



# WiController User Manual

Applicable Model:

- Wisnetworks Indoor Access Point Series
- Wisnetworks SMB series
- Wisnetworks CPE series
- Wisnetworks Base Station series
- Wisnetworks Bridge series

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## 1. Application

This guide is to help you know and configure WiController. Firstly learn about application scope of WiController.

WiController supports the following devices,

- Wisnetworks Indoor Access Point Series
- Wisnetworks SMB series
- Wisnetworks CPE series
- Wisnetworks Base Station series
- Wisnetworks Bridge series

# 2. Installation Preparation

### 2.1 System Requirements

WiController is a kind of PC software running on X86 architecture, based on B/S architecture and built-

in database system.

System and hardware configuration:

OS: Windows7 Professional or above, Windows Server 2003 or above

CPU: Intel core i3 or above (or same performance AMD CPU)

Memory: 2 GB or above

Disk: 10 GB or above

Display: 1440 x 900 or above

Browser: Google Chrome suggested. IE 9 version or above, compatible with Firefox

Attention: For different browser with different compatibility, please change browser when have incompatibility problem.

### 2.2 Installation Process

Open install software WiController\_install.exe, enter setup interface, as Figure 2-1.



Figure 2-1

Click "Next", enter setup interface, select destination location, click "Next", or default location and directly click "Next", as Figure 2-2.

j Setup - WiController	
Select Destination Location Where should WiController be installed?	
Setup will install WiController into the following folder.	
To continue, dick Next. If you would like to select a different folder, dick Browse.	
C: \Program Files \WiController Browse	
At least 438.2 MB of free disk space is required.	
< Back Next > Cancel	]

Figure 2-2

Select Start Menu folder, generally the default. If select a different folder, click "Browser" and click "Next", as Figure 2-3.

🔂 Setup - WiController
Select Start Menu Folder Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
WiController Browse
< Back Next > Cancel

Figure 2-3

Enter setup interface, and show previous settings information, such as destination location. Then check and click "Install", as Figure 2-4.

j- Setup - WiController	X
Ready to Install Setup is now ready to begin installing WiController on your computer.	
Click Install to continue with the installation, or click Back if you want to r change any settings.	eview or
Destination location: C:\Program Files\WiController	*
WiController	
4	-
	Cancel

Figure 2-4

When installing, it will pop up message of installing plug-in, including VC++2008 (Figure 2-5), VC++2010

(Figure 2-6) and WinPcap (Figure 2-7). Like other installation, follow the instructions and install.

滑 Microsoft Visual C++ 2008 Redistributable Setup	
Welcome to Microsoft Visual C++ 2008 Redistributable Setup	
This wizard will guide you through the installation process.	
Next >	Cancel
Next >	Cancel

Figure 2-5



Figure 2-6



Figure 2-7

Then pop up message f services starting successfully, as Figure 2-8.

C:\Windows\system32\cmd.exe	
The WiController Apache service is successfully installed. Testing http://www.service.com/	*
Errors reported here must be corrected before the service can be started	- E
####### Now Starting Apache ########	
WiController Apache 服务正在启动 WiController Apache 服务已经启动成功。	
Installing MySQL as an Service	
Service successfully installed.	
Try to start the MySQL deamon as service	
WiController MySql 服务正在启动 . WiController MySql 服务已经启动成功。	
####### install TFTP Service #######	
[SC] CreateService 成功	
WiController tftpd 服务正在启动 .	~

Figure 2-8

When all files are installed successfully, click "Finish" (Figure 2-9), and WiController is installed. Then Restart PC and WiController can go smoothly.



Figure 2-9

#### Attention:

Before installation, ensure that TFTP service of PC is not open. Because install package contains TFTP service, or an error will occur for service conflict; 1. Change program file pythonw.exe as administrator (\Program Files\WiController\Python27\pythonw.exe); 2. Change program file OpenTFTPServerOpenTFTPServerMT.exe as administrator (\Program Files\WiController \OpenTFTPServerOpenTFTPServerMT.exe).

😰 pythonw Properties	23
General Compatibility Security Details Previous Versions	
If you have problems with this program and it worked correctly or an earlier version of Windows, select the compatibility mode that matches that earlier version.	it .
Compatibility mode	
Run this program in compatibility mode for:	
Windows XP (Service Pack 3)	
C. 17-22	-
Settings	
Run in 256 colors	
Run in 640 x 480 screen resolution	
Disable visual themes	
Disable desktop composition	
Disable display scaling on high DPI settings	
Privilege Level	
Run this program as an administrator	
	-
Change settings for all users	
OK Cancel Ap	ply

Figure 2-10

# 3. Configuration Instruction

Network:





Operating Steps:

Enter <u>http://localhost:8080/</u> in the browser and go into the login page of WiController, as Figure 3-2, the default name/password is admin, click "Login" and go into management system of WiController.

