Zero Touch Provisioning in ADMP

Guide – Testing & Configuration

For additional support, call (604) 454-3792 or email support@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:

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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 → 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.

> **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.*

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 → 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).*
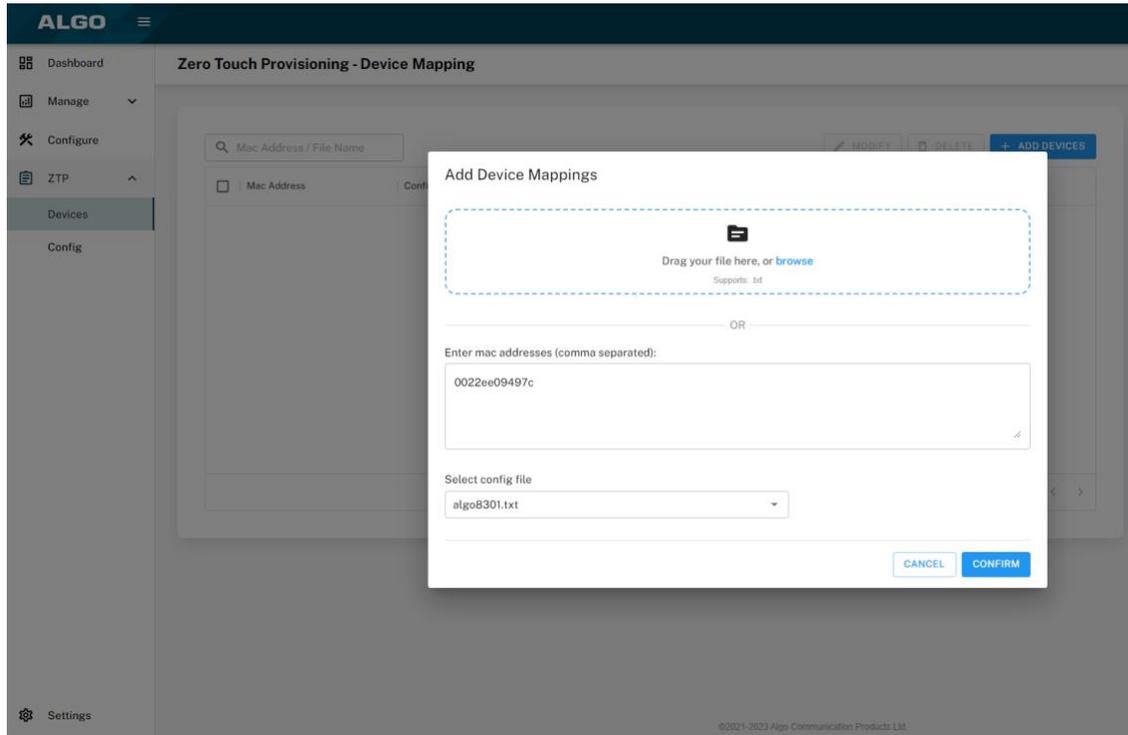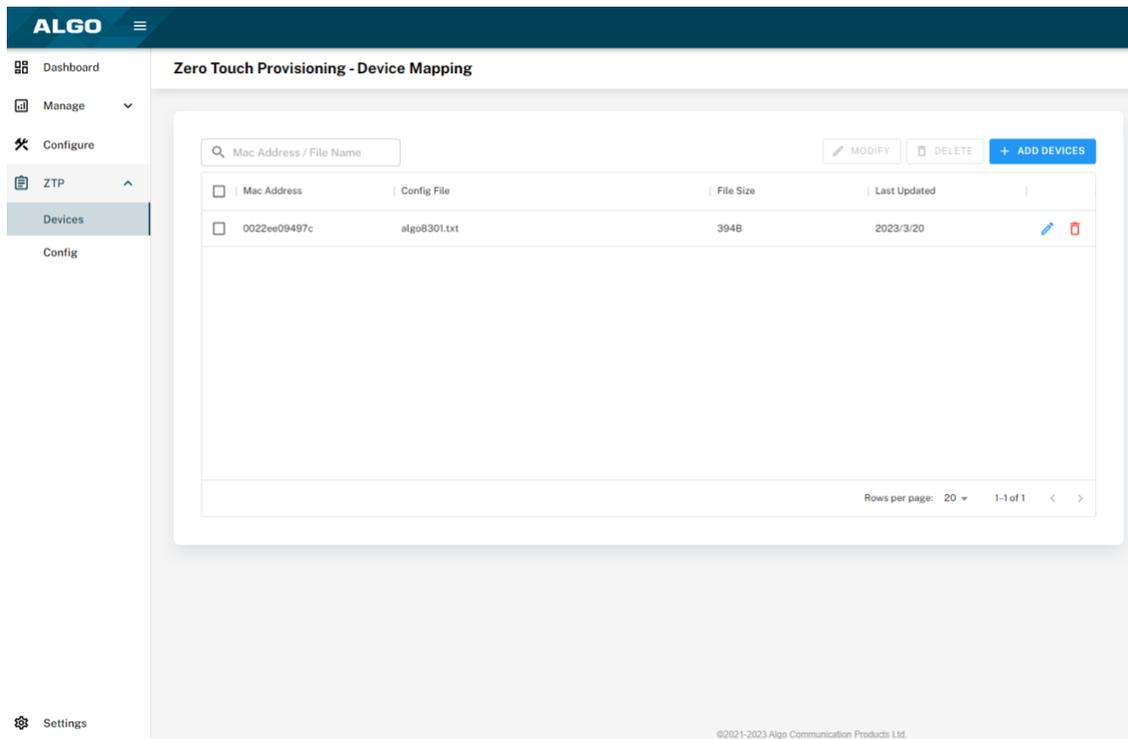
Figure 2: Add Files to Device Mapping

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
```