

EAP-TLS Termination

Termination of EAP-TLS on Aruba OS 3.1

This setup for EAP-TLS termination was do with the following

- Aruba Controller running AOS 3.1 or greater
- Windows 2003 server running a Microsoft Cert Authority, IIS and acting as a Domain Controller
- Juniper Odyssey Access Client
- 1. Certificate Creation
 - a. Server Cert
 - b. Trusted CA Cert
- 2. Controller Authentication Configuration
 - a. Configure TLS AAA Profile
- 3. AP Configuration
 - a. Add TLS Virtual AP
- 4. Client Configuration

1. Certificate Creation

You will need both a Server Cert and a Trusted CA Cert for EAP-TLS.

a. Server Cert – Generate a CSR by going to the Aruba Controller:

- i. Configuration> Management > Certificates > CSR
- *ii.* Fill in all fields and click> Generate New
- iii. View Current

notworks Co	onfiguration			POWER O STATUS O		200 384	
Monitoring Configuration	on Diagnostics Maintenanc	e Plan Events Reports	Licenses will expire in	7 days	S	ave Configuration	Logout jenga
Network Controller	Management > Ce	ertificates > CSR					
VLANs	Upload CSR Ca	otive Portal Certificates					
Ports							
IP	CSR Information						
Security	Key Length	1024 💙					
Authentication	Common Name	arubase					
Wireless	Country	US					
AP Configuration	State/Province	CA					
AP Installation	City	San Diego					
Management General	Organization	IT					
Administration	Unit	IT					
Certificates	Email Address	gjenkins@arubanetwor					
SNMP		Generate New	Reset View Currer	nt			
Logging							
Clock							
Advanced Services Redundancy							
IP Mobility							
Stateful Firewall							
VPN Services							
Wired Access							
Wireless							
All Profiles							

iv. Copy entire request from "-----BEGIN " to " ... REQUEST ----- "

Conf	figuration	NAME OF CONTRACT OF CONTRACT.
Monitoring Configuration	Diagnostics Maintenance Plan Events Reports Licenses will expire in 7 days	
Network Controller		x
VLANS	CSR Information Subject	
Ports	C=US	
IP Focurity	L=San Diego	
Authentication		
Access Control	OU=IT	
Wireless	CN=arubase	
AP Configuration	emailAddress=gjenkins@arubanetworks.com	
AP Installation		
Management	BEGIN CERTIFICATE REQUEST	<u>~</u>
General	MIIBX]CCASSCAQAwgYUXCZAJBGNVBAYTAIVTMQSWCQYDVQQIEWJDQTESMBAGAIUE ByMJU2EuIEBpZWdyMOswCOYDVOOKEwJJVDEIMakGaIUECyMCSVOyEDaOBoNVBAMT	
Administration	B2FydWJhc2UxKTAnBgkghkiG9w0BCQEWGmdqZW5raW5zQGFydWJhbmV0d29ya3Mu	
Certificates	Y29tMIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQCpYyu7LDZ/sEdZnK5dAW3v	
SNMP	ldTBZeVxve6CsXooOJrsZfWPTsNbRfuOb5VJSRB1afANRIeJ6aTJ3OCf3midWczh	
Logging	ZYVC1RZnuvOCjSHJeaZ/8bXhDXRTZXay1CZq+1M2fuMwMCjuZLqWyA9gJmN7HxZP	
Clock	RDztCR9XfJUDb/nJPC7KPVKcbtDj+CDKf+ZJgb0PByacWRKdSa0pu21m8rpAjUyA	
Advanced Services	D4ghvEVB+BxrdL7f5IK94MtUdWdmvK71XfbNTPfjIJ38HmEibQfzck6ZImZfhNcD	
TD Mability	gELbN7hErc/Kiy9L/1kY5xqSXnkWfYSF058=	
IP MODILLY	END CERTIFICATE REQUEST	
VDN Services		
Wired Access		~
Wired Access		
All Drofilos		ОК
All Profiles		

- v. Using your web browser go to your MS Certificate Server with the url of http://x.x.x.x/certsrv
- vi. > Request a certificate