MIC	WiController Version: 1.0 beta	
	User Name:	
NETWORKS	Password:	
	Language:	English US 🔹
•*• WIController		Login
Network Management System		

Download Google Chrome

Figure 3-2

### 3.1 Navigation

In Devices Tree, when different devices need to be managed, build several nodes and every node can manage some devices due to location, such as, under the node Lobby, it is device WIS-Q2300; under the node Room, it is other radios. Users can divide nodes according to reality.

E Devices Tree	Ξ	🖳 Summary 🖳 Interfaces 🔹	Configuration 🔒 Alarms
🗅 🕑 🗅 🖻 🦠 🧶 😣			
🖃 🔮 Lobby		(1) Information	
☐ 192.168.11.186 ☐ ∰ Room ☐ 192.168.11.185 ∭ Unkown		System         Device Model:       WIS-Q23         MAC:       FC-AD-0F         Firmware Version:       1.0.0271	00 -00-E9-A9 .20141107_Beta

Figure 3-3

Menu includes device management and system management (Figure 3-4). Specific functions will be introduced in the following.

Navigation	44	Wireless Clients	
E Devices Tree	+		
🚹 Menu	Ξ	MAC Address	
Device Managerment     Device Inventory     Wireless Clients     Scheduled Task     Statistics     Global Alarms     Config Templates     Access Templates     System Managerment		No clients	
General Settings			
U System Services			

Figure 3-4

### 3.2 Discovering manually and managing AP

In "Discover the device" of "Device Inventory", configure scan task. Here introduce the meanings of every setting.

Scan Type: scan by subnet and by IP address range;

Subnet/mask: configure subnet (configure when choose scanning by subnet, as Figure 3-5);
Start IP: configure start IP (configure when choose scanning by IP address range, as Figure 3-6);
End IP: configure send IP (configure when choose scanning by IP address range, as Figure 3-6);
Access template: configure access SNMP template, generally the default template;
Add to district: add to district, as Figure 3-5, add the discovered device to Lobby;

Add scanning task			×
Scan type:	Subnet	◎ IP address range	
Subnet/mask:*	192.168.2.0	/ 24 🖍	
Access template:	Default SNMP acce	ess template	•
Add to district:	S215		*
		Cancel Save	

Figure 3-5

Scan type:	Subnet     O IP address	ange
Subnet/mask:*	192.168.11.0 / 24 🔦	
Access template:	Default SNMP access template	~
Add to district:	Lobby	v

Figure 3-6

After scanning, it will reminder which devices are consistent, or not consistent, as Figure 3-7.

] 192.168.1.1 - 192.168.1.250	Default SNMP access template	
	Configuration success	
	Scan `192.168.1.1-250` Scan done at Wed Sen 24 17:35:06 2014: 250 IP addresses (2 hosts *** Support device: (192.168.1.2) *** No support device (192.168.1.151)	s up) scanned in 6.13 seconds
	ОК	

Figure 3-7

After scanning by subnet, the same as scanning by IP address range discover devices. The scanning result is the same as Figure 3-8.

Scan network	Access template	Add to district	Status	Operation
192.168.0.1 - 192.168.0.255	Default SNMP access template	Unkown	Scan finish	200
192.168.1.1 - 192.168.1.255	Default SNMP access template	Unkown	Scan finish	260
192.168.1.0 / 24	Default SNMP access template	Unkown	Scan finish	260
192.168.2.1 - 192.168.2.255	Default SNMP access template	Unkown	Never scan	260
192.168.4.0 / 24	Default SNMP access template	Unkown	Never scan	260
192.168.3.0 / 24	Default SNMP access template	Unkown	Never scan	260
192.168.11.180 - 192.168.11.190	Default SNMP access template	Lobby	Scan finish	



### 3.3 Discovering automatically and managing AP

Configure option 43 function at the switch linked with the device. Start the device and automatically add to NMS, then the system could manage devices. For example H3C switch, here introduce configuration of option 43.

In the mode of DHCP server address view, configure the followings:

option 43 hex 80 07 00 00 01 XX XX XX XX

- 1) Hex shows hex input;
- 2) 80 shows IP address;
- 3) 07 shows the following byte length;
- 4) 01 shows the number of server. If only one destination server, it is 01;
- 5) XX XX XX shows server IP address, using hex to represent it. For example: option 43 hex 80 07 00 00 01 C0 A8 01 97, server IP address is 192.168.1.151.

