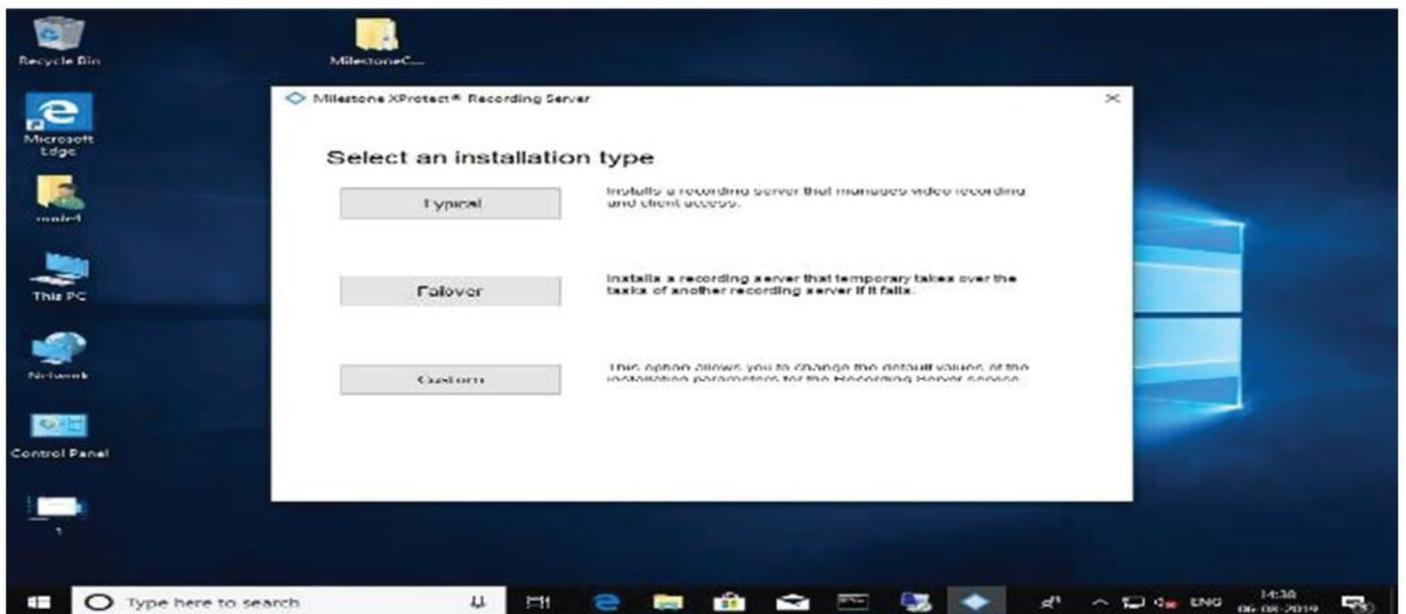
2. Run the downloaded file.
3. Click yes to all warnings. Unpacking starts.



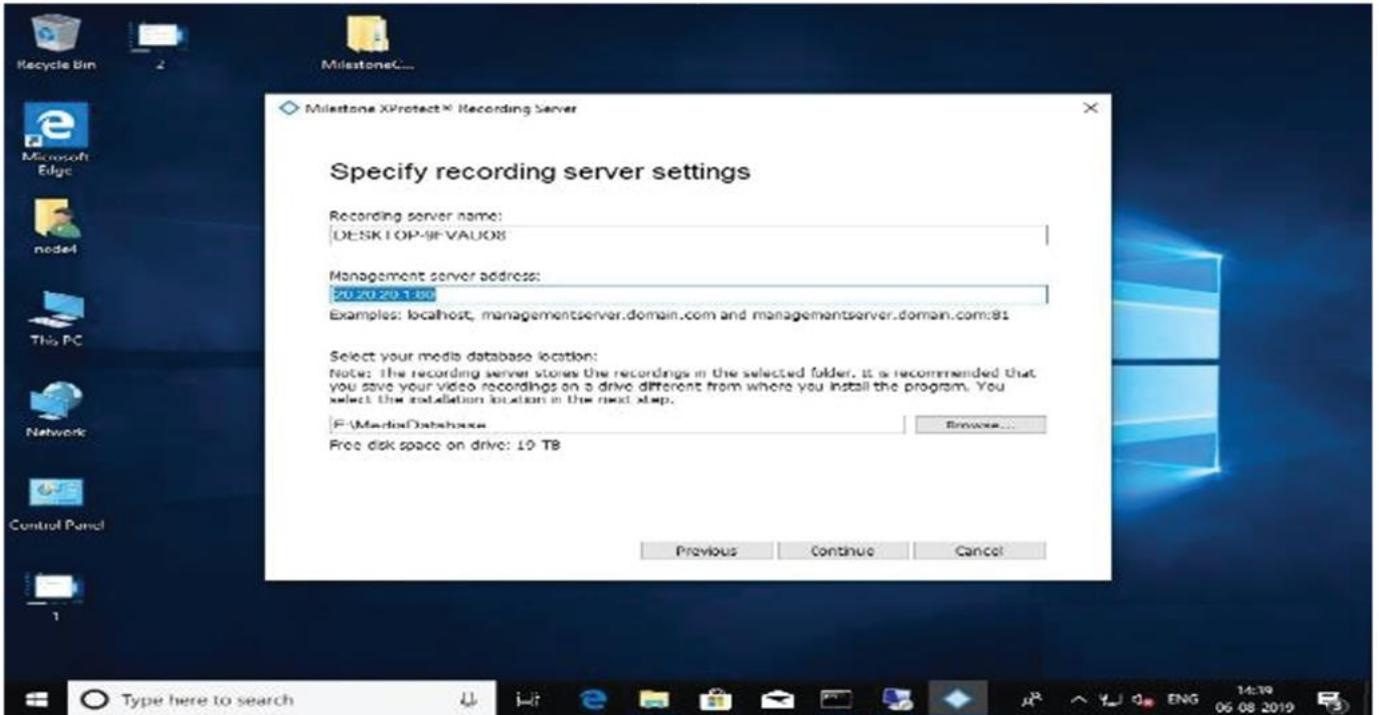
4. Choose language click continue.