🖉 Microsoft Certificate Services - Microsoft Internet Explorer provided by Aruba "The Mobile Edge Company"		
	Google	P-
Google 🖸 - 😧 Go 🖗 🌮 🚽 🏠 Bookmarks 🗕 🖓 12 blocked 🛛 🍄 Check 👻 🔦 AutoLink 👻 🦳 Aut	oFill 🔒 Send to 🗸 🥖	Settings - Jenovo
🗄 Links 🕸 Windows Marketplace 👩 Windows Media 👩 Aruba Mail 🔀 Gmail - Inbox (55)		
🛠 🏘 🔡 🗸 🍘 Microsoft Certificate Serv X 🔊 Switch Configuration	🙆 • 🔊	🖶 🔹 🔂 Page 👻 🎯 Tools 🔹 🎇
Minner B Ond Early One internet		
microson Centificate Services andasecen		nome
Welcome		
Use this Web site to request a certificate for your Web browser, e-mail client, or other program. By using a cert you communicate with over the Web, sign and encrypt messages, and, depending upon the type of certificate y	ificate, you can verify ou request, perform c	your identity to people ther security tasks.
You can also use this Web site to download a certificate authority (CA) certificate, certificate chain, or certificat of a pending request.	e revocation list (CRL	.), or to view the status
For more information about Certificate Services, see Certificate Services Documentation.		
Select a task: <u>Request a certificate</u> <u>View the status of a pending certificate request</u> <u>Download a CA certificate, certificate chain, or CRL</u>		

vii. Submit a certificate request by using a base-64-encoded....

🧭 Microsoft Certificate Services - Microsoft Internet Explorer provided by Aruba "The Mobile Edge Company"		
S . ktp://192.168.15.203/certsrv/certrqad.asp	🖌 🗲 🗙 Google	P •
Google 🖸 🗸 😽 Go h of the constraints 🖉 Sookmarks 🖉 12 blocked 🖓 Check 🔻 🐴 AutoLink 🔻 📔	AutoFill 🔒 Send to 🗸 💋	Settings - Jenovo
🗄 Links 🐝 Windows Marketplace 🖉 Windows Media 🖉 Aruba Mail M Gmail - Inbox (55)		
🛠 🎄 🕾 - 🎉 Microsoft Certificate Serv X 😰 Switch Configuration	🐴 • 🔊 -	🖶 🔹 🔂 Page 🔹 🍈 Tools 🔹 🎽
Microsoft Certificate Services arubasecert		Home
Advanced Certificate Request		
The policy of the CA determines the types of certificates you can request. Click one of the following options t	0.	
Create and submit a request to this CA.		
Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal rec file.	quest by using a base-64	4-encoded PKCS #7
Request a certificate for a smart card on behalf of another user by using the smart card certificate enrollm Note: You must have an enrollment agent certificate to submit a request on behalf of another user.	ent station.	
I		

viii. Paste in CSR information

C Microsoft Certificate Services - Microsoft Internet Explorer provided by	Aruba "The Mol	oile Edge Company"		
🚱 🕞 👻 http://192.168.15.203/certsrv/certrqxt.asp			🗸 🗲 🗙 Google	P -
Google G- Go ♦ 😴 😽 マ 🏠 Bookmar	ks 👻 🔊 12 blocked	ABC Check 👻 🐔 AutoLink 👻	📔 AutoFill 🍙 Send to 🗸 🥖	Settings - Jenovo
🗄 Links 😻 Windows Marketplace 🛛 🖉 Windows Media 🖉 Aruba Mail 🛛 M Gmail - Inbox (5	5)			
🛠 🏟 😁 🗸 🍘 Microsoft Certificate Serv 🗙 🖉 Switch Configuration				🖶 🔹 🔂 Page 🔹 🍈 Tools 🔹 🎽
Microsoft Certificate Services arubasecert				Home
Submit a Certificate Request or Renewal Request				
To submit a saved request to the CA, paste a base-64-encoded external source (such as a Web server) in the Saved Request box	CMC or PKCS	#10 certificate request	or PKCS #7 renewal reques	t generated by an
Saved Request:				
zYVClRZnuvOCjSHJeaZ/bbkhDKRTzKaylCZq+IM2 Base-64-encoded AjvLlVuneYU5SPYtBfku2wIDAQABoAAwDQYJKOZI certificate request RDztCR9XfJUDb/nJPC7KPVKcbtDj+CDKf+ZgbOP (CMC or D4ghvEVB+BxrdL7f5IK94MtUdWdmvK71XfbNTPfj PKCS #10 or gELbN7hErc/Kiy9L/1kY5xq5XnkWFYSF058= END CERTIFICATE REQUEST ✓ Browse for a file to insert. ✓				
Certificate Template:				
Administrator				
Additional Attributes				
Attributes:				
Submit >				