### 3.4 <u>AP Configuration</u>

In the devices Tree, click the device online, as Figure 3-9, check summary, interfaces, configuration, and Page 13 / Total 29

alarms.

😽 WiController	Ne	tworks Manager	nent System			
Navigation	~	- 192.168.11.185				
E Devices Tree	Ξ	🖳 Summary 🖳 Inte	erfaces 🔹 Configuration 👍 Alarms			
🕞 ⊋ 🔓 📬 🥞 🚱	<b>3</b>					
Lobby     192.168.11.186     Room     192.168.11.185     Unkown		Information     System     Device Model:     MAC:     Firmware Version:	WIS-S2300 14-1F-BA-70-2A-A8 1.0.0271.20141107_Beta		Description: Serial Number: Up Time:	WaveFlex 23000414602105 0 Days 00:29:45

Figure 3-9

### 3.4.1 Summary

It shows summary of the device, such as device mode, MAC, firmware version, series number and so on, as Figure 3-9.

### 3.4.2 Interfaces

It shows interfaces of the device, such as unicast packets, discarded packets, error packets, as Figure 3-

10.

皇1	92.10	58.11.185								
	Sumr	nary 🕎 Interfaces 🏻 🎲 Configur	ation 🛛 🔼 Alarn	ns						
								Last	updated time : 2014-1	1-29 10:46:31 🎯 Refresh
					Receive				Send	
	8	S Interface	Bytes	Unicast Packets	Error Packets	Discarded Packets	Bytes	Unicast Packets	Error Packets	Discarded Packets
1		lo (127.0.0.1/255.0.0.0)	0	0	0	0	0	0	0	0
2	P	gre0	0	0	0	0	0	0	0	0
3	P	eth0	38522720	108500	3	3	12106364	76654	0	0
4	P	vbr1 (169.254.42.168/255.255.0.0,	6587568	1397	0	0	338361	1210	0	0
5	P	wifi0	0	308478	0	0	0	275521	4272	0
6	1	ath0	13148413	76475	1	1	43675272	157675	0	418



### 3.4.3 Configuration

It shows SNMP information of the device and settings of SNMP, as Figure 3-11.

- SNMP Configuration

a Summary 🖳 🖳 Inter	faces Configuration	Alarms				
Operations	SNMP Information					
& SNMP Configuration & Radio Configuration & Firmware	Device Information Device Description:	Wisnetworks Platform Soft	ware WIS-S2300 Product Version 1.0	.0271.20141107_Beta.Copyr	ight (c) 2012-2014 Wisnetworks Te	chnologies Co., Ltd. All rights reserved.
<ul> <li></li></ul>	Service Set: Startup time:	physical Odays 0h:36m:3s	🔲 datalink/subnetwork	internet 📄	✓ end-to-end	☑ applications
	<ul> <li>Information of settings</li> <li>Device Name:</li> </ul>	wis-s2300				
	Information of settings     Device Name:     EngineID:	WIS-S2300 No Such Object currently	exists at this OID			
	EngineID: Version Used:	WIS-S2300 No Such Object currently	exists at this OID			
	Information of settings Device Name: EngineID: Version Used: Standard trap:	WIS-52300 No Such Object currently V1 V2c Authentication	exists at this OID	🗌 Linkdown	🕅 Linkup	🗐 Warmstart
	Information of settings Device Name: EngineID: Version Used: Standard trap: Contact:	WIS-S2300 No Such Object currently V1 V2c Authentication Support@wisnetworks.com	exists at this OID	Linkdown	🛄 Linkup	Warmstart

Figure 3-11

#### - Radio configuration

This page is to configure radio, such as working channel, channel width, power, WEP encryption, and so on, as Figure 3-12. The working channel is configured as 153, click "Submit", and working channel will be sent to the device. The configuration of other parameters is the same as the configuration of channel.

Operations	"t" radio1				
SNMP Configuration	Basic Configuration				
Radio Configuration	IEEE 802.11 Mode:	dot11gn 🗸	Channel Width:	20MHz 🗸	
2 Configuration	Channel:	11 💌	Tx Power(dBm):	24	
Export Data Save Configuration	Advanced Configura	tion			
Bave configuration	RTS Threshold(byte):	2347	Distance(km):	3	
	Wireless Client Isolation	: Enable			
	Aggr Enable:				
	Aggr Limit Enable:	V			
	Aggr Frame Count:	64	Aggr Frame Length(byte):	60000	
	ShortGI:	V	Broadcast Probe Response:	V	
	Beacon Interval(ms):	100	DTIM Interval:	1	
	Max Association Number	er: 128			
	- WEP				
					Submit Refresh
	Bindded Wlan Services	🗋 Add 🛛 🔓 Delete			🔯 Refres
	SSID	Wireless Mode	Security	VLAN	ID
	1 Assembling_line	ар	wpa2	1	



As Figure 3-12, in the bottom of the page, it will show information of WLAN services, such as SSID, wireless mode, security and so on.