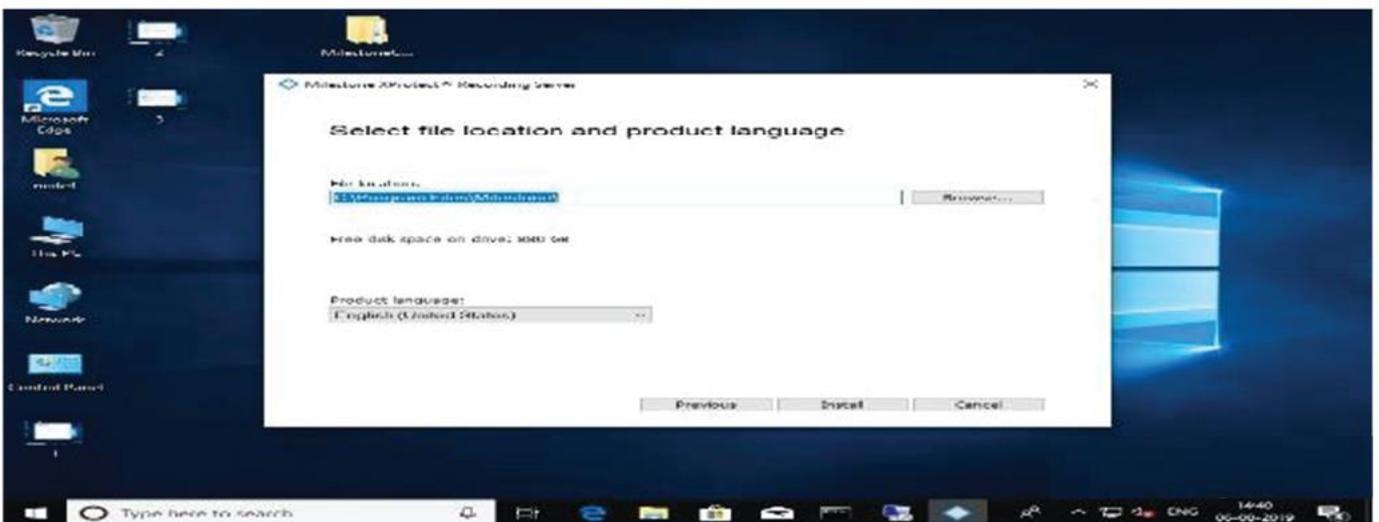
5. Select installation type Typical.



- Now specify the recording server settings. Give the recording server name, management server address with port and database location the click continue.



- Give the service account password and continue.
- Select file location and give product language. Click Install.

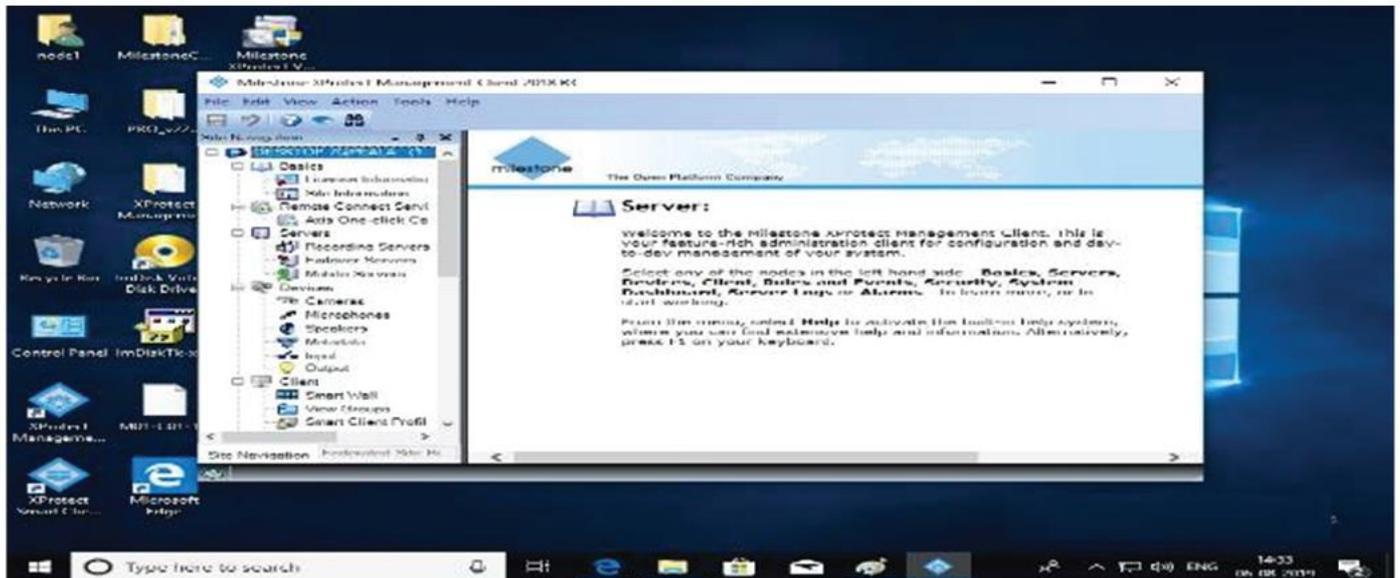


After the installation process completes, the installer lists the components that were successfully added to the system.

A Recording Server service icon appears in the system notification tray. If the server starts successfully, the icon appears with a green arrow :



9. The Recording Server will now appear in the Management Client and you can further configure it there. Close the Installer to complete the installation.
10. Now go to the Management Server and open X Protect management client.
11. Click on the Server tab then right click on Recording Server and click refresh.
12. After that it will display all the recording server list.



## RAM DISK

To reduce video latency due to slow access on shared storage, we use a software defined storage residing in memory on the feed server sharing the storage.

