VantageManager

User Manual

This is the User Manual VantageManager.

VantageManager is the primary software application used to manage and configure the Xena Networks Production Line test equipment.

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WELCOME

Welcome to VantageManager User Manual. You can find useful information about configuring, executing, and performance tests ranging from basic operations to advanced features, whether you are new to VantageManager or an advanced one.

INSTALLATION

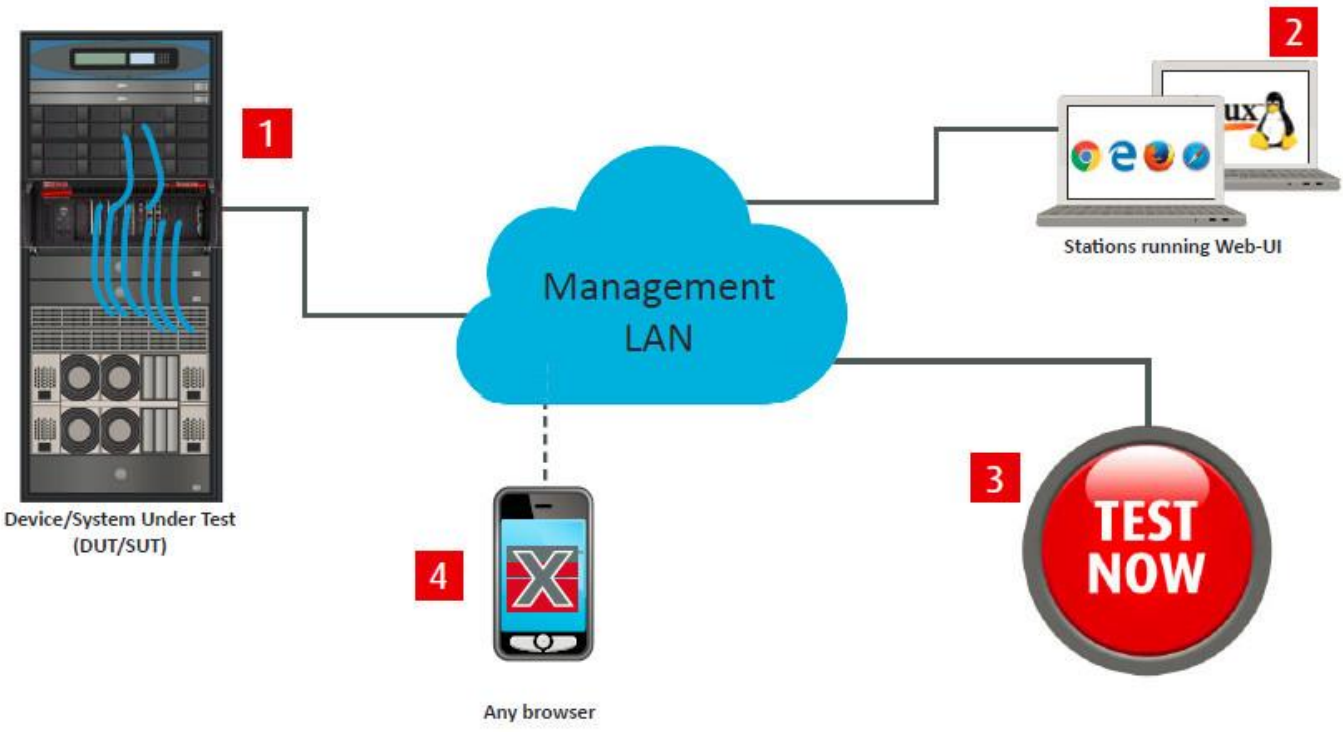
VantageManager is a program which running in the chassis, you don't need to install any software but just only a web browser. For the IE browser, you need to install the IE 8 or higher version. It will more better for you to use a Firefox browser.

GENERAL INFORMATION

Vantage is a production line test solution for networking devices that use Ethernet traffic, such as switches, NICs, routers, GPONs, cable modems, EOC, power modems and so on.

The solution consists of dedicated hardware and software from an experienced test & measurement experts, and is designed to be flexible, scalable and very easy to use.

Vantage enables networking equipment manufacturers (NEMs) to quickly detect performance issues and verify new features before the devices under test (DUTs) leave the factory.



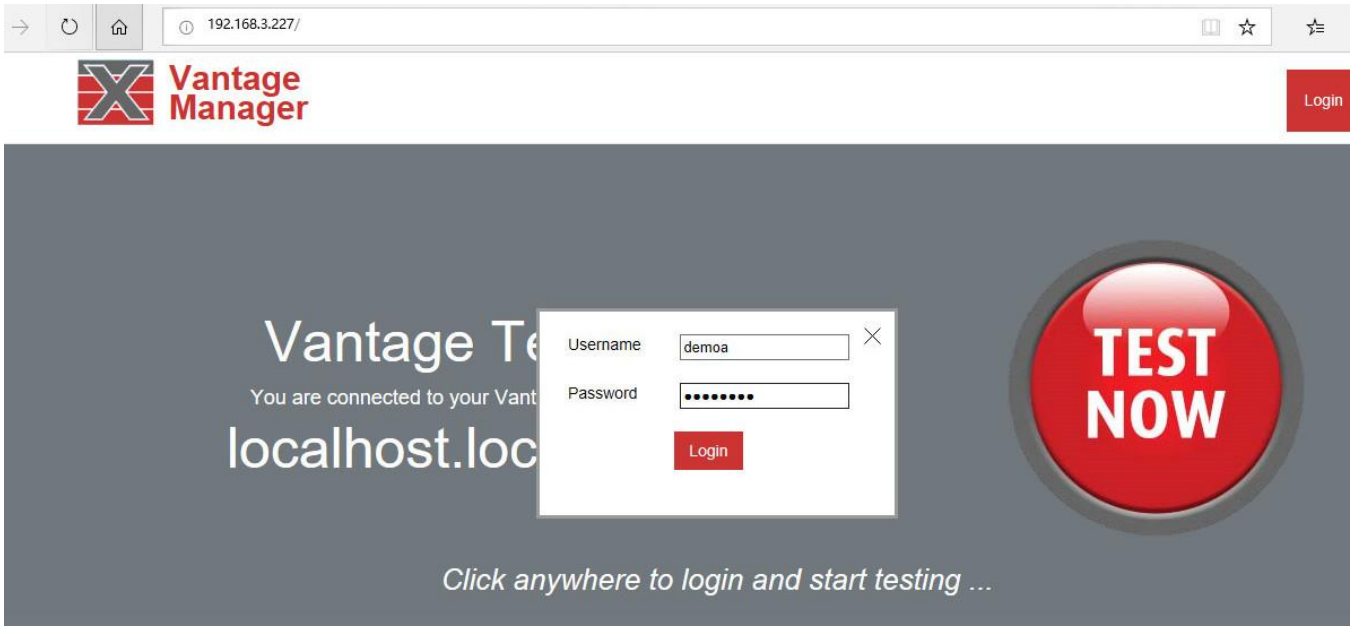
Login VantageManager

User and Password

Customer could login Vantage with browser, but for the compatibility, Xena suggest you use Firefox or Google browser. The default IP address of Vantage is 192.168.1.227.
If you use IE, please make sure that your IE version is higher IE 8.0. If your IE is lower 8.0, it may due to some UI display errors.