#### - Firmware

Upgrade one device, as Figure 3-13, click "Select" to select the upgrade file, upload successfully the file and show it in the following list, and then click upgrade button, the device will start to upgrade. When finish upgrading and rebooting the device, it will pop up the message of upgrading successfully, as Figure 3-14.

-	Upgrade System Application				
Upl	load File:	Select			Selec
	Name		Upgrade	Size(Byte)	Date
1	WFlex-2G16M-v1.0.0271.20140924_Beta.	in	<u></u>	4744963	09/25/14 1
2	WFlex-5G16M-v1.0.0271.20140913_Beta.bin			4417498	09/25/14 15:
	2G16M-v1 0 0271 20140924 B	Select			Ĩ
	3010M-41.0.0271.20140413_B	203,011			
		Upgrade Software Operation succeeded!	×		

Figure 3-14

- Configuration

Import the file of configuration, as Figure 3-15, click "Select" to select the file from local file, and show the

uploaded file in the following list. Click upgrade button, and import configuration file.

Attention: Upgrade page and configuration page are similar. Please check carefully and operate it.

Upgrade System Configuration			
load File:	Select		
Name		Upgrade	Size(Byte)
config.cfg		📥 🕹	2595
		End College	The second second second
WFlex-2G16M-v1.0.0271.201409	24_Beta.bin		4744963

Figure 3-15

#### - Export Data

Click "Export Data" to export data file of the device, as Figure 3-16.



Figure 3-16

#### - Save configuration

Save configuration of the device, as Figure 3-17.



Figure 3-17

### 3.4.4 Alarms

It shows trop of AP, as Figure 3-18.

🖳 Summary 🖉 I	iterfaces 🛛 🤹 Conf	iguration 🛛 🦺 Alarms			
🔒 Alarms 🛛 💈 Dev	ce Alarm Status	🖁 Device Alarm Statist	ics		
Clear					🔯 Refresh
Time -	Level	Туре	Name	Description	

### 3.5 Template AP Configuration

Template AP configuration is mainly to add AP templates, WLAN service templates, and filter templates, bind WLAN service templates to AP templates, match the device with AP templates. Then WiController can manage those devices. Specific operation will be introduced in the following.

Add AP template(Figure 3-19), click "add AP template" to configure AP template name, device type, filter rules, and IP range, click "Submit", and finish adding AP template.

Navigation	<	Gonfig Templates	
Devices Tree	+	🏇 AP Templates 🛛 🐺 WLAN Service Templates 🏹 Filter Templates	
🏦 Menu	Ξ	🕞 Add AP Template 📘 Add Wlan Template 📝 Modify 📑 Delete   🚑 Full E	xpand 🛛 🔎 Collapse All
🛛 🚐 Device Managerment		Name Device Model Used IP	Address Range
Contraction inventory		Modify AP Template	8 68.11.1-192.168.11.190
👔 Wireless client 🖸 Tasks		Name:* WLAN 2.4	
III Statistics Reports		Enable:	68.11.1-192.168.11.190
🔔 Global Alarms		Device Type: 2GHz CPE	
Config Templates		Black List Filter: None	
a 🆏 System Managerment		White List Filter: None	
🍪 Users 🌼 General Settings		IP Range: 192.168.11.1 - 192.168.11.190	
<ul> <li>System Services</li> <li>Logging</li> <li>License Management</li> </ul>		Cancel Submit	

Figure 3-19

Add WLAN service template(Figure 3-20), click "Add " to configure WLAN template name, SSID, service mode, max client, security, and so on, click "Submit", and finish adding WLAN service template. As Figure 3-20, here is clear WLAN service, or encrypted WLAN service (WEP/WPA/WPA2) according to reality.

Name	Status	Used	SSID		SSID Hide	Security Mode	Auth Type	VL
WLAN Setting	Enabled	2	XXX Hotel		No		Open	1
	Modif	y Wlan Te	emplate					×
		Wlan Tem	plate Name:*	WLAN Setting		Enab	le: 🔽	
			SSID:*	XXX Hotel		Hid	le: 🕅	
		5	Service Mode:	AP	~			
			Max Client:	30	~			
			VLAN:	1	<b>^</b>			
			Mac Filter:	Disable	~			
			Enable WDS:					
			Security:	WPA2-AES	~			
		WPA A	uthentication:	0	~			
		WPA Pr	e-shared Key:	•••••		Sho	w: 🕅	

Figure 3-20

Add filter template, click "Add" to configure filter name (Figure 3-21). Add MAC address of the device, as Figure 3-22, click "Add", configure MAC address, and finish adding filter template.