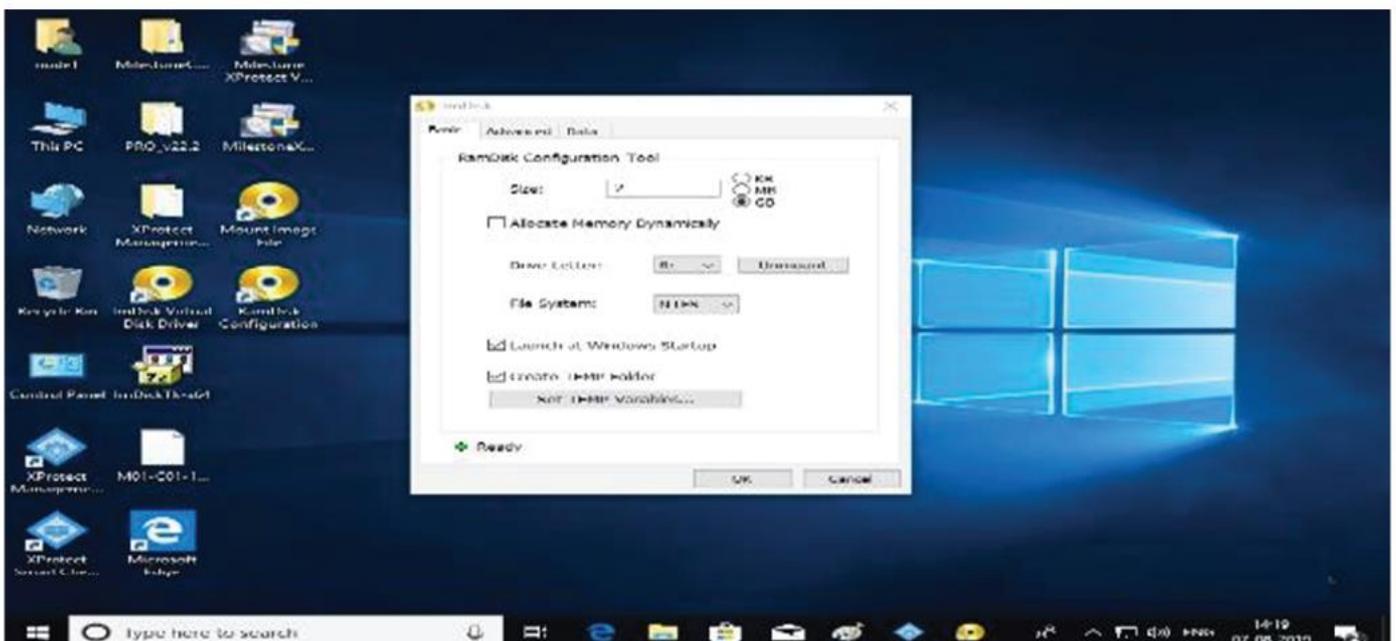
RAM Disk download from this link:

<https://sourceforge.net/projects/indisk-toolkit/>

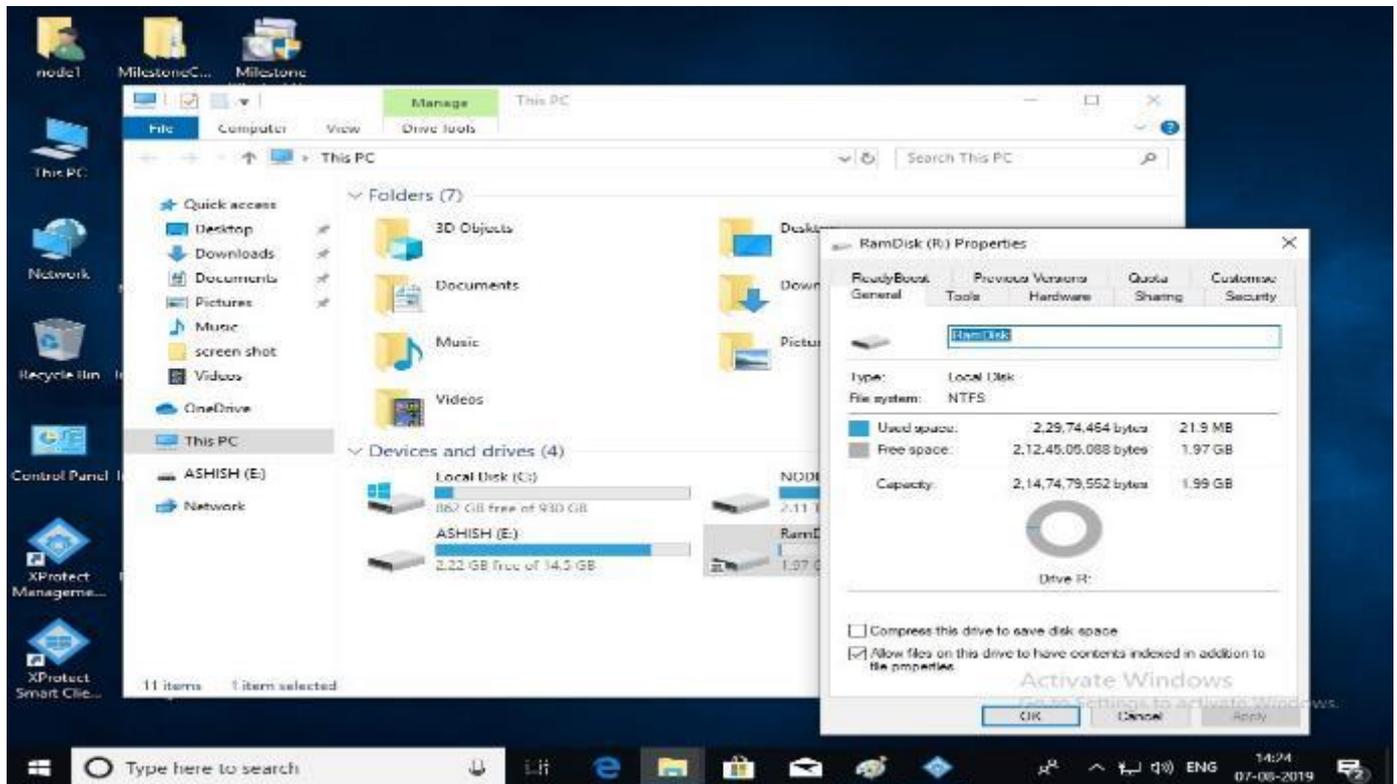
1. Download the RAM disk software and run installer.



