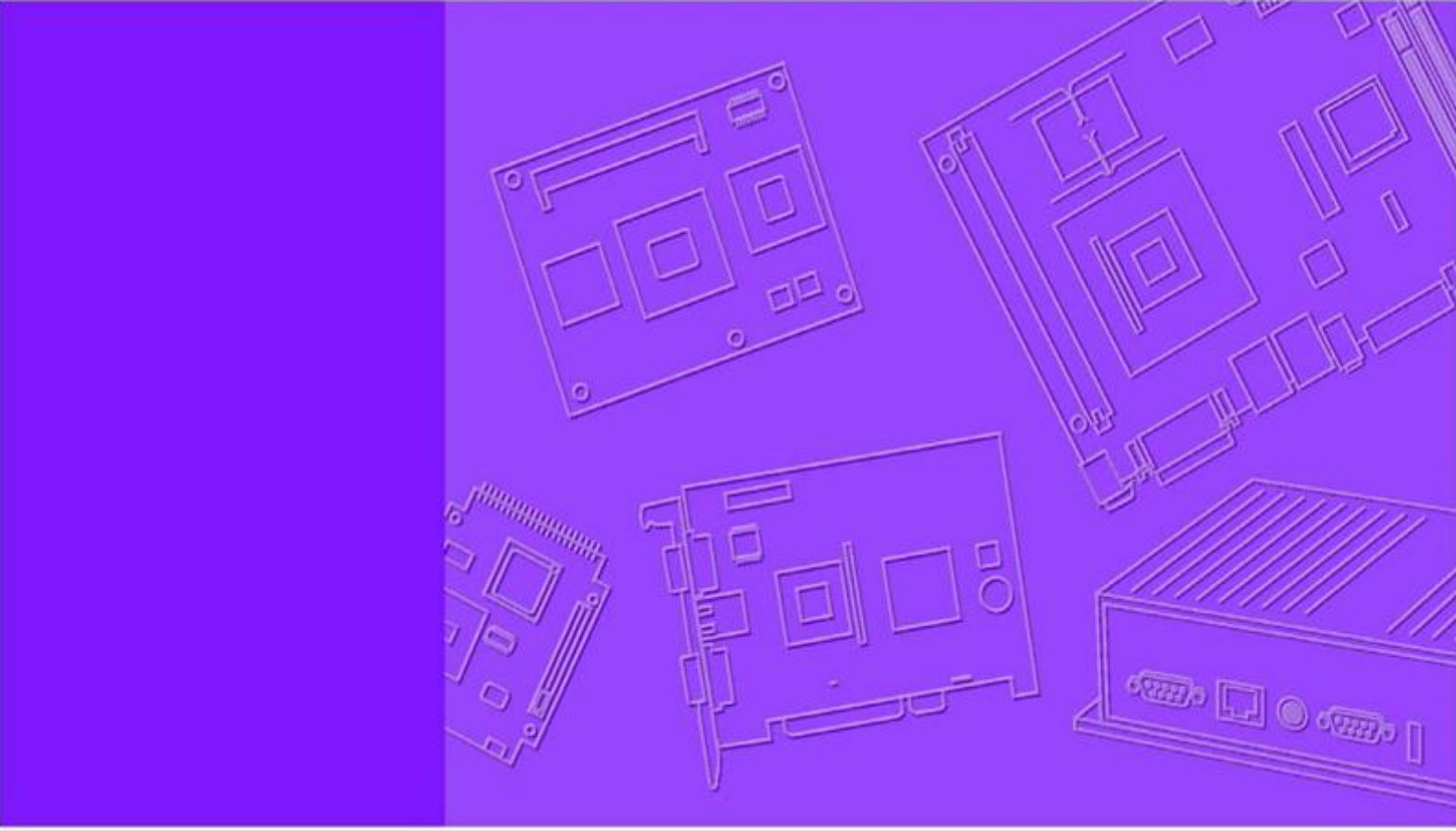

WISE-PaaS/OTA User Guide V2.0.5

ADVANTECH

Enabling an Intelligent Planet

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Technical Support and Assistance

Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:

- Product name

- Description of your software (operating system, version, application software, etc.)

- A complete description of the problem

- The exact wording of any error messages.

1 Preface

1.1 Software Applications and Background

Thank you for using WISE-PaaS/OTA Series. It focuses on remote software update. It provides one-stop updates for application, provisioning, firmware, driver and BSP. Upgrade process and status can be tracked and monitored by server. Upgrade schedule can be set by sever to make a planned update. It can roll back to older version when exception happens. Also supports scripting upgrade such as shell or batch which make the update more flexible. In addition, WISE-PaaS/OTA offers RESTful API web service which allows user to integrate OTA functions with other applications

This client-server architecture software allows upgrade schedule setting , upgrade management on the server side and download & deploy on the client.

1.2 Precautions

Supported platform:

Server: Windows Server 2012 64bit

Client: Windows 7 / Windows 8 / Windows10 32bit 64bit

Following items should be installed or configure before using the OTA Server:

1）Java virtual machine. You can download from the following link.

http://www.oracle.com/technetwork/java/javase/downloads/jre8-downloads-2133155.html

2) Note: The default FTP server is not provided in current version, you can use the existing one or download a FTP Server from network, for example FileZilla Server.

3) If your FTP server and OTA server are not on the same machine, you should turn off the firewall of the system where OTA server locates.

4) Please make sure that your FTP server can be accessed externally.

5) Time Correction:Set the correct time and zone for the OS.

6) Only silent installation packages can be supported.

1.3 Product Description

1) OTA Server: It include upgrade management, package management, storage management and event management in server. User can use it to upgrade the software packages. It provides active upgrade and scheduling mode to make the update more flexible.

2) OTA Client: It is installed on Client side and can download or deploy the OTA packages automatically.

1.4 Subject Range

Platform\ Upgrade Service	Windows	Linux (Lib+Demo)	Android (Lib+Demo)
Application	*	*	*
Patch	*	X	X
Provisiong	*	X	X
Driver	*	X	X
Firmware	X	X	X
BSP	X	*	*

Only silent installation packages can be supported.
* Support
X Not support right now
Windows: Application（exe/msi/bat）, Patch（exe/msi/bat）, Provisiong（bat）, Drivers（exe/msi/inf+sys+cat+auto install Tool）。
Linux: Supports upgrade by script.
Android:apk，BSP

2 Operation Description

2.1 System Login& Logout

2.1.1 System Login

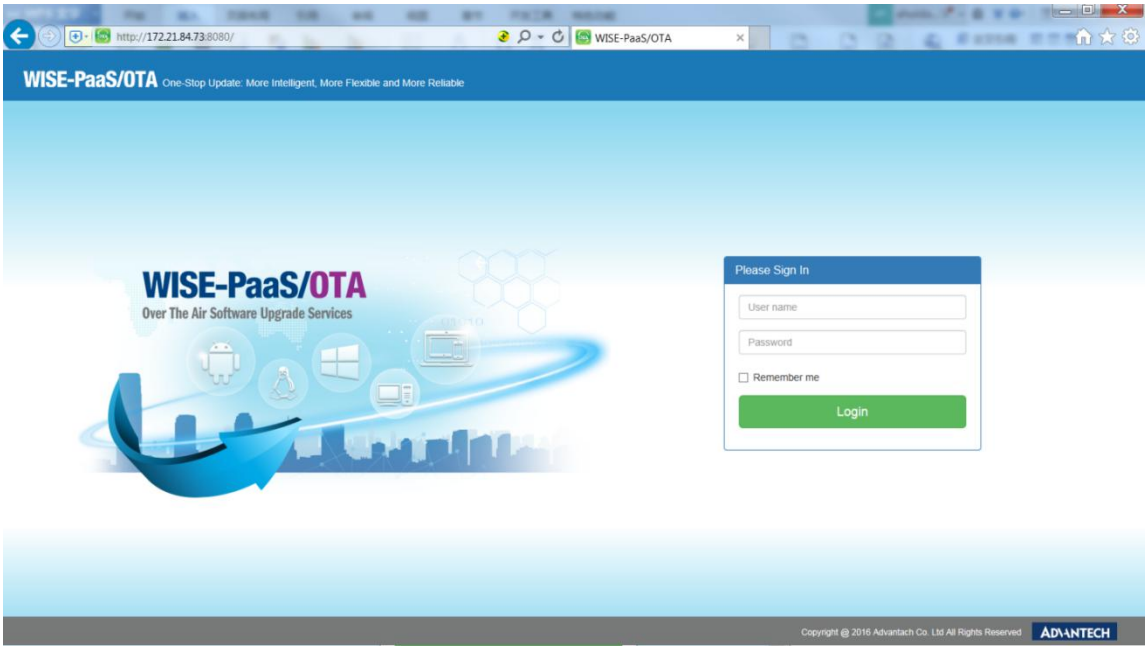
This software is a web-base system. Please click the browser and type in URL: http://127.0.0.1:8080 to start using the software.

* It is recommended to use Chrome 51 browser or above versions.

*External connection: http://SeverIP:8080

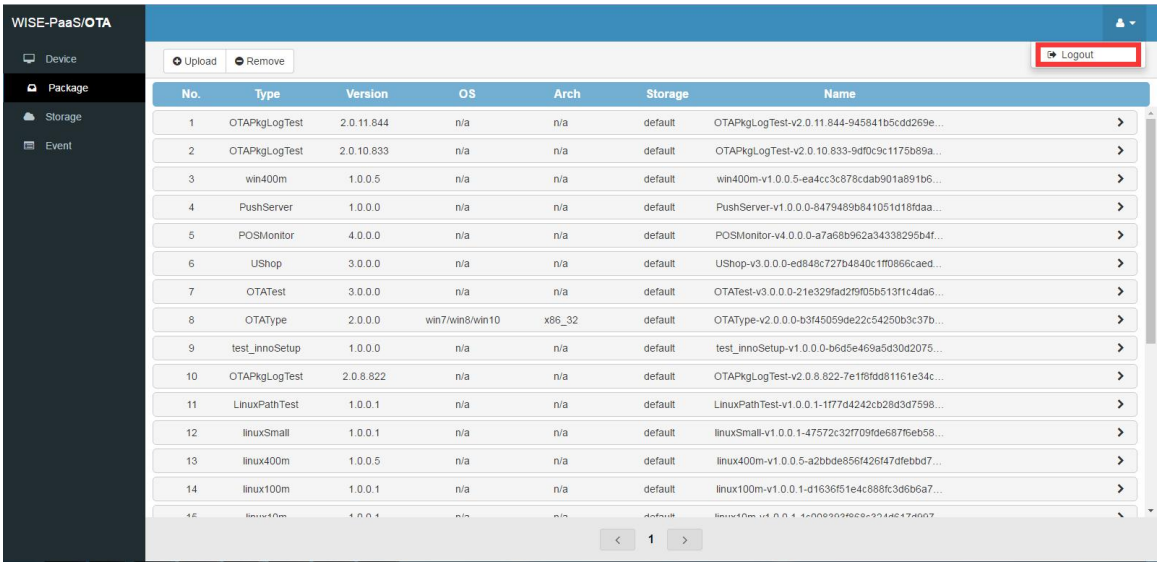
* Default user name and password admin/admin

Remember Me: After selecting “Remember Me”, the password is retained for 2 weeks.



2.1.2 System Logout

Click the “Logout” button on the right-top will log out current system. You need to input the password to re-log the software.

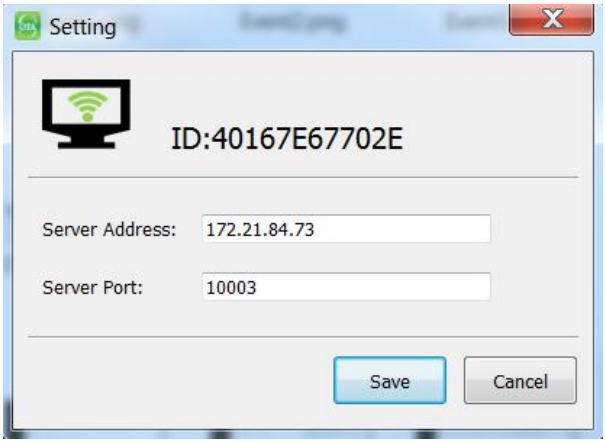


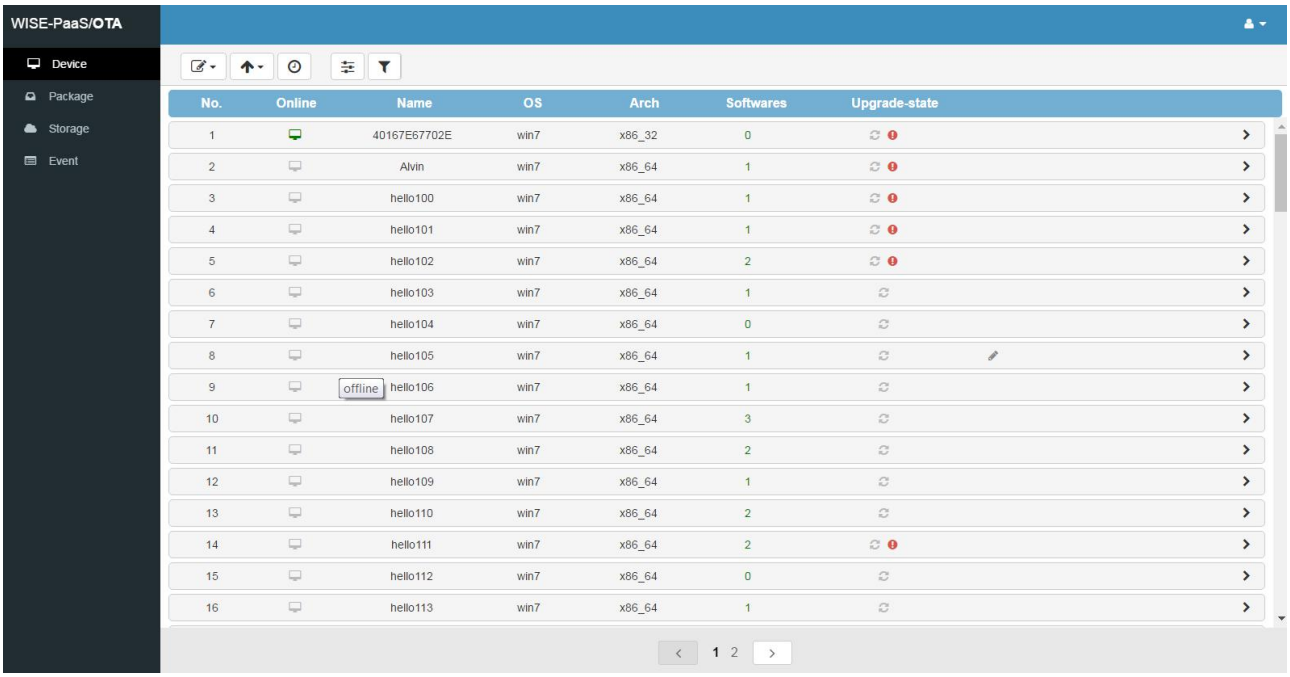
2.2 Device Connection

2.2.1 Add / Delete Device

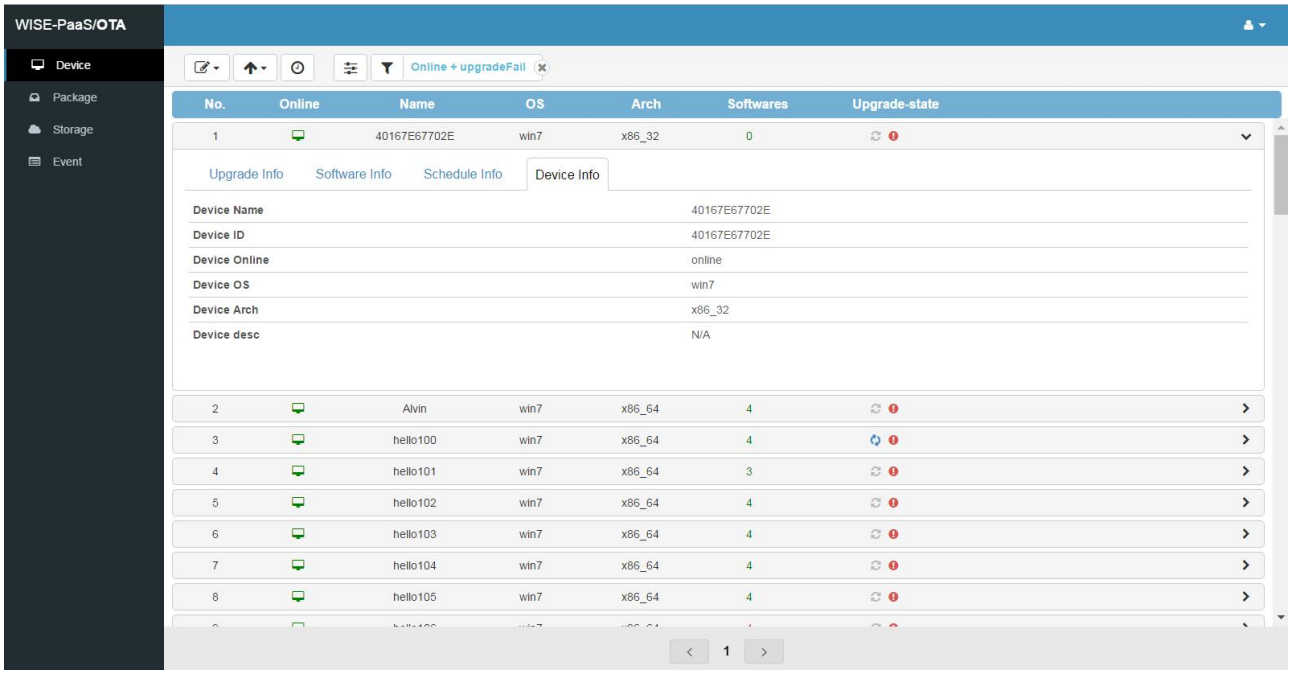
1) Connect to Server automatically

After setting the server IP and Port successfully , OTA client will connect to server automatically.