Config Templates				
AP Templates	WLAN Service	Templates	Filter Templates	
Filter List 🛛 🔂 Ad	d 🍃 Modify 🔓	Delete		
Name	MAC Cou	int Use Te	emplates	
	Ad	d Filter Tem	iplate	×
	a	Filter Name:*	Black	
			Cancel	bmit

Figure 3-21

AP Templates 📗 🙀 W	LAN Service Tem	plates 🛛 💎	Filter Templat
Filter List 🛛 🔂 Add 🗍	🎽 Modify 🛛 🔂 Dele	te	
Name	MAC Count	Use Templat	tes
-1-1			
Black	1		
Black	odify		



Now AP template, WLAN template and filter template are added. Return the page of AP templates, as Figure 3-23, select Radio 1, click "Add Wlan Template" and select added Wlan template, click "Submit" to bind Wlan template to AP template.

🍰 AP Templates 🛛 🙀 WLAN Service Temp	olates 🛛 💎 Filter Te	mplates	3			
🕞 Add AP Template 🔂 Add Wlan Template	🗋 Modify 📄 🔓 Delet	e   📿 F	Full Expand 🛛 🔎 Collapse All			
Name	Device Model	Used	IP Address Range			
⊖ ∰ WLAN 2.4 ®™ Radio 1	2GHz CPE	1	192.168.11.1-192.168.11.190			
⊡ ∰• BS 2.4 ⊟ <sup>®</sup> t <sup>™</sup> Radio 1	2GHz PTMP BS	1	192.168.11.1-192.168.11.190			
🙀 WLAN Setting	Add Wlan Template to AP Template					
	Radio: Radio 1					
	Wian Template:*	WLAN S	Setting 👻			
			Cancel Submit			

Figure 3-23

Select AP templates, as Figure 3-24, click "**Rescan**", consistent device is scanned and match automatically with AP templates.

wlan Setting				
🖃 🎰 BS 2.4 2G	Hz PTMP BS	1	192.168.11.1-192.168.11.190	
WLAN Setting				
"BS 2.4" configured devies: 😔 Sync 🕅 Clear	Rescan			
IP Address				Device Config Version Te
🔲 1 📮 192.168.11.185				0

Figure 3-24

When device config version and template config version is inconsistent, the device will be showed red (Figure 3-25). Select the device, click "**Sync**" to sync, and device config version and template config version is consistent, the device will be showed gray (Figure 3-26). Now configuration will be sent to the device.

A P Templates 🛛 🙀 WLAN Service Templates 🔍 💎 Filter Templates											
🔓 Add AP Template 🕞 Add Wlan Template 🍞 Modify 🍃 Delete   🖧 Full Expand 🔒 Collapse All											
Name Device Model Used IP Address Range					Enable	Action					
∰ ₩LAN 2.4 2GHz CPE 1 192.168.11.1-192.168.11.190						00	6				
2GHz PTMP BS	1	192.168.11.1-192.168.11.190				00					
						00					
						00					
"BS 2.4" configured devies: 😯 Sync 🏢 Clean Mescan											
			Device Config Version	Template Config Version	Last Sync Time	Syn	: Clean				
1 I INTERPORTED IN TRANSPORTED INTEGRATIVE INTEGRATIVENTE INTEGRATIVENTE INTEGRATIVENTE INTEGRATIVENTE INTEGRATIVA INTEGRATIVA INTEGRATI INTEGRATIVA INTEGRATI INTE						Ð	Î				
	es Filter Ten Modify Delete Device Model 2GHz CPE 2GHz PTMP BS	es View Filter Templates Prodify Delete Device Model Used 2GHz CPE 1 CGHz PTMP BS 1 ean Rescan	Wodfy Pitter Templates      Pitter Te	Wodfy Pitter Templates      Modfy Pitter Templates      Model Used IP Address Range      CGHz CPE     1     192.168.11.1-192.168.11.190      GHz PTMP BS     1     192.168.11.1-192.168.11.190      config Version      Percent Pitter      Potter      Potte	Image: Second Secon	es Viller Templates Viller Vill	es Vilker Templates				



a Add AP Template 🐻 Add Wan Template 📝 Modify 🕞 Delete   🖧 Full Expand 🔒 Collapse All								🔯 Refresh
Name	Device Model	Used	IP Address Range				Enable	Action
B 🏟 WLAN 2.4 2GHz CPE 1 192.168.11.1-192.168.11.190							00	2
∃ 🍰 BS 2.4 2GHz PTMP BS 1 192.168.11.1-192.168.11.190							00	0 2 0
⊟®†® Radio 1								
"BS 2.4" configured devies: 😯 Sync 🏢	Clean (🏲 Rescan			ſ		-		Sefresh
V S IP Address				Device Config Version	Template Config Version	Last Sync Time	Syn	c Clean
✓ 1				1	1		<del>()</del>	Î
					-			



Attention: When configure device mode of AP templates, select it according to the reality. If selected mode and true mode are inconsistent, the device cannot match with AP templates.