2. The default settings appears, Click Next.
3. Set the Size to 1 GB.



4. Enable the “Advanced Sharing” of the RAM disk.



5. Give permissions to use the Recording Server service.

## Stable FPS Installation

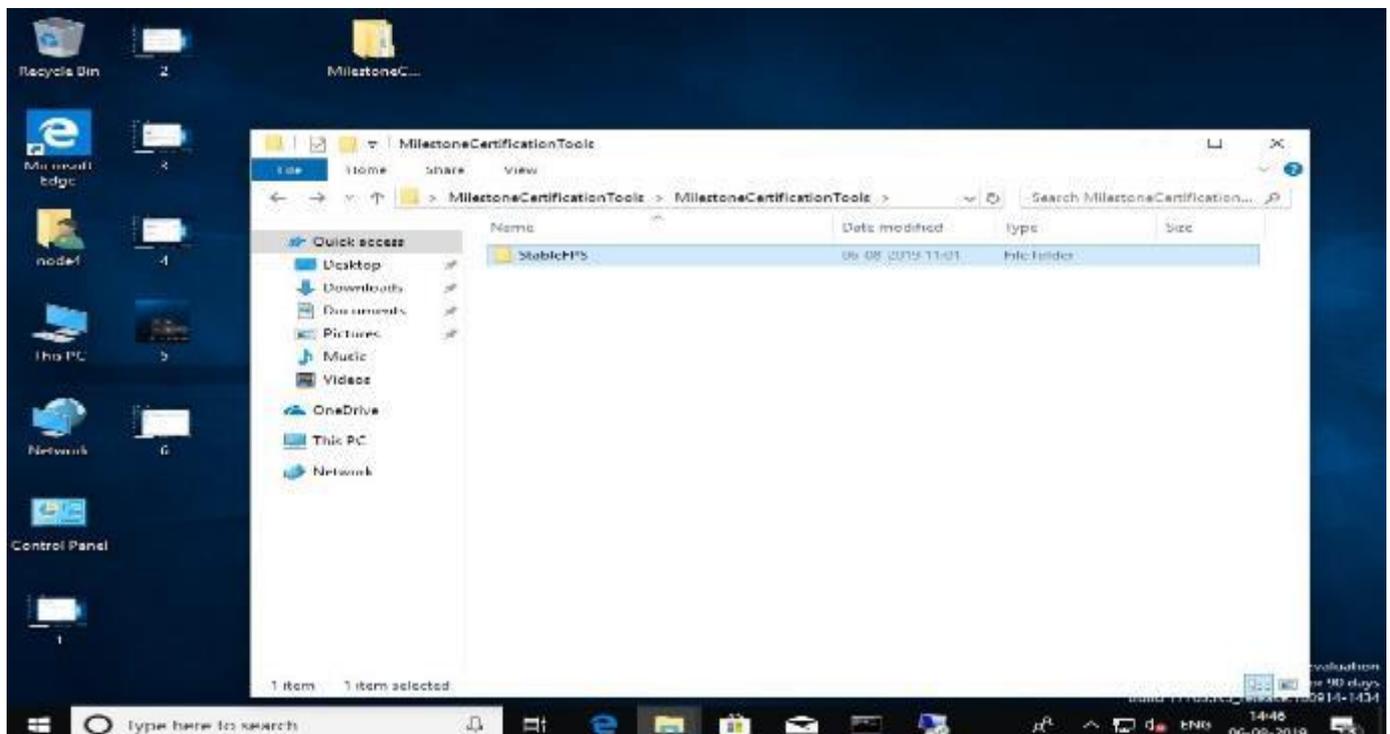
1. The Stable FPS is a device driver developed by Milestone systems for testing preliminary the performance of a X Protect system.
2. The stable FPS device driver can emulate video with MJPEG,H.264 and H.265 codecs.
3. Technically it is a normal multichannel device driver like device drivers used when adding physical multichannel cameras or video server to a Milestone X Protect System.
4. Each Stable FPS device can have between 1 to 200 video channels.

The Stable FPS package software and data is 700MB in size.

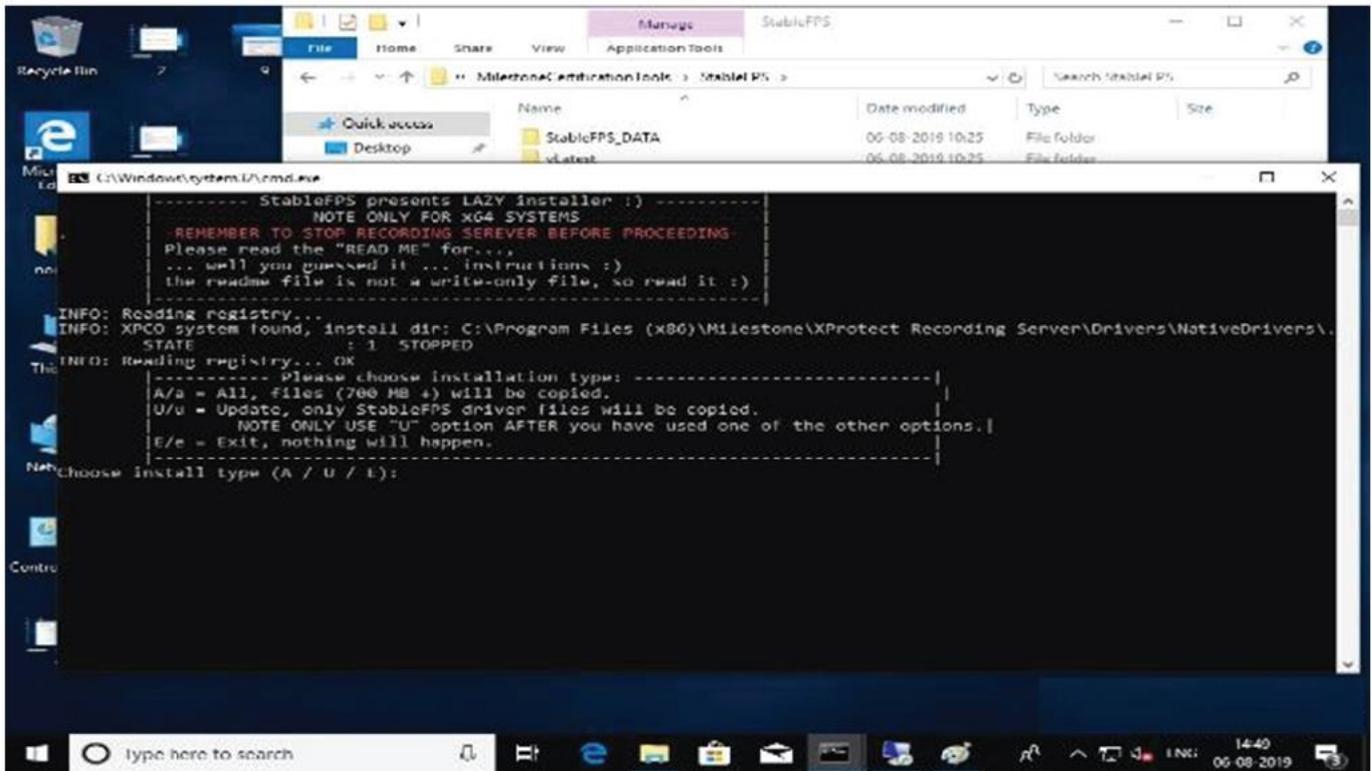
<http://download.milestonesys.com/Certification/MilestoneCertificationTools.zip>