ix. The Cert Admin will need to approve the pending request via the MS Cert Authority. You do this by right clicking on it and choosing Issue

📴 Certification Authority				
Eile Action View Help				
← → 🗈 🖪 🚯 😫				
Certification Authority (Local)	Request ID	Binary Request	Request Status Code The operation comple	Request Disposition Message Taken Under Submission
	-			

 You will now be able to web surf back to <u>http://x.x.x.x/certsrv</u> and download your cert. You should use a name that tells you it is the Server Cert so you don't get it mixed up with your CA Cert

🖉 Microsoft Certificate Services - Microsoft Internet Explorer provided by Aruba "The Mobile Edge Company"	
() • () http://192.168.15.203/certsrv/certckpn.asp	🖌 🗲 🗙 Google
Google 🕞 - Go I do Start - St	end to 👻 💋
😪 🕸 🔡 🕶 🕂 Switch Configuration 🏾 🎉 Microsoft Certificate Serv 🗴	🙆 • 🖻 •
Microsoft Certificate Services arubasecert View the Status of a Pending Certificate Request	
Select the certificate request you want to view: Saved-Request Certificate (Wednesday June 13 2007 10:24:48 AM)	

- xi. Upload the Server Cert to the Aruba Controller.
 - 1. Cert format is PEM
 - 2. Cert Type is Server Cert

Config	juration			POWER O JANN		ERAL 2
Monitoring Configuration	Diagnostics Maint	tenance Plan	Events Report	s Licenses will expire in 10	days	
Network Controller	lanagement	> Certifica	tes > Upload			
VLANs Ports	Upload CSR	Captive Porta	al Certificates			
IP	Upload a Certifica	te				
Security	Certificate Name	TLS-ServerCe	ert			
Authentication	Certificate Filename	C:\Documents	s and Set Browse			
Access Control	Passobrase (optional)		Eor import pur	nose only, will not be stored in the	system.	
AP Configuration	Deture Decembrase				. oyoteini	
AP Installation	Retype Passprirase					
Management	Certificate Format	PEM 💌				
General	Certificate Type	Server Cert	*			
Administration		Upload	Reset			
Certificates						
SNMP	Certificate Lists					
Logging	Crown But	Nana				
Clock	Group by:	Type	Filonamo	Deference		Action
Advanced Services Redundancy	servercert S	ServerCert	certnew.cer	1	View	Delete
IP Mobility	CA 1	TrustedCA	base64-arubase.cer	1	View	Delete
Stateful Firewall						
VPN Services						

b. Trusted CA Cert

- i. From the Windows 2003 server go to Start> run and type mmc into the run dialog box. This will bring up the mmc console.
- **ii.** go to File > add snap-in
- iii. Add the Certificate snap-in with Computer account

Standalone Extensions	Add Standalone Snap-in
Use this page to add or remove a standalone Snap-in from the console. Snap-ins added to:	Available Standalone Snap-ins: Snap-in Vendor Microsoft Corporation ActiveX Control Microsoft Corporation Cettificates Microsoft Corporation Component Services Microsoft Corporation Device Management Microsoft Corporation Disk Defragmenter Microsoft Corporation Disk Management Microsoft Corporation Disk Defragmenter Microsoft Corporation Disk Management Microsoft Corporation Disk Defragmenter Microsoft Corporation Disk Defragmenter Microsoft Corporation Disk Defragmenter Microsoft Corporation Description The Certificates comparis allows up to browse the contexts of the
Add Remove About OK Cancel	Certificates snap-in This snap-in will always manage certificates for: My user account Service account Computer account

