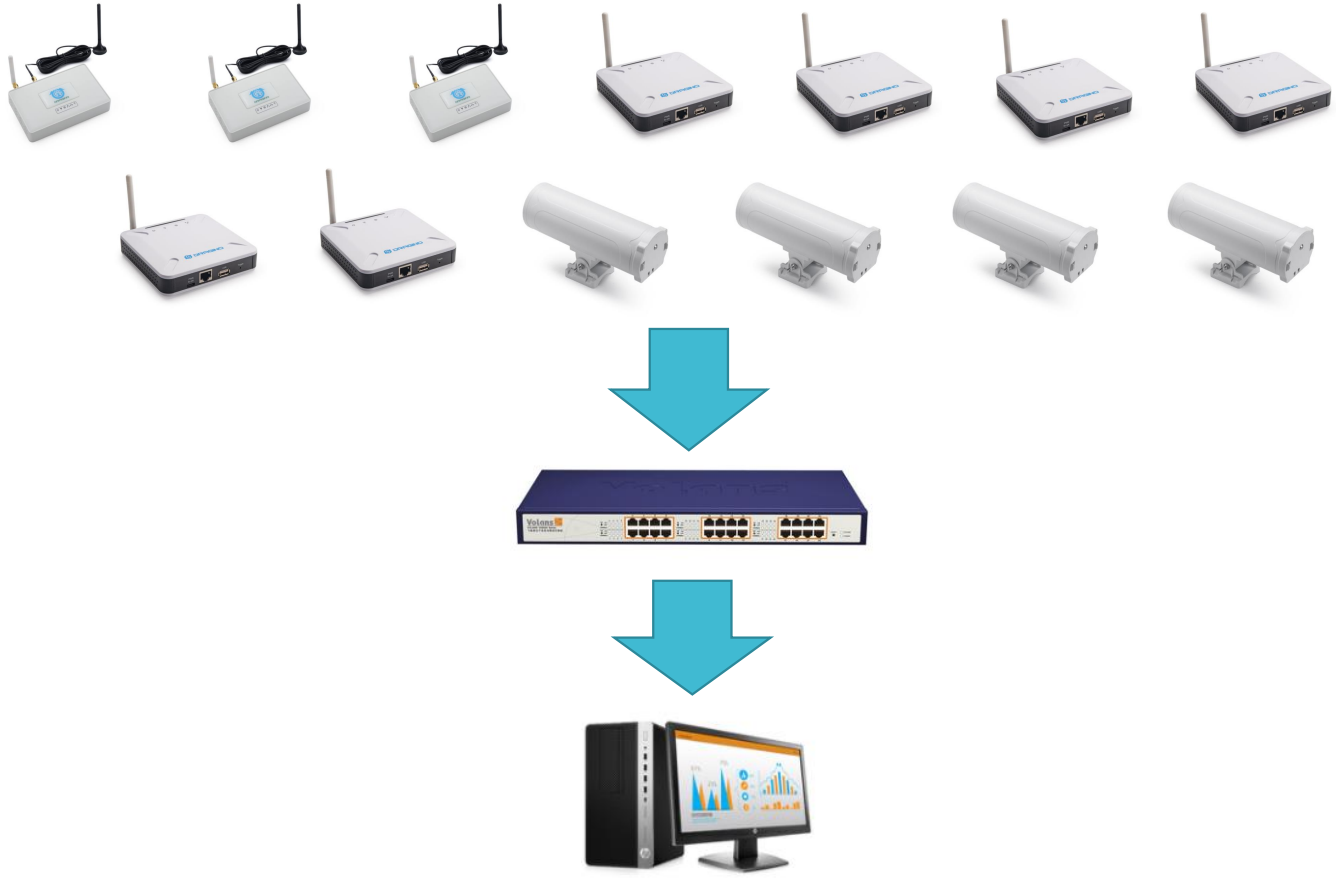
Auto Provision

Since firmware lgw-5.4.1609393379 (build Thu Dec 31 13:42:59 CST 2020)

Document date: 2021-Jan-3

Case 1: Batch configure gateways before deploy

Local Area Network (LAN)