### 3.6 Schedule Task

When configure schedule task, multiple devices can be upgraded simultaneously, or rebooted.

In Firmware Files, click "Select" to select device version file and upload to Wicontroller, as Figure 3-27.

Sc Sc	hedule Task				
Sche	dule task list Firmware Files				
Uplo	ad File:	Select			
					🎯 Refresh
	Name		Size(Byte)	Date	Operation
1	WFlex-5G16M-v1.0.0271.20140913 Beta.bin		4417498	09/24/14 10:39:48	

#### Figure 3-27

Click "Add" and pop up message, as Figure 3-28.

Description: describe the task, or null;

Type: task type, with "Upgrade" and "Reboot" two kinds of types;

Firmware: select firmware version. In "reboot", no need to configure it, as Figure 3-29.

Start Date: configure start date;

Start Time: configure start time;

Active: active or not.

Description:	test	
Type:	Upgrade	~
Firmware:	WFlex-5G16M-v1.0.0271.20140913_Beta.bin	×
Start Date:	2014-09-24	•
Start Time:	03:00:00	~
Active:	▼	

Figure 3-28

Description:	Reboot	
Type:	Reboot	~
Start Date:	2014-11-05	3
Start Time:	05:00:00	~
Active:	7	

Figure 3-29

Add the device in schedule task. Select the task and click "Add" to add multiple devices. Then added devices can be managed, as Figure 3-30.

Sc	Schedule task list Firmware Files												
	Add 🍃 Modify 🚡 Delete												
		Scheduled Time	Туре	Firmware			Status						
	1	2014-07-23 11:22:59	Upgrade	vt2000.bin			Finished						
	2	2014-08-05 02:00:00	Upgrade	ffacbc67c37	76be32571965a0e	-d1803ff.jp	og Finished						
	3	2014-08-05 06:00:00	Upgrade	WFlex-2G16	WFlex-2G16M-v1.0.0271.0703.bin								
✓	4	2014-08-06 02:00:00	Upgrade	WFlex-2G16M-v1.0.0271.20140924_Beta.bin			bin Running						
	5	2014-09-03 10:13:00	Upgrade	WFlex-5G16	5M-v1.0.0271.20140	)913_Beta	bin Finished						
	Add	🔓 Delete											
<b>V</b>		🔹 Name	IP Addres	ss I	Running time	Status							
<b>V</b>	1	1 📮 192.168.1.62 192.168.1.62 0:01:01 Step 2, waiting AP reboot											

图 3-30

Add a device (192.168.1.62). When it is time to upgrade it, WiController will send automatically upgrade order to the device. Status will show "Running" to start upgrading. Status of the device also will show the progress of upgrading.

Step1: downloading device version by TFTP server;

Step2: waiting AP rebooting;

Step3: waiting AP starting;

Step4: waiting SNMP starting.

When finishing starting, Status shows "Finished" and Status of the device will show upgrade time, firmware version, upgrade use time (Figure 3-31).

Scl	Schedule task list Firmware Files											
6	🚡 Add 📝 Modify 🚡 Delete											
		Scheduled Time	Туре	Firmware	Status	Description						
	1	2014-07-23 11:22:59	Upgrade	vt2000.bin	Finished	test1						
	2	2014-08-05 02:00:00	Upgrade	ffacbc67c376be32571965a0ed1803ff.jpg	Finished	ewrwrwrw						
	3	2014-08-05 06:00:00	Upgrade	WFlex-2G16M-v1.0.0271.0703.bin	Finished	jkjk						
	4	2014-08-06 02:00:00	Upgrade	WFlex-2G16M-v1.0.0271.20140924_Beta.bin	Finished	kkksss						
	5	2014-09-03 10:13:00	Upgrade	WFlex-5G16M-v1.0.0271.20140913_Beta.bin	Finished							

<u></u>	o Add 🔂 Delete								
		\$	Name	IP Address	Running time	Status			
<b>v</b>	1		192.168.1.62	192.168.1.62		2014-09-29 11:08:45 Upgrade firmware 'WFlex-2G16M-v1.0.0271.20140924_Beta.bin' success, use 148 seconds.			



