

# Wireless unter OSX 10.5.2

Wireless Verbindung in WPA-PEAP  
zum NWA-3500 (ggf. via P335WT) mit  
Firmware Version 3.60(AAH.3)

# Einstellung Security für WPA2-MIX Mode (WPA2 incl. WPA) PMK Cache Disable.

The screenshot shows the ZyXEL NWA-3500 web management interface. The browser address bar shows the URL `http://192.158.88.249/rpSys.html`. The page title is "ZyXEL NWA-3500 (NWA-3500)". The interface is in German, with a navigation menu on the left containing items like "STATUS", "MGNT MODE", "SYSTEM WIRELESS", "IP", "ROGUE AP", "REMOTE MGNT", "AUTH. SERVER", "CERTIFICATES", "LOGS", "VLAN", "MAINTENANCE", and "LOGOUT".

The main content area is titled "WIRELESS LAN" and has several tabs: "Wireless", "SSID", "Security", "RADIUS", "Layer-2 Isolation", and "MAC Filter". The "Security" tab is selected, showing the following configuration:

Parameter	Value
Profile Name	WPA2-MIX
Security Mode	WPA2-MIX
ReAuthentication Timer	1800 (seconds, 0 means no Reauthentication)
Idle Timeout	3600 (seconds)
Group Key Update Timer	1800 (seconds)
PMK Cache	Disable
Pre-Authentication	Disable

At the bottom of the configuration area, there are "Apply" and "Reset" buttons. The status bar at the bottom left indicates "Status: Ready".

# Einstellung der PEAP-ESSID entsprechend radius01 (interner Radius des NWA-3500).

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar displays `http://192.168.88.249/rpSys.html`. The page title is "ZyXEL NWA-3500 (NWA-3500)". The main content area is titled "WIRELESS LAN" and contains several tabs: "Wireless", "SSID", "Security", "RADIUS", "Layer-2 Isolation", and "MAC Filter". The "RADIUS" tab is currently selected. The configuration fields are as follows:

Field	Value
Profile Name	PEAP_Koenig
SSID	PEAP_Koenig
Hide Name(SSID)	Enable
Security	WPA2-MIX
RADIUS	radius01
QoS	ATC+WMM
Layer-2 Isolation	Disable
Intra-BSS Traffic blocking	Disable
MAC Filtering	WLAN PEAP

At the bottom of the configuration area, there are two buttons: "Apply" and "Reset". The status bar at the bottom left of the interface shows "Status: Ready".

# Einstellung (z.B. WLAN2 Modul) als Accesspoint in 802.11a mit gewählter ESSID für PEAP-Verbindungen.

The screenshot shows the ZyXEL NWA-3500 configuration interface. The browser address bar shows the URL `http://192.168.88.249/rpSys.html`. The page title is "ZyXEL NWA-3500 (NWA-3500)". The main navigation menu includes "Wireless", "SSID", "Security", "RADIUS", "Layer-2 Isolation", and "MAC Filter". The "Wireless" tab is active, showing the configuration for the "WLAN2" interface. The "Operating Mode" is set to "Access Point" and the "802.11 Mode" is set to "802.11a". The "Super Mode" checkbox is checked. The "Choose Channel ID" is set to "Auto Selection", resulting in "Channel-036" (2346). The "Output Power" is set to "100%". The "SSID Profile" is set to "PEAP\_Koenig". Below these settings is a "Rates Configuration" table with columns for "Rate" and "Configuration". The table shows configurations for 6, 12, 24, 48, 9, 18, 36, and 54 Mbps. At the bottom, there are checkboxes for "Enable Antenna Diversity", "Enable Breathing LED", "Enable Spanning Tree Protocol (STP)", and "Enable Roaming". The status at the bottom left is "Status: Ready".

