LGW Function User Guide

Version BaiStation_V100R001C00B060SPC009B

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Executive Summary

This documents describes the functional characteristics and

configurations of LGW.

Document Control

Version	Date	Author(s)	Reviewer(s)	Status
1.0	9/5/2016	Zhang Shu	Jesse Raasch	Complete

1 Configurations

1.1 LGW Settings page

Here is the base station web GUI below.

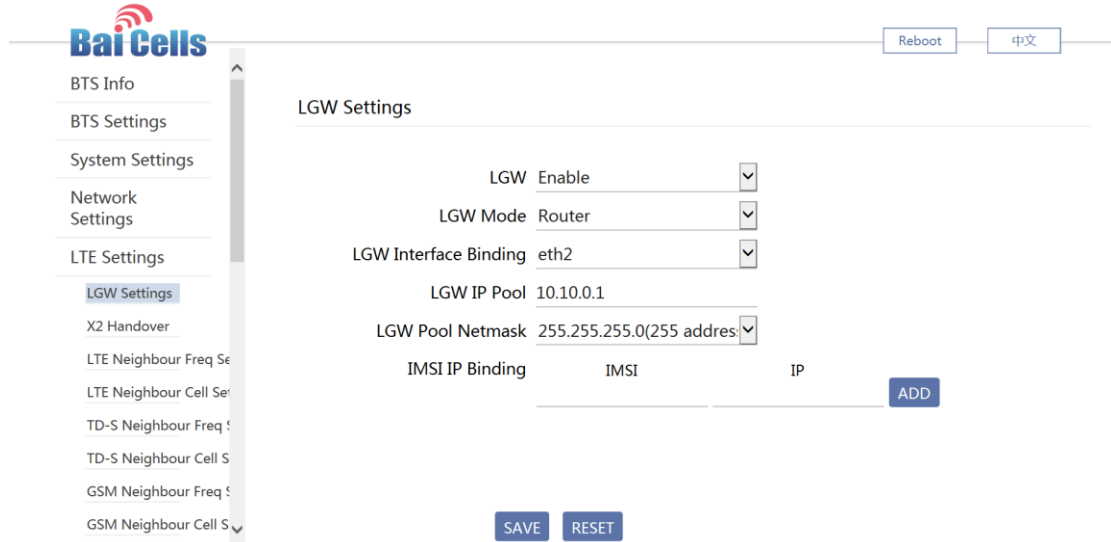Firstly, we chose 'LTE Settings'->'LGW Settings' to enter LGW configuration page.

