



Product Engineering Services (PES)

Residential Gateway Software Solution



L&T Infotech offers a complete Residential Gateway software stack. Our solution includes advanced networking, security and media streaming capabilities to deliver broadband services in a home or office environment. The solution's hardware abstraction layer makes it independent of the hardware platform and hence easy to port.

Feature Set

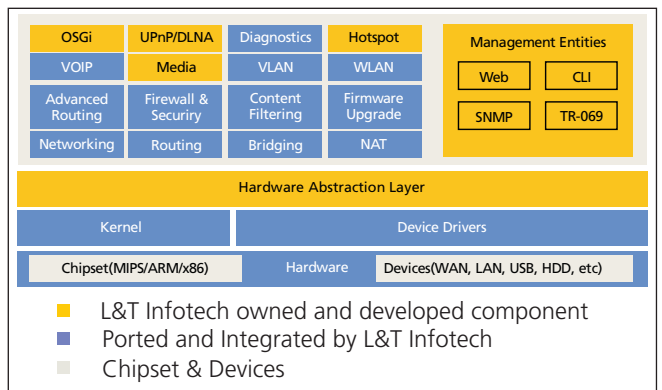
- WAN interfaces – xDSL, Ethernet, PON*
- LAN interfaces – Ethernet, WiFi, USB
- Advanced LAN routing capabilities:
 - NAT
 - Routing Tables
 - DHCP Server
 - WiFi Hotspot
- Security & Firewall capabilities
 - VPN
 - Parental Control
 - Time of Day Filter
 - Application Level Gateways (ALG)
 - Flood / DoS protection
 - DMZ
- User management like addition, deletion, authentication for home admin
- DLNA & UPnP for content sharing
- VoIP
 - VoIP phone support
 - Analog phone support (ATA)
 - IP-PBX
- Services (Conference, Voice Mail, Click-to-Call, etc.)
- Web based configuration & management for home users or operators
- Configuration (remote / local) using TR69, CLI, SNMP
- OSGi Framework for management of 3rd party applications
- Event logging
- Statistics and diagnostics

Highlights

- Features based on TR-124 – Functional Requirements for Residential Gateway Devices
- Proprietary Hardware Abstraction Layer to minimize impact in case of changes to hardware devices
- Common Management framework component for management interfaces, supporting Web, SNMP, CLI, TR-069, reusable in any CPE solution

Architecture

Our RG Stack has been designed to be easily portable to any hardware. The high level architecture of the stack is shown below. The Management and HAL components are proprietary along with feature additions to OpenWRT, which makes a complete solution.



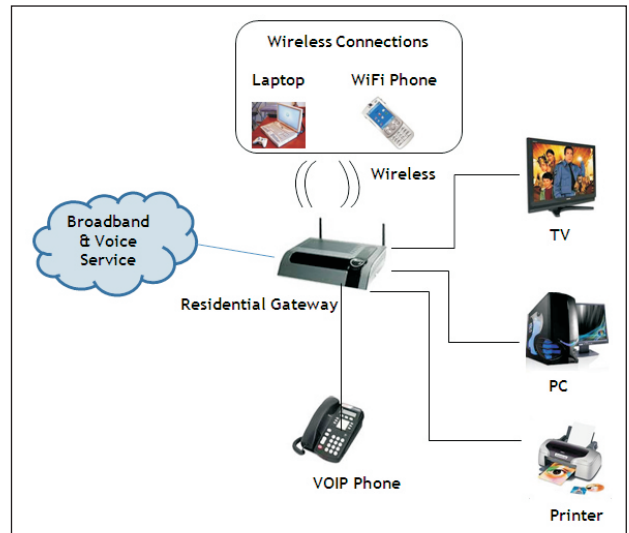
- Hardware Abstraction Layer (HAL) makes the RG solution easily portable
- Supports various management interface services such as Web, SNMP, CLI & Tr069
- Independent proprietary and open-source components

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Features and Roadmap

Features	Release 1.0	Release 2.0	Release 3.0
LAN & WAN - Ethernet	✓		
WAN - ADSL/VDSL, GPON		✓	✓
LAN - USB, WiFi			✓
Basic routing	✓		
Advanced routing		✓	
Traffic Filtering & Redirection	✓		
Basic security	✓		
Advanced security		✓	✓
VoIP			✓
DLNA, UPnP		✓	
User Management	✓		
Web Configuration Management	✓		
TR-069 Interface		✓	
CLI/SNMP Interface			✓
OSGi			✓
Logging	✓		
Statistics & Diagnostics	✓		

Home Network



Capabilities & Skills

- Porting of Linux and components to different hardware platforms
- Hardware Abstraction Layer design
- Integration of components into final product and testing system, performance, IOT
- Networking, VoIP, Multimedia, Management, Security domain capabilities

About L&T Infotech

Larsen & Toubro Infotech Ltd (L&T Infotech), one of the fastest growing IT services companies, is ranked 11th by NASSCOM among the top software & services exporters from India in 2009. Our parent company, L&T, was ranked as India's Best Managed Company-2008 in a survey conducted by Business Today-Ernst & Young. L&T has been rated as No.1 in Quality in a 2008 survey conducted by the Wall Street Journal Asia. L&T is the only engineering & construction company in India to feature in the Forbes Asia Annual Fabulous 50 list.

As a full-service IT Firm with a blue-chip client roster, L&T Infotech offers comprehensive, end-to-end software solutions and services in these industry verticals:

- Banking & Financial Services
- Insurance
- Energy & Petrochemicals
- Manufacturing
- Product Engineering Services (Telecom)

For further queries, email: info@Lntinfotech.com

Product Engineering Services (PES) – Telecom

The Product Engineering Services Group at L&T Infotech has a proven track record of developing and deploying telecom technologies, products, applications and platforms for renowned telecom players across the globe. We provide software and hardware engineering services to leading OEMs, ODMs, chipset vendors, Telecom carriers and ISVs. We support clients in the areas of chip design, hardware design, firmware, middleware, software engineering, applications & content all the way from design, development to deployment.

Our Telecom Domain Expertise spans across:

- Infrastructure
- Mobile Devices
- Entertainment Technologies
- Compute, Storage & Data Networking
- Test & Validation
- IP
- IC / SoC Design
- Board / System