

Instructions for setting up a guest WLAN with Nuclias Connect

DNC-100 or DNH-100 With Managed Switch DGS-1210 and a Fritzbox

To set up a guest Wi-Fi in addition to the main Wi-Fi, you need to enable an additional SSID in the DNC/DNH-100.

To prevent communication between the main and the guest WLAN, VLANs are used. This requires a managed switch, in this manual a DGS-1210 Rev.D.

A Fritzbox is used as an Internet gateway (router).

In this case, we make use of the guest access on LAN port 4 of the Fritzbox.

Here in the example:

- Connect the Fritzbox with its LAN port 1, 2 or 3 to LAN port 1 of the DGS-1210.
- Connect the DNC-100-PC/DNH-100 to LAN port 8 of the DGS-1210.

- Connect the DAP access point to LAN port 15.

Page 1: <u>Setting up the Fritzbox</u> Page 3: <u>Setting up DGS-1210</u> Page 7: <u>Setting up the DNC-100 / DNH-100</u>

Setting up the Fritzbox

1. Call up the configuration of your Fritzbox and log in.

Field 2	FRITZ!Box 7490	
	Wildownsteak bir dheir FR72 das Recentor Sp 20 Mittes Franze ik	
	ferreriegaar? Jondo	

2. Select the Heimnetz menu on the left, then Netzwerk and then Netzwerkeinstellungen.

At Gastzugang activate the Gastzugang für LAN 4.

Click **Apply** at the bottom right.





3. Slide the window that appears all the way to the bottom. At the bottom left, under **WAN-Einstellungen**, click **weitere Einstellungen**.

Slide the window that appears all the way to the bottom. On the right, **click IPv4-Einstellungen**.

IP-Adressen Hier können Sie Änderungen an Ihrer Netzwerkkonfiguration und den verwendeten IP-Adressen in Heimnetz und Gastnetz vornehmen.	
	IPv4-Konfiguration

The DHCP server must be enabled.

Below you can see the IP network, which the Fritzbox will assign to the Gastnetz.

If you have made a change, click **OK**.

v4-Adresse	192		168	. 1		. 1	
ibnetzmaske	255].	255	. 2	55	. 0	
DHCP-Server aktivieren							
DHCP-Server vergibt IPv4	-Adressen						
von	192		168	. 1		. 20	
bis	192		168	. 1		. 200	
Göltigkeit Die vergebenen IP-Adress Wenn Sie einen anderen I Lokaler DNS-Server:	1(en werder DNS-Serve 192	na na rin	age ch Ablauf Ihrem Hei 168	der (mne	Gültigk tz verw	eit wiede venden n	ler freigegeben. möchten, tragen Sie hier dessen IP-Adresse ein, damit die FRITZIBox diese den Geräten im Heimnetz bekannt gibt.
Gültigkeit Die vergebenen IP-Adress Wenn Sie einen anderen I Lokaler DNS-Server:	1(en werden)NS-Serve 192	na na rin] -	age ch Ablauf Ihrem Hei 168	der (mne	Gültigki tz verw	eit wiede venden n . 1	ter freigegeben. möchten, tragen Sie hier dessen IP-Adresse ein, damit die FRITZIBox diese den Geräten im Heimnetz bekannt gibt.
Gültigkeit Die vergebenen IP-Adress Wenn Sie einen anderen I Lokaler DNS-Server: hstnetz ss Gastnetz der FRITZIBox h ränderbar.	10 ien werder INS-Serve 192 at einen e	o T. n na r in] -	age ch Ablauf Ihrem Hei 168 en IP-Adn	der (mne . 1 essb	Gültigk tz verw	eit wiede renden n . 1 aus dem	ier freigegeben. möchten, tragen Sie hier dessen IP-Adresse ein, damit die FRITZIBox diese den Geräten im Heimnetz bekannt gibt.
Gültigkeit Die vergebenen IP-Adress Wenn Sie einen anderen I Lokaler DNS-Server: astnetz as Gastnetz der FRITZIBox h ränderbar. v4-Adresse	10 een werder DNS-Serve 192 at einen ei 192] T. n na r in] -	age ch Ablauf Ihrem Hei 168 en IP-Adre 168	der (mne - 1 essb	Gültigki etz verw ereich, 89	eit wiede renden n . 1 aus dem	ter freigegeben. möchten, tragen Sie hier dessen IP-Adresse ein, damit die FRITZIBox diese den Geräten im Heimnetz bekannt gibt.
Gültigkeit Die vergebenen IP-Adress Wenn Sie einen anderen I Lokaler DNS-Server: astnetz as Gastnetz der FRITZ/Box h ränderbar. 4- Adresse ubnetzmaske	10 ien werder DNS-Serve 192 iat einen ei 192 255	0 T. n na r in] - igen] .	age ch Ablauf Ihrem Hei 168 en IP-Adri 168 255	der (mne - 1 - 1 , 2	Gültigke etz verw ereich, 89	eit wiede renden n . 1 aus dem . 1 . 0	ter freigegeben. möchten, tragen Sie hier dessen IP-Adresse ein, damit die FRITZIBox diese den Geräten im Heimnetz bekannt gibt.