There will be a administrator support by Xena:

- User name : demoa
- Password : Xena2018



VantageManager

There will be four main operation on the home page, they will guide customers enter different management UI page. Different user will see different number operation, it bases on its role. If the user whose roles just contain “Test” and “Result”, that means he could only visit “Test Now” and “Test Result” page. The administrator could change the roles of the users.

Test Now

“Test Now” UI page is the main test page of VantageManager, customer will spend their most of time in the page. In this page, customer could add new tests, start/stop tests, check test log and input the Serial number of the DUT and so on.

Test Result

On this UI page, customer could view test result and download their test report. There are serval types of test report customer could download – TEXT/PDF. And customer could check the detail information of each test result.

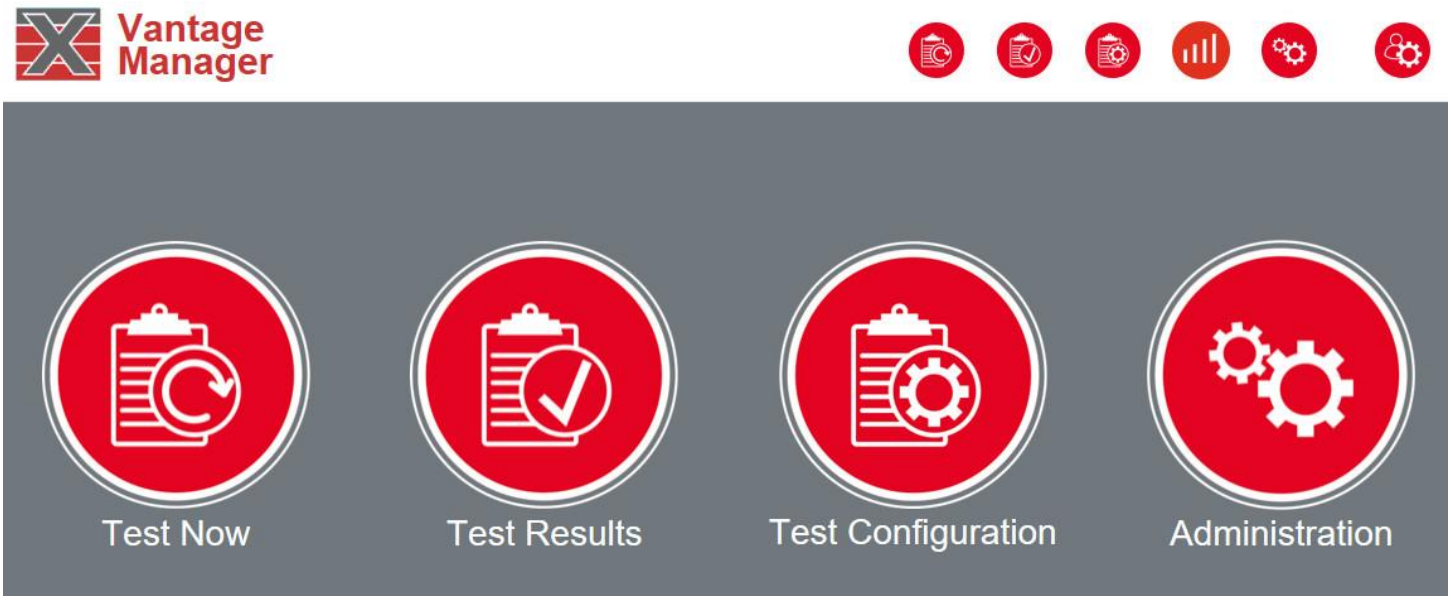
Test Configuration

As you know, for different kinds of DUT, we should need different test cases and topology. So you need to define the ports and streams mapping for different test scenes. Customer could add test template on this test UI page, and of curse customer could modify the value of the streams which they have defined.

Vantage allows customer redefine multiple test templates before doing test. Once the test template has been defined, tester just need to run the test but no need to configure again.

Administration

This is the administrator UI page which only allowed for the user who has admin role. On this UI, customer could be allowed assign the ports to different user and could change the roles for different users. This most important thing is that you could add new user in this UI page.



Vantage Chassis Administration

Chassis information

In this UI page, you could get the chassis information. It will contain Vendor, Version, Version date and so on.

Iterm	Description
Vendor	VantageManger will always belong Xena Networks ApS
Version	The version number of the program
Version date	The date of this version published
Chassis web address	The web address of the chassis, it's special for multiple chassis on one UI
Chasss	The chassis information, it will display all chassis information if customer add multiple chassis into one manager IP.
VantageManager Chassis Upgrade	Customer could visit the VantageManager Chassis Upgrade web page though clicking this link.

