



Application Note

Building Hotel and Hotspots Solution Using DG-LB1054

Introduction

Nowadays High-speed Internet access requirement has evolved from Luxury service to a “Must” service for most of the Hotels, be a Luxury 5 start hotel or self service apartment. Being an essential service it needs to always have backup mechanism. Generally, Star hotels have PMS modules with Authentication system to convert these facilities in revenue. However, small 30 – 60 rooms Hotels or Self Service Apartments doesn’t have such infrastructure to manage the users. Also headache is to control Massive internet usage by some of the Guests and large bills.

DIGISOL DG-LB1054 Load Sharing Router enables guests to connect from guest rooms, conference rooms or lobby to Internet using wired or wireless connections. The Authentication can be managed by Ticket/ billing system for fixed period starting from Hours to days or even Data usage.

DG-LB1054 has 5 10/100Mbps ports which can be user configured from 1Lan/ 4Wan, 2Lan/ 3Wan, 3Lan/ 2Wan etc. This provides a great flexibility to have Internet sharing along with Automatic failover mechanism.

The Router also has Firewall and Attack Defence mechanism to defend against LAN ARP and WAN DoS attacks.

DIGISOL Approach to Hotel/Wireless Hotspot Solutions

When coming to introduction of Controlled Internet Access device to market, the DIGISOL considered few challenges faced by target customer mainly Small hotels (25 to 60 Rooms)

1. Dependency mainly on Broadband/ADSL Internet service providers.
2. Guaranteed availability and performance in the face of single ISP service disruptions.
3. Elastic scale up of WAN Bandwidth to support variable growth of traffic.
4. Need of time and Bandwidth control per user
5. Simplest way of working without intervention of IT person.

The DG-LB1054 stands out to deliver these challenges using,

1. Up to 4 WAN ports to connect to different WAN Access devices like ADSL, 3G Router or ETTH.
2. Features like Automatic User Creation and Access Ticket Printing support
3. Apart from these features it also provides granular Internet Bandwidth control for Internet capping and Hotspot Billing Solutions.

Solution for Hotels/Hotspots

- User request for Internet Access.
- Hotel front Desk generates Internet Username/password based time.
- Guest Enters this Credential in the Login Window which pops up while opening Internet Home Page
- User get Internet access for fixed time.

Solution for Internet Kiosk/Hotel

- PPPoE Dialer is configured just like Home Broadband Modem.
- Guest enters Internet Username/Password and Access internet.
- He will be redirected to Home Page set by DG-LB1054.
- After time is over he get intimation requesting renewal.

Seamless Internet Connectivity Experience

- Dynamic Host Configuration Protocol (DHCP) provides automatic IP address management which Allows guest to connect from Guest Room and Conference Room or any node in the hotel provided the network link is available using wired or wireless.
- It reduces Headache of IP Address Management and IP conflicts.
- Be it hotel room, open area or restaurant, the guest can use same credentials for login.
- Two Distinct Login Methods are available at customer choice

1. Web Authentication

Hotel Front Desk has option to configure Username and Password credentials for Expiration time with calendar view.

System has Real Time clock along with NTP option.

The option for customized login portal provides option to insert Hotel Photo/Logo in Login Screen.