- iv. Under the Trusted Root Cert Auth. find your Cert. This was created during the install of the MS Cert Server.
- v. Right click on it to export it

🚡 cert - [Console Root\Certificates (Local Computer)\Trusted Root Certification Authorities\Certificates]									
🚡 Eile Action View Favorites V	🚡 Ele Action View Favgrites Window Help								
⇔ → 🗈 💽 🐰 🖻 🗡 😭	E 2								
Console Root	Issued To 🔺	Issued By		Expiration Date	Intended Purposes	Friendly Name	-		
🖻 🗑 Certificates (Local Computer)	ABA.ECOM Root CA	ABA.ECOM	4 Root CA	7/9/2009	Secure Email, Server	DST (ABA.ECOM) CA			
	arubasecert		···•	5/26/2012	<all></all>	<none></none>			
Certificates	🔤 Autoridad Certificadora de la A 🔡	Open	ertificador	6/28/2009	Secure Email, Server	Autoridad Certificad			
Trusted Root Certification Aut	🖼 Autoridad Certificadora del Coli	All Tasks 🔹 🕨	Open	29/2009	Secure Email, Server	Autoridad Certificad			
Certificates	🔤 Baltimore EZ by DST 📃 📒			3/2009	Secure Email, Server	DST (Baltimore EZ) CA			
Enterprise Trust	🔤 Belgacom E-Trust Primary CA 👘	Cu <u>t</u>	Export	21/2010	Secure Email, Server	Belgacom E-Trust Pri			
Cortificate Devocation Lid	🔤 C&W HKT SecureNet CA Class ,	<u>С</u> ору	ecureNet	10/16/2009	Secure Email, Server	CW HKT SecureNet			
	🔤 C&W HKT SecureNet CA Class I	<u>D</u> elete	ecureNet	10/16/2009	Secure Email, Server	CW HKT SecureNet			
	🔤 C&W HKT SecureNet CA Root	Properties	ecureNet	10/16/2010	Secure Email, Server	CW HKT SecureNet			
🕀 🦳 Untrusted Certificates	🖼 C&W HKT SecureNet CA SGC R —	2-4	ecureNet	10/16/2009	Secure Email, Server	CW HKT SecureNet			
🗄 🧰 Third-Party Root Certification	🖭 Certisign - Autoridade Certifica 📃	<u>H</u> elp	Autoridade	6/26/2018	Secure Email, Server	Certisign Autoridade			
표 🦲 Trusted People	🔛 Certisign - Autoridade Certificador.	. Certisign -	Autoridade	6/26/2018	Secure Email, Server	Certisign Autoridade			
표 🧰 Certificate Enrollment Reques	🖭 Certisign Autoridade Certificadora .	Certisign A	Autoridade	6/26/2018	Secure Email, Server	Certisign Autoridade			
🗄 🧰 SPC	🖭 Certisign Autoridade Certificadora .	Certisign A	Autoridade	7/9/2018	Secure Email, Server	Certisign Autoridade			
	🖼 Class 1 Primary CA	Class 1 Pri	imary CA	7/6/2020	Secure Email, Server	CertPlus Class 1 Prim			
	🔤 Class 1 Public Primary Certification.	. Class 1 Pu	blic Primary	8/1/2028	Secure Email, Client	VeriSign Class 1 Publi			
	🔤 Class 1 Public Primary Certification.	. Class 1 Pu	blic Primary	1/7/2020	Secure Email, Client	VeriSign Class 1 Prim			
	🖼 Class 2 Primary CA	Class 2 Pri	imary CA	7/6/2019	Secure Email, Server	CertPlus Class 2 Prim			
	🔤 Class 2 Public Primary Certification.	. Class 2 Pu	blic Primary	1/7/2004	Secure Email, Client	VeriSign Class 2 Prim			
	🖼 Class 2 Public Primary Certification.	. Class 2 Pu	blic Primary	8/1/2028	Secure Email, Client	VeriSign Class 2 Publi			
	🔛 Class 3 Primary CA	Class 3 Pri	imary CA	7/6/2019	Secure Email, Server	CertPlus Class 3 Prim			
	🖼 Class 3 Public Primary Certification.	. Class 3 Pu	blic Primary	8/1/2028	Secure Email, Client	VeriSign Class 3 Publi			
	🔤 Class 3 Public Primary Certification.	Class 3 Pu	blic Primary	1/7/2004	Secure Email, Client	VeriSign Class 3 Prim			
	Class 3P Primary CA	Class 3P P	rimary CA	7/6/2019	Secure Email, Server	CertPlus Class 3P Pri			
	Class 3TS Primary CA	Class 3TS	Primary CA	7/6/2019	Secure Email, Server	CertPlus Class 3TS P			
	E Copyright (c) 1997 Microsoft Corp.	Copyright	(c) 1997 Mi	12/30/1999	Time Stamping	Microsoft Timestamp			
	Butsche Telekom Root CA 1	Deutsche	Telekom Ro	7/9/2019	Secure Email, Server	Deutsche Telekom R			
	Butsche Telekom Root CA 2	Deutsche	Telekom Ro	7/9/2019	Secure Email, Server	Deutsche Telekom R			
	🔤 DST (ANX Network) CA	DST (ANX	Network) CA	12/9/2018	Secure Email, Server	DST (ANX Network) CA			
	B DST (NRF) RootCA	DST (NRF)	RootCA	12/8/2008	Secure Email, Server	DST (National Retail	• 1		
4						1			