The configuration of the Fritzbox is now complete. Now turn to the DGS-1210.

Very important:

Do not connect the LAN port 4 of the Fritzbox to the LAN port 4 of the DGS-1210<u>yet.</u> This will only happen at the very end.



Setting up the DGS-1210

1. Go to the configuration of the DGS-1210.

Please follow the instructions in the manual of the DGS-1210.

In this example, the DGS-1210 already has an IP address that matches the network.

Log in.

The default **password** is **admin**. Please leave the language in English. Click **OK**.

-		
Password	••••	
Language	English	~
	OK C	Cancel

2. If necessary, click Exit.

IP Informat	ion
Static	ODHCP OBOOTP
IP Address	192.168.1.201
Netmask	24 (255.255.255.0) ~
Gateway	192.168.1.1

3. Note: Under **System Settings**, adjust the IP address setting of the DGS-1210 to the IP network of your network if necessary.

DGS-1210-16 System	System Settings		
Porterioreungs Portsettings DHCP Auto Configuration	IP Information	OROOTE	
	IP Address Netmask	192.168.1.201 24 (255.255.255.0)	
DNS Resolver Settings D-Link Discover Protocol Settin	Gateway	192.168.1.1	
VLAN L2 Functions L3 Functions	L		Apply



The required VLAN configuration in the DGS-1210

4. Select the VLAN -> 802.1Q VLAN menu on the left.

Asymmetric VLAN must be disabled.

Click on the **default** VLAN 1.

DGS-1210-16	802.1Q VLAN Settings			😑 Safeguard
System Settings Password Port Settings	Asymmetric VLAN [Example]	CEnabled		Apply
DHCP Auto Configuration SysLog Host Time Profile	Total static VLAN entries: 1 Maximum 256 entries.			Add
Power Saving	VLAN Name	Untagged	Tagged	Delete
EEE802.3az EEE settings	1 default	01-20		Delete
DNS Resolver Settings				

5. Since the guest network LAN port 4 of the Fritzbox will be connected to LAN port 4 of the DGS-1210, set port 4 to **Not Member** and click **Apply**.

💾 Save 🗸 🌋 Tools 🗸 🧚	Wizard 🛛 🛞 Hel	p 🛨 🚺	English	~																	<u>1</u>	_ogout
DGS-1210-16	VID Setting	S																	() s	afegi	uard
System Settings System Settings System Settings DHCP Auto Configuration System Report	VID VLAN Name	1 de	efault	1															Back	[Ap	ply
Time Profile	Port	Select All	01	02	03	04	05	06	07	80	09	10	11	12	13	14	15	16	17	18	19	20
Bower Coving	Untagged	All	0	۲		0	۲	•	۲	۲	۲	•	۲	•	۲	\odot	۲	۲	۲	•	۲	
TEEF002 207 EEE cottingo	Tagged	All	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DNS Resolver Settings	Not member	All	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dr.V resolver Genings D-Link Discover Protocol Settin VLAN 802/10 VLAN 802/10 VLAN 802/10 VLAN				U						U	0		0		0		U		0			

6. Click **Add** to create an additional VLAN.





7. At VLAN ID (VID) enter 10.

VLAN Name is e.g. GuestWLAN

Set port 4 to Untagged and port 15 to Tagged

Later at Port 4 the Guestnetwork port 4 of the Fritzbox will be conencted. At Port **15** the DAP is connected.

Important:

If you use several DAPs, which is to be assumed, you must set this VLAN to Tagged for all LAN ports of the switch to which the DAPs will be or are already connected!

Click Apply.