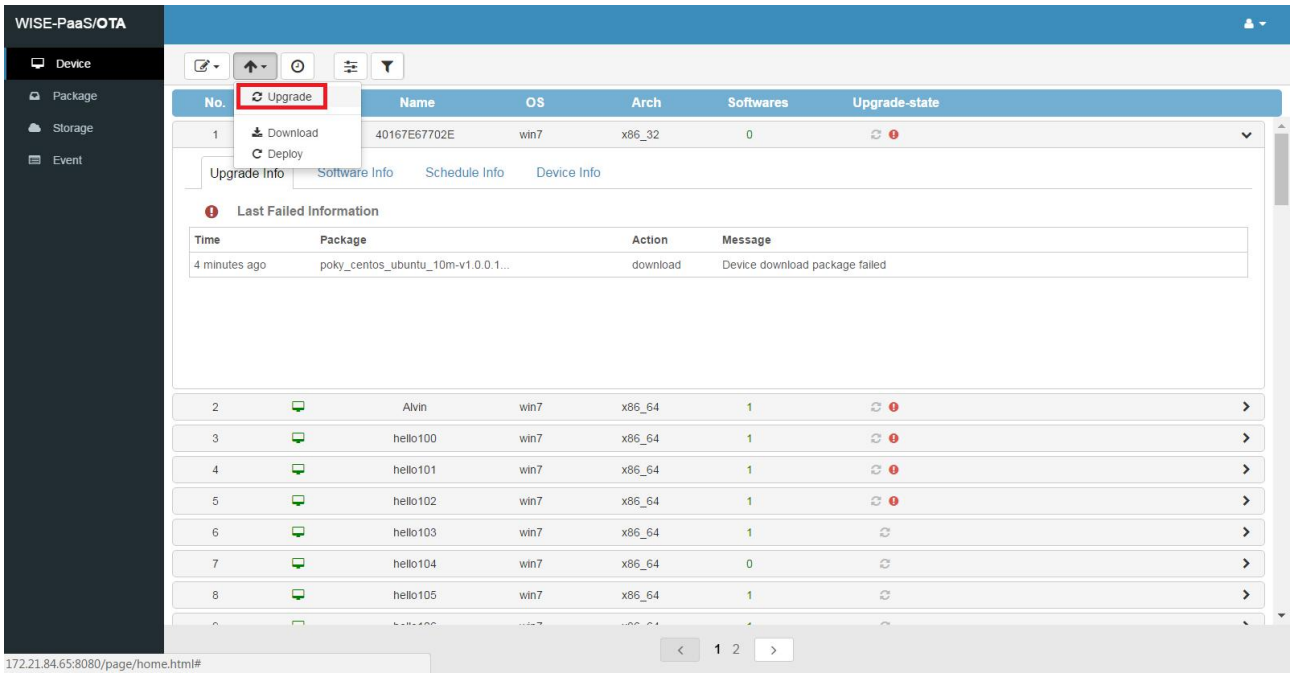
You can view the current device information from the “Device Info” card.



2.2.2 Active Upgrade from Server Side

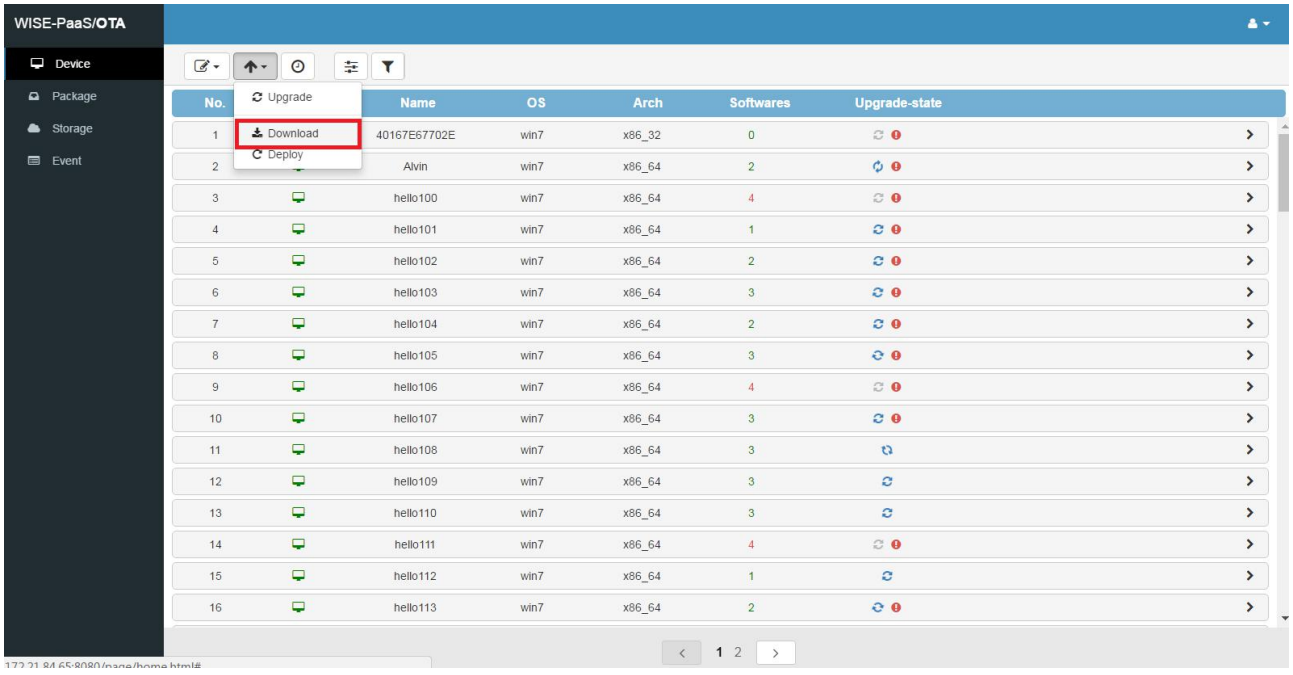
1) Download & Upgrade

Click the “Upgrade” button to execute the upgrade operation. Client will auto deploy the packages immediately after downloading successfully.



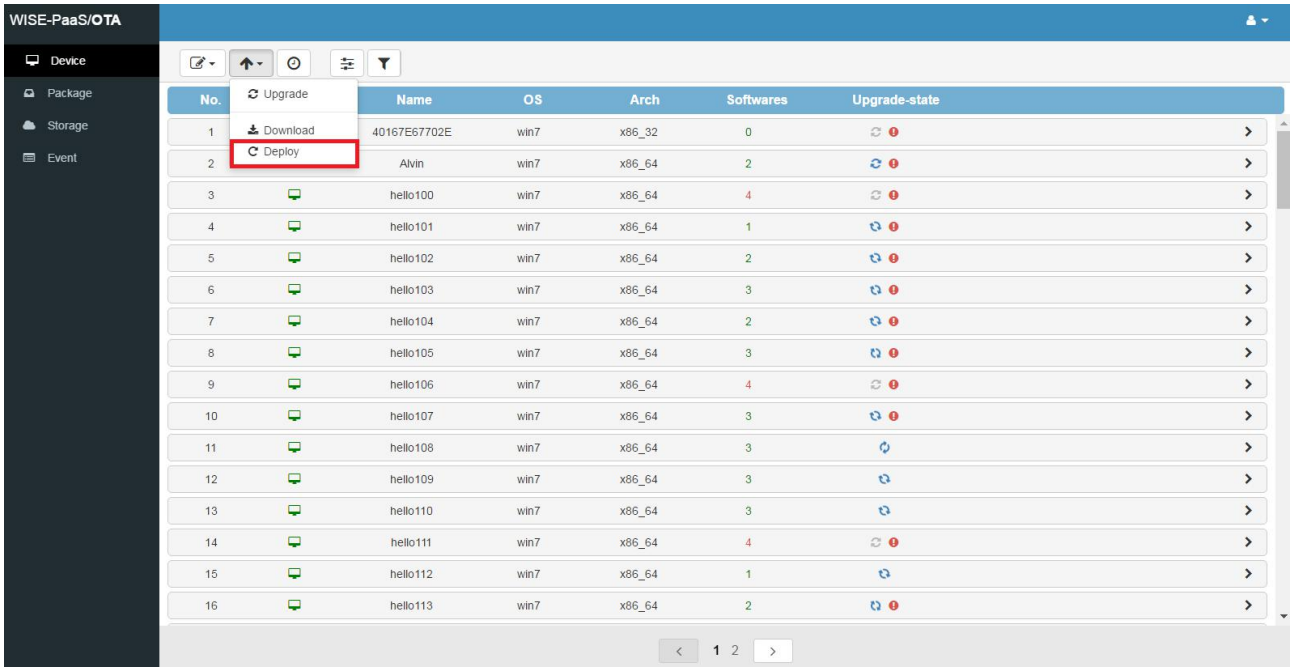
2) Download Only

Click the “Download” button to execute the download operation. Package will be downloaded in client without deploying.



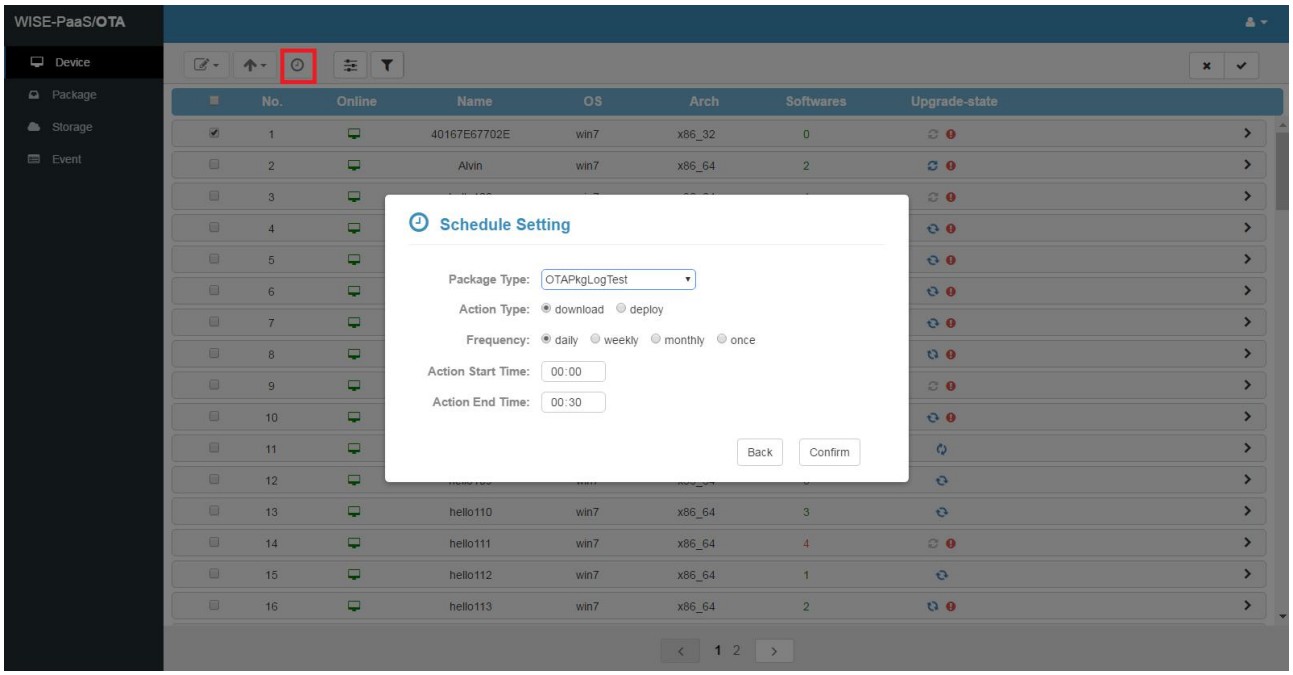
3) Deploy Only

Click the “Deploy” button to execute the deploy operation. If the upgrade packages download completely, client will deploy them automatically.

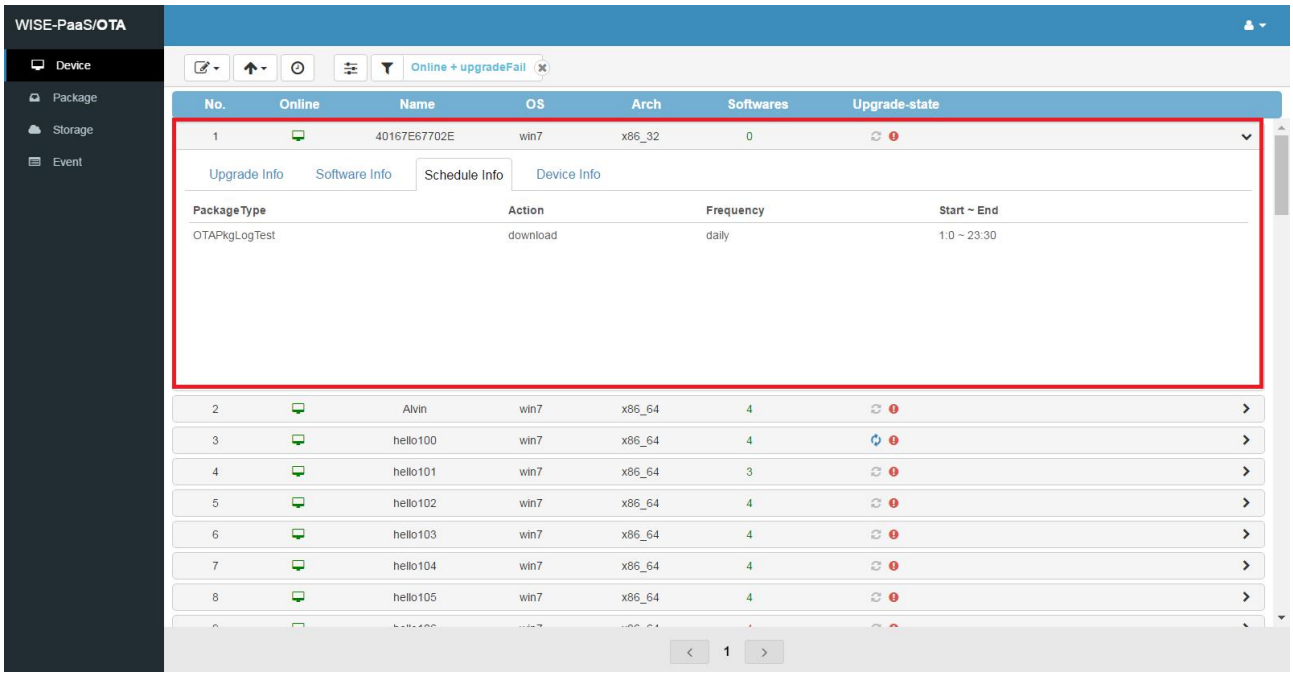


2.2.3 Upgrade Scheduling Setting

Click “ ” button to set the schedule for different device and different package. Scheduling can be set up in each device independently. It will not affect with each other. Moreover, scheduling can be set by package type and it will not affect with each other. Download schedule and deploy schedule should be set separately. Schedule type includes: daily, weekly, monthly and once.