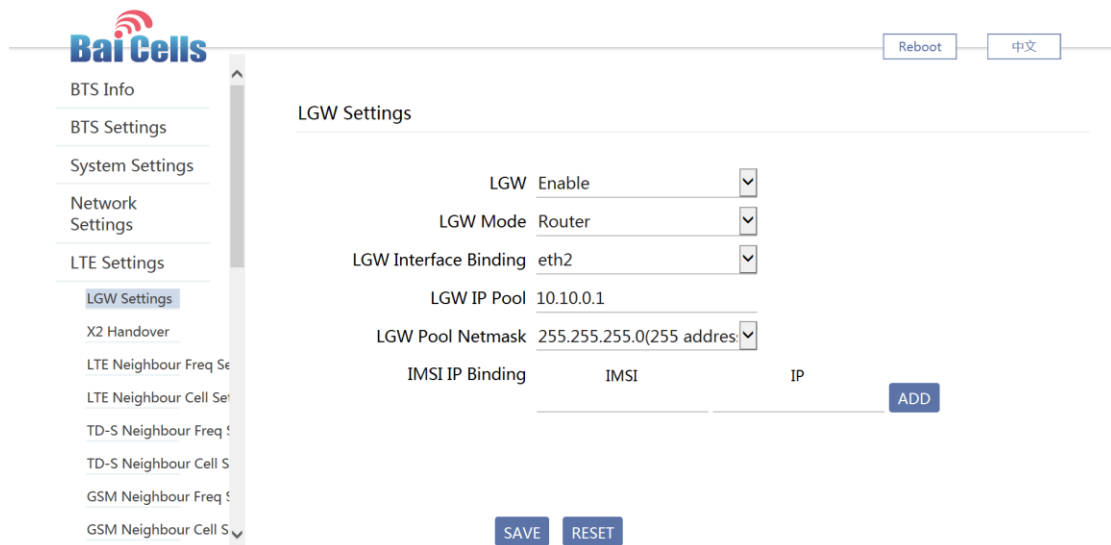Figure 1 LGW Settings

1.2 Basic Settings

Figure 2 LGW Settings

LGW: Switch of LGW function, has two values [Enable] and [Disable], default value is [Enable]. LGW is required when using cloud EPC.

LGW Mode: LGW have two modes, [NAT] and [Router], default value is [NAT]. NAT mode and Router mode are introduced in Chapter 2.

LGW Interface Binding: This is the interface LGW use to offload data, should be set to WAN interface of eNodeB. Default value is [eth2].

LGW IP Pool: This is the first IP address which will be dynamically assigned to UEs. This could be any address within the LGW subnet. Default value is [10.10.0.1].

LGW Pool Netmask: This is the LGW IP Pool netmask. Default value is [255.255.255.0]. If we add [10.10.0.1] and [255.255.255.0], there will be 255 IP addresses in this IP pool, it's from 10.10.0.1 to 10.10.0.255.

IMSI IP Binding: We can bind a static IP address with an IMSI here. Firstly, input the IMSI and IP address, and then click the ADD button.

Figure 3 IMSI IP Binding

Figure 4 IMSI IP Binding example

Notice: All LGW settings change need a reboot of eNodeB to take effect.
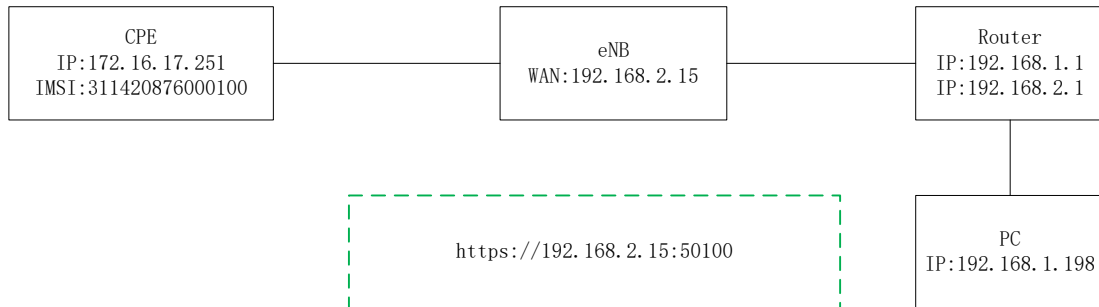
2 Modes

2.1 NAT Mode

Figure 5 NAT mode network example

2.1.1 Data Transfer

In NAT mode, eNodeB will do a Source Network Address Translation (SNAT) changing CPEs' IP address to eNodeB WAN IP address.
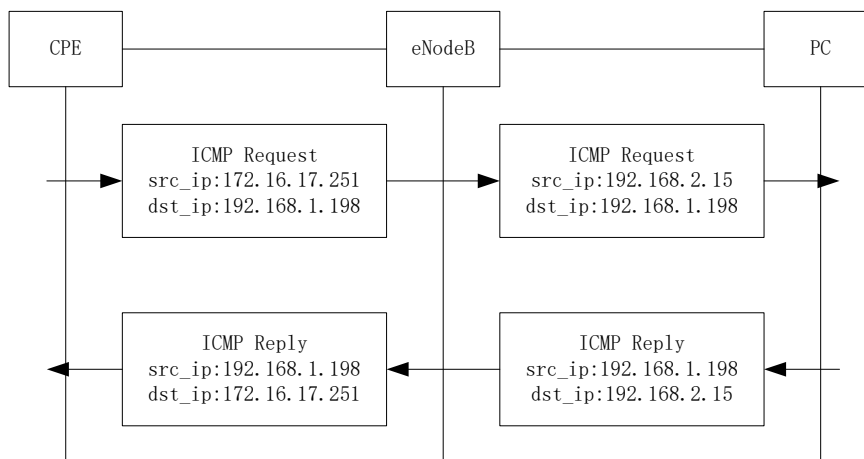
eg. Ping from CPE to PC is like below.