💾 Save 🗸 🛣 Tools 🗸 🧚	Wizard 🛛 🕜 Hel	p 🗸 🛛 E	nglish 🕔										-				-			i	<u>1</u>	.ogout
DGS-1210-16	VID Setting	5																	() Se	afegi	Jard
- Password - Port Settings - DHCP Auto Configuration - SysLog Host - Time Profile	VID VLAN Name Maximum 20 d	10 Gas	tWLAN	75															Back	Ē	Api	ply
	Port	Select All	01	02	03		05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
	Untagged	All	0	0	0	۲	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tagged	All	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0
D-Link Discover Protocol Settin → VLAN → 802.10 VLAN → 802.10 VLAN	Not member	All	۲	۲	۲	0	۲	۲	۲	۲	۲	۲	۲	۲	۲	۲	Ō	۲	۲	۲	۲	۲

8. The result:

302.10	2.1Q VLAN Settings								
Asymme	tric VLAN [Example] O Enable	Disabled		Apply					
Total sta	tic VLAN entries: 2 num 256 entries.			Add					
VID	VLAN Name	Untagged	Tagged	Delete					
1	default	01-03, 05-20		Delete					



9. Click on **Save** in the upper left corner and then on **Save Configuration** to save the settings permanently in the DGS-1210.



10. Click Save Config...

Save Configuration	😑 Safeguard
Please press the "Save" button to save system settings to flash.	

\ldots and then click OK.



The configuration of the DGS-1210 is now complete. Now turn to the Nuclias Connect DNC-100/DNH-100.



The required settings in the DNC-100/DNH-100

These instructions assume that you are already using the DNC-100/DNH-100, or at least that you have already played through the setup wizard.

1. Go to the configuration of the DNC-100/DNH-100 and log in.

Please leave the language or change it to English.

	< nuclias
L	ogin to your account
	admin
	•••••
[5865] 5 8 6 .5 Forgot password?
	Login
	© 2020 D-Link Corporation English V

2. If the DAP access point is not yet mounted, do so now.

Otherwise, continue to point 8 on page 10.

On the left go to **Configuration** and then **Create Profile**. Then click on the **magnifying glass** to search for DAPs.

<nuclias< th=""><th>dnh-100</th><th></th><th></th><th></th><th></th><th></th><th></th><th>9</th></nuclias<>	dnh-100							9
Dashboard	All Sites V Total 1 Network	s Total <mark>0</mark> /0 Online APs Total <mark>0</mark> Clients						
Monitor >	Site Manue a	V Network Manage	Y Tabl Devices	V. Online Deplere	V. Clinete	V. Bastle	Discourse	Antina
🗙 Configuration 🗸	inis_DNH	inis_DNH	0	0	0	R D B	Q	R T
Create Profile Deptile Soltions								

3. Click Next.

* Discover Network Settings	×
✓ Layer 2	
Layer 3 (IP)	
Pick one V - +	
	Next



4. Click Start Discovery.

Tiscovery AP Start Discovery	1			>
Configurable	Managed			
State	✓ IP Address	✓ MAC Address	✓ Model Type ✓ NMS URL	✓ Network
		No Dev	vice yet.	
<				>
Import Network Profil	e: admin	•	Apply	
				Back Exit

5. The DAP will be found. In this example a DAP-2660.

Check the box in front of the DAP you found and click **Apply**.

Re-Discovery	-	ished (2020-10-29	9 09:55	5:56)				
Configurable	Manag	ed						
State	×	IP Address	~	MAC Address ~	Model Type 💙	NMS URL	~	Network
Stand	ialone	192.168.1.21		40:9b:cd:08:bc:40	DAP-2660			
¢								>



6. Task successfully sent appears.

Please wait 15-20 seconds and then click **Exit**.

Re-Dis	covery	Scan Finis	shed (2020-10-29	9 09:5	55:56)				
Config	urable	Manage	d						
\checkmark	State	×	IP Address	~	MAC Address ~	Model Type 🗠	NMS URL	~	Network
~	Standa	alone	192.168.1.21		40:9b:cd:08:bc:40	DAP-2660			
	<								>
Import Ne	<	ofile: ac	Imin	-	••••• &	Apply	fask successfully se	nt! 🤇	,

7. On the left at **Monitor** -> **Access Point**, the integrated DAP is marked in green after a few minutes.

<nuclias< th=""><th></th><th>dnh-100</th><th>×</th></nuclias<>		dnh-100	×
Dashboard			
Monitor	**	All Sites v All Networks v R Total 1/1 Access Points	
Access Point		Tetal Download: 7.20 MB Tetal Upload: 4.30 MB	
 Wireless Client 		Download (MB) Delate	d (MB)
🗙 Configuration	>	12	
Report	3		
Log	>		
System	•	0 10 10 10 10 10 10 10 10 10 10 10 10 10 1	08:00
		Access Polets	
		Search By Local IP Address	R
		No. Status * Action Local/PAddress * MACAddress * ModelTune * Network * Client * Channel 24G * Channel 3G1 * Lost Seen *	
		1 🕐 () [] 🕀 192.168.1.2.1 40.9bxct.08bxc40 DAP-2660 inis_DNH 0 11 132 2020-10-29.09:59:32	2



8. Now create a second SSID for the guest Wi-Fi in addition to your main Wi-Fi.

On the left select **Configuration** and then select **Profile Settings**.