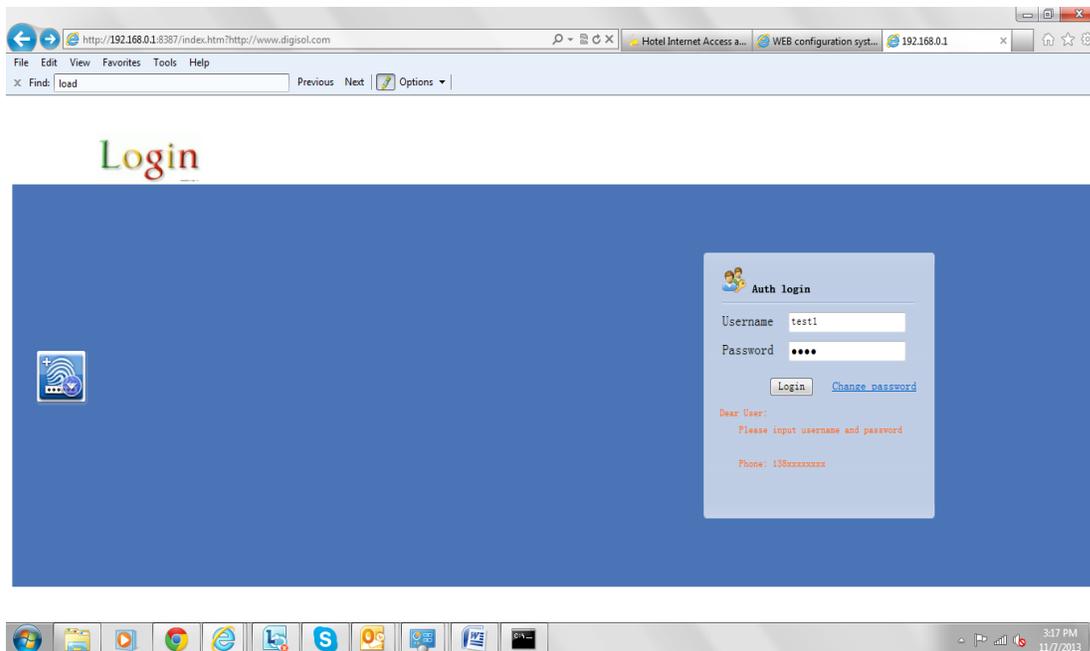
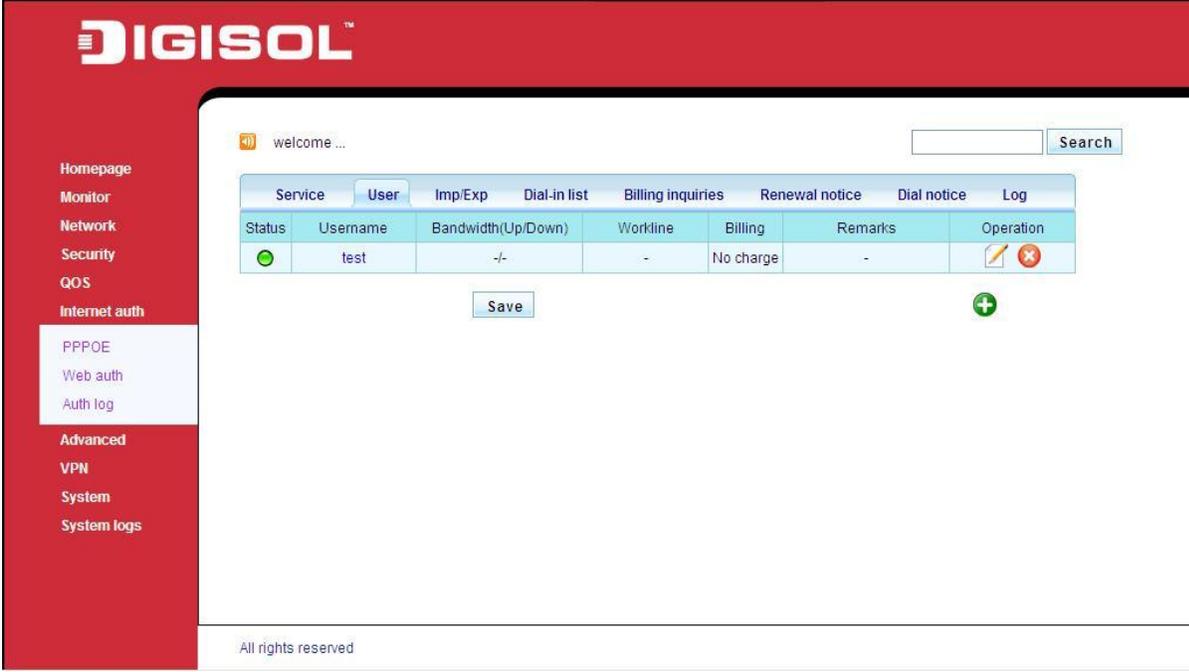


Fig.1 Web Authentication Screen

For Hotspot/Instant wireless users there is option of Credential Ticket Generation for Internet access starting from 12 Hours. The ticket can be printed directly using Print option.

2. PPPoE Authentication

This option provides user authentication using most popular Broadband access method using built-in PPPoE Dialer. It can also be adapted by Internet Kiosks or Cyber Cafés. The simple username password option can be coupled with bandwidth restriction per login. There are options of Logout Screen reminders.