You can view the schedule information via the “Device Schedule Info” Card after you set schedule successfully.



Special Notes on the schedule section:

a) The end time should later than start time when you setting the action time, otherwise it is invalid.

b) If you select "once" in schedule time, you should ensure that the time which you set is in the future, otherwise it is invalid.

c) The start time and end time which you set for action will limit the action execution. The action will enable with the start time and disable with the end time. When the end time is arrived, the download action will suspend and it will be resuming in next schedule time. But end the time will be ignored when the deploy action has been started.

d) Daily: Set the start time and end time in a natural day, can not cross the day, that is say the end time can not exceed 23:59:59 to the next day.

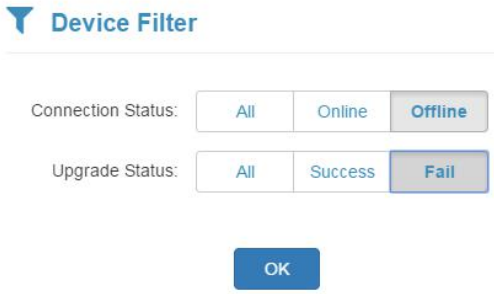
e) Weekly: The start and end times are set in a natural week and can not be crossed.

f) Monthly: The start and end times are set in a natural month and can not be crossed.

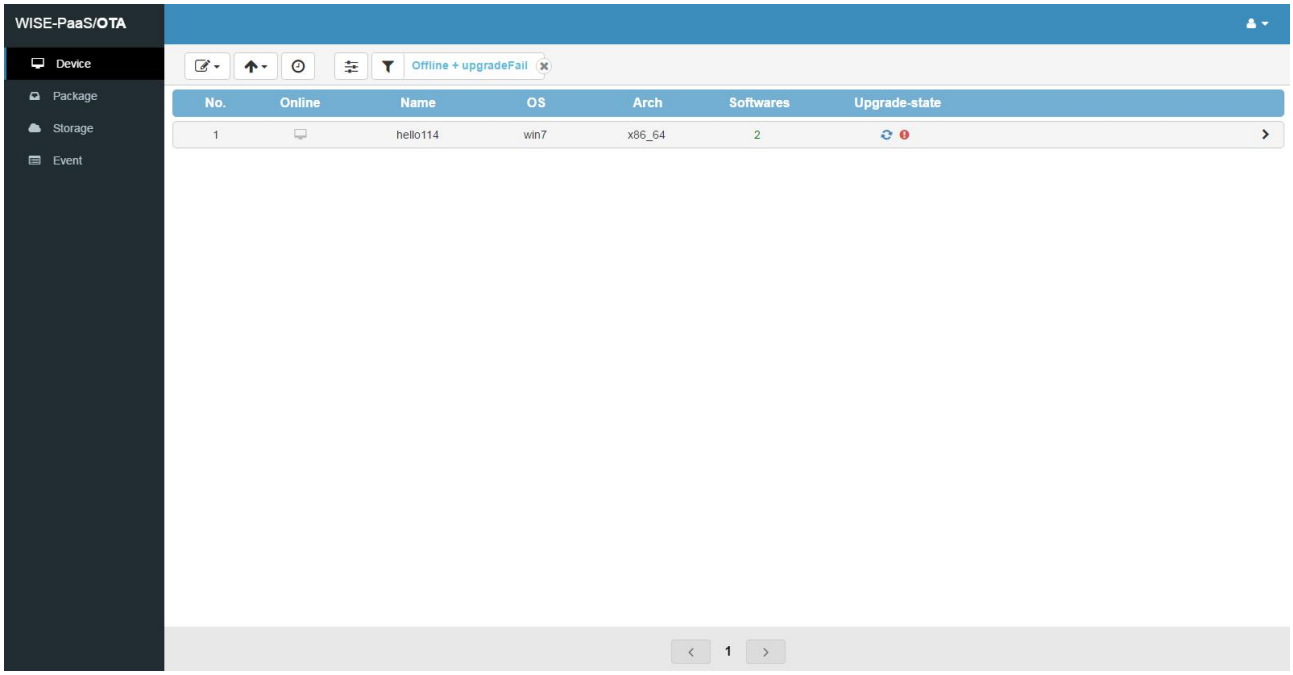
Note: the offline device can not set the schedule.

2.2.4 Status Filter

You can filter the connection status and upgrade result by button. This filter allows you to quickly view the device that is not currently online or all update failed devices. As shown in the following figure, select all devices that are offline and fail to update.



Devices will be displayed with the “Offline + Upgrade failed” condition.

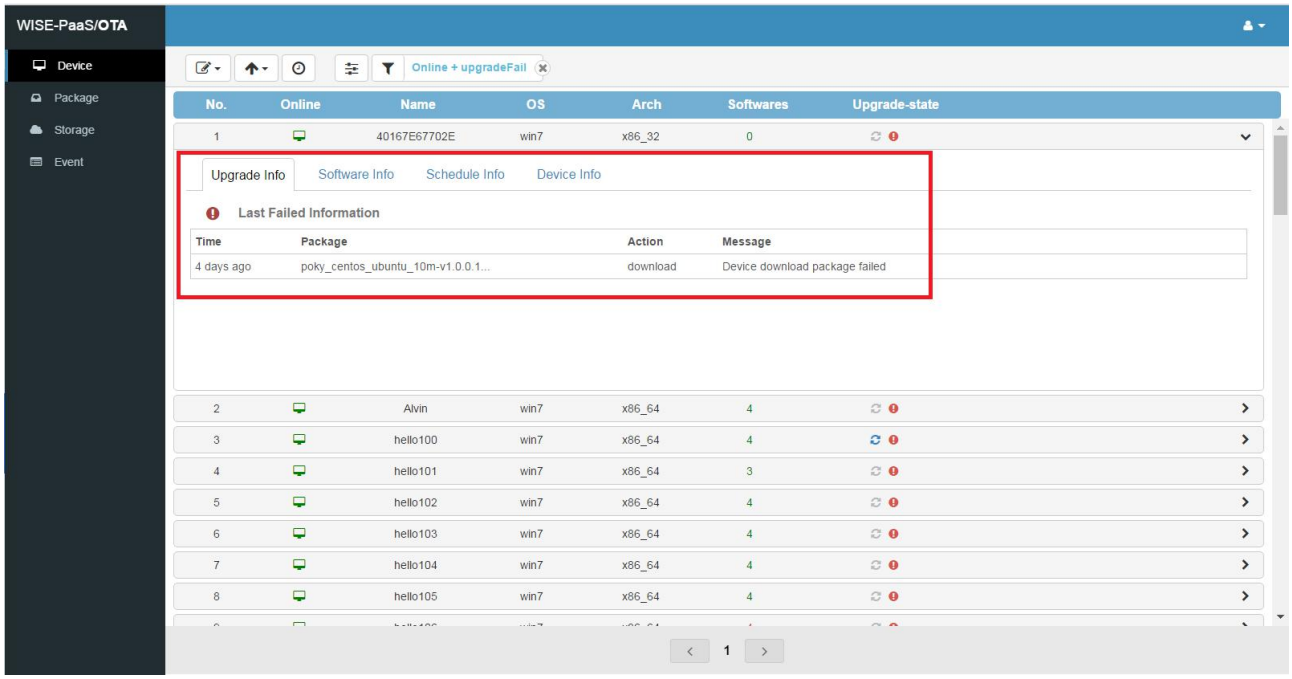


2.2.5 Other Setting

Click “ ” button to set the Retry times for download or deploy, and whether to enable the backup & roll-back mechanism. Please note, this parameters apply to all devices. By default, download will be retry 3 times, and deploy does not retry and the back-up & roll-back is not enabled.

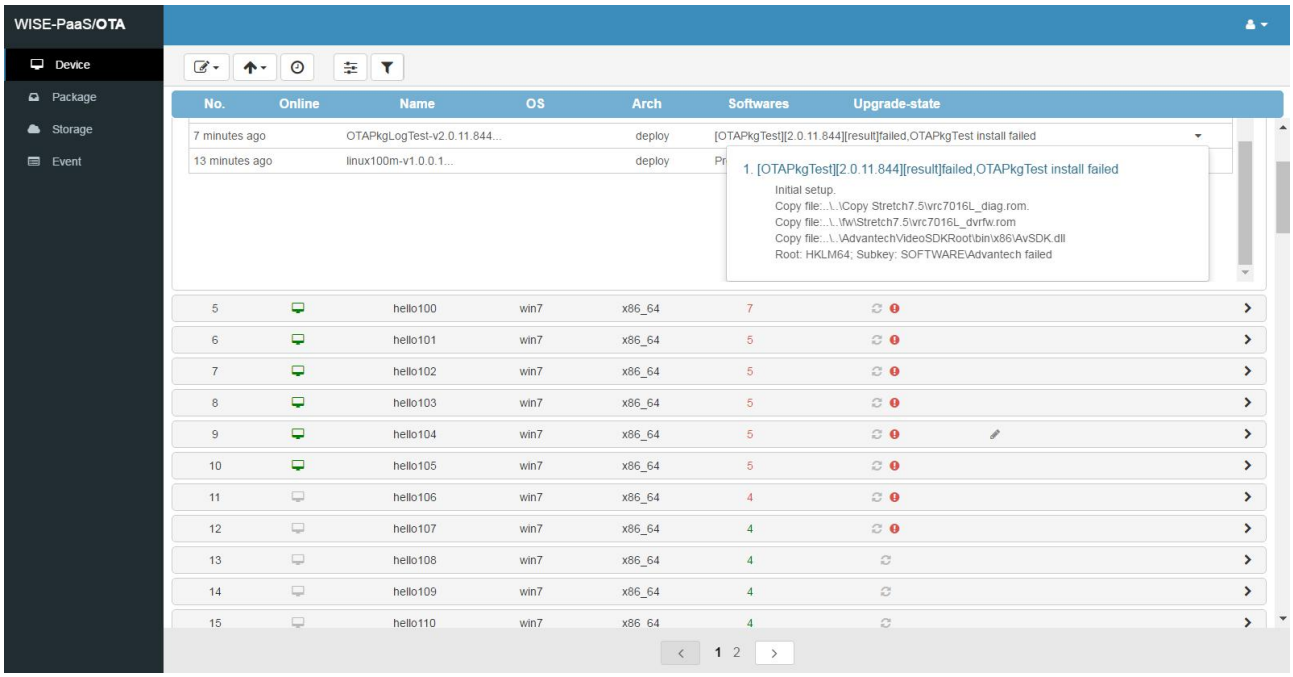
2.2.6 View Upgrade Information

Expand the device list and choose the ” Upgrade info” card, the download and upgrade process and status will be displayed on this card. The exception information of download or deploy will be retained for 15 days.



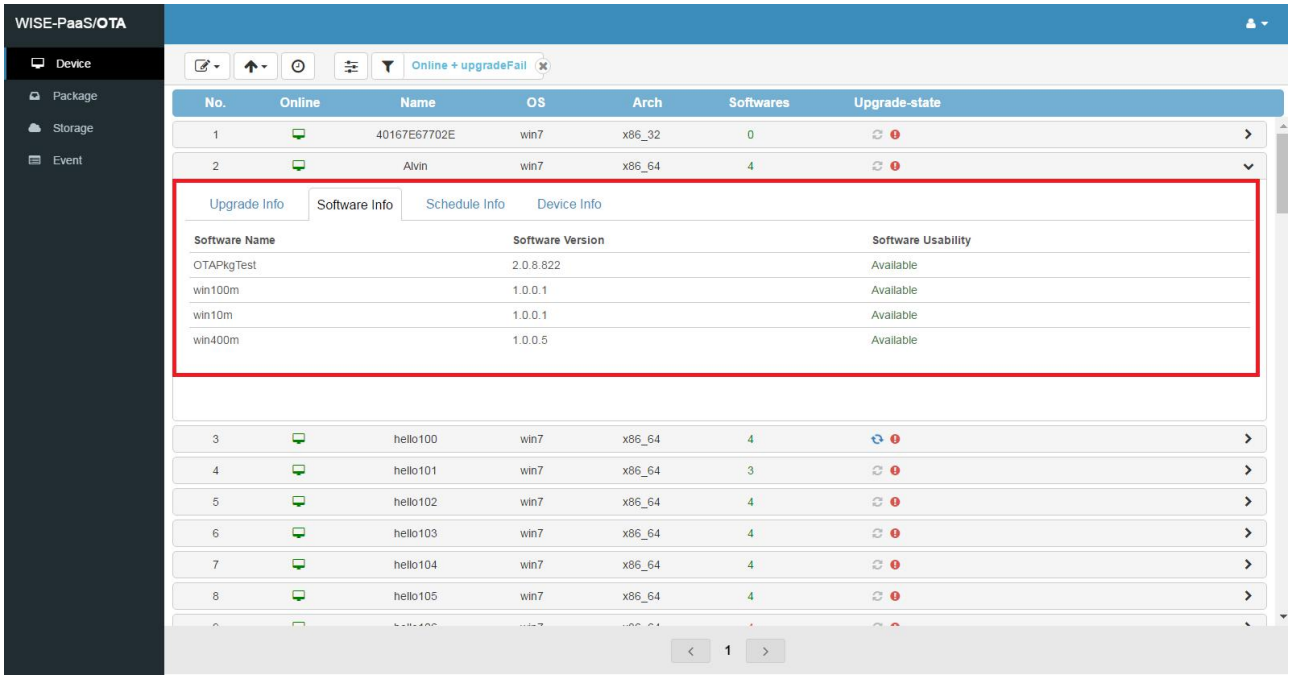
2.2.7 View Detail Failure Information

If you follow the specification of OTA log which used to monitor the key information of deployed software, the detail exception information can be viewed from the server side when the upgrade exception happens.



2.2.8 View Current Software Version

The name and version of deployed software will be viewed on “Software Info” of the device page. You can check whether they are available currently. (Available means deploy successfully)



