

Zero Touch Provisioning in ADMP

Guide – Testing & Configuration

For additional support, call (604) 454-3792 or email support@algosolutions.com

AL061-GU-GF000ZTP-001-R0 Firmware Version 5.2 support@algosolutions.com March 24, 2023 Algo Communication Products Ltd. 4500 Beedie Street, Burnaby V5J 5L2, BC, Canada 1-604-454-3790 www.algosolutions.com



Information Notices

Note



Note indicates useful updates, information, and instructions that should be followed

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For additional information or technical assistance in North America, please contact Algo's support team:

Algo Technical Support 1-604-454-3792 support@algosolutions.com

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1 GENERAL

1.1 Introduction

Algo offers Zero Touch Provisioning (ZTP) as a helpful resource to speed up the deployments of multiple devices in large-scale environments, such as schools, factories, or enterprises.

Effective March 20th, 2023, Algo offers partners the ability to manage configuration files and map devices to configuration files via a user-friendly interface within the Algo Device Management Platform (ADMP).

The Algo Device Management Platform (ADMP) is a powerful tool to simplify the process of managing, monitoring, and maintaining Algo devices from any location. For more information about the ADMP, please visit this webpage.



Note

While annual licenses are required for ADMP device monitoring and management, ZTP is a free solution from Algo. An ADMP account with zero management licenses can be created, allowing users to set-up an ADMP account for ZTP-only purposes, and thus free of charge. ADMP device monitoring licenses can be added to the ADMP at any time, contact Algo for assistance or licensing questions.

2 SECURITY

ZTP Is secured by TLS mutual authentication using certificates. The device certificate Installed on each Algo IP endpoint from factory Is unique and associated with Its MAC address.

During boot up, the device will automatically reach out to Algo's hosted ZTP server (ztp.algosolutions.com) and establish a TLS connection secured with the Device Certificate. This ensures the data transfer Is fully encrypted.



Note

Devices shipped before November 2022 do not have ZTP enabled from factory, even after upgrading the firmware. If ZTP needs to be enabled on devices in this situation, please contact Algo support.

Once a MAC address has been entered In the ZTP configuration, It cannot be claimed by another account, ensuring It cannot be hijacked Intentionally or due to a typo. Note that If the MAC address Is deleted from the ZTP configuration, It Is free to be claimed by another account.

3 ZTP CONFIGURATION

3.1 Setting up ZTP

- 1. Start by creating an ADMP account. If you already have an ADMP account, ZTP may need to be enabled on the account before first use. If that is required, please contact the Algo support team at support@algosolutions.com.
- 2. After setting up the account, navigate to ZTP \rightarrow Config.
- 3. Upload configuration files using the Browse option or drag and drop files into the blue-dotted rectangle. Examples of common configurations used for ZTP are provided In the Examples section below. Please also read the note below before proceeding.

Once the configuration file is uploaded, it will be visible under Files. The content can be viewed by clicking on the filename.

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Note

Algo's ZTP service is primarily meant to be used as a redirection service to your provisioning server. While it will accept files containing other settings, such as SIP parameters, it is not meant for this purpose. ZTP is only active on the first boot or after a device has been factory reset. For this reason, ZTP should only be used as a redirect service. If you have any questions, please contact Algo support.

	ALGO	=			
88	Dashboard		Zero Touch Provisioning - Configuration	on Files	
11	Manage	~			
*	Configure		Upload ZTP config files		
Ē	ZTP	^		Drag your file here	
	Devices			OR	
	Config			BROWSE Supports: .td	
			No Files Selected to Upload		ر UPLOAD
			Files	Q Search File Names File Content	
			File Name	Date Size prov.auth.user =	
			algo8301.txt	2023/3/20 3948 T prov.download.cfr = 0 prov	lig ware
				prov.download.method = https prov.i = 1 prov.server.tmethod = static prov.server.static = https://my.provisioni prov.sync.endtime = prov.sync.kime = prov.sync.kime = prov.sync.wight = 1,2,3,4,5,6,7, prov.use = 1 prov.ztp.use = 1	ing_server.com
			1 row selected	Rows per page: 10 v 1-1 of 1 < >	
鐐	Settings				

Figure 1: Uploading ZTP config files

3.2 Map Config Files to Targeted Devices

Once the configuration file(s) have been uploaded, map them to the target device(s). To do so,

- 1. Navigate to ZTP \rightarrow Devices.
- 2. Press the Add Devices button on the top right corner.
- 3. Enter the MAC addresses manually (separated by commas) or upload a text file containing all the MAC addresses (the content must also be separated by commas).
- 4. Lastly, select a configuration file to be associated with the MAC address(es).



Note

MAC addresses may be entered with or without colon separating the pairs (e.g. 00:22:ee:12:34:56 or 0022ee123456).

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	ALGO	=		
88	Dashboard		Zero Touch Provisioning - Device Mapping	
	Manage	~		
*	Configure		Q, Mac Address / File Name Add Devices + ADD Devices	
Ē	ZTP	^	Add Device Mappings	
	Devices			
	Config		Drag your file here, or browse Septim. Int OR Enter mac addresses (comma separated): 0022ee09497c Select config file	
			CANCEL	
暾	Settings			

Figure 2: Add Files to Device Mapping

A	LGO	=	
🔡 Da	ashboard		Zero Touch Provisioning - Device Mapping
al Ma	lanage	~	
% C a	onfigure		🔍 Mac Address / File Name 🖉 MODIFY 📋 DELETE 🕇 ADD DEVICES
🖹 Z1	ТР	^	Mac Address Config File File Size Last Updated
De	evices		0022ee09497c algo8301.txt 3948 2023/3/20
			Rowsperpage: 20 + 1-1 of 1 < >
段 Se	ettings		@2021-2023 Algo Communication Products 1M.

Figure 3: Associate Config File to Device



3.3 Sync the device with ZTP

Simply power up (or factory reset) your Algo IP endpoint, ensuring internet connection is available. During boot up, the device will automatically reach out to Algo's hosted ZTP. At this point, it will request a configuration file based on its MAC address. If there's a match, it will apply the settings, otherwise, it will proceed to boot up on default factory settings.

3.4 Examples

Redirect to a provisioning server and enable ADMP Cloud Monitoring

```
prov.server.method = static
prov.server.static = https://some-local-server
prov.sync.endtime = 03:00:00
prov.sync.frequency = daily
prov.sync.time = 02:00:00
prov.use = 1
prov.i = 1
iot.mqtt.ka = 30
iot.tenant = [ADMP account ID]
iot.use = 1
```

Enable ADMP Cloud Monitoring

iot.mqtt.ka = 30 iot.tenant = [ADMP account ID] iot.use = 1