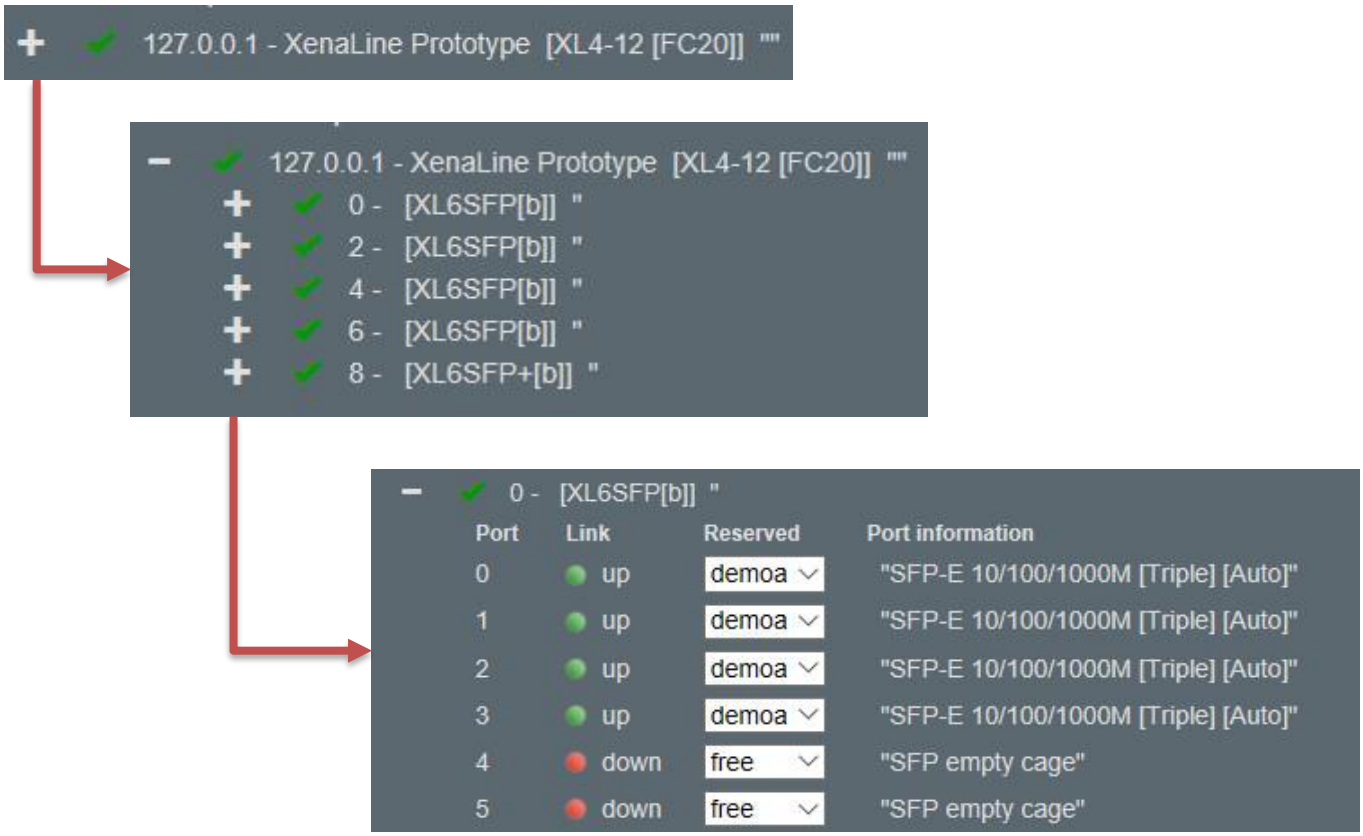
Test port information

The port information is from the last scan performed and may be out of date.
So you need to update the information press the “Rescan Ports” button.
The most important thing is that you should assign the ports to different user. Please learn that you could use this port only after you assign this port to your user.

Expand button, customer could click this button to hide the detail information or expand the detail information of each chassis/modules.

Modules ID – [Modules type]

Item	Description
Port	Port ID of each module.
Link	Link status of the port, green means link up, red means link down
Reserved	The owner of the ports. One port only can be assigned to one user.
Port information	The transceiver information and port speed types. If there is no transceiver in in the cage, it will display “empty cage”



User administration

VantageManager could allow the administrator add new users and assign their roles. If your user is not administrator, you will not be allowed login the “User administration” page.

Item		Description
New user login name		The name of the new user, you could use this new user to login Vantagemanager
Active and login name		The name of the user
Roles	Test	The role of “Test Now” page, will allow customer start the test
	Config	The role of “Configuration” page, allow customer define the test configuration
	Result	The role of “Test Result” page, allow customer view the detail test result and download the RDF/TEXT test report
	Admin	The role of “Vantage XenaLine Administration page”, the administrator user, allow customer modify the user and their roles
		The button which use to add a new user
		Enable/disable the user, once you disable it, you can’t login Vantage any more with this user

	Modify the password of the user, click this button to an input box to change the password
	Save the password which you have inputed
	Filter the user list, you could just see the active users

Test Configurations

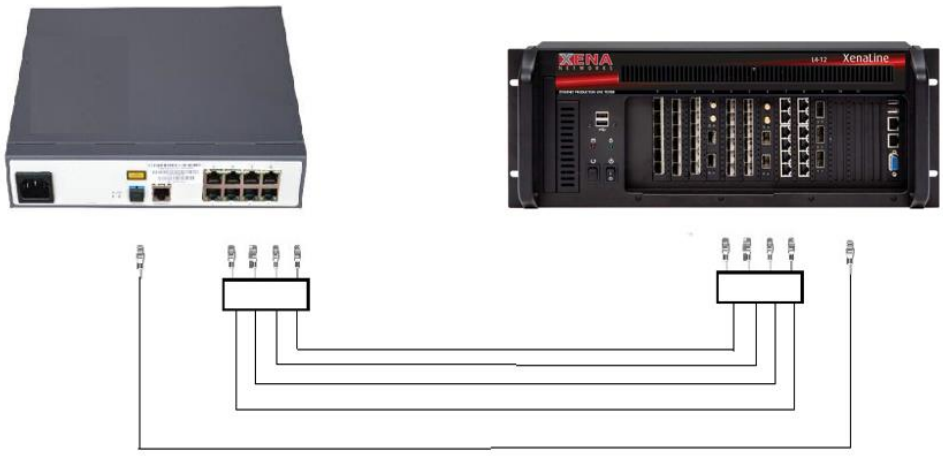
Test case

VantageManager has defined 5 basically test cases for customer. Customer could modify the configuration base on this 5 templates.

Xtlc_aggregation

Aggregation test case which designed for PON. As a PON, there will be an aggregate interface and multiple LAN ports. All LAN ports will upstream to the aggregate port and downstream from aggregate port to each LAN port.

The steams and port map:



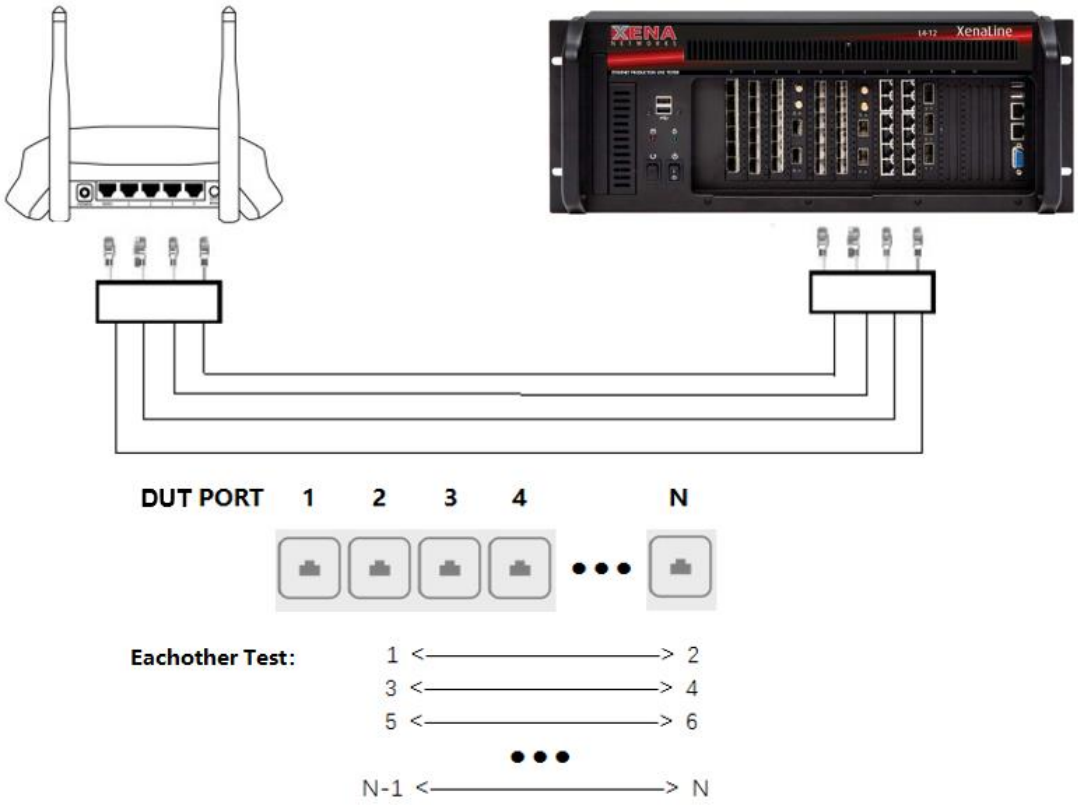
Aggregation Test:
Aggregation port: 1
Downlink Ports: 2, 3, 4, 5, ···, N