### Steps to install FPS driver:

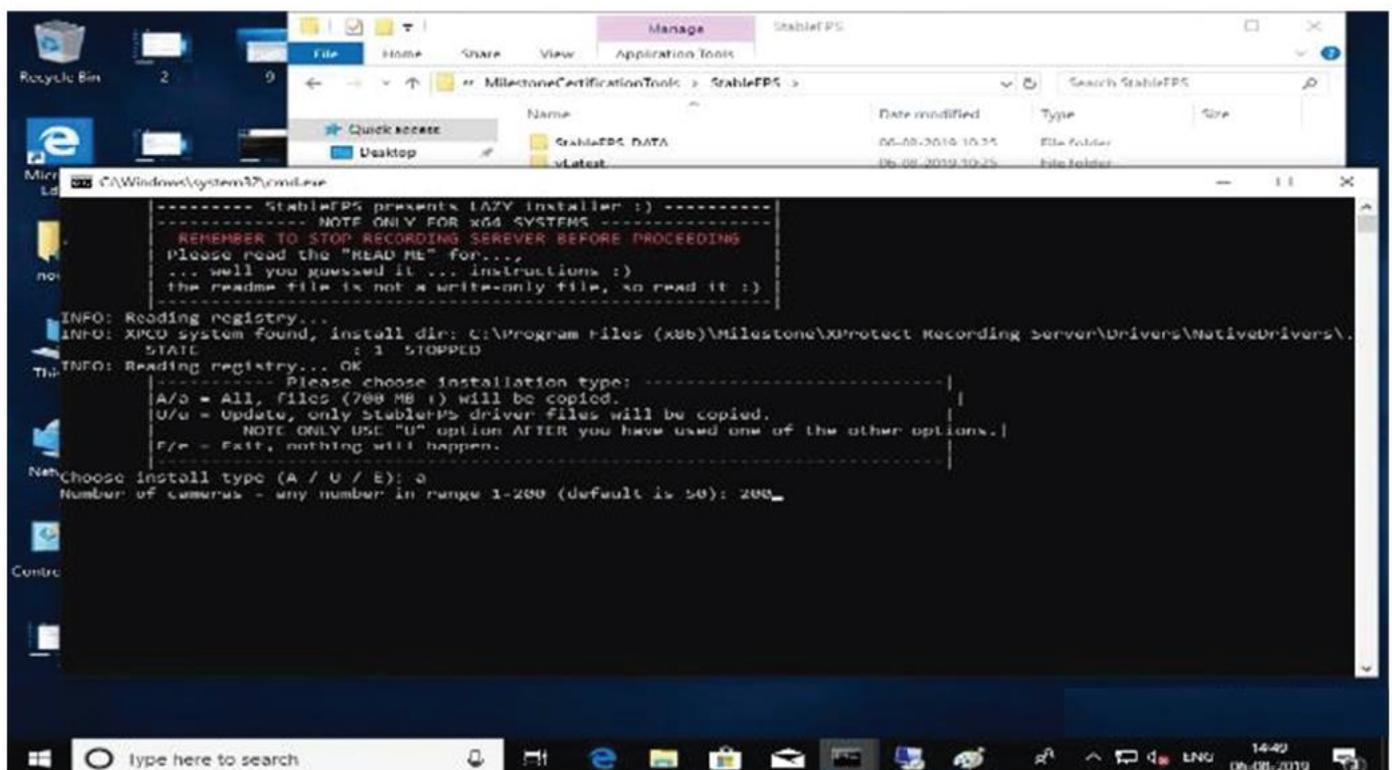
1. Stop the recording service.
2. Unzip the downloaded file and open Milestone Certification
3. Tools 3 Go to stable FPS file.



4. Then open “I\_AM\_LAZY\_INSTALL\_FOR\_ME.bat” batch file.
5. The command prompt windows will look like this.



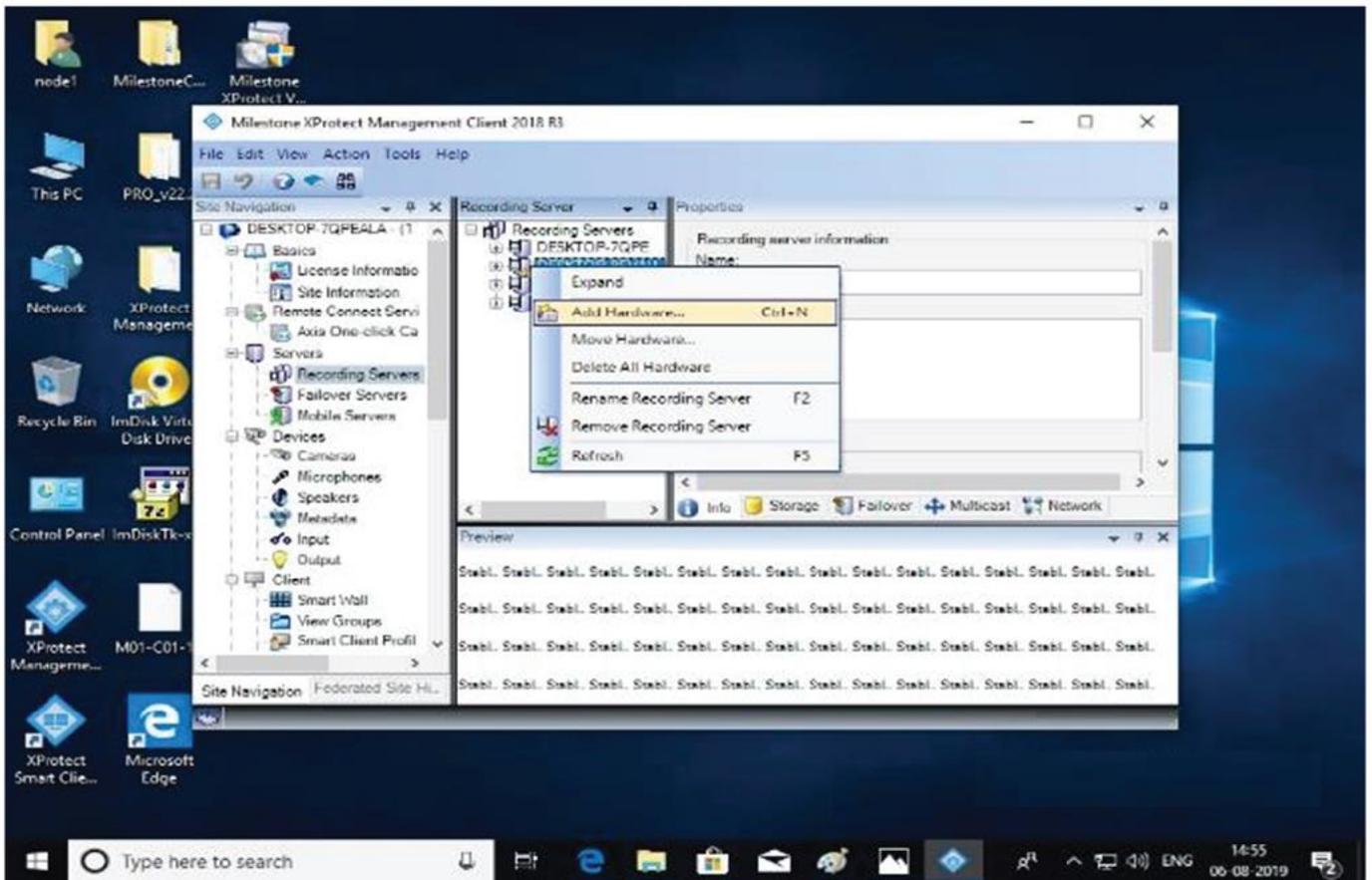
6. For the first install we should select “A” for a full install of drivers and data.
7. Select the number of channels all the Stable FPS devices on this recording server will have.