**ZyXEL**

STATUS  
MGNT MODE  
SYSTEM WIRELESS  
IP  
ROGUE AP  
REMOTE MGNT  
AUTH. SERVER  
CERTIFICATES  
LOGS  
VLAN  
MAINTENANCE  
LOGOUT

Wireless SSID Security RADIUS Layer-2 Isolation MAC Filter

WLAN Interface: WLAN2  
Operating Mode: Access Point  
802.11 Mode: 802.11a  
 Super Mode  
 Disable channel switching for DFS  
Choose Channel ID: Auto Selection  
Operating Channel: Channel-036  
RTS/CTS Threshold: 2346  
Fragmentation Threshold: 2346  
Output Power: 100%  
SSID Profile: PEAP\_Koenig

Rates Configuration

Rate	Configuration	Rate	Configuration
6 Mbps	Basic	9 Mbps	Optional
12 Mbps	Basic	18 Mbps	Optional
24 Mbps	Basic	36 Mbps	Optional
48 Mbps	Optional	54 Mbps	Optional

Enable Antenna Diversity  
 Enable Breathing LED  
 Enable Spanning Tree Protocol (STP)  
 Enable Roaming

Status: Ready

Fertig

# Interner Radius01 ist voreingestellt.

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar shows the URL `http://192.168.88.249/rpSys.html`. The page title is "ZyXEL NWA-3500 (NWA-3500)". The main content area is titled "WIRELESS LAN" and has several tabs: "Wireless", "SSID", "Security", "RADIUS", "Layer-2 Isolation", and "MAC Filter". The "RADIUS" tab is selected. Below the tabs, there is a form for configuring RADIUS profiles. The "Index" is set to "1" and the "Profile Name" is "radius01". The configuration is divided into "Primary" and "Backup" columns. The "RADIUS Option" is set to "Internal" for both. The "RADIUS Server IP Address" is "0.0.0.0" for Primary and "0.0.0.0" for Backup. The "RADIUS Server Port" is "0" for Primary and "1812" for Backup. The "Accounting Server IP Address" is "0.0.0.0" for both. The "Accounting Server Port" is "1813" for both. There are "Apply" and "Reset" buttons at the bottom of the form. The status at the bottom left is "Status: Ready".

**ZyXEL**

STATUS  
MGNT MODE  
SYSTEM  
WIRELESS  
IP  
ROGUE AP  
REMOTE MGNT  
AUTH. SERVER  
CERTIFICATES  
LOGS  
VLAN  
MAINTENANCE  
LOGOUT

## WIRELESS LAN

Wireless SSID Security **RADIUS** Layer-2 Isolation MAC Filter

Index: 1  
Profile Name: radius01

	Primary	Backup
RADIUS Option	<input checked="" type="radio"/> Internal <input type="radio"/> External	<input type="radio"/> Internal <input checked="" type="radio"/> External
	<input type="checkbox"/> Active	<input type="checkbox"/> Active
RADIUS Server IP Address	<input type="text"/>	<input type="text" value="0.0.0.0"/>
RADIUS Server Port	<input type="text" value="0"/>	<input type="text" value="1812"/>
Share Secret	<input type="text"/>	<input type="text"/>
	<input type="checkbox"/> Active	<input type="checkbox"/> Active
Accounting Server IP Address	<input type="text" value="0.0.0.0"/>	<input type="text" value="0.0.0.0"/>
Accounting Server Port	<input type="text" value="1813"/>	<input type="text" value="1813"/>
Share Secret	<input type="text"/>	<input type="text"/>

Apply Reset

Status: Ready

Fertig

# Internal Radius Server muss Aktiviert sein.

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar shows `http://192.158.88.249/rpSys.html`. The page title is "INTERNAL RADIUS SERVER". The "Active" checkbox is checked. Below it is a table with the following data:

#	Name	Type	Subject	Issuer	Valid From	Valid To
1	auto_generated_self_signed_cert	*SELF	CN=NWA-3500 0019CB3354CE	CN=NWA-3500 0019CB3354CE	2000 Jan 1st, 00:00:00 GMT	2030 Jan 1st, 00:00:00 GMT

Buttons for "Apply" and "Reset" are located below the table. The status at the bottom left is "Status: Ready".

Als Trusted AP kann man weitere im Netzwerk vorhandene Accesspoints eintragen, sofern diese entsprechend WPA2/WPA eingestellt sind.

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar shows the URL `http://192.168.88.249/rpSys.html`. The page title is "INTERNAL RADIUS SERVER". The "Trusted AP" tab is selected, showing a table of configured access points.