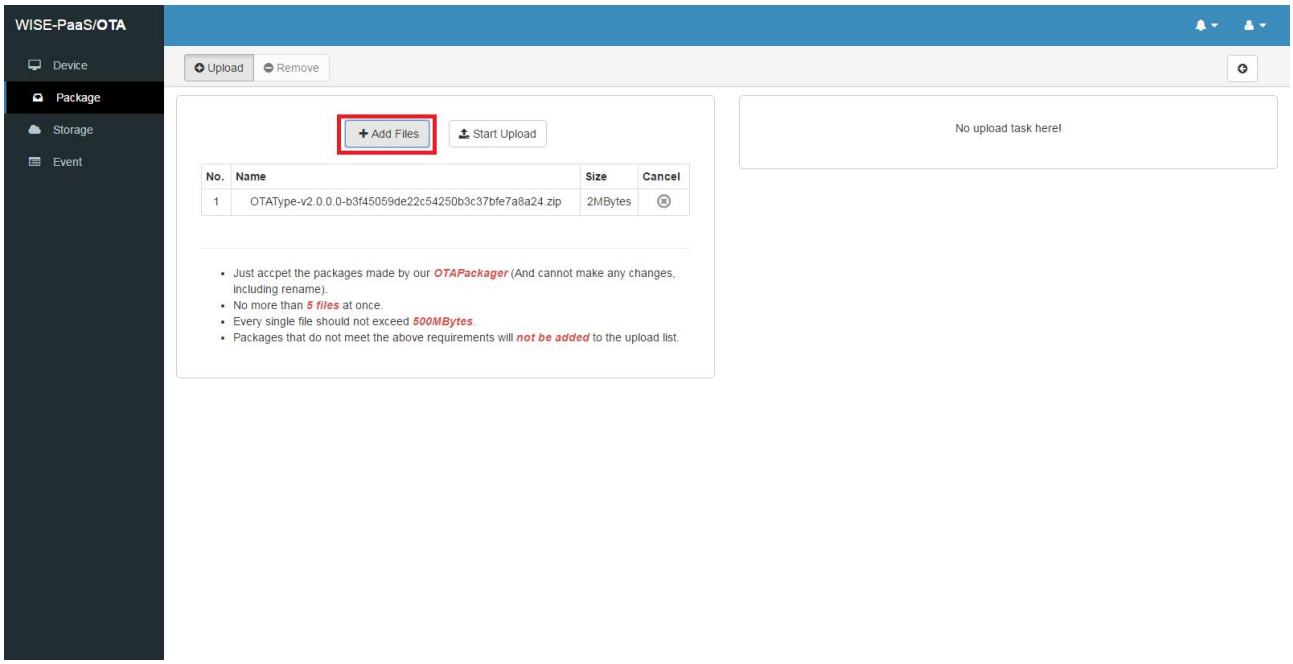
2.3 Package Management

2.3.1 Generate Package

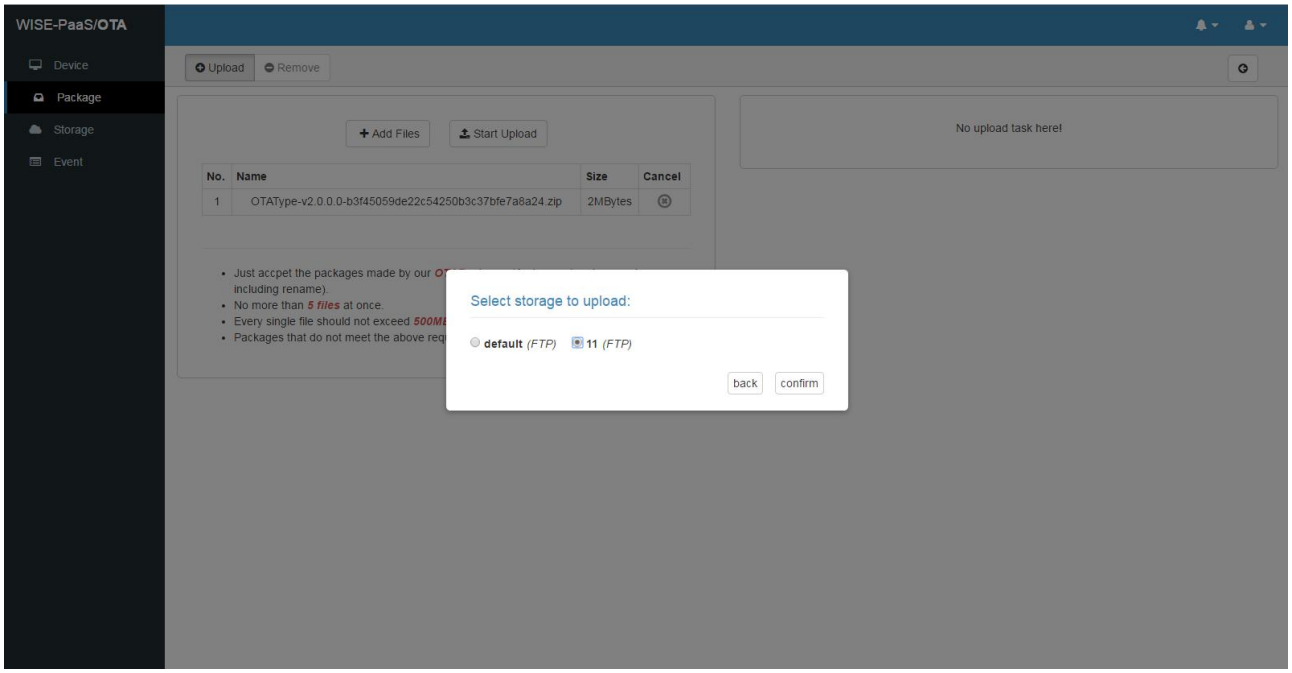
When using WISE-PaaS/OTA system to upgrade, you need to use our OTA Packager Tool to compress your source file which used to deployment. For detail, please refer to “OTAPackager User Guide-English.pdf”.

2.3.2 Upload Package

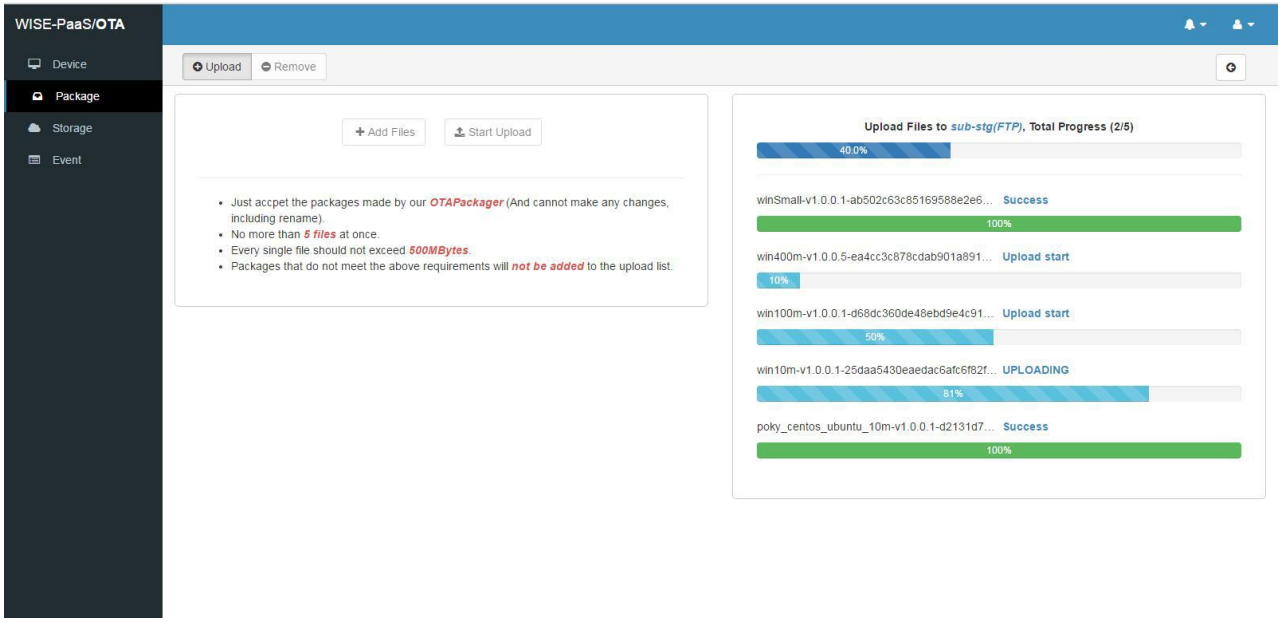
1）Click “Upload” button will show the file upload page. Use can add files which have generated by OTA Packager Tool though the “Upload” button.



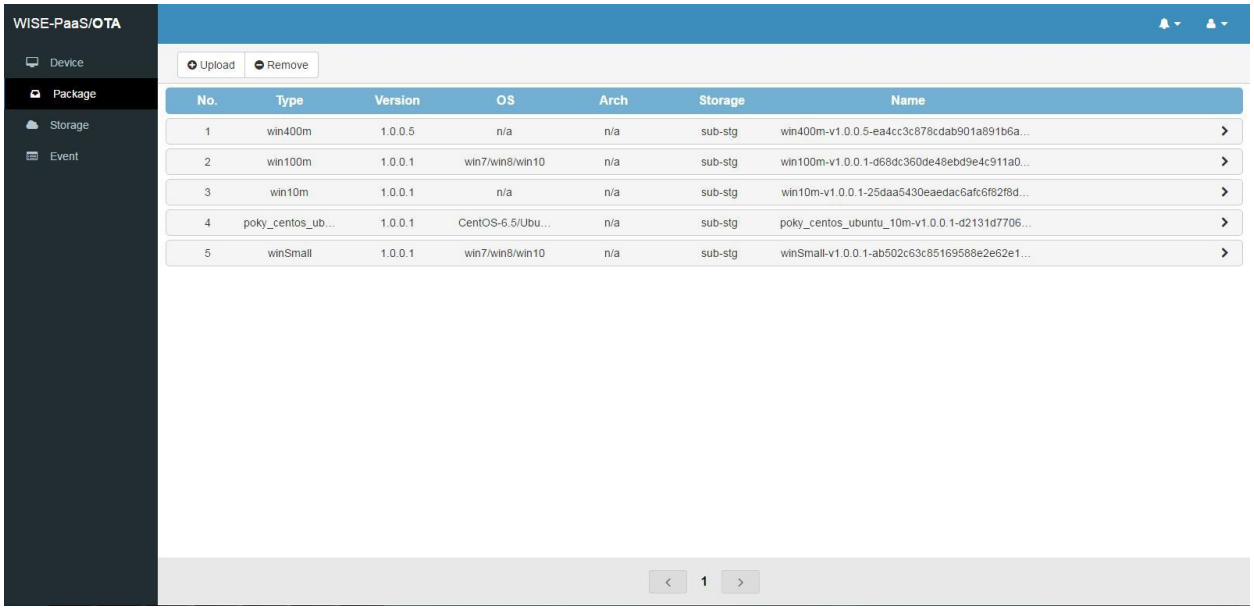
2）After you add the OTA package successful, please click “ Start Upload” button to upload the package to storage which you have configured before. Information about how to configure the storage to OTA system please refers to 2.4 section “Storage Management” in this document.



3）The real-time information of upload process and result will be displayed immediately.



4）All packages information can be list on Package page.

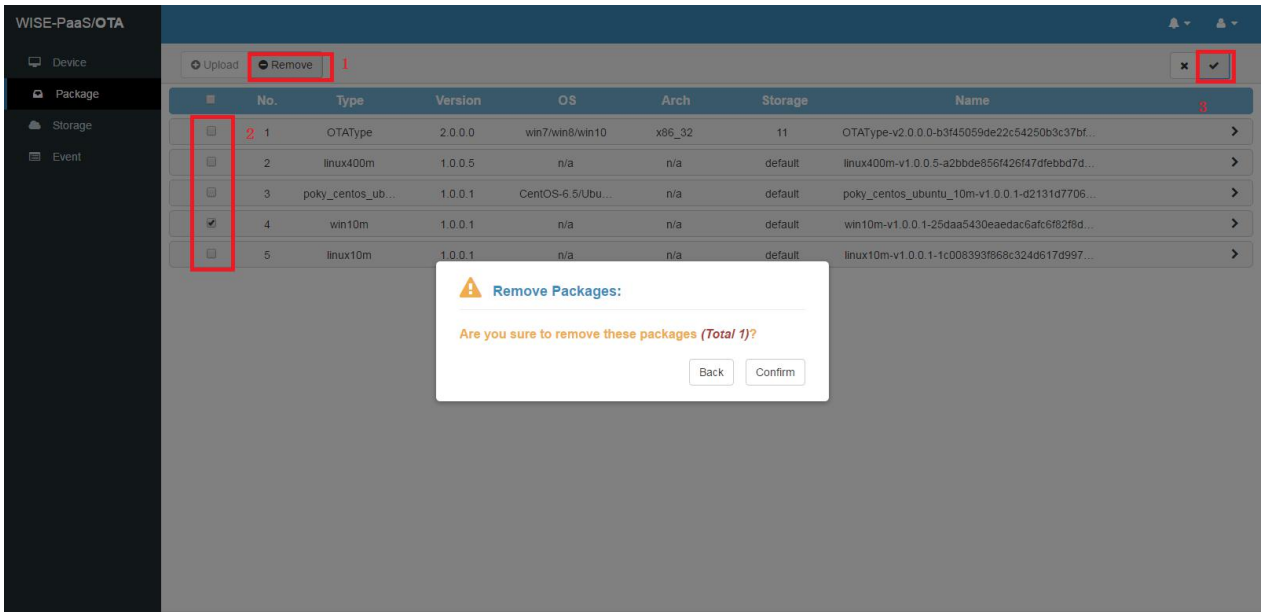


2.3.3 Delete Package

1）Click the “Remove” button;

2）Choose the packages which you want to delete;

3）confirm to delete.



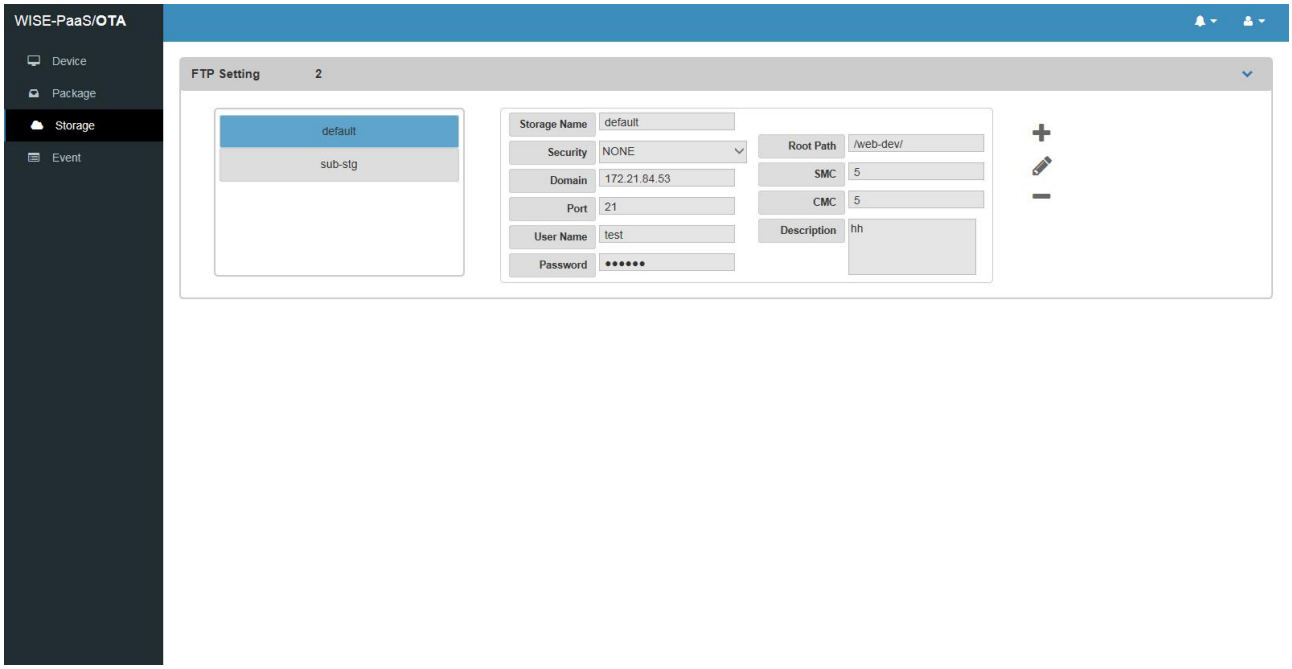
4）Delete completely.

2.4 Storage Management

1）Use the ➕ button to add a new FTP Server to OTA system. All fields are required.

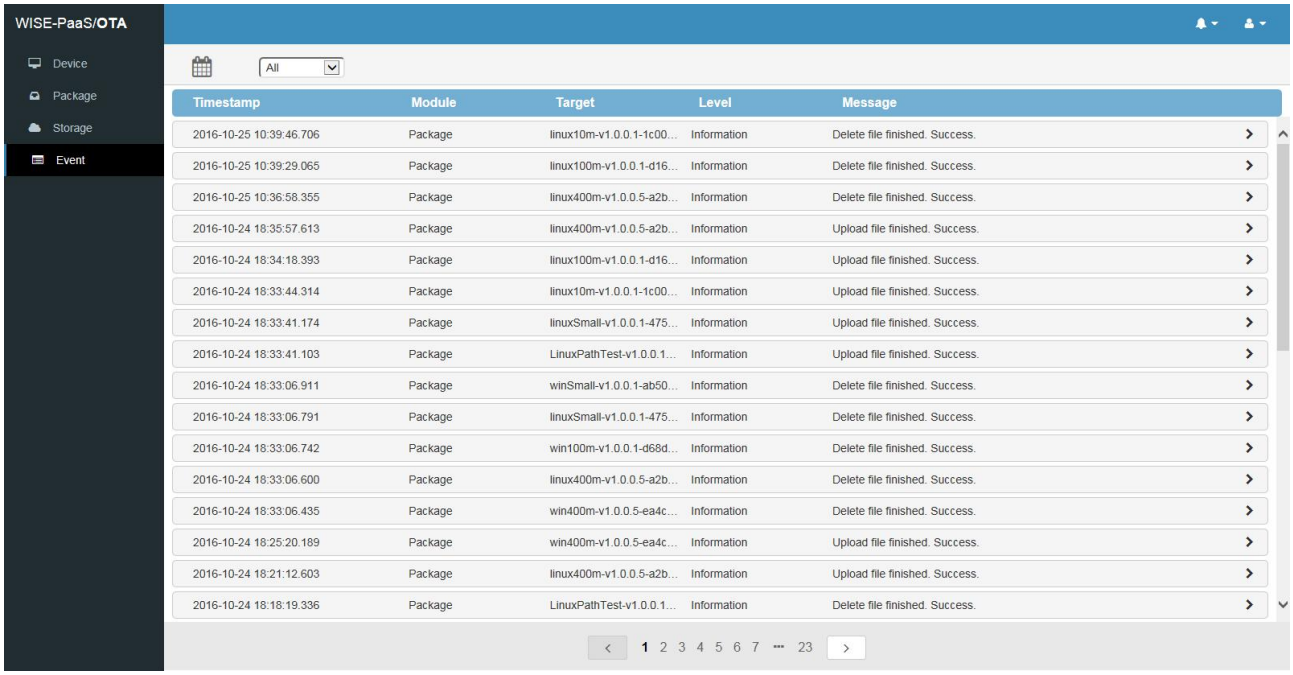
2）Use the ✏ button to modify the FTP information which you have been added in OTA system.