Go to **SSID** in your profile.

Please DO NOT click on one of the primary WLANs.

«nuclias connect	dnh-100			
(b) Dashboard	C Profile	Profile > inis DNH > in	is DNH > SSID	
Monitor >	inis_DNH	-		
🗙 Configuration 🗸	③ inis_DNH	Index 🔺	✓ Band ▲	✓ SSID
Create Profile	SSID	Primary	2.4GHz	inis_DNH
Profile Settings	VLAN	Primary	5GHz 1	inis_DNH
Firmware Upgrade SEL Cortificato	Bandwidth Optimization	Primary	5GHz 2 (Tri-Band)	inis_DNH

9. In the Security section at SSID, enter the SSID for the guest WLAN.In this example the guest Wi-Fi will be unencrypted and has no other authentication.Therefore let the Security as Open System.

Click Add at the bottom right.

Security				^
Wireless Settings				
Band	2.4GHz V	Index	SSID 1 V	
SSID *	GastWLAN	Character Set	UTF-8 v	
SSID Broadcast	Enabled \lor	WMM (Wi-Fi Multimedia)		
Security	Open System 🗸 🧹	\Rightarrow		
Fast Roaming (802.11 k/v/r)	Disabled v This feature is	only available on the compatible models and specific firmware version.		
Security Settings				
Encryption	Disabled \lor	Key Size	64 Bits v	
Кеу Туре	HEX V			
Key Value				
Access Control				~
User Authentication				~
Hotspot 2.0				~
				Add Clear



10. The question appears if the setting should be applied to the other radio band. Click **Yes**.

Note:

If you click No, you must repeat step 9 for the other radio band (with a different SSID).



11. In addition to the **primary** WLAN, the result is a **SSID 1** for the guest WLAN:

Prohie	Profile > Inis_DNH >	inis_DNH >	SSID										
is_DNH						_		_		_		_	_
inis_DNH	Index 🔺	~	Band 🔺	~	SSID	~	Security	~	Access Control	~	User Authentication Y	Acti	on
SSID	Primary		2.4GHz		inis_DNH		WPA-Auto-Personal		Disabled		Disabled	Ľ	
VLAN	Primary		5GHz 1		inis_DNH		WPA-Auto-Personal		Disabled		Disabled	Ľ	
Bandwidth Optimization	Primary		5GHz 2 (Tri-Band)		inis_DNH		WPA-Auto-Personal		Disabled		Disabled	ľ	
RF Optimization	SSID 1		2.4GHz		GastWLAN		Open System		Disabled		Disabled	ľ	Î
Device Settings	SSID 1		5GHz 1		GastWLAN		Open System		Disabled		Disabled	Ľ	Ô
Performance	SSID 1		5GHz 2 (Tri-Band)		GastWLAN		Open System		Disabled		Disabled	Ø	Ê

12. Now click on the **VLAN** menu on the left.

At VLAN Status select Enabled and click Save.

At **VLAN 1** click the **Edit** icon under Action.

2 Profile	Profile > Inis_DNH > Inis_DNH > VLAN	
is_DNH	·	
inis_DNH	VLAN Status Enabled ~ Save	
SSID		
VLAN	VLAN List Port List Add/Edit VLAN PVID Settings	
Bandwidth Optimization		
RF Optimization	VLAN VID • VLAN Name V Tag VLAN Ports	Untag VLAN Ports
Schedule	1 default	Management , LAN1, LAN2, Primary (2.4G), SSID1 (2.4G), SSID2
Davice Settings		



13. Set **SSID 1** to **Not Member** on all three radio bands.

Click **Save** at the bottom-right.

Port	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7
Untag					۲	۲	۲	۲	۲
Not Member		0	۲	0					
3GHz 1									
Port	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7
Untag		۲		۲	۲	۲	۲	۲	SSID7
Not Member		0	۲	0					
iGHz 2 (Tri-Band)									
Port	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7
		٠		٠	۲	۲	۲	۲	۲
Untag									

14. Select the **Add/Edit VLAN** tab on the top.

At VLAN ID (VID) enter the same ID 10 this was previously used/added in the DGS-1210 and enter a VLAN name, e.g. GuestWLAN.