#	Active	IP Address	Shared Secret
1	<input checked="" type="checkbox"/>	127.0.0.1	*****
2	<input checked="" type="checkbox"/>	192.168.0.250	*****
3	<input type="checkbox"/>	0.0.0.0	
4	<input type="checkbox"/>	0.0.0.0	
5	<input type="checkbox"/>	0.0.0.0	
6	<input type="checkbox"/>	0.0.0.0	
7	<input type="checkbox"/>	0.0.0.0	
8	<input type="checkbox"/>	0.0.0.0	
9	<input type="checkbox"/>	0.0.0.0	
10	<input type="checkbox"/>	0.0.0.0	
11	<input type="checkbox"/>	0.0.0.0	
12	<input type="checkbox"/>	0.0.0.0	
13	<input type="checkbox"/>	0.0.0.0	
14	<input type="checkbox"/>	0.0.0.0	
15	<input type="checkbox"/>	0.0.0.0	
16	<input type="checkbox"/>	0.0.0.0	

Status: Ready

Im Bereich Trusted Users sind all jene Benutzer Authentifizierungen einzutragen.

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar shows the URL `http://192.158.88.249/rpSys.html`. The page title is "INTERNAL RADIUS SERVER". The "Trusted Users" tab is selected, showing a table with the following data:

#	Active	User Name	Password
1	<input checked="" type="checkbox"/>	kkoenig	*****
2	<input checked="" type="checkbox"/>	ckoenig	*****
3	<input checked="" type="checkbox"/>	bkastenholz	*****
4	<input type="checkbox"/>		
5	<input type="checkbox"/>		
6	<input type="checkbox"/>		
7	<input type="checkbox"/>		
8	<input type="checkbox"/>		
9	<input type="checkbox"/>		
10	<input type="checkbox"/>		
11	<input type="checkbox"/>		
12	<input type="checkbox"/>		
13	<input type="checkbox"/>		
14	<input type="checkbox"/>		
15	<input type="checkbox"/>		
16	<input type="checkbox"/>		

At the bottom left, the status is "Status: Ready".

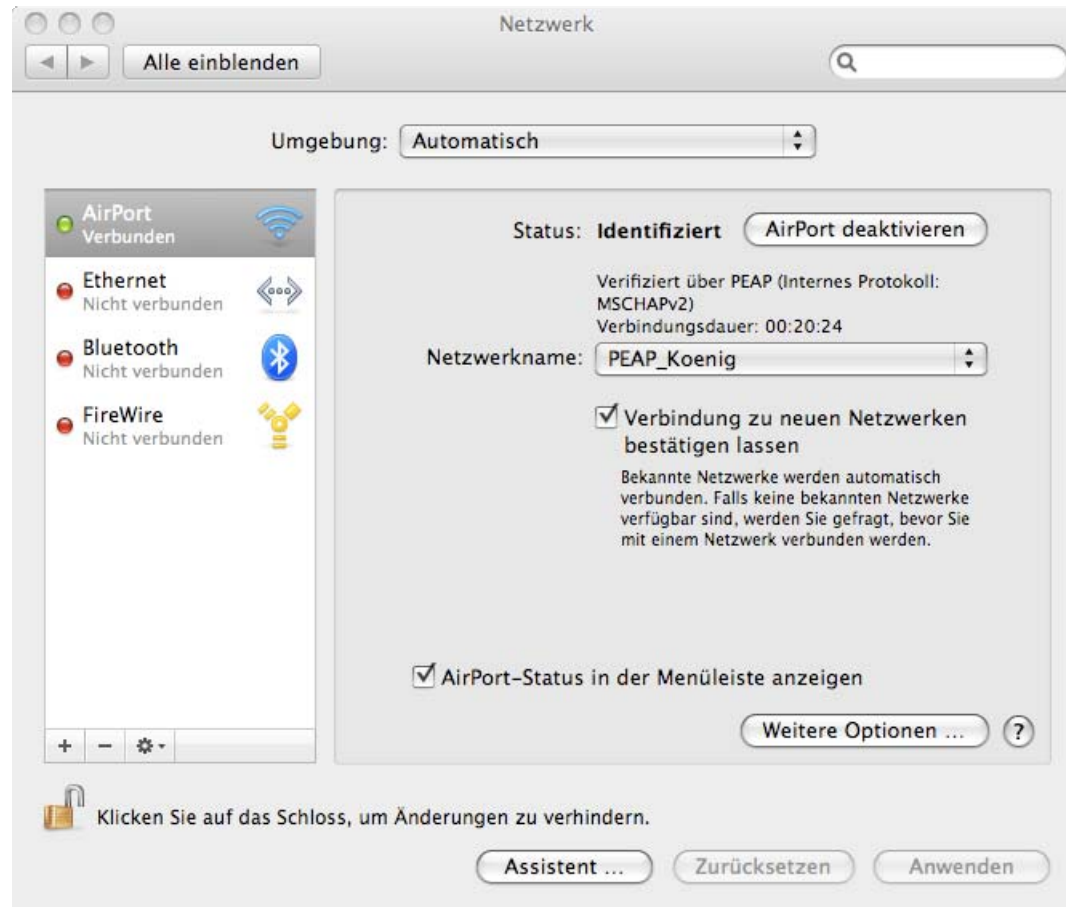
# Darstellung LOGs einer erfolgreichen Wireless Verbindung und Authentifizierung mittels WPA-PEAP.