3）User the ➖ button to remove the FTP Server from OTA server.（Removing does not uninstall your FTP server, it means you can't use this server from OTA system）.



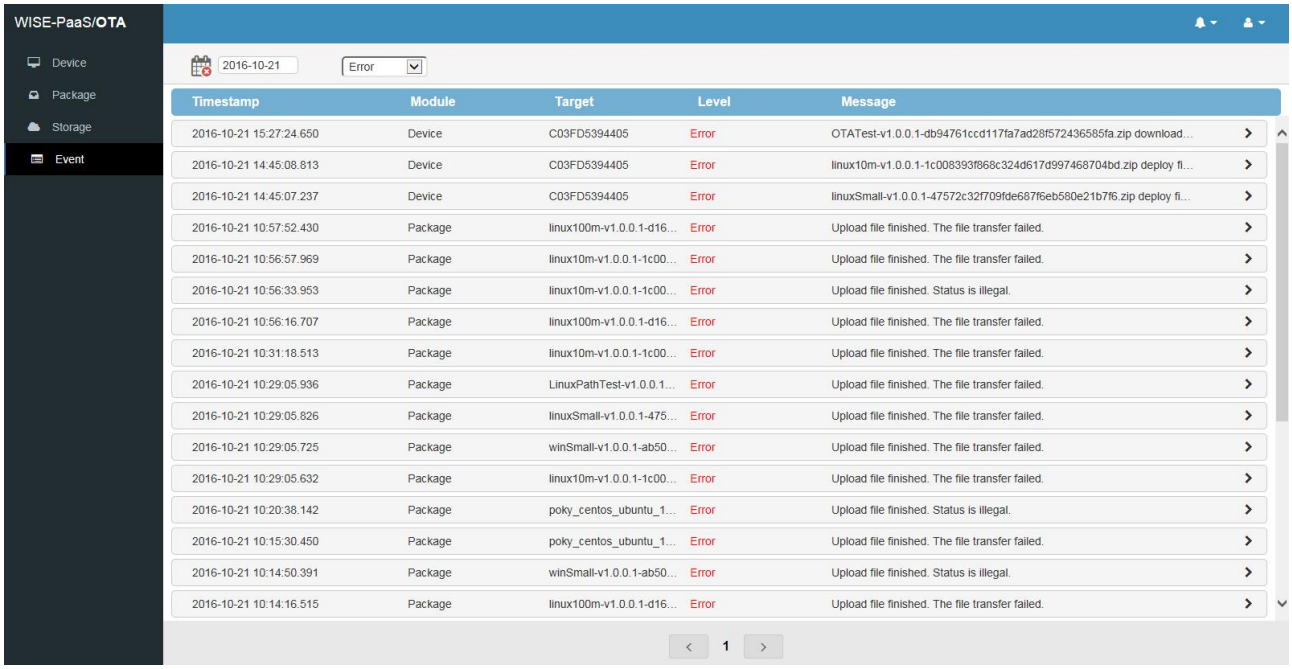
2.5 Event Management

2.5.1 Event List



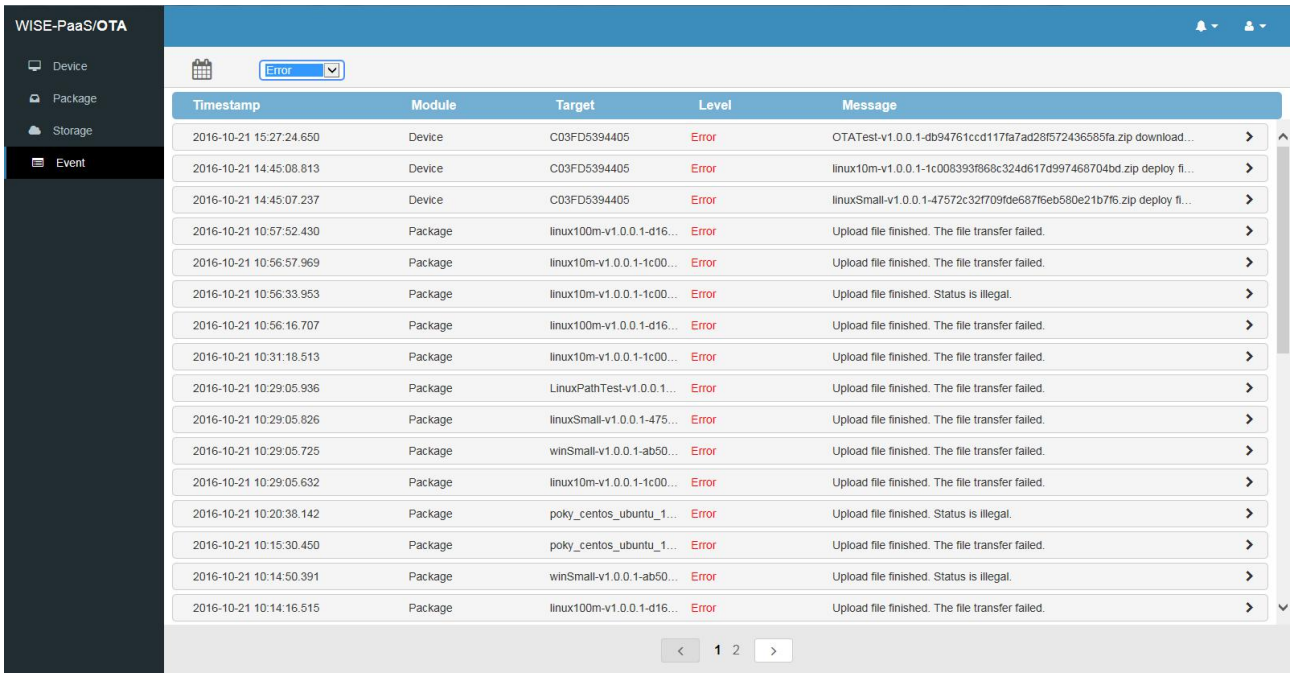
2.5.2 Search by Time

Click on the calendar to select the date (selected by day), and the events in the selected date will be displayed in the event list.



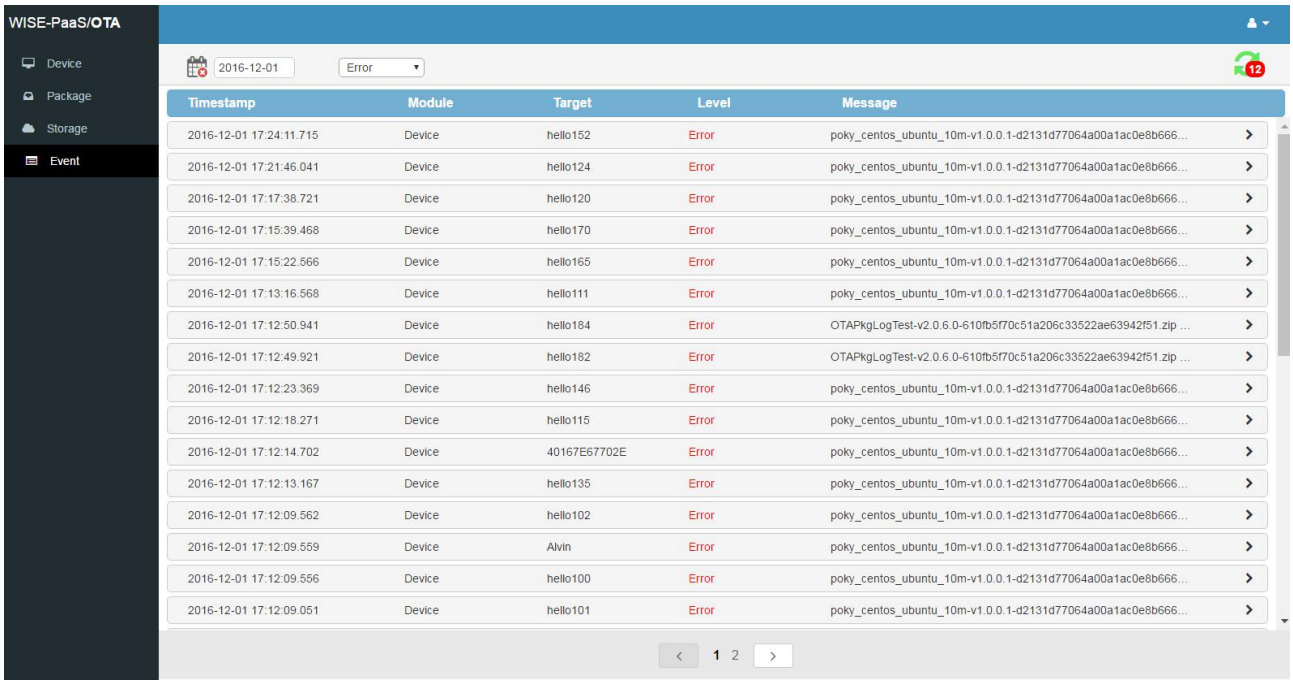
2.5.3 Search by Type

All events will be displayed on this list when you choose “All”. Events which belongs to error type will be filtered out from events. And select “Information” to filter all events of information type.



2.5.4 Event Push

New events will be prompted in the upper right corner. After clicked on it, the event will be added to the event list.


WISE-PaaS/OTA
Device
Package
Storage
Event
2016-12-01
Error
12
Timestamp
Module
Target
Level
Message
2016-12-01 17:24:11.715 Device hello152 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:21:46.041 Device hello124 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:17:38.721 Device hello120 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:15:39.468 Device hello170 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:15:22.566 Device hello165 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:13:16.568 Device hello111 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:50.941 Device hello184 Error OTAPkgLogTest-v2.0.6.0-610fb5f70c51a206c33522ae63942f51.zip ...
2016-12-01 17:12:49.921 Device hello182 Error OTAPkgLogTest-v2.0.6.0-610fb5f70c51a206c33522ae63942f51.zip ...
2016-12-01 17:12:23.369 Device hello146 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:18.271 Device hello115 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:14.702 Device 40167E67702E Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:13.167 Device hello135 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:09.562 Device hello102 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:09.559 Device Alvin Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:09.556 Device hello100 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
2016-12-01 17:12:09.051 Device hello101 Error poky_centos_ubuntu_10m-v1.0.0.1-d2131d77064a00a1ac0e8b666...
1 2

3 Simple Demonstration

3.1 Active Upgrade from Server Side

Usage 1 : Active Upgrade from Server Side——Centralized software upgrade management, to make everything under control

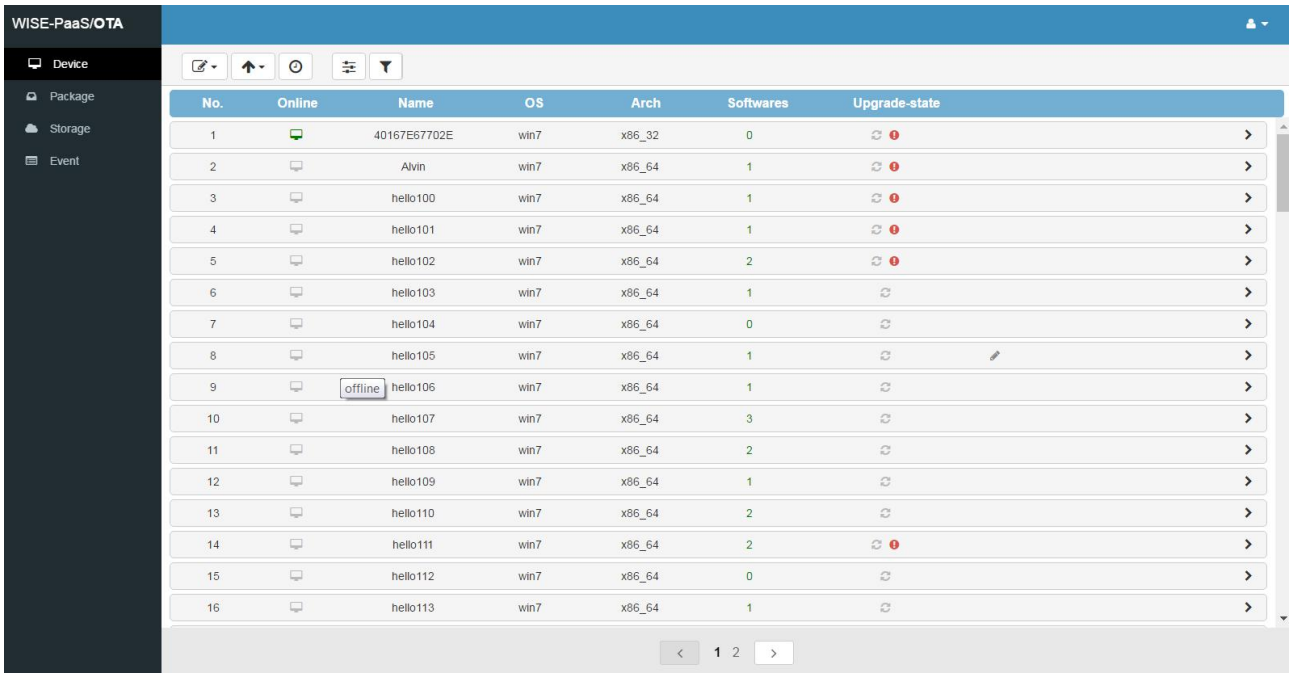
Software A has important bug fixed. Customers need to upgrade the software on all device. Zhang is owner of this project. He hopes he can control the upgrade process. When the exception happens, he can resolve the problem immediately. He start to implement the upgrade task after coordinating the upgrade time withe relevant personnel.

Zhang prepares the source file which used to upgrade, and compresses them using the OTA Package Tool. In accordance with the following items, he will be able to complete the entire upgrade process.

For more information on how to use the about OTA Packager Tool, please refers to “OTAPackager User Guide-English.pdf”.