1 <——> 2
1 <——> 3
1 <——> 4
1 <——> 5
···
1 <——> N

Xtlc_eachother

Eachother test case which designed for the Switch, router and ECI and so on. This test is used to test the whole LAN ports performance. This test case will make the DUT ports into multiple pairs test port, such 1 with 2, 3 with 4 and so on. And send streams to each other. So it would ask the customer to add the even number of ports to the port map.

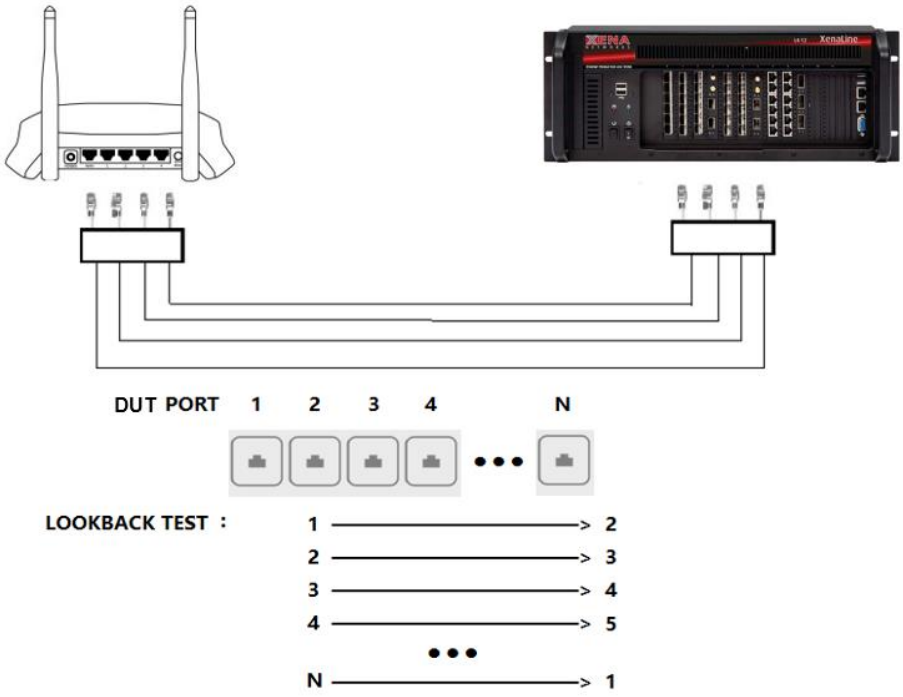
The steams and ports map



Xtlc_loopback

Loopback test case which designed for the Switch, router and ECI and so on. This test is used to test the whole LAN ports performance. It will send the stream from 1 to 2, 2 to 3, 3 to 4 and so on. This test doesn't have port number limitation. Both odd number could be added into the port map too.

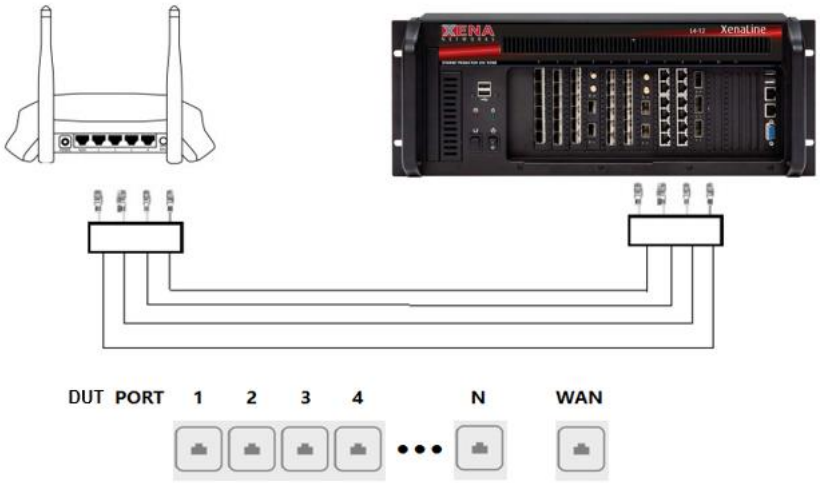
The steams and ports map



Xltc_router

Router test case which designed for the Router. VantageManager predefine as WAN port, other will be assigned as LAN ports. Vantage will send one stream from each LAN port to WAN port and send one stream from WAN port to each LAN port.

The steams and ports map



Test suite combination

Test suite combination is a task list. Customer could add multiple test cases into it. Then Vantage will run those test cases one by one. And of course, you should configure the same port number for each test case, or it will test fail. Since now, the max number of the test case is 10 (from 0 to 9).

Autoconfiguration

The global configuration of this test template, once you change the value of the configuration, the value of the test template will be reset.

- Number of ports:
  The ports which the DUT need to be tested. It will affect the steams and ports map. Enter the desired number of ports.
- LAN subnet (/24) :
  The LAN ports subnet, you could set the subnet for the tester LAN ports. It will affect for the all LAN ports. Enter the IP address for the desired subnet , e.g. 192.168.1.0(/24 is assumed)
- VLAN
  The VLAN tag which will affect to the whole streams. If not empty or 0, enables insertion of VLAN tag in the LAN stream packets.

Overall test configuration

Overall test configuration is the main test configuration for each test template. It's the test process logic when the test running. Customer could double click the value to an input box instead of the slider. It will more easy for customer to set some fixed value.