The screenshot shows the ZyXEL NWA-3500 web interface. The browser address bar displays `http://192.168.88.249/rpSys.html`. The page title is "ZyXEL NWA-3500 (NWA-3500)". The left sidebar contains navigation menus: "ZyXEL", "STATUS", "MGNT MODE", "SYSTEM WIRELESS", "IP", "ROGUE AP", "REMOTE MGNT", "AUTH. SERVER", "CERTIFICATES", "LOGS", "VLAN", "MAINTENANCE", and "LOGOUT". The main content area displays a log table with the following data:

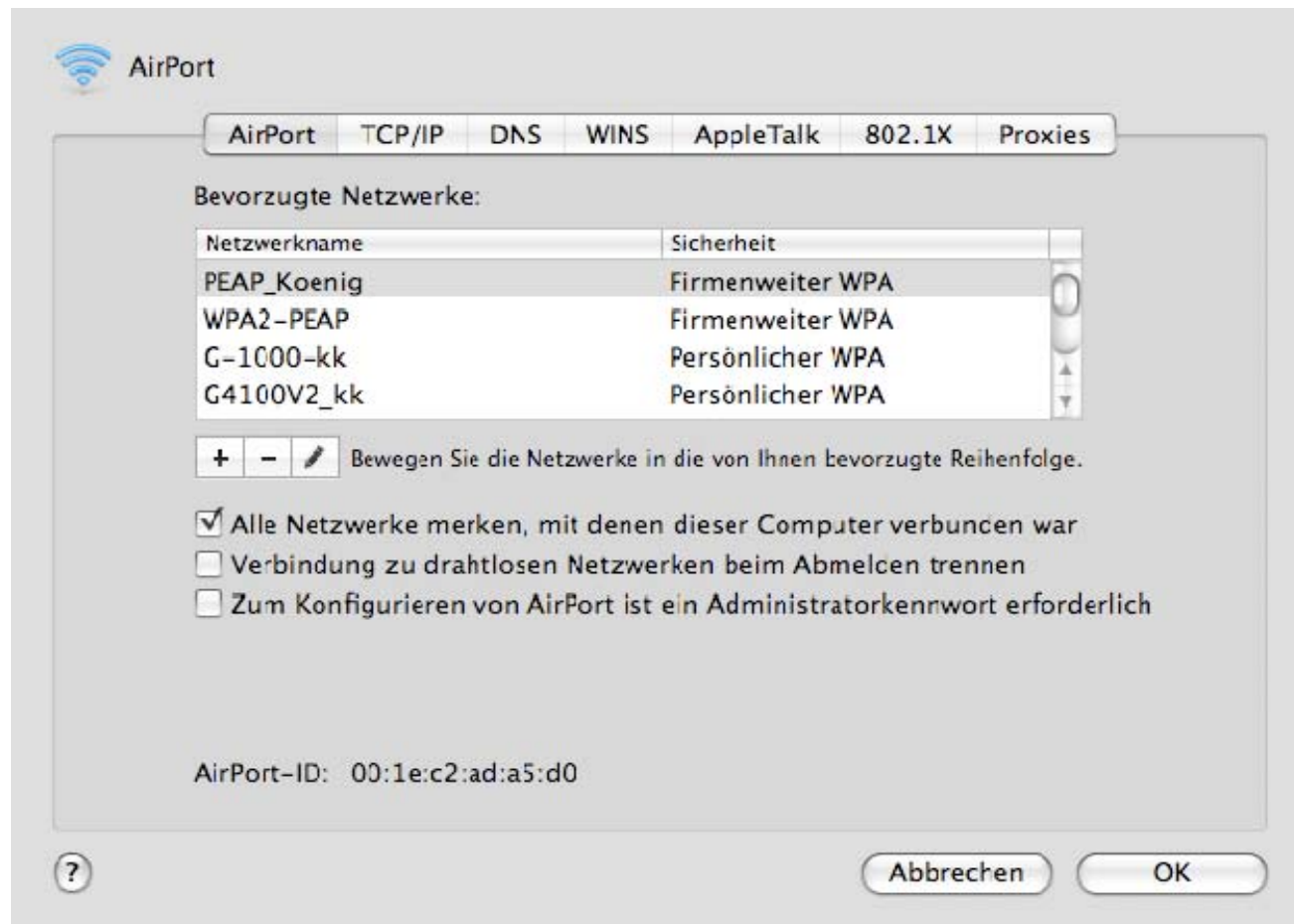
14	04/27/2008 10:36:58	RADIUS Accept	127.0.0.1:1026		kkoenig
15	04/27/2008 10:36:58	RADIUS accepts user.			WPA2:001ec2ada5d0:success:PEAP
16	04/27/2008 10:36:58	RADIUS use PEAP	127.0.0.1:1026		kkoenig
17	04/27/2008 10:36:58	RADIUS New User	127.0.0.1:1026		kkoenig
18	04/27/2008 10:36:54	RADIUS use PEAP	127.0.0.1:1026		kkoenig
19	04/27/2008 10:36:54	RADIUS New User	127.0.0.1:1026		kkoenig
20	04/27/2008 10:36:54	Use RADIUS to authenticate user.			WPA2:001ec2ada5d0:authing...
21	04/27/2008 10:36:54	WLAN STA Association			MACAddr:001ec2ada5d0
22	04/27/2008 10:36:54	User logout because of user disassociation.			WPA2:001ec2ada5d0:logout
23	04/27/2008 10:35:41	RADIUS Accept	127.0.0.1:1026		kkoenig
24	04/27/2008 10:35:41	RADIUS accepts user.			WPA2:001ec2ada5d0:success:PEAP
25	04/27/2008 10:35:41	RADIUS use PEAP	127.0.0.1:1026		kkoenig
26	04/27/2008 10:35:41	RADIUS New User	127.0.0.1:1026		kkoenig
27	04/27/2008 10:35:41	Use RADIUS to authenticate user.			WPA2:001ec2ada5d0:authing...
28	04/27/2008 10:35:41	WLAN STA Association			MACAddr:001ec2ada5d0
29	04/27/2008 10:35:41	User logout because of user disassociation.			WPA2:001ec2ada5d0:logout
30	04/27/2008 10:25:38	WPA-PSK user.			WPA-PSK:0016e317a376:success
31	04/27/2008 10:21:52	RADIUS Accept	127.0.0.1:1026		kkoenig
32	04/27/2008	RADIUS accepts user.			WPA2:001ec2ada5d0:success:PEAP