1. Device Connection

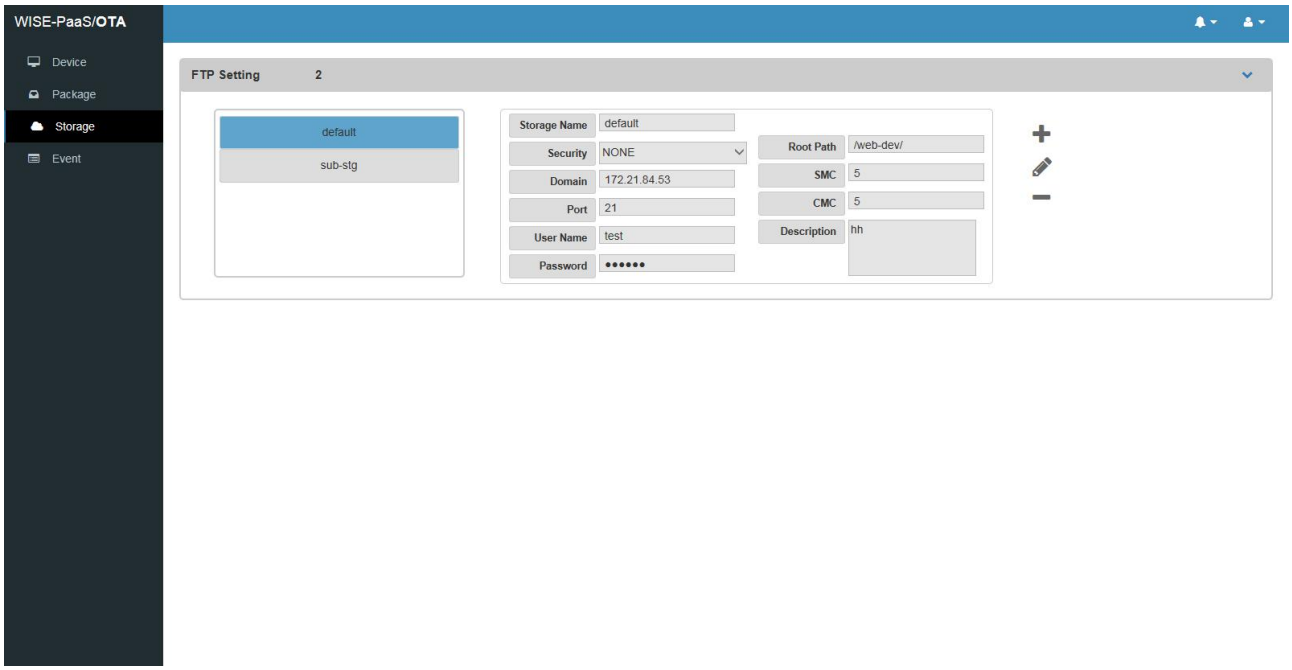
   Because all devices in this project have built in OTA client, device will connect to OTA server automatically. User can see all the online devices in device page.(Information about how to ensure the device connect to OTA server successfully, please refers to WISE-PaaS/OTA Installation Guide or 2.2 section ”Device Connection” of this document)



2. Storage Configuration

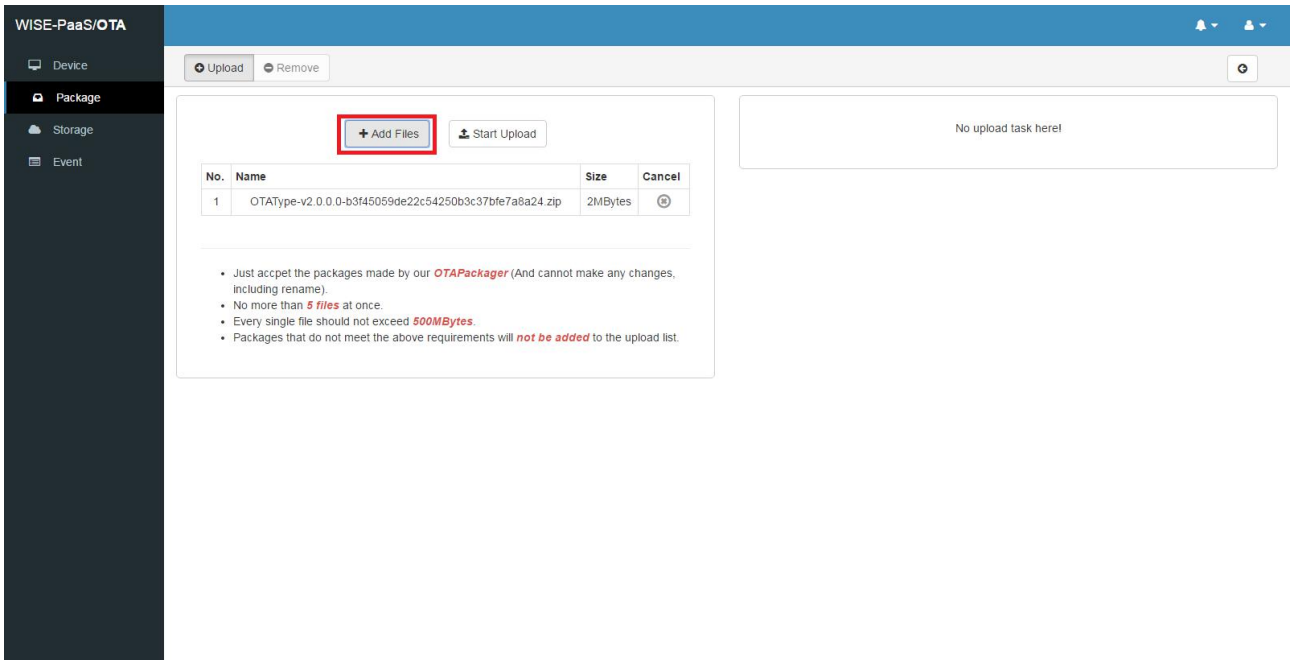
Enter the Storage page to configure the FTP Storage. Because the FileZilla server has been installe, so Zhang only need to configure the FTP server to the existing OTA system. Before using this storage, Zhang has confirmed that the FTP server can be accessed by other machines. If you don't remember how to configure the FTP server, please refer to section 2.4 Storage Configuration. If you are not familiar with how to install and configure the FTP server, you can refer to the following link.

http://ess-wiki.advantech.com.tw/view/How_to_configure_your_FTP_server_to_OTA

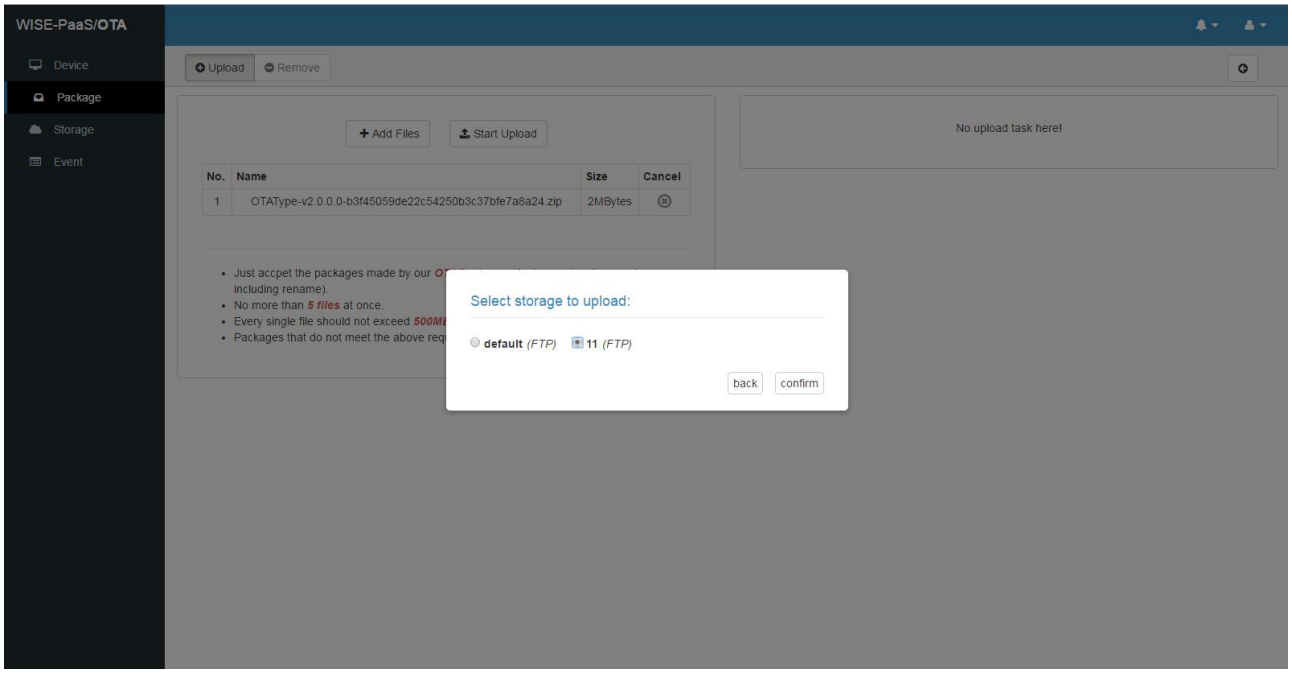


3.Upload Package

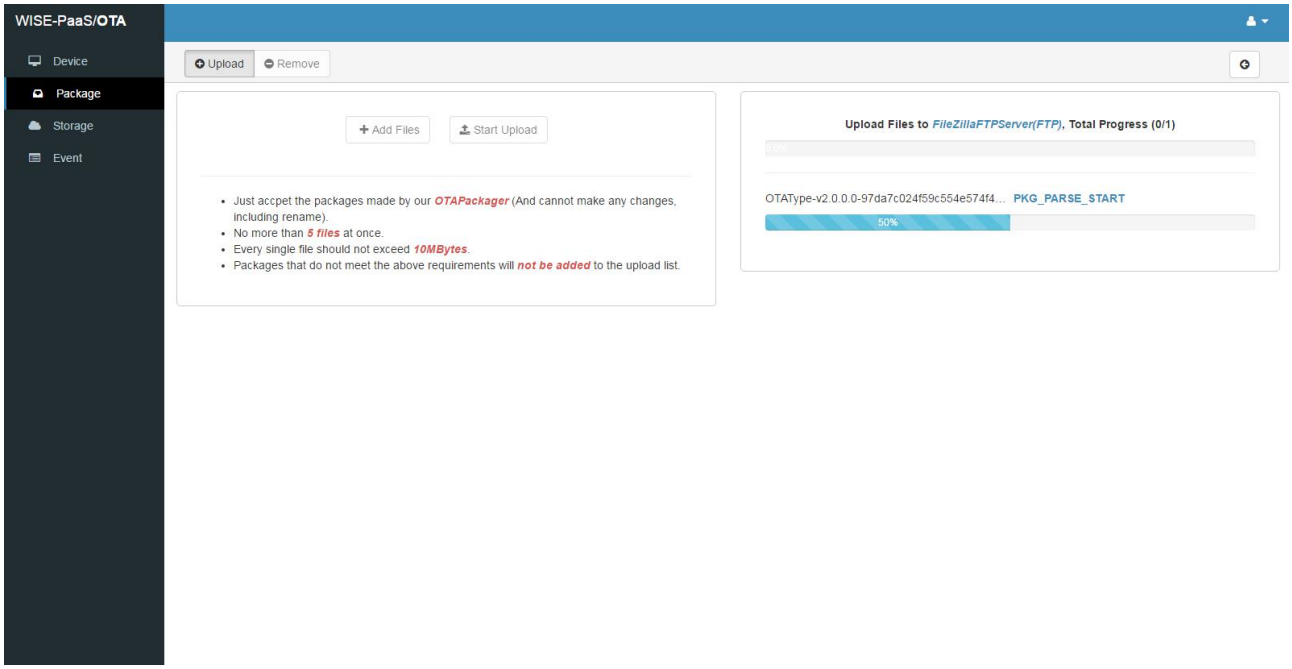
Enter the Package Page to upload the OTA package to OTA Server. Before you upload the files, you should configure the FTP storage.

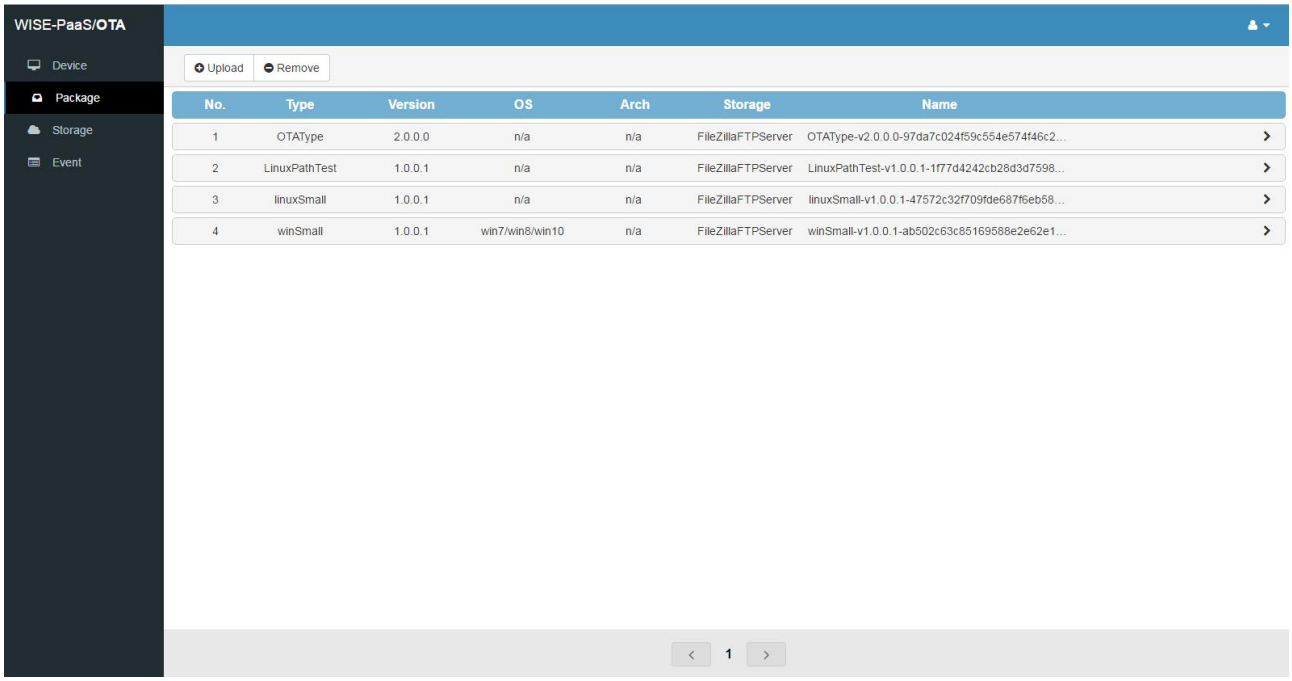


If you have configured multiple FTP servers, remember to select the correct storage device when uploading.



After the upload is complete, you can view all the packages on the server.

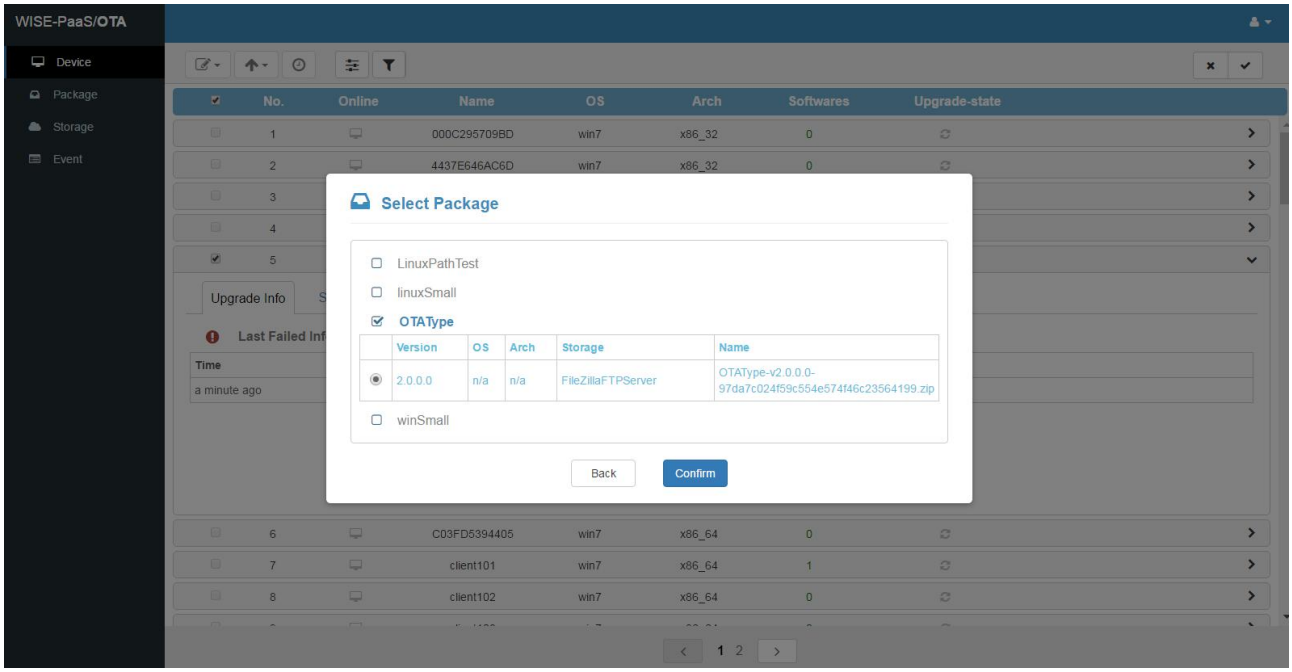




4.Execute Upgrade

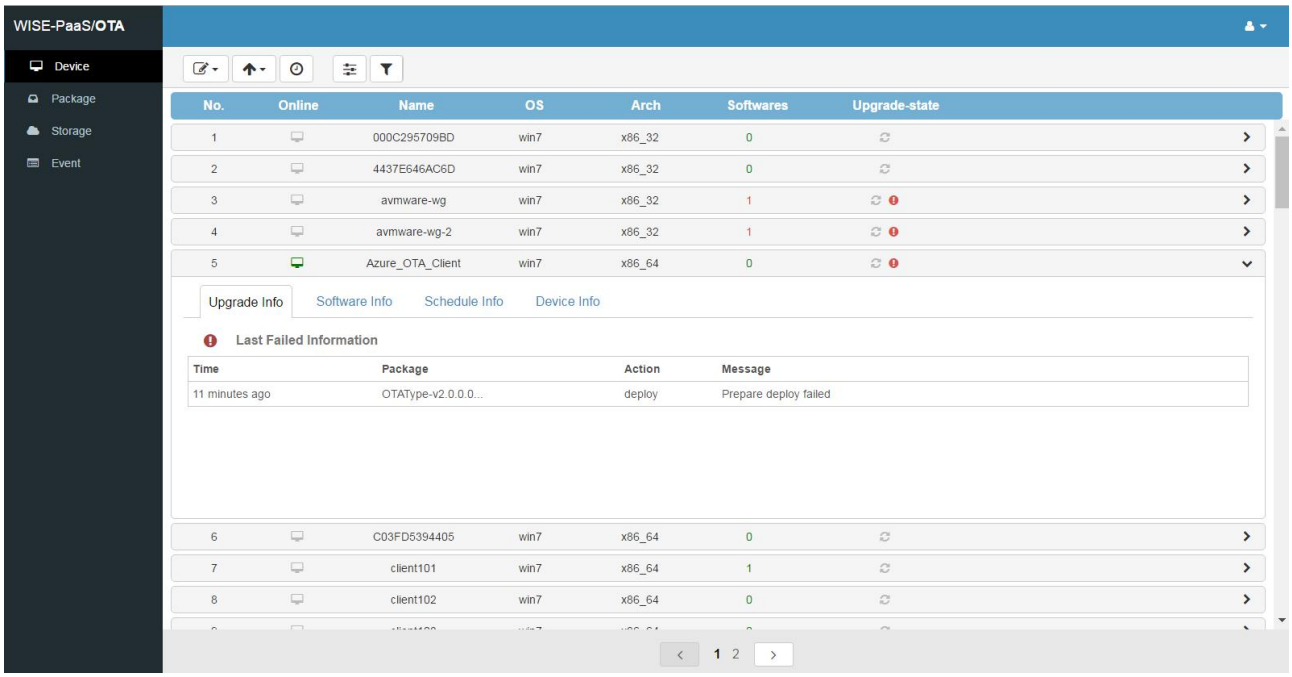
Enter the Device page to execute the upgrade operation.Just in case, Zhang tries it on one device.