Item	Description
Automatically clone	If set to a non-zero value, the system will wait this long for the link to disconnect and then automatically reset the DUT field and start a new test after this delay. Use the slider to select a value and press Set to save the new value
Lost packets threshold	If the packet loss exceeds this value, the test will be marked as failed. Use the slider to select a value and press Set to save the new value
Autolearn time and MAC detection	The max time of the mac learning. Tester will send some low speed rate streams to help the DUT to learn the mac address.
Test execution time	Duration time where measuremnts are done. Use the slider to select a value and press Set to save the new value

Timeout for link synchronization	Timeout for link synchronization before sending first packets, once the link sync timeout, the test will stop and failed.
Port(s) to await:	Select one or more ports (ctrl+click to select multiple), if you enable "**Automatically clone test after delay**", program will detect the ports link status after last test complete. When the program check that the DUT has been change(ports reconnect), test will clone and start again.
Enable MAC addrss detection for SN	Enables autolearn of MAC from DUT using ARP request, program will learn the mac address of the DUT with the selecting port. The arp destination IP could be defined by customer.

Port configuration

Port properties of Vantage tester ports, customer could define the IP address, MAC address, port speed and so on. And the roles of the test case will be display on the left top on each port configuration box. The aggregation port and the WAN port will always be the first port in the test template. You should learn that all this configuration will be reset if you change the value of "**Autoconfiguration**" . That means you'd better finish the "**Autoconfiguration**" before the "**port configuration".**

Item	Description
Port	The role of this test template.
Port IP address	You could define the IP address, mask, gateway for the tester port. And the port could reply the arp and ping packet.
Port speed	If the physiscal interface supports setting the port speed,it may be set here. If set to default the value depends on the module/port type. Select an option and press Set to save the new value
BroadR-Reach	If the physiscal interface supports setting the BroadR-Reach mode,it may be set here. If set to default the value depends on the module/port type. Select an option and press Set to save the new value

Steam configuration

Steam configuration of the test template. Customer could define the value of each stream on this UI page. The stream number of each port will base on the test case types. The stream ID will display on the left top of the configuration box, the port ID will display on the right top. "SID" is the label which Xena will add into the payload, it's the ID which xena recognize the packet is generated by Xena.

Item		Description
Mac address		Sets the source and destination MAC address inserted in the header of test packets. Enter mac address using 6 hex bytes, e.g. 03456723168E
Port IP address		Select the IP protocol as well as source and estination IP. Enter IP address using 123.123.123.123 notation.
Protocol	IP	Define the stream packet into IP packet.
	TCP	Define the stream packet into IP packet.
	UDP	Define the stream packet into UDP packet.
	-	Define the stream packet into Ethernet packet.
Ports		Enter the source and destination port number. Requires protocol to be TCP or UDP.
VLAN:		Enables and sets the VLAN tag for insertion of VLAN headers in the stream packets
Packet lengths		Enter desired length of stream packets
Rate		Set the maximum rate fraction for this stream on the port. If the sum of fractions for streams on a port is above 100%, actual traffic rate will be lower. Set to save the new value
Distr		Set the type of the packet length. Random, BTFLY(Butterfly), INCR(Incrementing) , MIX, Fixed.
Payload type		Set the type of byte pattern used for payload data in test packets. Select an option and press Set to save the new value

Other configuration settings

- **Description**
  The Description of the test case, it will descript the topology of the test case. You could learn the information from this box. Of course, you could change and modify the content, click the button to save the value.
- **Config ID**
  The test template ID of each template, each template will only has one config ID.
- **Create by**
  You could learn the creation user and the creation date in this item.
- **Update by**
  You could learn the update user and the update date from this item.

- **View**
  View the raw test configuration. You could view the test case scripting as a json file.

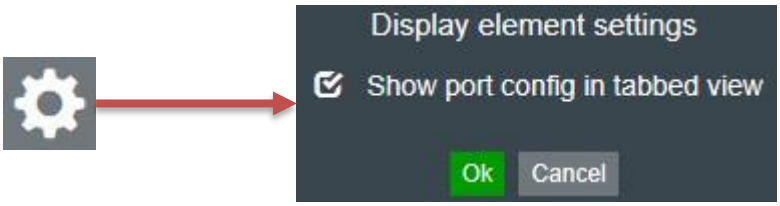
- **Download**
  Download the test case from this chassis to user's computer. Customer could modify it with TEXT and upload to another chassis.

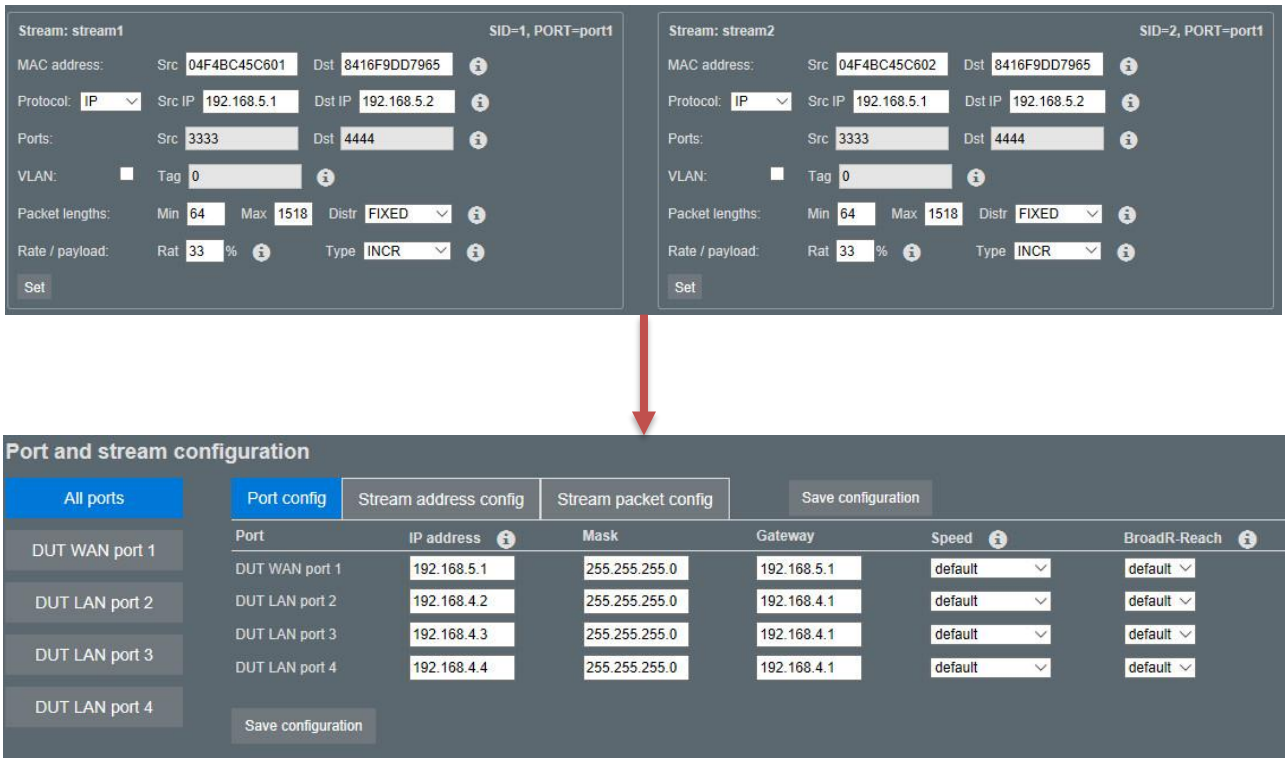
- **Upload** .
  Customer could modify the configuration file with TEXT and upload to the chassis from user's computer.

