

# NETGEAR® ProSAFE® WAC720 and WAC730

How to Create an Ensemble  
with Two WAC720 or WAC730

## CONCEPTS

The NETGEAR® ProSAFE® WAC720 and WAC730 are high performance 2 x 2 and 3 x 3 business class dual band 802.11ac wireless Access Points (AP) that can support an aggregate through-put of up to 1.2 Gbps (300 Mbps for 2.4 GHz and 867 Mbps 802.11ac for 5 GHz) and 1.75Gbps (450Mbps for 2.4GHz and 1.3Gbps 802.11ac for 5 GHz) respectively. The WAC720 & WAC730 operate in standalone or ensemble mode for centralized group management of up to 10 like Access Points without additional hardware, licenses or support fees. Ensemble mode allows you to initiate common firm-ware updates and monitor client connectivity and usage for multiple APs through a centralized dashboard.

## COMPONENTS

WAC720 or WAC730 x 2 (up to 10)

## CONFIGURATION STEPS

**NOTE:** By default the WAC720/730 will obtain an IP address from your DHCP Server.  
Username: admin Password: password

### Suggested Test Setup

For our example, we will have two WAC720 with the following IP address:

AP1: 192.168.50.188

AP2: 192.168.50.189

We will also give the ensemble we created the following management IP address:

Ensemble IP: 192.168.50.197

Although we can still go into the management IP of each ensemble member, giving every member the same ensemble IP address will provide you with a single IP address in which to manage your ensemble regardless of which member is the master.

## Steps

The steps below illustrates the typical steps to create the ensemble we outlined above.

1. Login to AP1 (in our example the IP address is 192.168.50.189, yours may vary) and go to the **Configuration -> Ensemble -> Basic -> Ensemble General** page.
2. For **Ensemble Mode** select **Start**, for Ensemble Name enter a name for your Ensemble. The Ensemble Name is what joins all the members of the ensemble. Every AP in the same ensemble must have the same Ensemble Name.
3. For **AP Name**, give your AP a descriptive name (optional).
4. For **Priority**, enter a number. The priority number is used to determine which AP is the master. In our example we will give it 10.
5. Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point

Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Cancel | Apply

Basic

- Ensemble General
- Management
- Secured Ensemble

Advanced

Ensemble General

Ensemble Mode:  Start  Stop

Ensemble Name:

AP Name:

Priority (0 - 255):

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Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Cancel | Apply

Basic

- Ensemble General
- Management
- Secured Ensemble

Advanced

Ensemble General

Ensemble Mode:  Start  Stop

Ensemble Name:

AP Name:

Priority (0 - 255):

- Next, go to the **Configuration -> Ensemble -> Basic -> Management** page. Enter an IP address for your ensemble. (In our example we give it 192.168.50.197)
- Click **Apply**.

**NOTE:** Although not required, a best practice is to give every member of the ensemble the same Ensemble Management IP Address. This way, if the current Ensemble master is removed from the ensemble, you will be able to still manage the ensemble from the same ensemble management IP address.

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Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Cancel | Apply

Basic

- Ensemble General
- Management
- Secured Ensemble

Advanced

Management

Ensemble Status: Started

IP Address to manage Ensemble (IPv4):

- Now, go to the **Configuration -> Ensemble -> Basic -> Secure Ensemble** page. Securing the ensemble is an important step to prevent unwanted APs from joining your ensemble.
- Select **Enabled for Secure Mode** and enter a secure **Passphrase**. The **Re-authentication Timeout** value can be left at default.
- Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Cancel | Apply

Basic

- Ensemble General
- Management
- Secured Ensemble**

Advanced

Secured Ensemble

Ensemble Status: Started

Secure Mode:  Enabled  Disabled

Passphrase (8 - 63 characters): 

Re-authentication Timeout (300 - 86400 secs):

- Next, we will enable **Auto Channel Assignment** for the ensemble. This will allow the ensemble to automatically adjust the channels used by ensemble member APs, according to real-time RF conditions. Go to **Configuration -> Ensemble -> Advanced -> Channel Assignment**.
- For **Auto Assign Channels**, select **Start**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Cancel | Apply

Basic

Advanced

- Channel Assignment**
- Channel Assignment
- Settings

Channel Assignment

Ensemble Status: Started

Auto Assign Channels:

IP Address	Radio	Band	Channel	Status	Assign to Static
192.168.50.189	50:6A:03:80:57:B0	11a-na-ac	161	up	<input type="checkbox"/>
192.168.50.189	50:6A:03:80:57:A0	11ng	6	up	<input type="checkbox"/>

Proposed Channel Assignments ( 1 minute and 14 seconds ago)

IP Address	Radio	Proposed Channel
192.168.50.189	50:6A:03:80:57:B0	161
192.168.50.189	50:6A:03:80:57:A0	6

Now, we will configure AP2 so that it joins the ensemble we just created.

- Login to AP2 (in our example the IP address is 192.168.50.188, yours may vary) and go to the **Configuration -> Ensemble -> Basic -> Ensemble General** page.
- For **Ensemble Mode** select **Start**, for **Ensemble Name** enter the same ensemble name you used for AP1. The Ensemble Name is what joins all the members of the ensemble. Every AP in the same ensemble must have the same Ensemble Name.
- For **AP Name**, give your AP a descriptive name (optional).
- For **Priority**, enter a number. The priority number is used to determine which AP is the master. In our example we will give it 9.
- Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point

Welcome admin

Configuration Monitoring Maintenance Support

System IP Wireless Security Wireless Bridge Ensemble Captive Portal

Cancel Apply

Basic

Ensemble General

- Ensemble General
- Management
- Secured Ensemble

Advanced

Ensemble Mode  Start  Stop

Ensemble Name

AP Name

Priority (0 - 255)

18. Next, go to the **Configuration -> Ensemble -> Basic -> Management** page. Enter an IP address for your ensemble. (In our example we give it 192.168.50.197)

19. Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point

Welcome admin

Configuration Monitoring Maintenance Support

System IP Wireless Security Wireless Bridge Ensemble Captive Portal

Cancel Apply

Basic

Management

- Ensemble General
- Management
- Secured Ensemble

Advanced

Ensemble Status Started

IP Address to manage Ensemble (IPv4)

20. Now, go to the **Configuration -> Ensemble -> Basic -> Secure Ensemble** page. Securing the ensemble is an important step to prevent unwanted APs from joining your ensemble.