Select a device, click ”Upgrade”, choose the package which you want to upgrade.

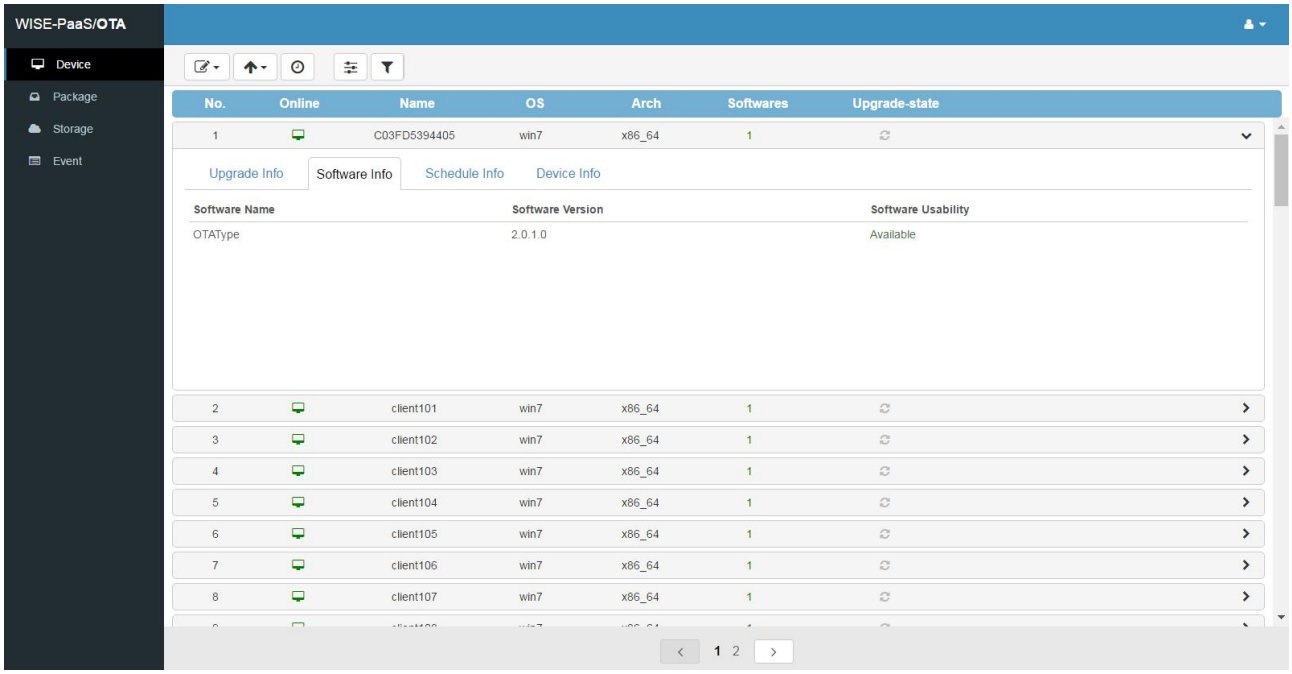


5.Confirm the Upgrade Result

Upgrade failed! View the reason of failure quickly and fix them immediately.



Retry again. View the process of upgrade, check the software version. OK, everything is normal. More than a few to try.



View update results, one-time update is successful.

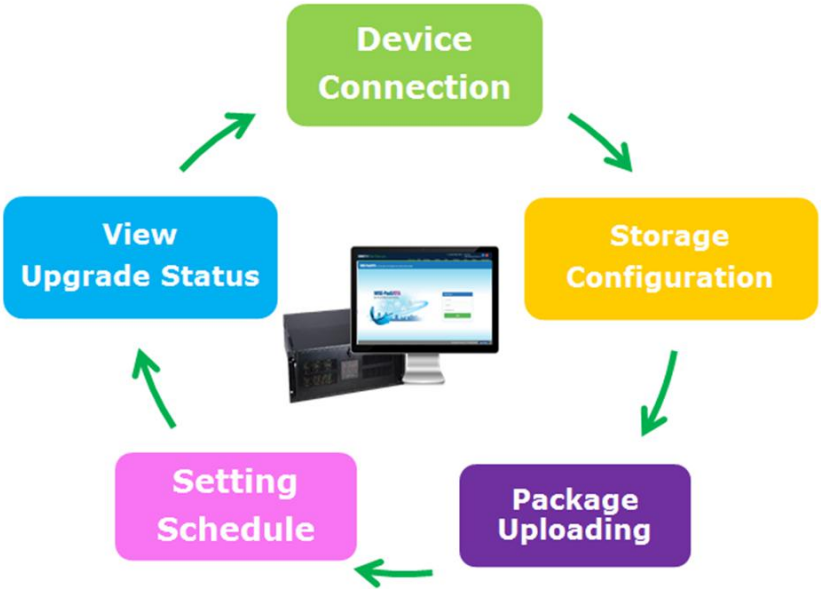
3.2 Scheduling Upgrade

Usage 2：Scheduling Upgrade——Reasonable arrangements update time, effectively reduce the loss brought about by software update

Software A has important bug fixed. Customers need to upgrade the software on all device. Because there is business during the day, so them don't want to upgrade the software which will make some loss. Not only to solve this problem effectively, but also to upgrade the new version, Zhang decided to use the scheduling Upgrade.

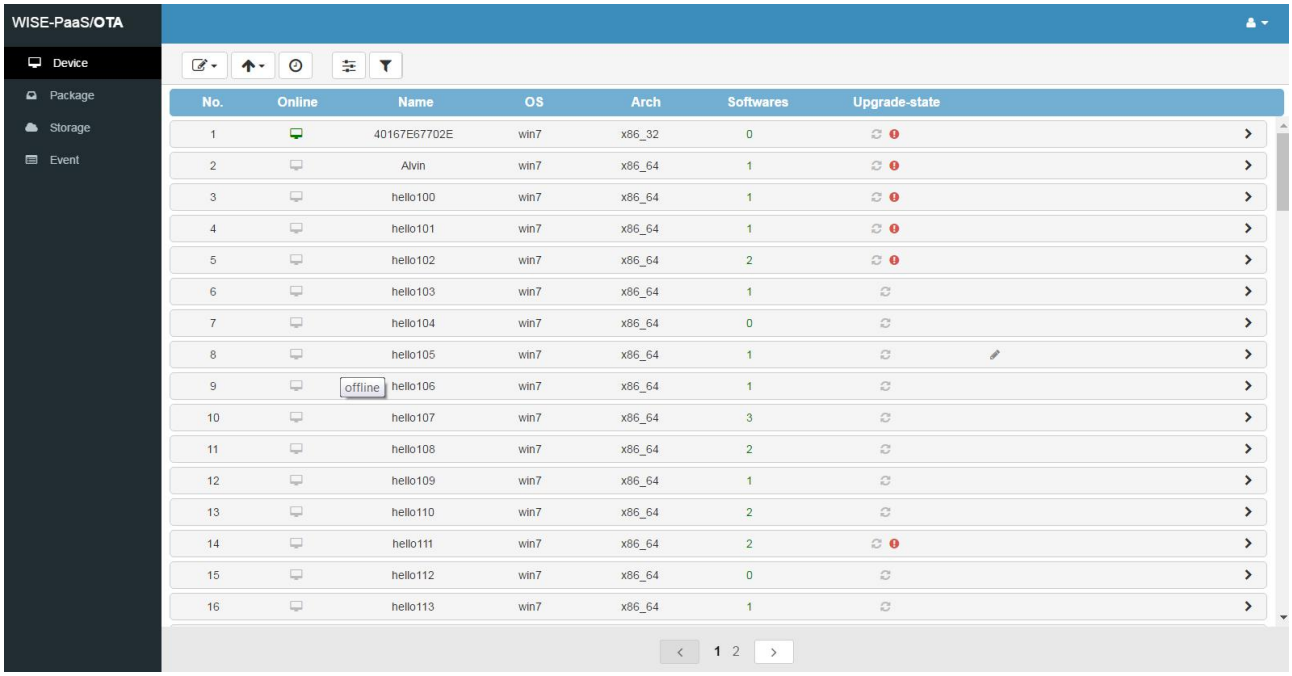
Zhang prepares the source file which used to upgrade, and compresses them using the OTA Package Tool. In accordance with the following items, he will be able to complete the entire upgrade process.

For more information on how to use the about OTA Packager Tool, please refers to "OTAPackager User Guide-English.pdf".



1. Device Connection

Because all devices in this project have built in OTA client, device will connect to OTA server automatically. User can see all the online devices in device page.(Information about how to ensure the device connect to OTA server successfully, please refers to WISE-PaaS/OTA Installation Guide or 2.2 section ”Device Connection” of this document)

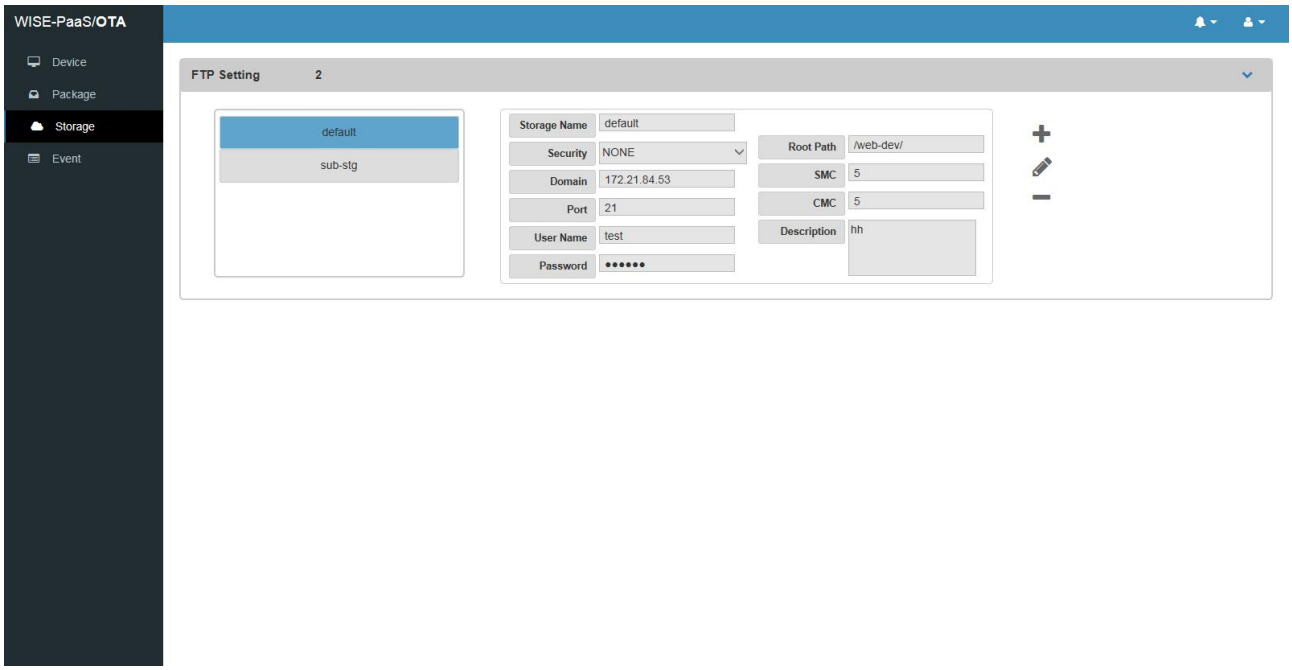


2. Storage Configuration

Enter the Storage page to configure the FTP Storage. Because the FileZilla server has been installe, so Zhang only need to configure the FTP server to the existing OTA system. Before using this storage, Zhang has confirmed that the FTP server can be accessed by other machines. If you don’t remember how

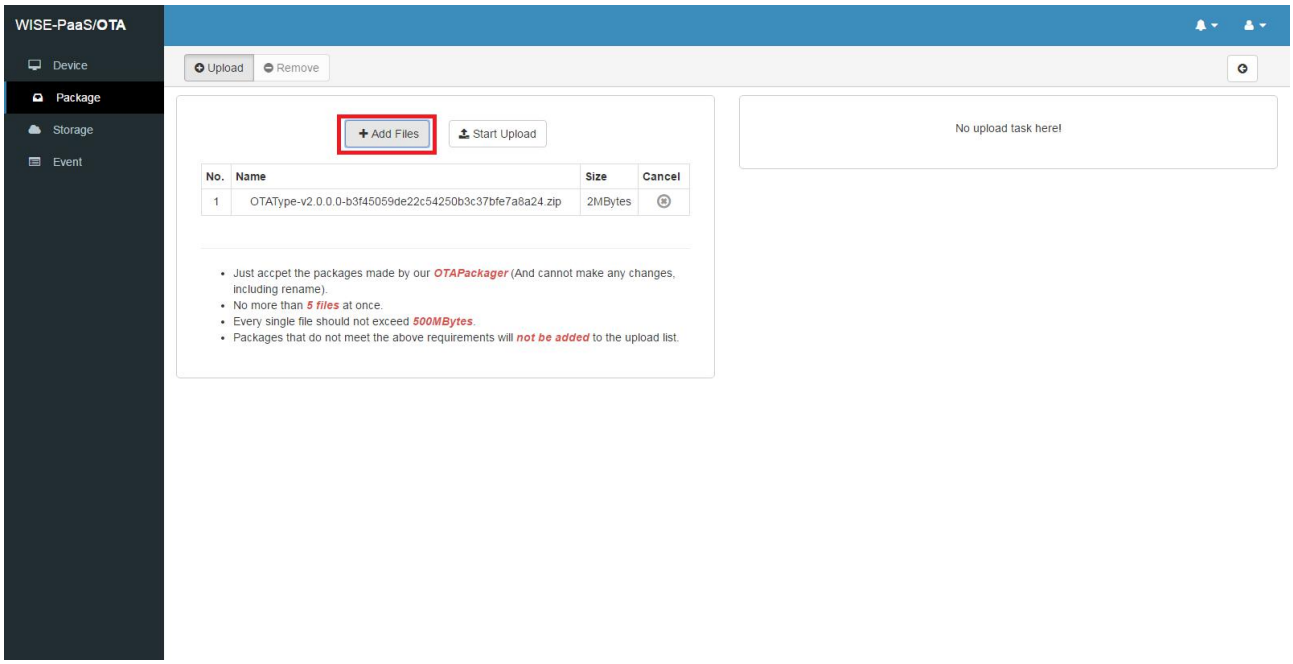
to configure the FTP server, please refer to section 2.4 Storage Configuration. If you are not familiar with how to install and configure the FTP server, you can refer to the following link.