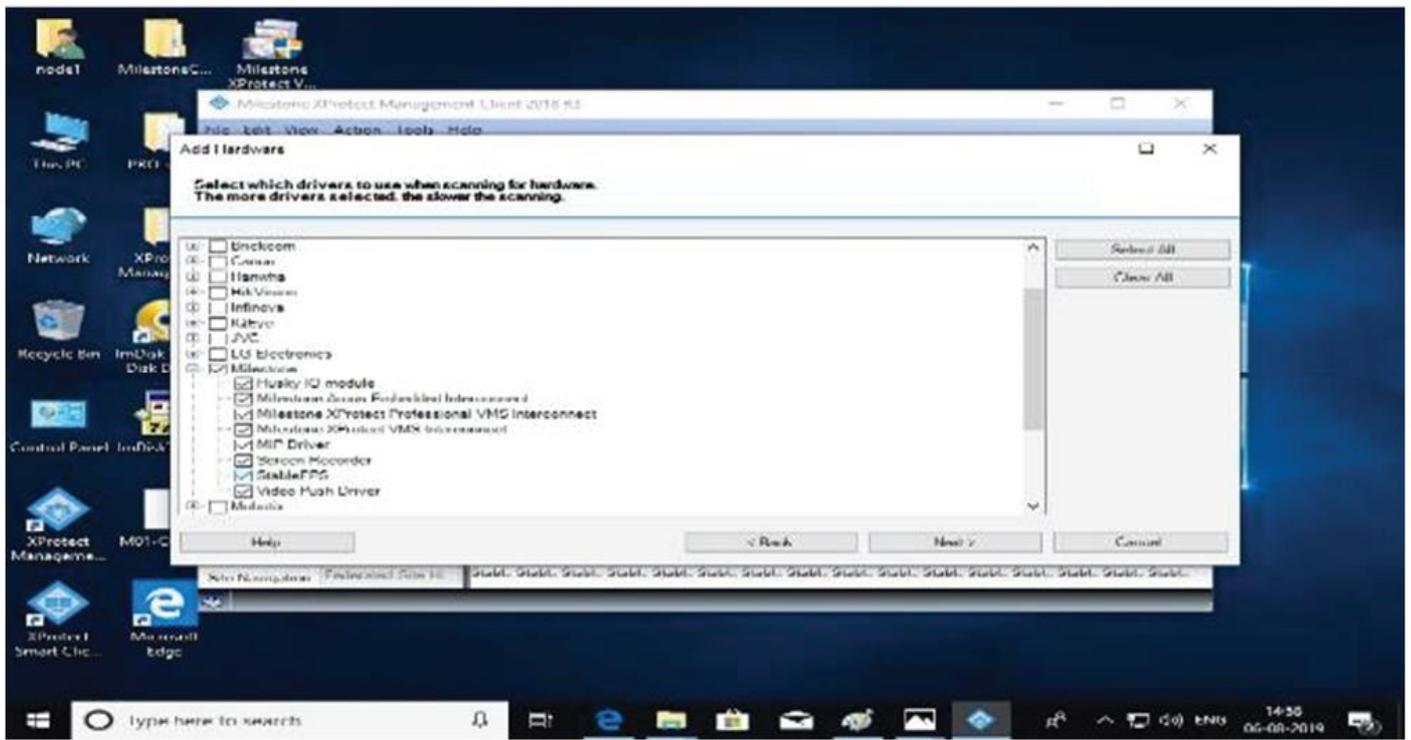
8. Press Enter for the latest driver to be installed.
9. The installer will copy data and driver to the correct locations on the server. Press enter to exit the batch file.
10. Now you should start the Recording server service again.

Adding a Stable FPS device to a recording server:

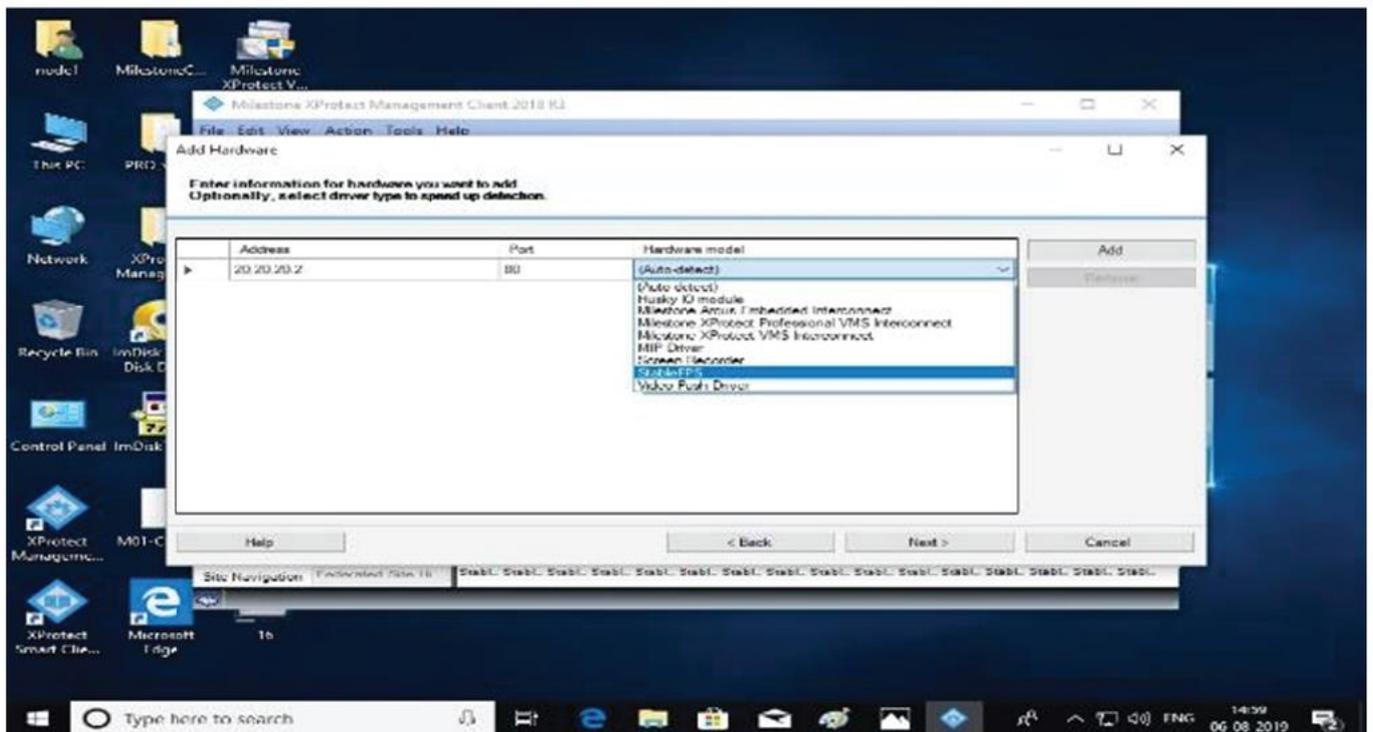
1. Open the Management Client and Select the Recording server.
2. Right click on the recording server to Add Hardware.