Figure 6 NAT mode ICMP data transfer

2.1.2 CPE Web GUI Access

We can use URL: https://[IP Address]:[Port]   to access CPE's Web GUI.

[IP Address] is the eNodeB's IP address.

[Port] is a number with format 5XXXX, XXXX is the last 4 digits of IMSI of CPE.

Eg. In network topology of Figure 5, we use https://192.168.2.15:50100 to access CPE's Web GUI.
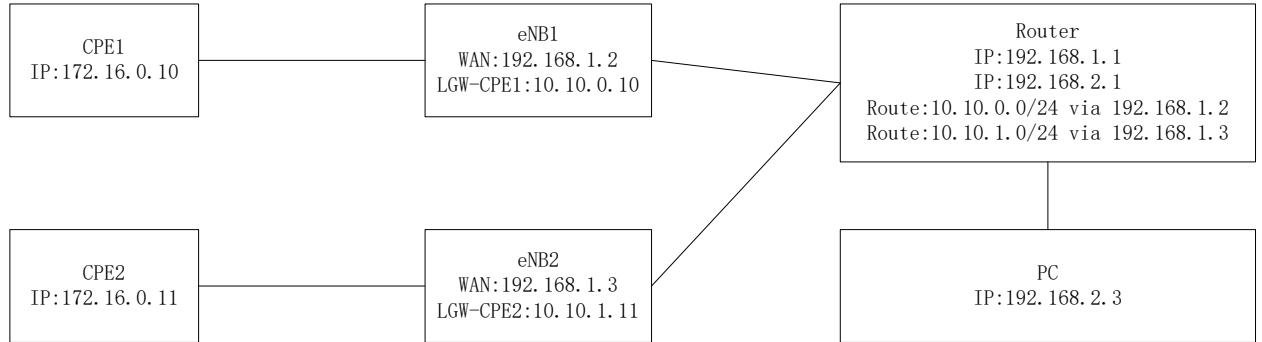
2.2 Router Mode

Figure 7 Router mode network example

2.2.1 Data Transfer

In NAT mode, eNodeB will do a Source Network Address Transfer(SNAT) changing CPEs' IP address to CPEs' local IP address.
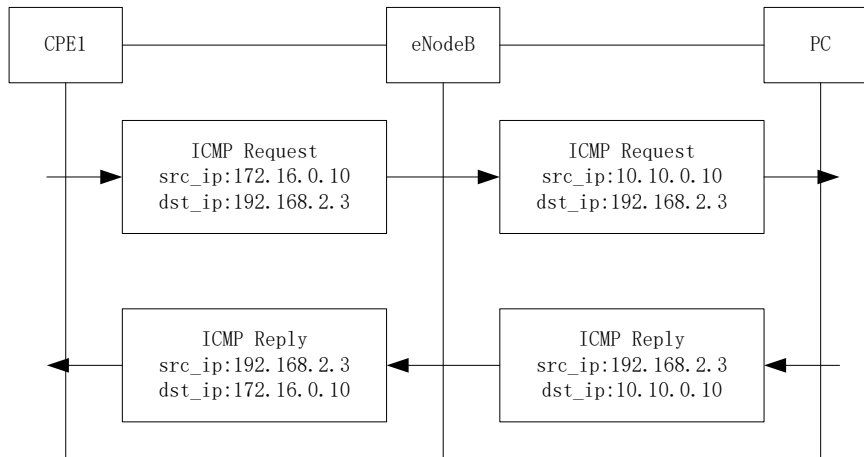
eg. Ping from CPE to PC is like below.

Figure 8 Router mode ICMP data transfer

2.2.2 CPE Web GUI Access

PC use CPE's local IP address to access Web GUI.

Eg. https://10.10.0.10