vi. Export without the private key

tificate Export Wizard	×				
Export Private Key	-				
You can choose to export the private key with the certificate.	-	E	Expiration Date	Intended Purposes	Friendly Name
		7	7/9/2009	Secure Email, Server	DST (ABA.ECOM) CA
Drivate keys are password protected. If you want to export the private key with the		5	5/26/2012	<all></all>	<none></none>
certificate, you must type a password on a later page.	pr.	e	5/28/2009	Secure Email, Server	Autoridad Certificad
	pr.	e	5/29/2009	Secure Email, Server	Autoridad Certificad
Do you want to export the private key with the certificate?		- 7	7/3/2009	Secure Email, Server	DST (Baltimore EZ) CA
\bigcirc Yes, export the private key	m.	1	1/21/2010	Secure Email, Server	Belgacom E-Trust Pri.
Children to an a state bar		1	10/16/2009	Secure Email, Server	CW HKT SecureNet
(* <u>110, do not export the private key</u>		1	10/16/2009	Secure Email, Server	CW HKT SecureNet
		1	10/16/2010	Secure Email, Server	CW HKT SecureNet
		1	10/16/2009	Secure Email, Server	CW HKT SecureNet
	e.	e	5/26/2018	Secure Email, Server	Certisign Autoridade .
	e.	e	6/26/2018	Secure Email, Server	Certisign Autoridade .
	1	. е	6/26/2018	Secure Email, Server	Certisign Autoridade .
		. 7	7/9/2018	Secure Email, Server	Certisign Autoridade .
		7	7/6/2020	Secure Email, Server	CertPlus Class 1 Prim.
	. K.	ε	3/1/2028	Secure Email, Client	VeriSign Class 1 Publi.
< <u>B</u> ack <u>N</u> ext > Canc	el /	1	1/7/2020	Secure Email, Client	VeriSign Class 1 Prim.
		7	7/6/2019	Secure Email, Server	CertPlus Class 2 Prim.
Class 2 Public Primary Certification Class 2 Pub	ic Primary .	1	1/7/2004	Secure Email, Client	VeriSign Class 2 Prim.
Class 2 Public Primary Certification Class 2 Pub	ic Primary .	e	3/1/2028	Secure Email, Client	VeriSign Class 2 Publi.
Class 3 Primary CA Class 3 Prim	ary CA	- 7	7/6/2019	Secure Email, Server	CertPlus Class 3 Prim.
Class 3 Public Primary Certification Class 3 Pub	ic Primary .	e	8/1/2028	Secure Email, Client	VeriSign Class 3 Publi.
Class 3 Public Primary Certification Class 3 Pub	ic Primary .	1	1/7/2004	Secure Email, Client	VeriSign Class 3 Prim.
Class 3P Primary CA Class 3P Pri	nary CA	7	7/6/2019	Secure Email, Server	CertPlus Class 3P Pri
Class 3TS Primary CA Class 3TS P	imary CA	7	7/6/2019	Secure Email, Server	CertPlus Class 3TS P
Copyright (c) 1997 Microsoft Corp. Copyright () 1997 Mi.	1	12/30/1999	Time Stamping	Microsoft Timestamp .
Deutsche Telekom Root CA 1 Deutsche Te	elekom Ro.	7	7/9/2019	Secure Email, Server	Deutsche Telekom R
Deutsche Telekom Root CA 2 Deutsche Te	elekom Ro.	7	7/9/2019	Secure Email, Server	Deutsche Telekom R
DST (ANX Network) CA DST (ANX N	etwork) CA	A 1	12/9/2018	Secure Email, Server	DST (ANX Network) C
🔛 DST (NRF) RootCA DST (NRF) F	lootCA	1	12/8/2008	Secure Email, Server	DST (National Retail .