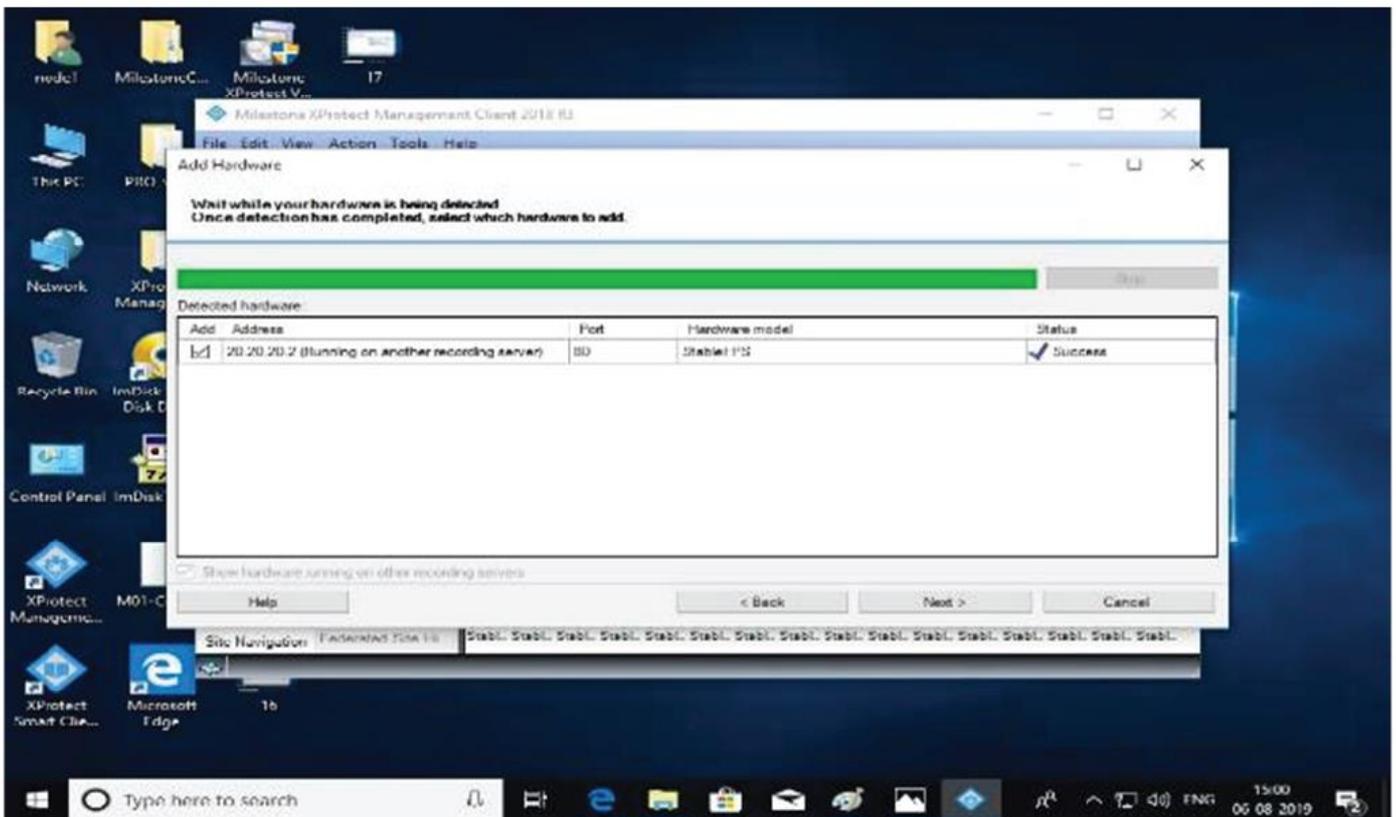
3. You must select Manual method to add a Stable FPS device.
4. Stable FPS device does not check the credential, just click next.
5. Scroll down and select the Stable FPS and press NEXT.