Configuration of reboot task and upgrade task is similar. Add reboot task, select the managed device. When it is time of configured reboot time, Wicontroller will send automatically reboot order to the device. And Status of the device will show progress of reboot, as Figure 3-32.

6	👌 Add 🕼 Modify 🕒 Delete												
		Scheduled Time	Туре	Firmware	Status	Description							
	1	2014-09-24 02:00:00	Upgrade	WFlex-5G16M-v1.0.0271.20140913_Beta.bin	Finished	test							
7	2	2014-09-24 03:00:00	Reboot		Running	reboot							

🚡 Add 📑 Delete								
7		\$	Name	IP Address	Running time	Status		
7	1	÷.	192.168.1.2	192.168.1.2	0:00:05	Reboot Step 2, wating AP down		

Figure 3-32

### 3.7 Graph Statistics

Devices statistics are showed by graph, including AP Statistics, Client Statistics, and Data Statistics. Specific statistics are introduced in the following.

AP Statistics, as Figure 3-33, online/offline APs, offline hours of top 10 offline APs, online hours of top 10

online APs.





Client Statistics include 2.4G/5G Clients, top 10 clients of APs, top 10 clients of services, as Figure 3-34.



Figure 3-34

Data Statistics include top 10 throughput of APs, top 10 throughput of services, and top 10 throughput of clients, as Figure 3-35.



Figure 3-35

Attention: Only top 10 are showed in all ranking statistics.

### 3.8 System Management

Users: Manage users of Wicontroller (add, modify, and delete users) .

1) Click "Add" to add user (Figure 3-36), and configure user name, password, user lever, user description (or null), contact (or null), Then click "Save". Now adding new user is finished.

3	User Manageme	ent						
6	Add   📝 Modify	Delete						
	User Name		sword Description					
	admin		set		Defaut	account f	or system administrat	or, can not be del
	admin1 Add User							X
		User Name	e:*	test				
	Password:*			••••				
		Again input the password:* User Level: User description:		••••				
				Administr	ator	~		
				Input the	e user des	cription		
		Conta	ict:	Input the	e contact			
							Cancel	Save

Figure 3-36

2) Select user, as Figure 3-37, click "Modify" to modify user information.

0	Add   📝 Modity   🔓 D	elete					
	User Name	Password	De	Description			
	admin	set	De	faut account for system a	dmin <mark>i</mark> strator, ca	n not be deleted o	
	admin1	set	ba	ckup			
	admin2	set					
7	test	set					
		Modify user information				×	
		User Name:* t User Level: /					
				strator 🗸			
		User description:	Input t	he user description			
		Contact:	Input the contact				
		Modify password					
	Current Pas		ssword:*	word:* Input the password			
		New Pas Again input the new pas		Input the password			
				Input the password			
	, gan ap ac and their pas				- 22		

Figure 3-37

3) Select user, as Figure 3-38, click "Delete" to delete user.

😚 User Management						
🔓 Add   🍃 Modify   🔓 Delete						
User Name Password Description						
	admin	set	Defaut account for system administrator, can not be deleted or mod			
	admin1	set	backup			
	admin2	set				
	test	set				

Figure 3-38

General settings: modify system parameters, such as max lever of devices tree, period of refreshing configuration, max concurrent processes for polling and so on. Generally user can choose the default settings, or modify parameters according to the reality.

System Parameters						
	Name	Value	Description			
1	Max level of the device tree	6	Max level of the device tree, the limit is 8.			
2	period of refreshing configuration	86400 (秒)	period of refreshing configuration			
3	Max concurrent processes for polling	5	Max concurrent processes for polling			
4	period of status polling	60 (秒)	period of status polling			
5	system debug switch	1	open the switch will slow down the system			

#### Figure 3-39

System services: Here are all running services of WiController, such as, MySql, Polling Service, SNMP Trap Service, Telnet Service and so on, as Figure 3-40. And MySql and Apache are necessary services of WiController, the default is open. So "Stop" "Reboot" "Open" buttons of MySql and Apache are all gray, and users cannot manage those two services.

Other services can be managed, like "stop", "reboot", or "open" services.