The screenshot displays the DIGISOL web management interface. On the left is a red sidebar with a navigation menu. The main content area shows a configuration page for PPPoE authentication. At the top, there is a 'welcome ...' message and a search box. Below this is a table with tabs for 'Service' and 'User'. The 'User' tab is active, showing a table with columns: Status, Username, Bandwidth(Up/Down), Workline, Billing, Remarks, and Operation. A single user entry is visible with Username 'test', Bandwidth '-/-', Workline '-', Billing 'No charge', and Remarks '-'. Below the table is a 'Save' button and a green plus icon. The footer of the page contains the text 'All rights reserved'.

Status	Username	Bandwidth(Up/Down)	Workline	Billing	Remarks	Operation
●	test	-/-	-	No charge	-	 

Both have option of MAC addresses binding.

“Always ON” Internet Connection

With Flexibility of configuration of multiple WAN Ports (up to 4) different ISP connection can be terminated and shared.

The option of Time based or User Group based load sharing reduces load on single Link.

The option Intelligent Failover function has ability to detect ISP failover based on Modem or ISP core.

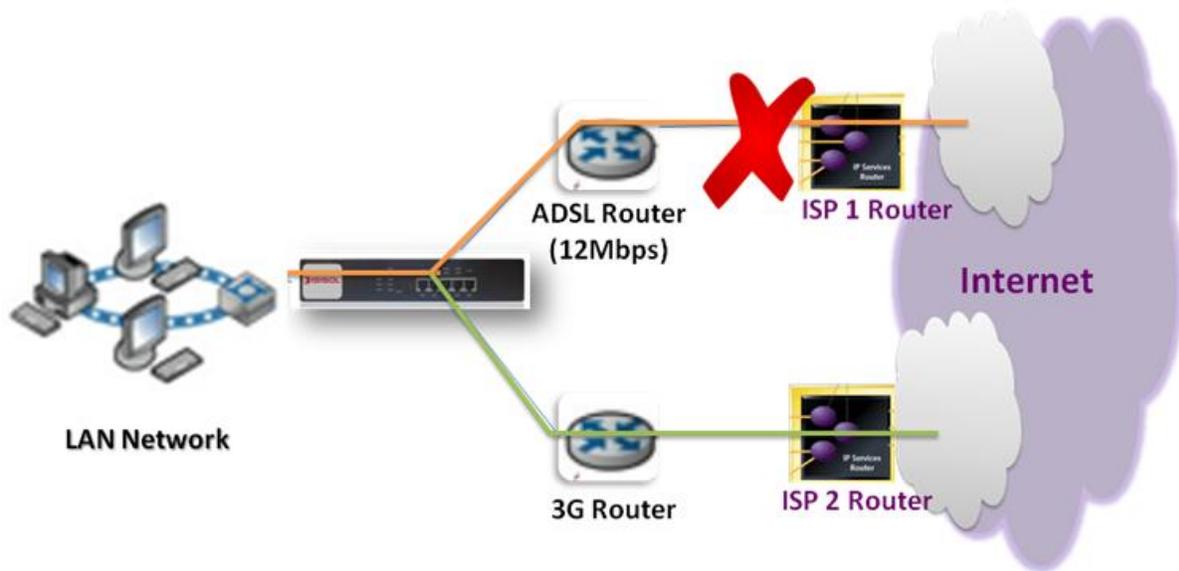


Fig.3. Primary Path Routing with Internet Failover

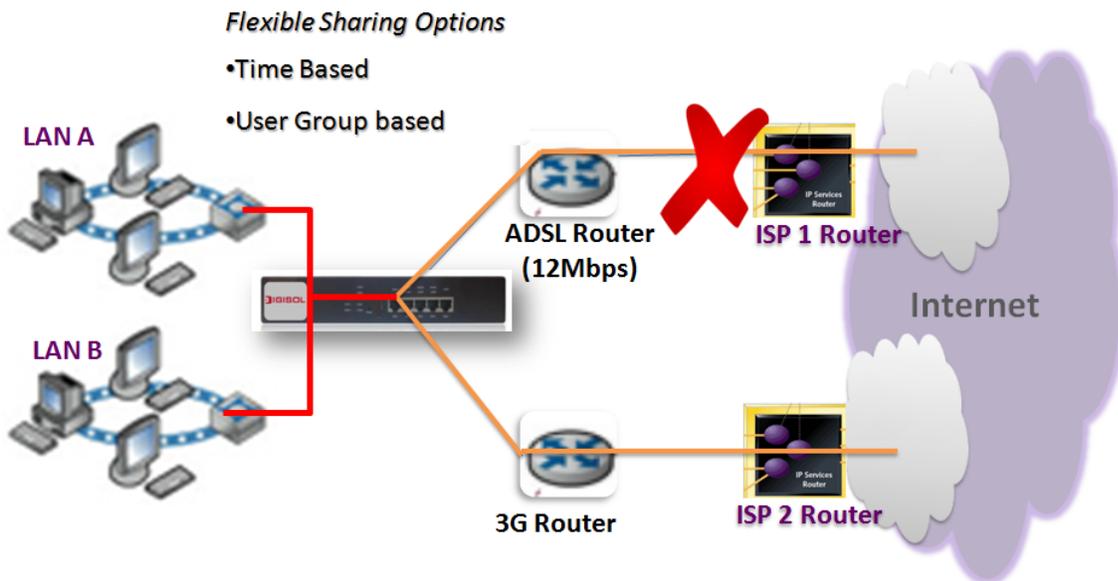


Fig 4. Load Sharing with Failover

Application Monitoring and Security Appliance

The DG-LB1054 host couple of Security and monitoring features considering today's different type of traffic. The dashboard provides complete picture of Network traffic. User can later block certain traffic to boost the performance of network.

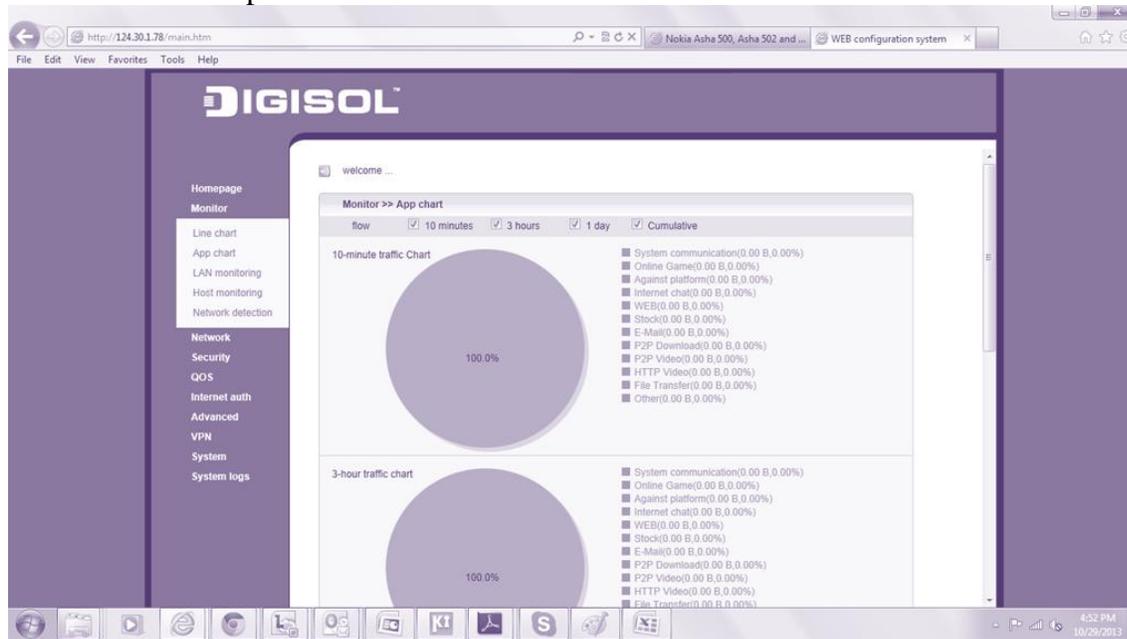


Fig.5 Application Monitoring Dashboard showing Internet usage

Summary

DIGISOL DG-LB1054 is Feature rich and yet cost effective Load Balancing Solution with WAN failover functions. It provides granular control on Internet usage for each user. Coupled with Hour or time based Internet booking the device can be used as billing solution for Hotspot and Hotel users.