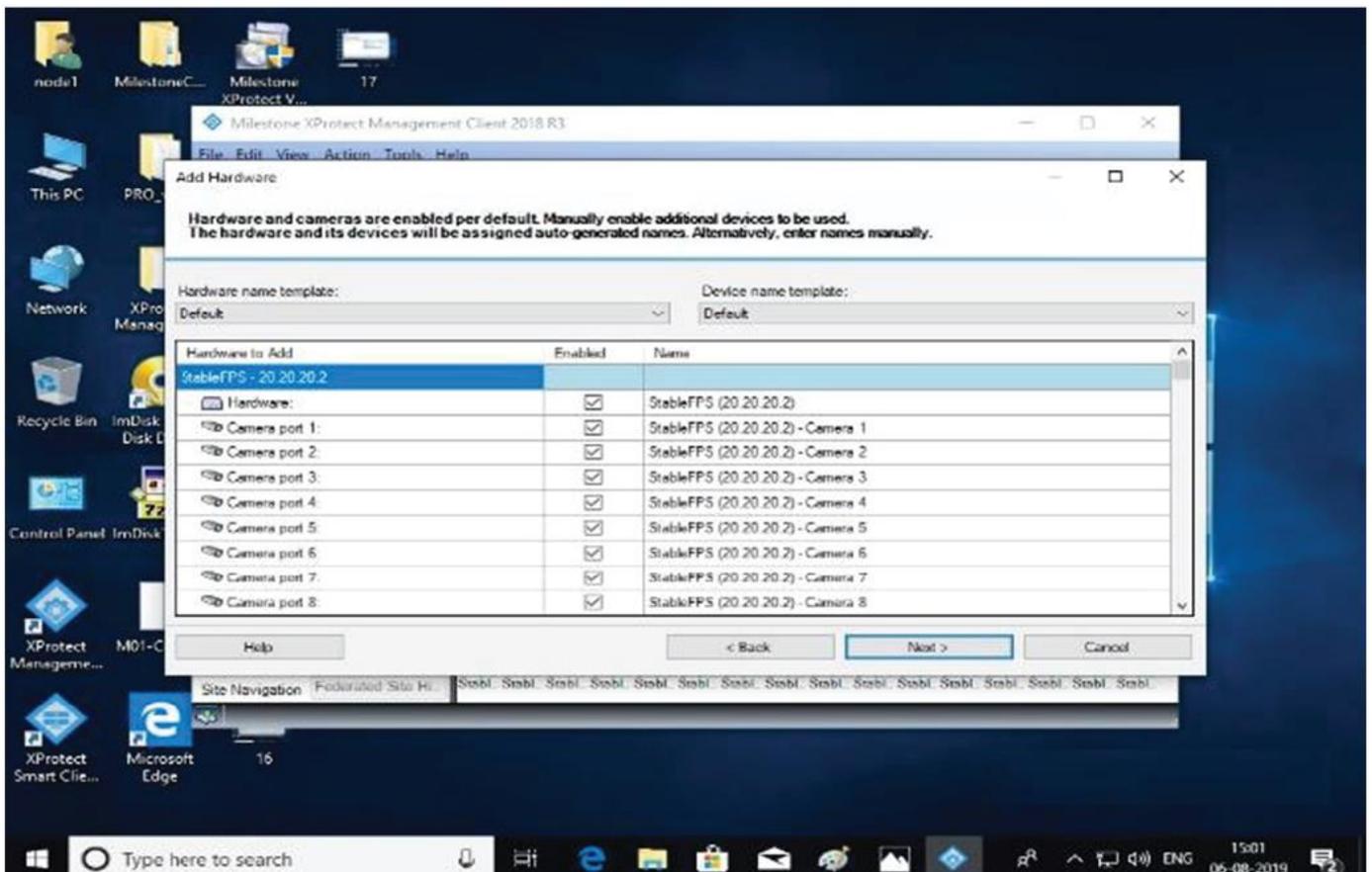
6. Now Assigned IP and add port number then click next.



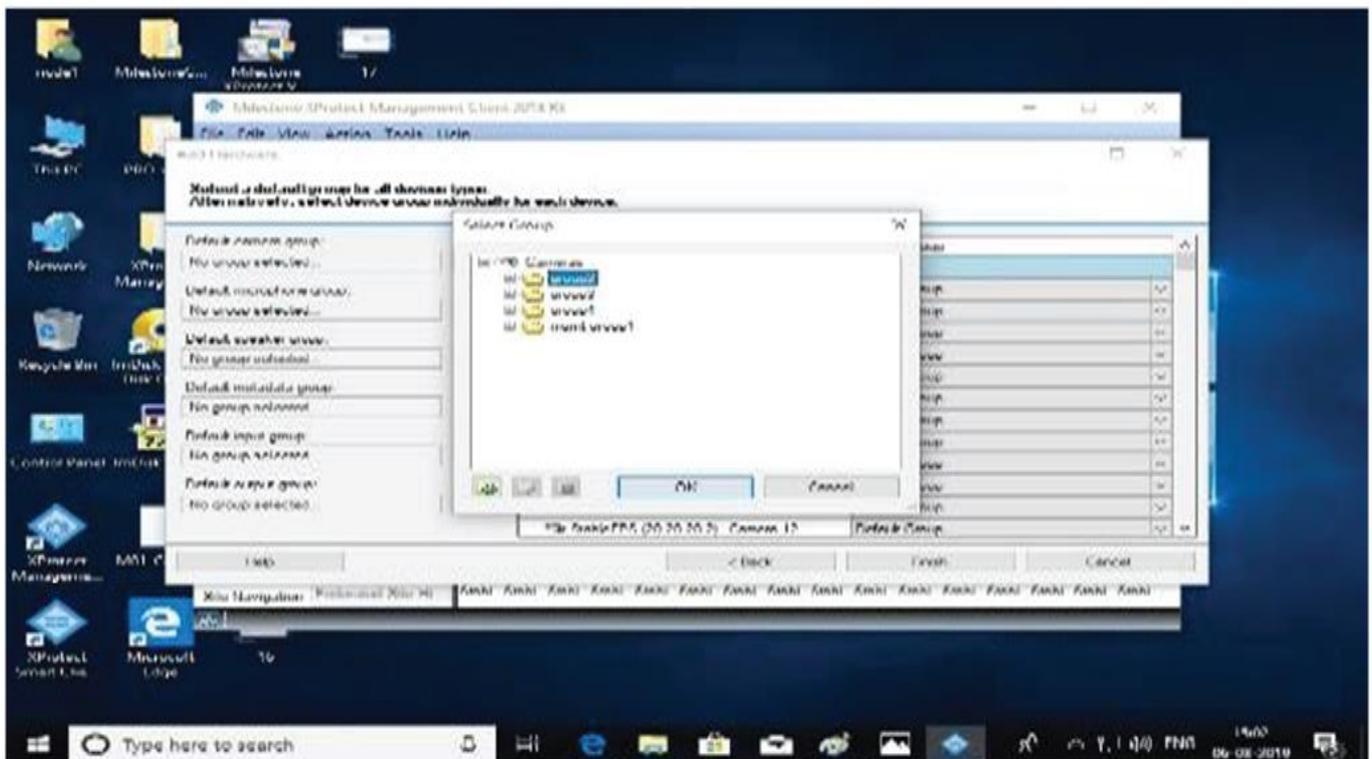
7. After a while the windows will show a success message, press NEXT.



8. After a while you need to press NEXT again and this window will show up where you will have the options to disable /enable individual channels and functions like microphone and meta data, leave all check boxes as they are and press NEXT



9. Here you need to create a group for your video channels.
10. After you have pressed OK and finish the recording server view will look like this.



11. Selecting the Stable FPS device will show the info tab.
12. Select the setting tab, here you have the options to select codec, frame rate etc. For the device.
13. Press the save button.