- **Delete**
  Delete the test configuration

Display element settings

Customer could change the display element settings to change the display types of the ports and streams configuration. Click the ⚙ button to open the "**Display element settings**" windows. Enable **"Show port config in tabbed view"**. Then the streams configuration will display the item in a tabbed view.





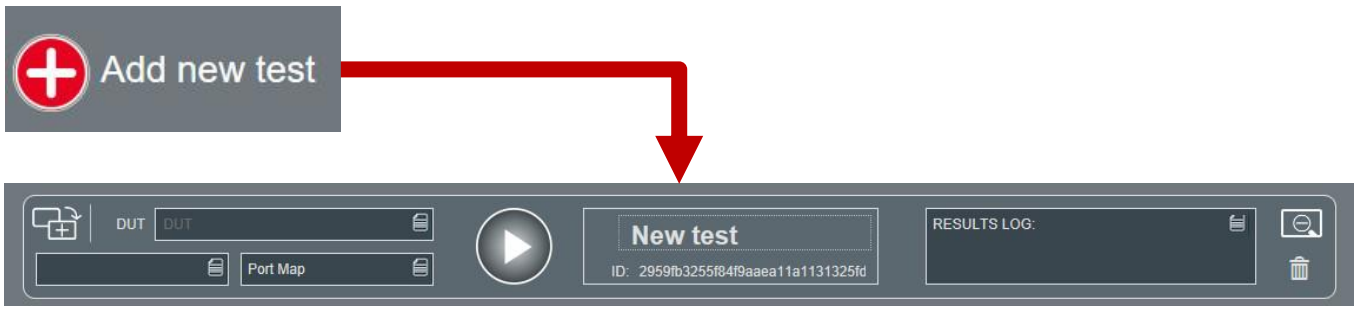
Test Now

This is one of the most important UI of VantageManager, customer will spend most of their time on this page. Once the test templates configuration have been done, customer will only force on this page and do test on this page.
Customers could perform their behaviors like that:

- Add new test
- Start test
- Stop test
- Input serial number
- Select port map
- Check detail test log
- Select the number of test windows
- Filter test

Add new test

Once customer finished their configuration and assigned their test ports, customer could enter "**Test Now**" UI page and click this button to add a new test. There is one thing customer need to understand. Vantage's test is independent, a new test would not recover the old test. Each test will be saved in the chassis until you delete it manually.



DUT

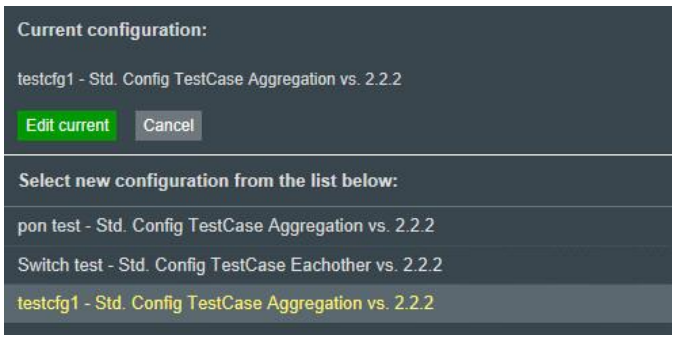
This input box allow customer input their DUT's serial number, this serial number will be save in the test result and test report. Customer could use it to search their test result and test report in VantageManager.
There is three way that you could input the serial number into the box.

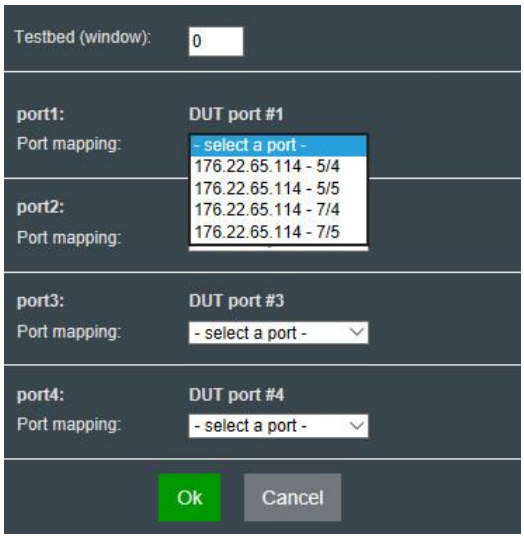
1. With the keyboard and input it manual.
2. Input the serial number with a scanner.
3. Scan the mac address as serial number.
   It could be done by Vantage automatically.

Select test configuration

After customer "**Add new test**", customer should select a test configuration for the new test, the one which customer has configured on the test configuration UI page. You should configure it before you select the port map.

Once you click the list button  , all the test template which customer have done will display as a list. You could select which you want test.

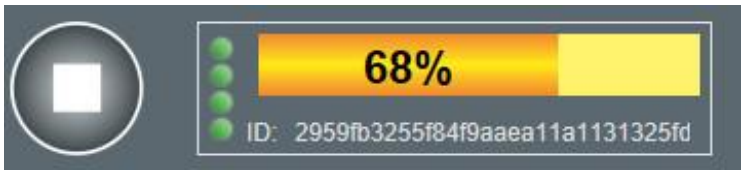




Status of the test

Different display are used to distinguish the status of the test. The green will be used to identify the test is passed, the red will be used to identify failed. And there is a progress bar in the middle of the test to display the schedule of the test.

Config. – That means this test is being configuring or has been finished configuration. Customer could click the "start" button to run the test



Running – When test is running, the schedule will be display on the progress bar. And the link status will also display on the left of the bar. Of course customer could click the "stop" button to stop the test case.

Passed – If test finish and passed, program will display a "√" label on the button and display an green bar with 100%.