vii. Base-64 encoded X.509 format. Again name it with a name so that you know it is the CA Cert.

Certificate Export Wizard	X
Export File Format Certificates can be exported in a variety of file forma	ts.
Select the format you want to use:	
C DER encoded binary X.509 (.CER)	
Base-64 encoded X.509 (.CER)	
💭 Cryptographic Message Syntax Standard - PK	CS #7 Certificates (.P7B)
\square Include all certificates in the certification p	ath if possible
$igcap_{ ext{Personal Information Exchange - PKCS #12}$ (.	PFX)
Γ Include all certificates in the certification p	ath if possible
🔲 Enable strong protection (requires IE 5.0,	NT 4.0 SP4 or above)
\square Delete the private key if the export is succ	cessful
< Bar	ck Next > Cancel

viii. Upload the TrustedCA to the Aruba Controller.

- 1. Cert format is PEM
- 2. Cert Type is Trusted CA

Con	figuration			ARURA	ROWER O STATUS O		200 1994	
Monitoring Configuration	Diagnostics Mainte	enance Plan E	Events Reports	Licenses will expir	re in 10 days		Save Configuration	Logout jenga
Network Controller VLANs Ports IP Security Authentication Access Control Wireless AP Configuration AP Installation Management Control	Diagnostics Management Upload CSR Upload a Certificate Certificate Name Certificate Filename Passphrase (optional) Retype Passphrase Certificate Format Certificate Type Certificate Type	Captive Portal Cer PEM Trusted CA Trusted CA	Set Browse	e only, will not be store	ed in the system.			
General Administration	Certificate Type	Upload Rese	et					
Certificates SIMP Logging Clock Advanced Services Redundancy TP Mohitty	Certificate Lists Group By: Name servercert CA	None Type ServerCert TrustedCA	Filena certnew.cer base64-arubase.cer	me 1 1	Reference	View	Actions Delete Delete	
Stateful Firewall VPN Services Wired Access Wireless All Profiles								
Aruba Networks®								E-mail Support

2. Controller Authentication Configuration

- a. Configure TLS AAA Profile
 - i. Go to Configuration > Security > Authentication > Profiles
 - ii. Click on add at the bottom and create a new AAA Profile
 - iii. Chose the Initial and Default role you want to use