		🔯 Refresh
Name	Description	Operation
WiController Discovery Service	WiController Discovery Service	II 🖸 🧕
WiController MySql	WiController MySql	
WiController Polling Service	WiController Polling Service	
WiController Schedule Service	WiController Schedule Service	II 🖸 🧿
WiController SNMP Trap Service	WiController SNMP Trap Service	🖸 🖸 🖸
WiController Telnet Service	WiController Telnet Service	
WiController tftpd	WiController tftpd	II 🖸 🧿
WiControllerApache	WiController Apache	I I I I I I I I I I I I I I I I I I I
	WiController MySql WiController MySql WiController Schedule Service WiController Schedule Service WiController SIMIP Trap Service WiController Teinet Service WiController thpd WiController Apache	WiControler Discovery Service         WiControler Discovery Service           WiControler Discovery Service         WiControler MySql           WiControler Poling Service         WiControler Poling Service           WiControler Schedule Service         WiControler Schedule Service           WiControler ShiMP Trap Service         WiControler Schedule Service           WiControler Tehet Service         WiControler Thet Service           WiControler Tehet Service         WiControler Tehet Service           WiControler Thet Service         WiControler Tehet Service           WiControler Thet Service         WiControler Tehet Service           WiControler Schedule Service         WiControler Tehet Service

#### Figure 3-40

#### Logging: system logs, as Figure 3-41

ᡖ L	ogging				
î (	lear				🔯 Refresh
	level	Time *	Туре	Message	
1	warning	2014-11-29 11:16:54	Deamon	System poling used 19s, close to poling timeout limit 30sl please increase `period of status poling`	
2	warning	2014-11-29 11:00:44	Deamon	Device 192.168.11.186 was down!	
3	info	2014-11-29 10:17:32	Web server	`192.168.11.185` match config template `BS 2.4`	
4	notice	2014-11-29 10:16:32	Deamon	Device 192.168.11.186 now online!	
5	notice	2014-11-29 10:16:10	Login/logout	User `admin` from 192.168.11.180 login successfully!	
6	notice	2014-11-29 10:16:09	Login/logout	User `admin' from 192.168.11.180 exit!	
7	warning	2014-11-29 10:14:33	Deamon	Device 192.168.11.186 was down!	
8	warning	2014-11-29 10:13:23	Deamon	System poling used 55s, close to poling timeout limit 30s! please increase `period of status poling`	
9	info	2014-11-29 10:07:43	Web server	`192.168.11.186` match config template `WLAN 2.4`	
10	info	2014-11-29 10:06:27	Deamon	Service 'WiController Polling Service' started	
11	warning	2014-11-29 10:06:25	Deamon	Service 'WiController Polling Service' stopped	
12	notice	2014-11-29 10:01:34	Deamon	Device 192.168.11.185 now online!	
13	warning	2014-11-29 10:00:12	Deamon	Discoery: device WIS-Q2300(192.168.11.186) already exist.	
14	notice	2014-11-29 09:58:00	Login/logout	User 'admin' from 192.168.11.180 login successfully!	
15	warning	2014-11-29 09:57:56	Deamon	WiController HTTP service was start up!	
16	notice	2014-11-29 09:56:47	Login/logout	User `` from 127.0.0.1 exit!	
17	warning	2014-11-29 09:56:47	Deamon	WiController HTTP service was start up!	
18	info	2014-11-29 09:53:29	Deamon	Service 'WiController Polling Service' started	
19	warning	2014-11-29 09:53:28	Deamon	Service 'WiController Schedule Service' started	
20	warning	2014-11-29 09:53:28	Deamon	Service 'WiController SNMP Trap Service' started	
21	warning	2014-11-29 09:53:28	Deamon	Service 'WiController Discovery Service' started	
22	notice	2014-11-28 16:17:13	Deamon	Device 192.168.11.186 now online!	
23	warning	2014-11-28 16:15:14	Deamon	Device 192.168.11.186 was down!	

# **Appendix A**

### **Models Mapping in AP Templates**

Device Type	Model
WIS-A7900	WIS-A7900
WIS-A7900D	WIS-A7900D
WIS-A7900N	WIS-A7900N
WIS-A790UFO	WIS-A790UFO
2GHz CPE	WIS-Q2300
5GHz CPE	WIS-Q5300
2GHz CPE Lite	WIS-Q2300L
	WIS-L2416S
	WIS-L2417S
	WIS-L2415S
	WIS-S2300
	WIS-L5818S
	WIS-L5820S
5GHz PTMP BS	WIS-L5819S
	WIS-S5300
	WIS-L5800N
2GHz PTP Bridge	WIS-L2415D
	WIS-L5819D
5GHz PTP Bridge	WIS-L5825D
Jonzi II Dhuge	WIS-D5250
	WIS-G5250
	WIS-CM2300
	WIS-CM2310
2GHz AP Lite	WIS-CM2300L
2GHz Inwall AP	WIS-WM2300
2GHz Inwall AP with PSE	WIS-WM2310