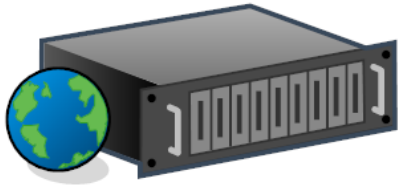
Gateways

http server with configure files

Case 2: Maintain gateway configure from cloud

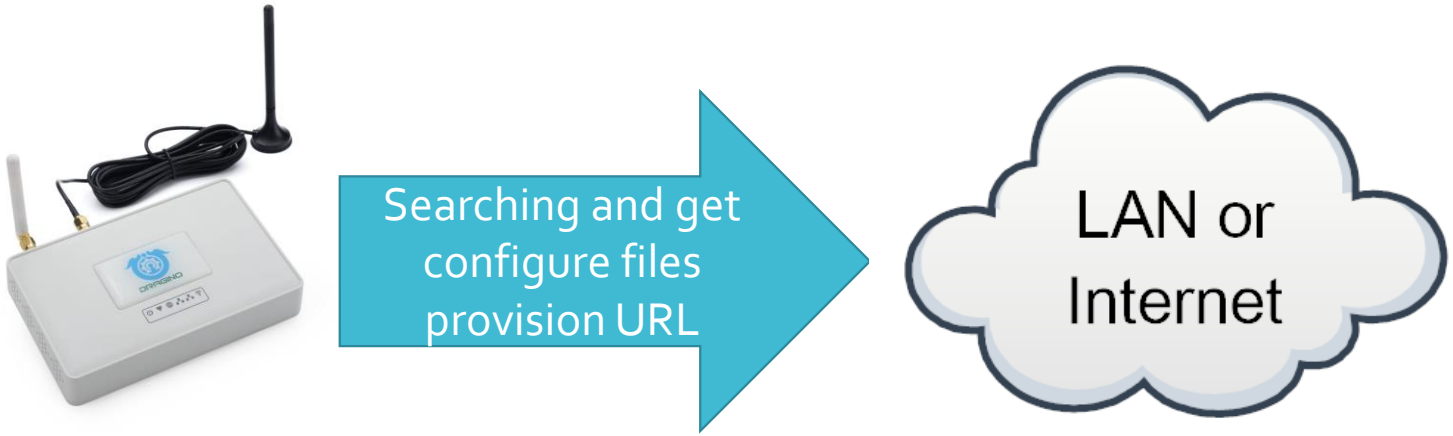
Internet

Gateways

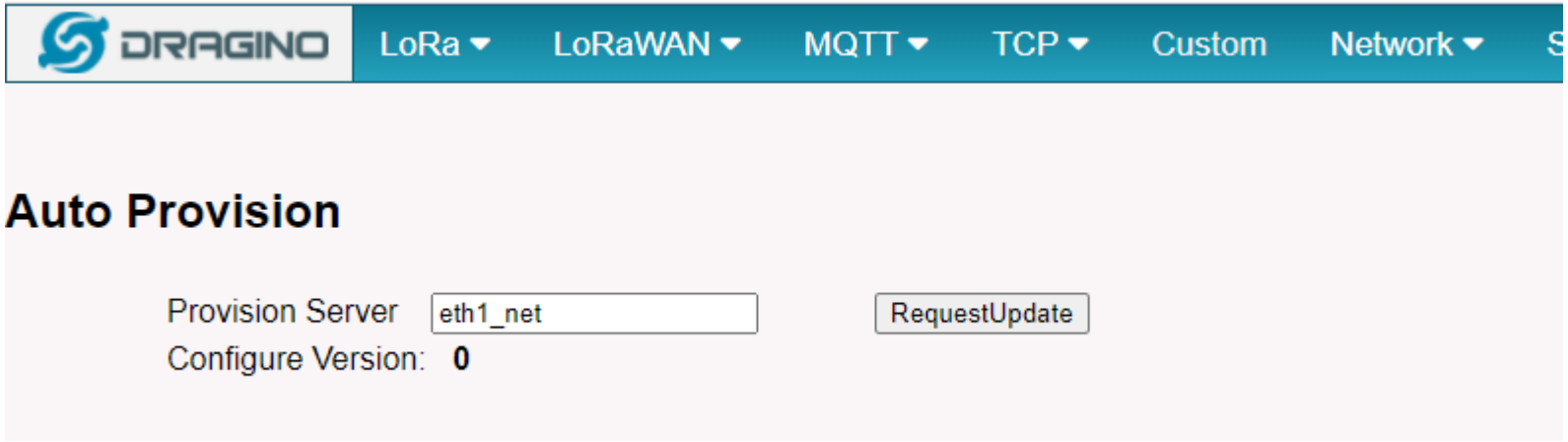


maintain server with configure files

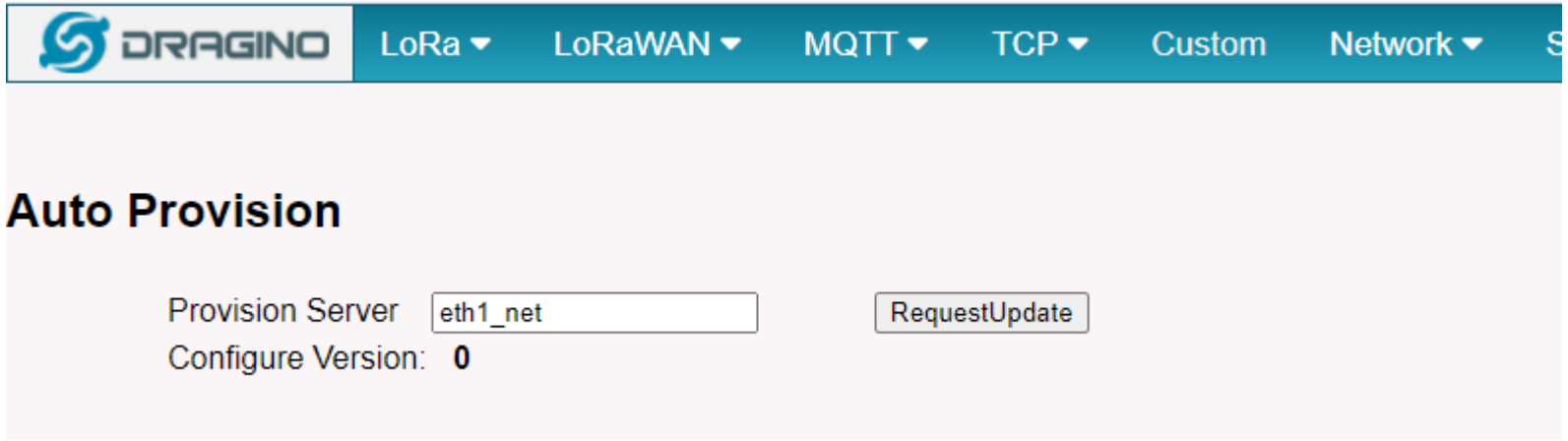
How it works



1. Gateways search (on every boot or 23:00 every day) the provision URL to get configure files or script files.
2. Gateways compare version number of the configure file, and process update if configure files has higher version.



Gateway Provision Settings



Assume the gateway has WiFi_MAC: a840411b81c8

Provision Server:

- Default is eth1_net: in this case, gateway will search the .254 IP in the WAN port as provision server, for example, if gateway has IP in WAN port is 192.168.1.89. The provision server will be http://192.168.1.254/ . And gateway will try to download this file http://192.168.1.254/a840411b81c8
- User can set this to a cloud server such as http://provisioning.dragino.com and gateway will search: http://provisioning.dragino.com/a840411b81c8

Configure Version:

Current version in the gateway, default is 0.

Request Update: Manually check update.

Provision file structure -1 necessary field

Example:
http://www.dragino.com/downloads/index.php?dir=LoRa_Gateway/LPS8/Firmware/customized_script/&file=a840411b81c8

File Format: Json

necessary field:

- "provision_key":

This key must match the 32 bytes key in device, command: hexdump -v -e '1/1 "%.2x"' -s $((0x100)) -n 32 /dev/mtd6

- "config_ver" :

Device will only update when find a higher version, must be integer , without quote ""

Provision file structure -2 General Settings

Optional fields:

- "provision_server":

Default Value: local_net , your WAN Port network prefix .254, for example your eth1 IP is 192.168.1.69. eth1_net = "192.168.1.254"

- "reboot" :

1: reboot device, 0 or other value: do nothing