Monitoring Configuration	Diagi	nostics M	Maintenance	Plan E	Events	Reports	Licenses will	expire in 10 day	S	Save Configuration	Logout je
Network Controller	Secu	rity > /	Authenti	cation >	> Profi	les					
VLANs	Ser	vers A	AA Profiles	L2 Authe	ntication	L3 Aut	hentication	User Rules	Advanced		
Ports											
IP		AAA Profile		dat	Home	e-					Delet
Security				der	logor	ı					Delet
Authentication		CP		det	ault- logor	1	default				Delete
Access Control		• default	t	dot	:1X =						
Wireless				det	tix- logor	1	default-p	osk			Delete
AP Configuration		 default 	t-dot1x	psk	:						
AP Installation		• default	t-dot1x-psk	det	ault-	- default					Delet
Management		default	t-mac-auth	aut	th logor	i uerauri					Derect
General			c-mac-autri	det	fault-						Dalati
Administration		 default 	t-open	ope	an logor	1					Delett
Certificates		+ Home-	- A A A - Profile	Ho	me- Home	e-	homo				Delet
SNMP				Pro	file logor	1	nome				Deleti
Logging		 test-tls 	5	tes	t-tis logor	1	tls-auth-	profile			Delete
Clock		• wired-	-auth	wir	ed						
Advanced Services				aut	th logor	1					Delete
Redundancy				Т	S-AAA-Pr	ofile			Ac	ld Cancel	1.00
IP Mobility											
Stateful Firewall											
VPN Services											Analys
Wired Access											Арріу

- b. 802.1X Authentication Profile
 - i. Create a new 802.1x auth profile
 - ii. Enable Termination
 - iii. EAP-Type eap-tls
 - iv. Inner EAP-Type eap-tls
 - v. Make sure you Apply before the next step

 default-dot1x-psk 	802.1X Authentication Profile > tls-auth-profile 💙	Save As R
• default-mac-auth	Basic Advanced	
default-open		
Home-AAA-Profile	Max authentication failures	0
test-tls	Enforce Machine Authentication	
TLS-AAA-Profile	Machine Authentication: Default Machine Role	guest 💌
MAC Authentication	Machine Authentication: Default User Role	guest 💌
Profile	Reauthentication	
MAC Authentication Server Group defaul	Termination	
802.1X tis-	Termination EAP-Type	🔽 eap-tis 🗌 eap-peap
Authentication Profile profile	Termination Inner EAP-Type	✓ eap-tls
802.1X		
Server Group interna		
RADIUS Accounting		

- vi. Go into the Advanced tab
- vii. Select your CA Cert and your Server Cert
- viii. If you want a cert based login you will need select TLS Guest Access and a TLS Guest Role. If you do not select this option you will need to tie in some type of Auth Server

_			Exchange	1
default-dot1x-psk	WPA/WPA2 Key Message Retry Count	3	Multicast Key Rotation	
default-mac-auth	Unicast Key Rotation		Reauthentication	
default-open	Opportunistic Key Caching		Validate PMKID	
Home-AAA-Profile	Use Session Key		Use Static Key	
test-tls	xSec MTU	1300 bytes	Termination	
TLS-AAA-Profile MAC Authentication	Termination EAP-Type	🔽 eap-tis 🗌 eap-peap	Termination Inner EAP-Type	eap-tis 🗌 eap-mschapv2 🗍 eap-
Profile MAC Authentication	Token Caching		Token Caching Period	24 hrs
Server Group default 📃	CA-Certificate	CA 💌	Server-Certificate	servercert 💙
802.1X tls-	TLS Guest Access		TLS Guest Role	authenticated 💌
profile	Ignore EAPOL-START after authentication		Handle EAPOL- Logoff	
802.1X Authentication Server Group internal	Ignore EAP ID during negotiation.		WPA-Fast-Handover	
RADIUS Accounting Server Group	Disable rekey and reauthentication for clients on call			
🔹 wired-auth				



- c. 802.1X Authentication Server Group
 - i. Select the internal server as the Auth Server Group. I don't understand why this is required for Guest TLS but it is. You do not need any usernames or passwords for Guest TLS.