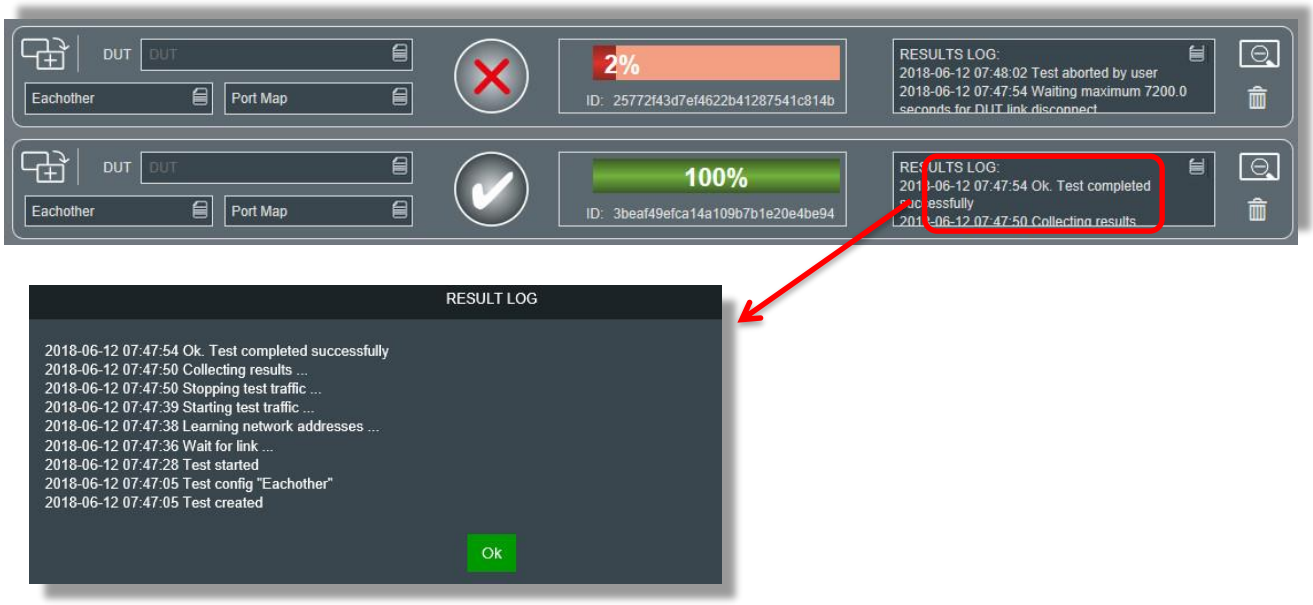
	**Failed – If the test finished and failed, it will display a "×" on the button. And the bar will be displayed red.**
	**If customer enable "Automatically clone", after the last test finished, the new test will be cloned and display "2%" to waiting customer change the DUT.**
	**Of course there will be a time to wait customer change the DUT. If time out, the test will end with red.**
	**It is a new test but the test configuration doesn't has been selected yet. You should select a test configuration for it.**

Start/Stop

There are two kinds of **Start/Stop** button on Vantage UI page. One is for single test which is on the each test bar, this button will only start or stop the single test. Another is the global Start/Stop button which on the right top of the test windows. Once you click this global button, it will affect all the test which are not finished.

Results log

In this box, it will record all the behaviors of the test has done and with the time stamp. It will record the creation time of the test, the test configuration which it's running and the test is passed or failed, and the reason of the failed and so on. You could left click on the box and it will expend on the middle of your screen that you could see more detail information of it.



Other buttons

Customer could click this button to extend the test box to see more information of the test.

Customer could click this button to shrink the test box. It will let the screen to show more test and some information will be hidtten

Customer could click this button to delete test.

The global statistics of the test result. It will display the Passed number

The global statistics of the test result. It will display the Failed number

Customer could input their "Station ID" here and this Station ID will be written into the test report.

Customer could input their "Tester ID" here and this Tester ID will be written into the test report.

Testbed window settings

The **Testbed window settings** could change the display options of the **Test Now** page. Customer can define how many tests display on the front page or hide some buttons which they don't use. Of course, customer could filter the display of the passed and the failed tests.

- Window layout:
  It could be set into different number windows
  1(1x1), 2(2x1), 4(2x2), 6(3x2), 8(4x2), 10(5x2), 12(6x2)
- Hide successful completed tests

  All the successful tests will be hidden on this UI page.
- Hide failed completed tests

  All the failed tests will be hidden on this UI page
- Delete unfinished tests

  All the test which didn't finished will be deleted
- Show latest □ results

  It will only show the latest x tests in each test window.

Display element settings

Display element of different button and box. This setting could allow customer hide or display the below element settings.

- Show pass/fail statistics

  If customer enable this setting, there will be a passed counter and a failed counter in the top of the page. It is a global statistics, it will count the pass and the fail test.
- Show "Start/stop all" button

  Once customer enable this setting, there will be a global start button on the top of the page which will next to the "**Test window settings**". It's a global button, click it could start/stop all the test which has been finished.
- Show Tester ID

  It could allow customer to input their tester id if they enable this feature. And this Tester ID will be written into the test report.
- Show Station ID

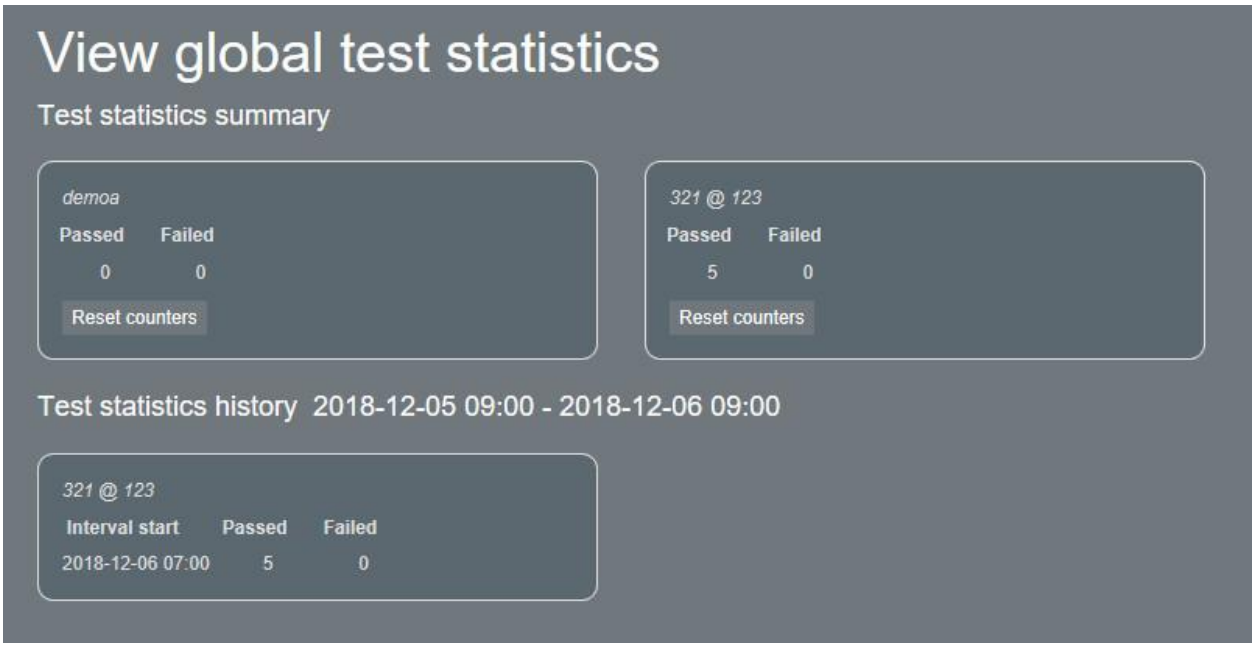
  It could allow customer to input their tester id if they enable this feature. And this Station ID will be written into the test report.