- "root_password" :

Set system password for root, password must be longer than 6 bytes . root user has http and ssh access.

- "admin_password" :

Set system password: for admin, password must be longer than 6 bytes, admin user has http access

Provision file structure -3 Network Settings

Optional fields:

- "network_conf": "network_conf.factory",

downlink the network_conf file from PROVISION_SERVER/$network_conf, original: /etc/config/network, for web-ui: Network --> Network, Network --> Cellular.

- "wireless_conf": "wireless_conf.factory",

downlink the wireless_conf file from PROVISION_SERVER/$wireless_conf, original: /etc/config/wireless, for web-ui: Network --> Wireless

- "host_status" : 0,

1: Keep current WiFi-SSID and WAN HostName settings; 0: overwrite by network_conf/wireless_conf file.

Provision file structure -4 LoRaWAN Settings

Optional fields:

- "gateway_conf": "gateway_conf.factory",

downlink the gateway_conf file from PROVISION_SERVER/$gateway_conf, original: /etc/config/gateway, for web-ui: LoRa --> LoRa, LoRaWAN --> LoRaWAN(expect gateway ID), LoRaWAN --> LORIOT. gateway_id and email will be ignored

- "gateway_id": "keep",

Keep current setting or set a new gateway ID.

- "email" : "keep",

Keep current setting or set a new email.

- "ABP_KEY": "abp_keys.factory",

Point to ABP Decoder File, path: /etc/lora/devskey, web-ui: LoRa --> ABP

Provision file structure -5 MQTT Settings

Optional fields:

- "mqtt_conf" : "mqtt_conf.factory",

downlink the mqtt_conf file from PROVISION_SERVER/$mqtt_conf, original: /etc/config/mqtt, for web-ui: MQTT --> MQTT.

- "mqtt_channel" :"mqtt_channel.factory"

Point to MQTT Channel File. original: /etc/iot/channels, for web-ui: MQTT --> Channels

Provision file structure -6 Remote Script

Optional fields:

- "script" : "example_script",

downlink the script and execute.

Welcome & Bye Bye

Support@dragino.com