21. Select **Enabled** for **Secure Mode** and enter a secure **Passphrase**. The **Re-authentication Timeout** value can be left at default.

22. Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point

Welcome admin

Configuration Monitoring Maintenance Support

System IP Wireless Security Wireless Bridge Ensemble Captive Portal

Cancel Apply

Basic

Secured Ensemble

- Ensemble General
- Management
- Secured Ensemble

Advanced

Ensemble Status Started

Secure Mode  Enabled  Disabled

Passphrase (8 - 63 characters)

Re-authentication Timeout (300 - 86400 secs)

23. Next, we will enable **Auto Channel Assignment** for the ensemble. This will allow the ensemble to automatically adjust the channels used by ensemble member APs, according to real-time RF conditions. Go to **Configuration -> Ensemble -> Advanced -> Channel Assignment**.
24. For **Auto Assign Channels**, select **Start**.

Now that the ensemble has been created, we will now create a wireless-ac SSID on the ensemble. You can do this on any member of the ensemble as the settings will be auto propagated to all other members of the ensemble. However, as a best practice, it is best to login to the ensemble management IP address (192.168.50.197) and make all your changes on the ensemble master.

25. Login to the ensemble management IP address and go to the **Configuration -> Security -> Profile Settings** page.
26. For this example we will edit the default 5GHz profile according to our settings. Find the **Profile Settings – 802.11 a/na-ac/a-na-ac** section at the bottom of the page and select **profile #0**.
27. Click **Edit**.

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Welcome admin |

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Edit | Cancel | Apply

Profile Settings

Profile Settings - 802.11 bg/ng/bgn

Advanced

#	Profile Name	SSID	Security	VLAN	Enable	WMF-Enable
<input type="radio"/>	0 NETGEAR	peterdeskn	WPA2-PSK	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	1 NETGEAR-1	NETGEAR_11ng-1	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	2 NETGEAR-2	NETGEAR_11ng-2	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	3 NETGEAR-3	NETGEAR_11ng-3	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	4 NETGEAR-4	NETGEAR_11ng-4	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	5 NETGEAR-5	NETGEAR_11ng-5	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	6 NETGEAR-6	NETGEAR_11ng-6	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	7 NETGEAR-7	NETGEAR_11ng-7	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>

Profile Settings - 802.11 a/na-ac/a-na-ac

#	Profile Name	SSID	Security	VLAN	Enable	WMF-Enable
<input checked="" type="radio"/>	0 NETGEAR	NETGEAR_11ac	Open System	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	1 NETGEAR-1	NETGEAR_11ac-1	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	2 NETGEAR-2	NETGEAR_11ac-2	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	3 NETGEAR-3	NETGEAR_11ac-3	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	4 NETGEAR-4	NETGEAR_11ac-4	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	5 NETGEAR-5	NETGEAR_11ac-5	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	6 NETGEAR-6	NETGEAR_11ac-6	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	7 NETGEAR-7	NETGEAR_11ac-7	Open System	1	<input type="checkbox"/>	<input type="checkbox"/>

28. Enter your SSID security settings.
29. Click **Apply**.

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WAC720 ProSAFE Dual Band Wireless AC Access Point Welcome admin

Configuration | Monitoring | Maintenance | Support

System | IP | Wireless | Security | Wireless Bridge | Ensemble | Captive Portal

Back | Cancel | Apply

**Profile Settings** | Edit Security Profile

Advanced

**Profile Definition**

Profile Name: NETGEAR  
 Wireless Network Name (SSID): peterdeskac  
 Broadcast Wireless Network Name (SSID):  Yes  No

**Authentication Settings**

Network Authentication: WPA2-PSK  
 Data Encryption: AES  
 WPA Passphrase (Network Key): .....  
 Show Passphrase in Clear Text:  No  Yes  
 VLAN ID: 1

**Qos Policies**

Mode:   
 Apply Policy: Incoming: None, Outgoing: None  
 Policy Details: None, None  
 Bandwidth Limit (bits per second): 0, 0

**Captive Portal**

Profile Name: None

30. And that's it! You can go to the **Monitoring -> Ensemble** page to monitor the status of your ensemble.

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Configuration | **Monitoring** | Maintenance | Support

System | Dashboard | Wireless Stations | Rogue AP | Logs | Statistics | Packet Capture | Ensemble

Refresh

**Access Point** | Access Point

Wireless Stations

Wireless Neighborhood

AP Name	MAC Address	IP Address	Ensemble Priority	Master AP	Firmware version	2.4GHz Channel	5GHz Channel	Uptime in Ensemble	Status
netgear805d8f	50:6A:03:80:5D:8F	192.168.50.188	9	no	1.1.10.5	11	157	0 days 0 hours 5 minutes	Connected
netgear8057af	50:6A:03:80:57:AF	192.168.50.189	10	yes	1.1.10.5	6	161	0 days 0 hours 5 minutes	Connected

*\*\*NOTE: This table takes few minutes to get updated.*