At the bottom of the log area, the status is indicated as "Status: Ready".

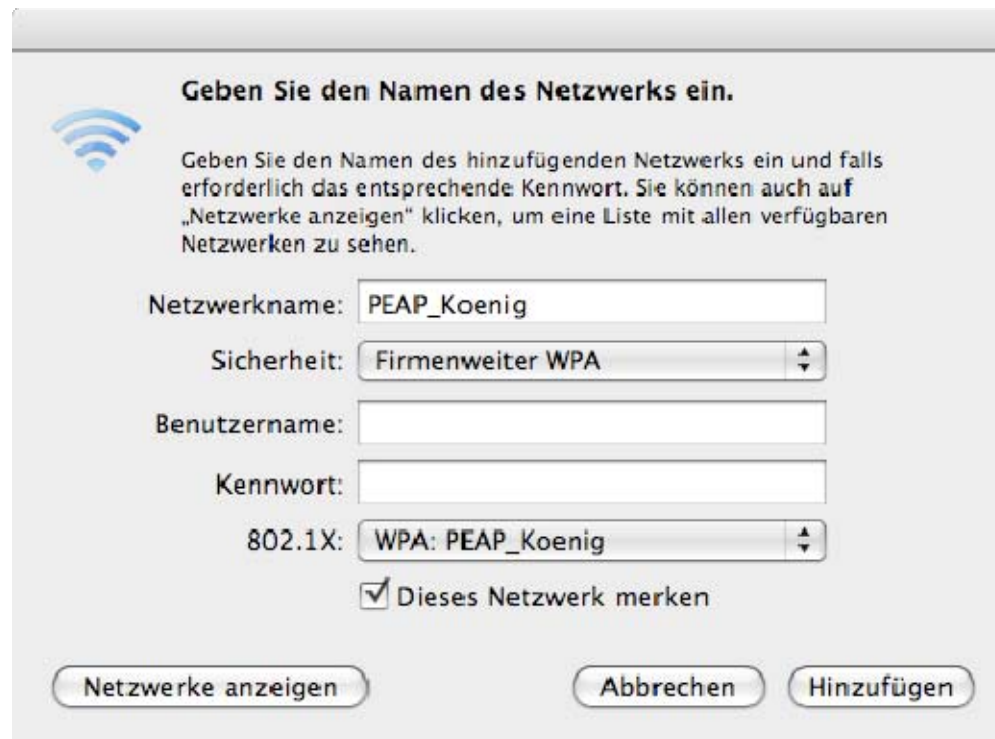
# Systemeinstellung Netzwerk öffnen.