http://ess-wiki.advantech.com.tw/view/How_to_configure_your_FTP_server_to_OTA

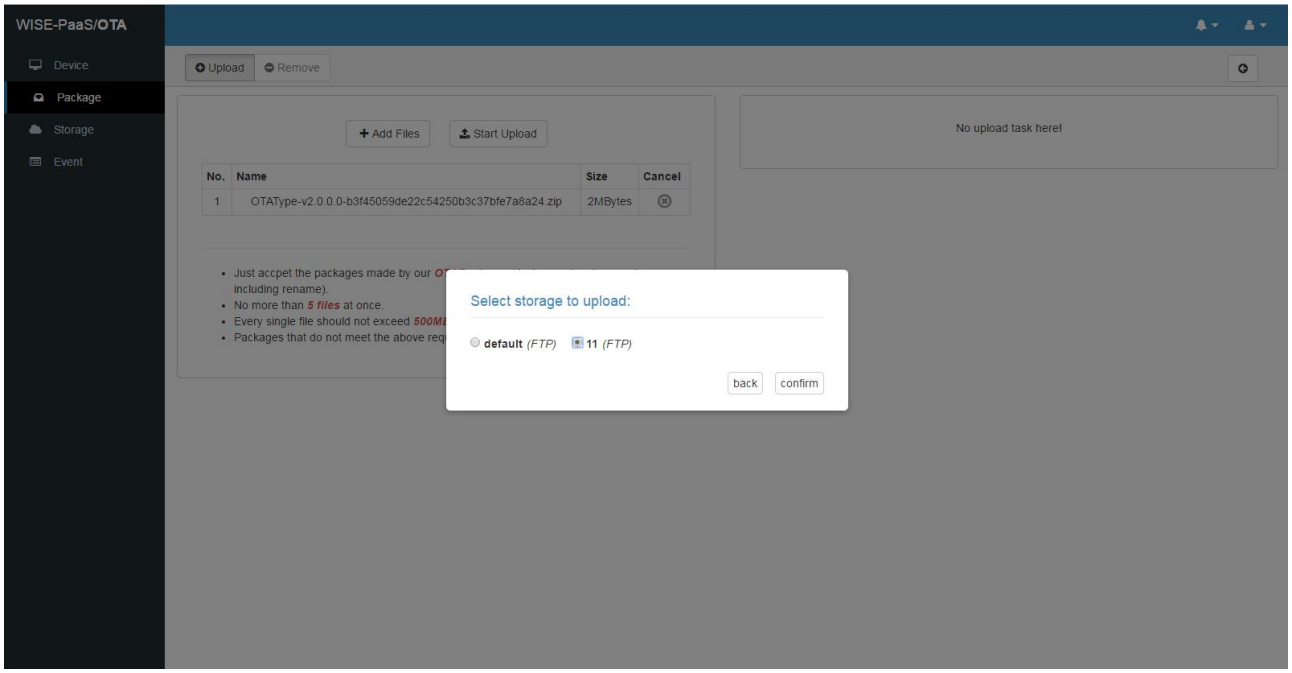


3.Upload Package

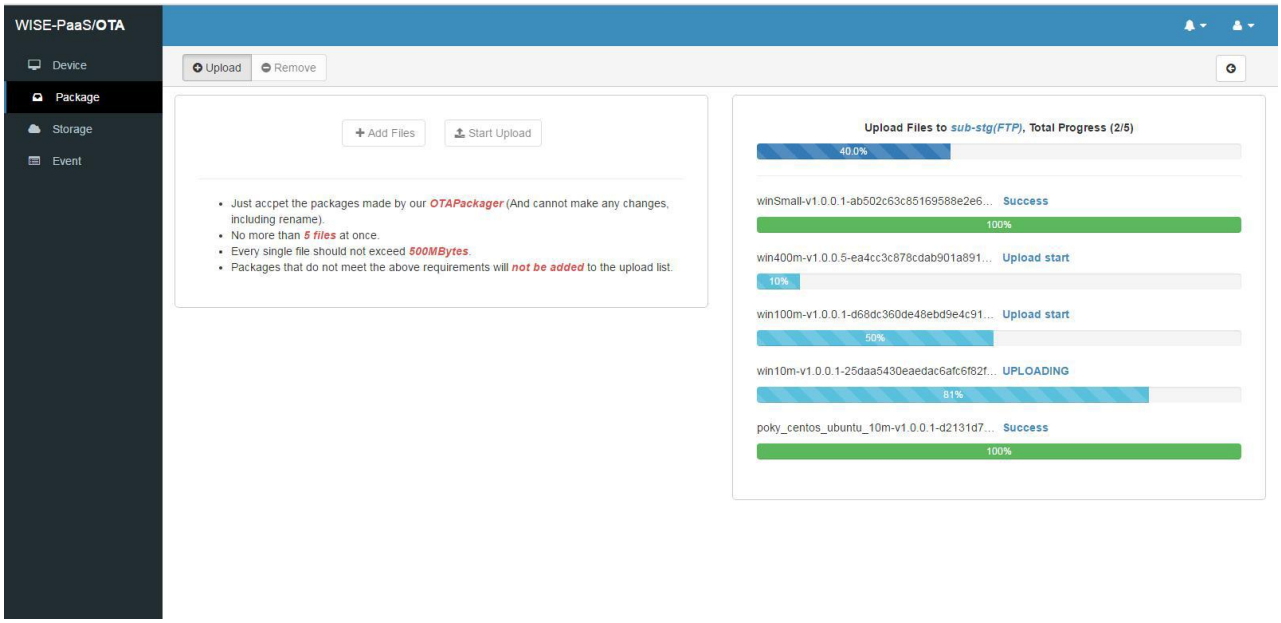
Enter the Package Page to upload the OTA package to OTA Server. Before you upload the files, you should configure the FTP storage.

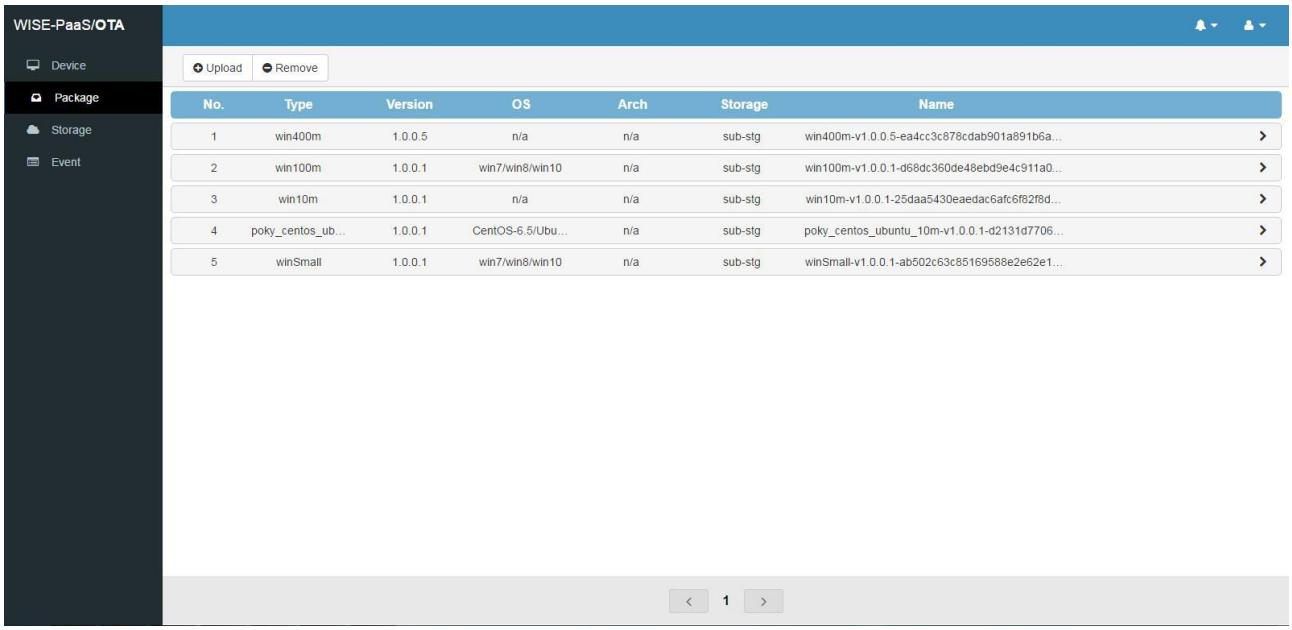


If you have configured multiple FTP servers, remember to select the correct storage device when uploading.



After the upload is complete, you can view all the packages on the server.

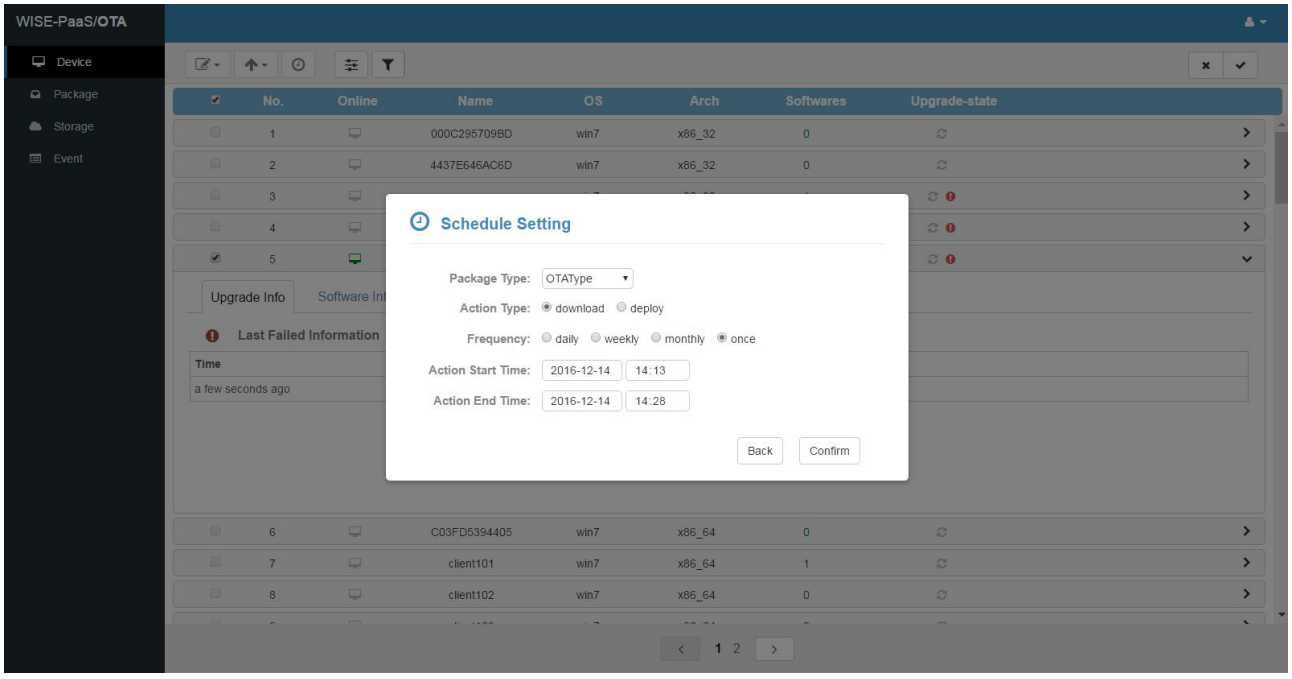




4. Set Upgrade Schedule

Enter the Device page to execute the upgrade operation.Just in case, Zhang tries it on one device.

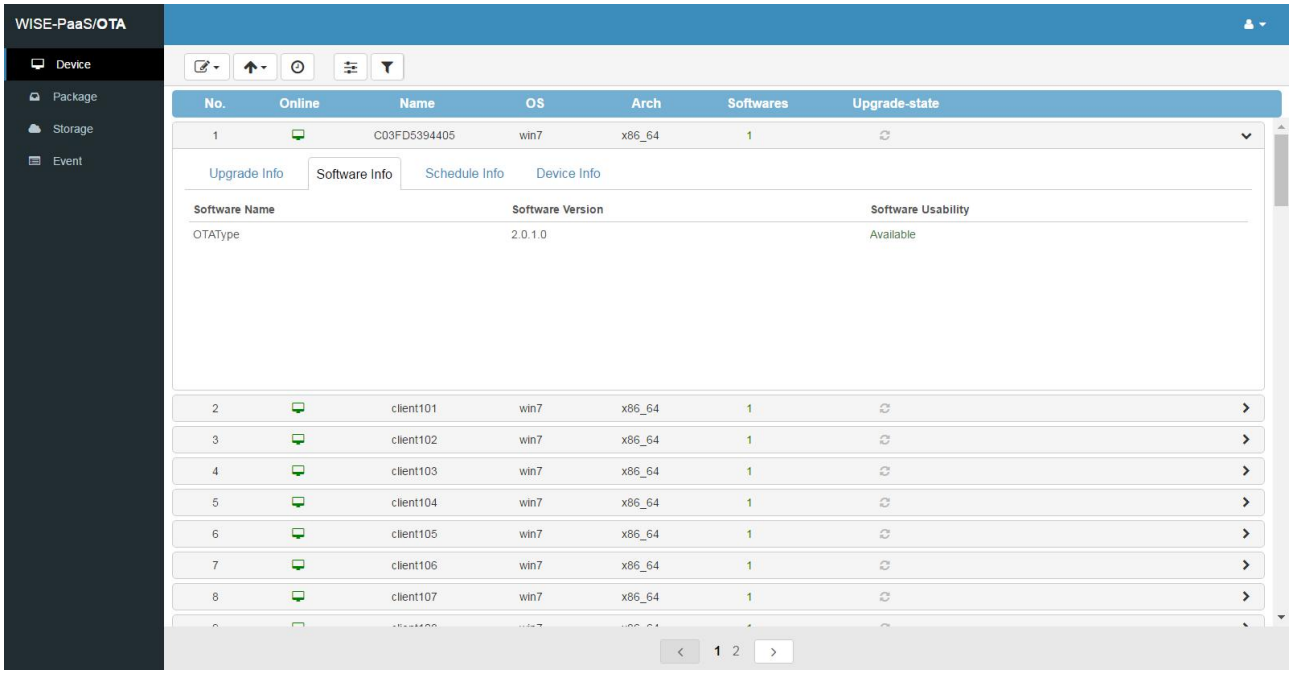
Select a device, choose the package which you want to upgrade and set the download and deploy schedule. (3 minutes later to download and 15 minuter later to deploy)



5.Confirm the Upgrade Result

After the time, check the update result in “ Upgrade Info” card.

OK，you can set the scheduling for other devices, so that device can upgrade in different batches.


WISE-PaaS/OTA
Device
Package
Storage
Event
No.
Online
Name
OS
Arch
Softwares
Upgrade-state
1
C03FD5394405
win7
x86_64
1
Upgrade Info
Software Info
Schedule Info
Device Info
Software Name
Software Version
Software Usability
OTAType
2.0.1.0
Available
2
client101
win7
x86_64
1
3
client102
win7
x86_64
1
4
client103
win7
x86_64
1
5
client104
win7
x86_64
1
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client105
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client106
win7
x86_64
1
8
client107
win7
x86_64
1
1 2

4 FAQ

1. How many devices can be connected to OTA system. How about other specification?

   Answer: OTA system supports 500 devices connected at the same time. Each update package is not more than 500; Five packages can be uploaded simultaneously and 20 packages can be download simultaneously. （Use of bandwidth=numbers of simultaneous download * package size - other use）.The uploaded and downloaded numbers has something to do with both the band width on the site (field) and the max. connection count of FTP server that you have configured.The default maximum upload connection is 10 and the download connection is 30. Detail information please refer to section 2.4 Storage Management.

2. What kind of device can the OTA system be deployed on?

   Answer: Server side：Windows Server 2012 64bit / Windows 7 64bit
   Intel Core i3 2.3 Ghz CPU or above 4GB

   Windows 7 / 8 /10 32bit or 64bit

3. What about he requirement of upgrade files?

   Answer: OTA system requires all deployment or upgrade files are able to support silent mode, and contains at least one executable file, such as, exe, msi, bat etc. .

   Only the OTA packages which generated by OTA Packager Tool can be used in our system. We will encrypt your deployment package to prevent transmission damage and tampering.

   The package size which generated by OTA Packager Tool can not exceed 500M.

4. What about the requirement of browser?

   Answer: Browser supports

   Chrome: 51+

   Firefox: 45

   IE 11