Test Statistics

In this page, customer could view the global test statistics of each tester. And customer could view their test statistics history, too.

There is a “Reset counters” button in each test statistics summary box. Once you click it, the counter will be reset to 0.

Click this button to turn into the **Test Statistics** UI page. This button is on the top manual.

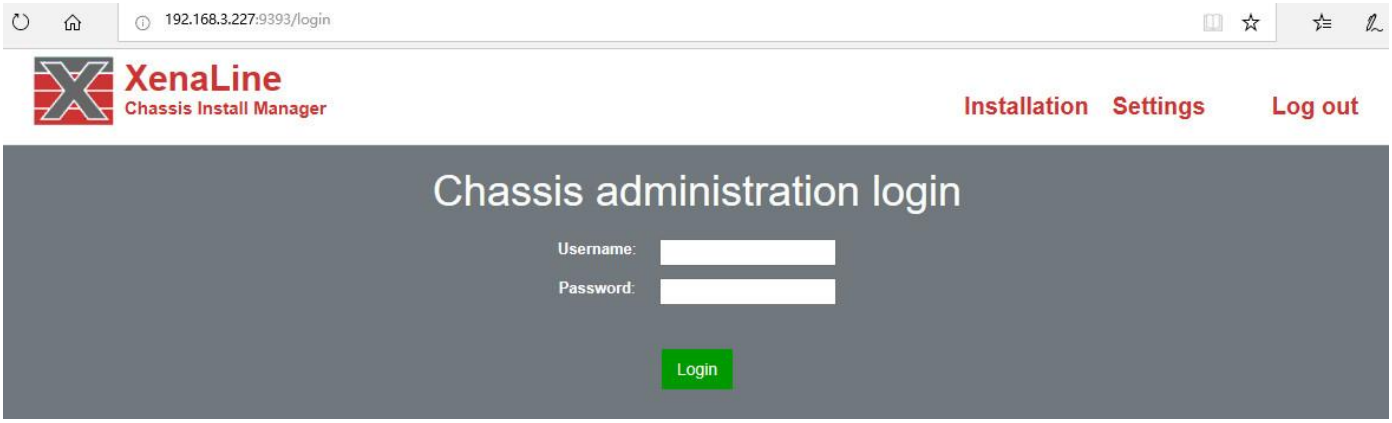


Vantage Chassis Upgrade

Vantage Chassis Upgrade is the web page which use to upgrade chassis release, also it allows customer change the chassis IP address of the chassis.

Visit Vantage Chassis Upgrade

It's all most the same as Vantage Manager, customer could login **Vantage Chassis Upgrade** with a browser and input **192.168.1.227:9393**. (The IP address is the same as the **Vantage Manager**)

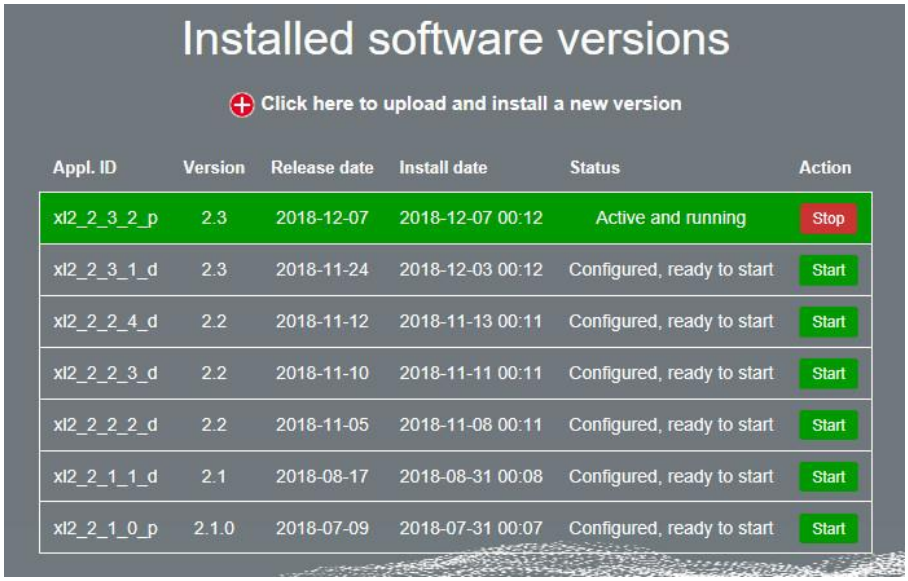


Installation

Installation page allow customer upgrade their unit with the Vantage image which from Xena. Of course, customer could stop and start the special release which they want. There are multiple release could be exit in the same time, but there is only one running in the same time. Customer could active the one which they like.

Install step:

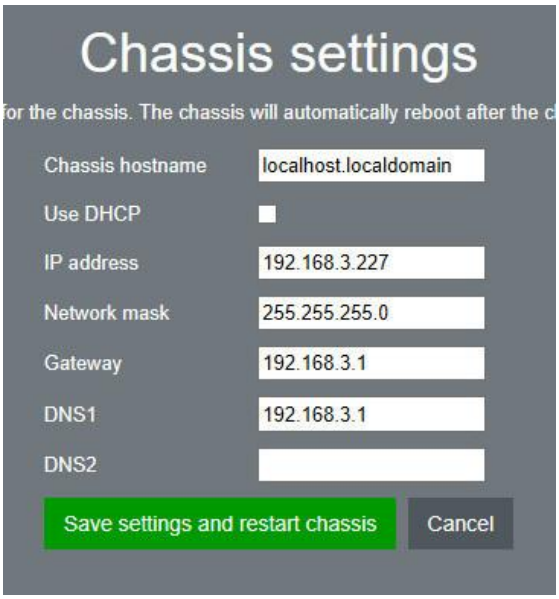
1. Click the button which named "**Click here to upload and install a new version**"
2. Select the image which has been download in your computer
3. Click "Upload application file" to upload the image
4. Then it will return back the version list page, find out the version which you have upload and click "Install"
5. Stop the old version of Vantage and "Start" the new version.



How to change the chassis IP address

You could change the chassis settings on **Setting** page. Change network settings for the chassis. The chassis will automatically reboot after the changes have been saved.

Chassis hostname	The device name of the chassis
Use DHCP	Once you enable this feature, the chassis will send the dhcp require to the network and get the ip address from the DHCP server. Please make sure that the DHCP server works.
IP address	The IP address of the chassis, you could change it manual.
Network mask	The mask of the Chassis manager interface.
Gateway	The gate way of the manager port. You should set it if you change the subnet of chassis ip address.



PS : Please don't forget to Save settings and restart chassis to active the values.