Zu verwendendes Drahtlos-Netz an die oberste Position verschieben und Doppelklick auf den Eintrag zur weiteren Einstellung.



# WPA entspricht Firmenweiter WPA. (Auch als WPA-Enterprise bekannt)



**Geben Sie den Namen des Netzwerks ein.**

 Geben Sie den Namen des hinzufügenden Netzwerks ein und falls erforderlich das entsprechende Kennwort. Sie können auch auf „Netzwerke anzeigen“ klicken, um eine Liste mit allen verfügbaren Netzwerken zu sehen.

Netzwerkname:

Sicherheit:

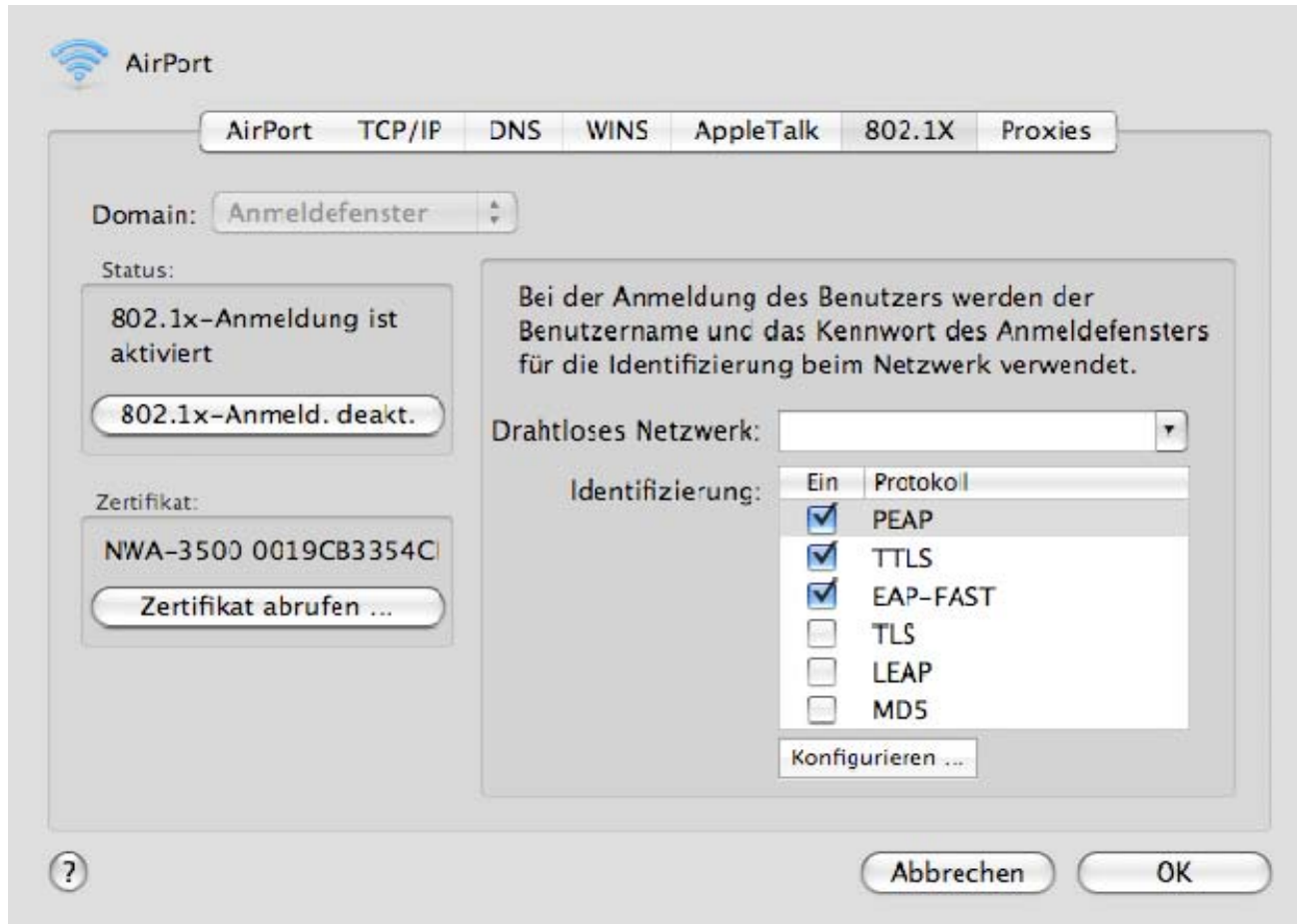
Benutzername:

Kennwort:

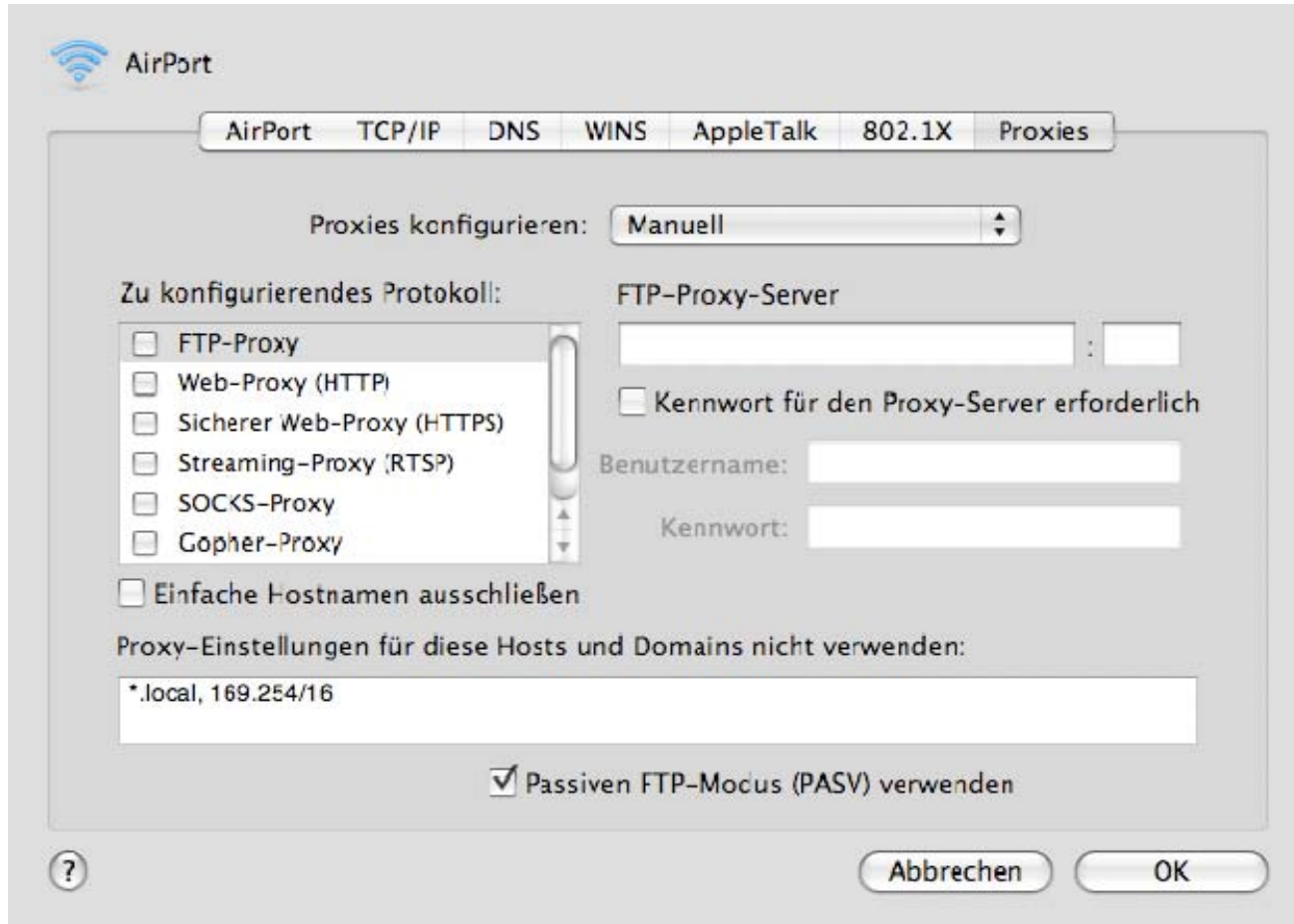
802.1X:

Dieses Netzwerk merken

# Darstellung 802.1X



# Darstellung Proxies



Beispiel Einstellung eines lokal vorhandenen P-335WT, dieser WPA2/WPA eingestellt, die 802.1X Authentifikation zum NWA-3500 abwickelt, sofern dieser beim NWA-3500 als Trusted eingestuft.

The screenshot displays the web management interface for a ZyXEL P-335/P-335WT printer server. The browser address bar shows the URL `http://192.168.0.250/rpSys.html`. The interface is in English and shows the following configuration:

- Network > Wireless LAN > General**
- Wireless Setup**
  - Enable Wireless LAN
  - Name(SSID): P335WT-kk
  - Hide SSID
  - Channel Selection: Channel-07 2442MHz
- Security**
  - Security Mode: WPA2
  - WPA Compatible
  - ReAuthentication Timer: 1800 (In Seconds)
  - Idle Timeout: 3600 (In Seconds)
  - Group Key Update Timer: 1800 (In Seconds)
  - Authentication Server
    - IP Address: 192.168.88.249
    - Port Number: 1812
    - Shared Secret: 12345678
  - Accounting Server
    - Active
    - IP Address: 192.168.88.249
    - Port Number: 1813
    - Shared Secret: 12345678

The interface includes a left-hand navigation menu with options like Status, Network, Wireless LAN, WAN, LAN, DHCP Server, NAT, Security, Management, and Maintenance. A status bar at the bottom indicates "Message Ready".

# Darstellung LOGs einer erfolgreichen Wireless Verbindung und Authentifizierung mittels WPA-PEAP über P-335WT.

The screenshot displays the ZyXEL P-335/P-335WT web management interface. The browser address bar shows the URL `http://192.168.0.250/rpSys.html`. The page title is "Welcome to ZyXEL P-335/P-335WT (printserver)". The interface includes a navigation menu on the left with categories like Network, Security, Management, and Maintenance. The "Maintenance > Logs > View Log" section is active, displaying a table of system events.

Index	Time	Event Description	Source IP	Destination IP	Details
6	04/24/2008 19:05:53	Successful FTP login	192.168.88.11		User:admin
7	04/24/2008 19:00:40	RADIUS accepts user.			1x:001ec2ada5d0:succes:PEAP
8	04/24/2008 19:00:36	WLAN STA Association			MACAddr:001ec2ada5d0
9	04/24/2008 19:00:36	Use RADIUS to authenticate user.			1x:001ec2ada5d0:authing...
10	04/24/2008 18:51:41	Successful WEB login	192.168.88.11		User:admin
11	04/24/2008 18:49:04	Time synchronization successful			
12	04/24/2008 18:49:04	Time initialized by NTP server: ntp3.cs.wisc.edu	128.105.37.11:123	192.168.0.250:123	
13	04/23/2008 18:48:58	Time synchronization successful			
14	04/23/2008 18:48:58	Time initialized by NTP server: ntp3.cs.wisc.edu	128.105.37.11:123	192.168.0.250:123	
15	04/22/2008 18:48:51	Time synchronization successful			
16	04/22/2008 18:48:51	Time initialized by NTP server: ntp3.cs.wisc.edu	128.105.37.11:123	192.168.0.250:123	
17	02/16/2008 12:15:29				ip:192.168.88.249, port:1813
18	02/16/2008 12:15:29				ip:192.168.88.249, port:1812

At the bottom of the interface, there is a status bar with a "Message Ready" indicator and the word "Fertig" in the bottom left corner.