	VLAN Statu	s Enab	led		~	Save	VLAN status successfully saved	
1	/LAN List	Port List	Add/I	Edit VLAN	PVI) Settings		
		VLAN ID (V	'ID)	10				
		VLAN Nar	ne*	GastWL	AN			



15.

- The management **mgmt** set you to **Not Member**.
- LAN 1 and 2 remain/set on Tag.
- Set **SSID 1** of all three radio bands to **Untag**.
- All others set to Not Member.

Then click **Add** at the bottom-right.

Port	S	Select All		Mgmt		LAN1		LAN2		
Untag Tag				0		•		•		
Not Member				۲						
4GHz										
Port	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Untag		0	۲	0						
Not Member		۲	0	۲	۲	۲	۲	۲	۲	
GHz 1										
Port	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Port Untag	Select All	Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Port Untag Not Member	Select All	Primary O	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Port Untag Not Member 5GHz 2 (Tri-Band)	Select All	Primary O	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Port Untag Not Member 5GHz 2 (Tri-Band) Port	Select All Select All Select All	Primary Primary Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	
Port Untag Not Member 5GHz 2 (Tri-Band) Port Untag	Select All	Primary Primary Primary	SSID 1	SSID 2	SSID 3	SSID 4	SSID 5	SSID 6	SSID 7	

16. The result:

VLAN Status	Enabled	Save VLAN status successfully saved				
VLAN List Port L	ist Add/Edit VLAN	PVID Settings				
VLAN VID 🔺	 VLAN Name 	Tag VLAN Ports	~	Untag VLAN Ports	Actio	on
1	default			Management , LAN1, LAN2, Primary (2.4G), SSID1 (2.4G), SSID2	Z	Î
10	GastWLAN	LAN1, LAN2		SSID1 (2.4G), SSID1 (5G 1), SSID1 (5G 2)	Ľ	面



17. Hint

In a guest WLAN the clients should normally not be able to communicate with each other, they should be isolated from each other.

To realize this, select the WLAN Partition menu on the left.

Set **Multi-SSID 1** to **Guest Mode** for 2,4 GHz and then click **Save** at the bottom-right. Do the same with the other Wi-Fi bands.

Qº Profile	Profile > Inis_DNH > Inis_DNH > WL	AN Partition			
IS_DNH	2.4GHz 5GHz 1 5GHz 2	(Tri-Band)			
SSID	Link integrity	Disabled V			
VLAN					
Bandwidth Optimization RF Optimization	Ethernet to WLAN Access	Enabled			
Schedule	Primary SSID	Enabled Disabled	Guest Mode		
Device Settings Performance	Multi-SSID 1	C Enabled C Disabled	Guest Mode		
WLAN Partition	Multi-SSID 2	Enabled Disabled	Guest Mode		
WEBES RESOUCE	Multi-SSID 3	Enabled Disabled	Guest Mode		
	Multi-SSID 4	Enabled Disabled	Guest Mode		
	Multi-SSID 5	Enabled Disabled	Guest Mode		
	Multi-SSID 6	Enabled Disabled	Guest Mode		
	Multi-SSID 7	Enabled Disabled	Guest Mode		

18. Finally transfer the settings you have made into the DAP.

On the left your profile is marked with yellow sign even when settings are made/changes in the DNH-100/DNC-100 profile but not yet transferred into the DAP.

- Click on your profile.
- Time Start is immediate.
- Click Apply.

CP Profile	Profile > Inis_DNH > Inis_DNH	
inis_DNH	Uplasd Configuration	
SSID	Time Start Immediate V	
VLAN Bandwidth Optimization		Clear
RF Optimization Schedule	Run Status	_

After a few minutes the settings are active in the DAP.

The setup of the Guest-WLAN in the DNH-100/DNC-100 is also complete.



Please note:

Is the DAP's 5 GHz Wi-Fi running on a DFS channel (52-64 or 100-140) it takes up to 5 minutes for the 5 GHz Wi-Fi to be available.

Very important:

Now connect the LAN port 4 of the Fritzbox to the LAN port 4 of the DGS-1210

Then you can then connect Wi-Fi clients to the guest Wi-Fi network of the DAP access points. These obtain an IP address from the guest network of the Fritzbox and have Internet access via it.