 default-dot1x-psk 	802.1X Authentica	tion Server Gro	oup > internal 🔽	•		Sa	ave As Rese
default-mac-auth	-		N/A CP-Auth				
default-open	Servers		default				
- delautropen	Name	trim	West	atch-FQDN	Server-Type	A	ctions
 Home-AAA-Profile 	Internal	No	NEW		Internal	Edit De	lete 🔺 🔻
 test-tls 	New						
7 7 6 4 4 9 10	Server Rules						
TLS-AAA-Profile	Priority	Attribute	Operation	Operand	Action	Value	Actions
Server Group default 802.1X Authentication Profile 802.1X Authentication Server Group Server Group Wired-auth							
E WIELBOUT	1						

3. AP Configuration

- a. Add TLS Virtual AP
- b. under Configuration > AP Group > add a SSID
- c. From the AAA Profile drop down menu select the TLS profile and apply



- d. Go into the new virtual AP and edit the SSID profile
- e. Add a SSID name
- f. Select WPA and TKIP or WPA2 and AES
- g. Click on save as at the top right and give it a name.
- h. Apply

Note: do not edit the default

ARUBA n o t w o r k s Cont	figuration			POWER @	200
Monitoring Configuration	Diagnostics Maintenance Plan E	vents Reports License	es will expire in 30 days		Save Configuration Logout
Network Controller VLANs Ports	Configuration > AP Group >	Edit "TLS"			
TD	Profiles			Profile Details	
Scurity Authentication Access Control Wireless AP Configuration AP Installation Management General Administration Certificates SNMP Logging Clock Advanced Services	 Wreess LAN Virtual AP TLS SSID Profile AAA Profile RF Management AP QOS IDS Mesh 	default TLS-AAA- Profile	I Security rk Authentication C None Mixed tion C None C Mixed C TiclP	aruba-tis	C WPA-PSK C WPA2 C WPA2-PSK
Redundancy IP Mobility Stateful Firewall VPN Services Wired Access Wireless All Profiles		٢		an a	Apply

- 4. Client Configuration
 - a. From you client web surf to your cert server <u>http://x.x.x.x/certsrv</u>
 - b. Click on Request a certificate

Ø Microsoft Certificate Services - Microsoft Internet Explorer provided	by Aruba "The Mobile Edge Company"	
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		~
Microsoft Certificate Services arubasecert		<u>Home</u>
Welcome		
Use this Web site to request a certificate for your Web browser	r, e-mail client, or other program. By using	a certificate,
you can verify your identity to people you communicate with over	er the Web, sign and encrypt messages, a	and,
depending upon the type of certificate you request, perform our	er security tasks.	
You can also use this Web site to download a certificate author	rity (CA) certificate, certificate chain, or ce	ertificate
revocation list (CRL), or to view the status of a pending request	t.	
For more information about Certificate Services, see Certificat	e Services Documentation	
,,		
Select a task:		
Request a certificate		
View the status of a pending certificate request		
Download a CA certificate, certificate chain, or CRL		

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c. Select Web Browser Certificate

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- d. Fill in form
- e. Submit

C Microsoft Certificate S	ervices - Microsoft Internet Explorer provided by Aruba "The Mobile Edge Company"
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Web Browser Certif	icate - Identifying Information
To complete your cert	ificate, type the requested information in the following boxes.
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E-Mail:	arubase@arubanetworks.com
Company:	
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City:	
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i. The Cert Admin will need to approve the pending request via the MS Cert Authority. You do this by right clicking on it and choosing Issue

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Certification Authority (Local)	Request ID	Binary Request	Request Status Code	Request Disposition Message
arubasecert Revoked Certificates Issued Certificates Pending Requests Failed Requests	10	BEGIN NE	The operation comple	Taken Under Submission
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ii. You will now be able to web surf back to <u>http://x.x.x.x/certsrv</u> and install your cert.

🖉 Microsoft Certificate Services - Microsoft Internet Explorer provided by Aruba "The Mobile Edge Company"	
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View the Status of a Pending Certificate Request	

Select the certificate request you want to view: Saved-Request Certificate (Wednesday June 13 2007 10:24:48 AM)