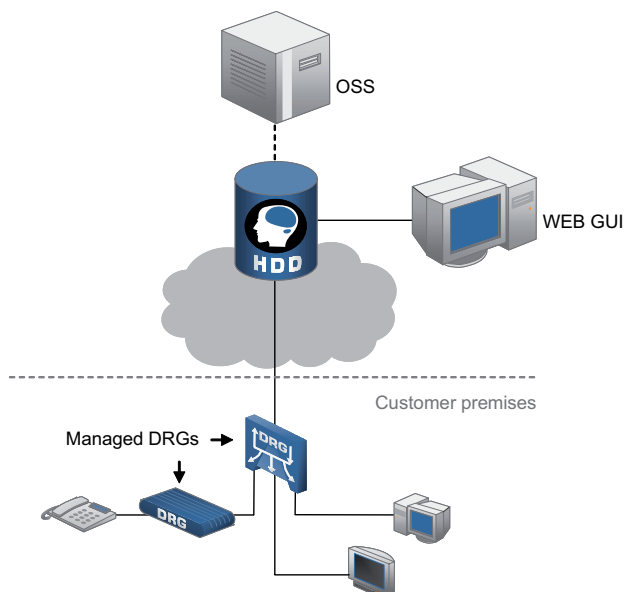




## HDD

# Home Device Director



Making triple-play services available for thousands of end-users requires a flexible service provisioning system. The Home Device Director, HDD, is optimized for the DRG series of Digital Residential Gateways and IP-telephony, IPTV and Internet services.

### HDD

In broadband networks where the number of CPE units is growing, the need for automation is evident. HDD makes it possible for the operator to register, configure and manage all DRGs in the network remotely. All manageable functions in the DRG can be configured through the HDD. This involves defining telephone line characteristics, fax parameters, configuration of Virtual Local Area Networks (VLANs), multicast behavior and network information.

### Auto-discovery

The HDD is independent of the network architecture and can also be placed remotely (outside the network containing the DRG). The communication between the HDD and a DRG is based on standard protocols and does not require any additional rules in the firewalls of the networks. DRG units can discover the HDD system in two ways:

- A DRG may be pre-provisioned with the name and/or address of the HDD system from manufacturing. As soon as the DRG is connected to a network and gets the network configuration, the DRG immediately looks for the HDD.
- A DRG can be instructed to find the HDD through the Dynamic Host Configuration Protocol (DHCP) option 43 when the DRG acquires its network configuration.

### Configuration

When the DRG is connected to the network, it automatically discovers the HDD. The HDD then configures the DRG with the desired parameters and required software.

To simplify the configuration of DRGs, profiles are provided. These profiles are used to minimize the efforts needed for configuration of the DRG units, and to ensure the mapping of capabilities with the correct DRG type. When adding a DRG to the network, the operator chooses a pre-defined profile and all parameters are set in the DRG except those that are unique to the individual, such as the DRG ID, VoIP account data and telephone number.

To create services for multiple DRGs – such as VoIP, Internet or IPTV – the HDD facilitates system-wide service profiles. A specific service profile is referred to when that service is activated in DRG. In this way, services become manageable even if they are deployed on thousands of DRGs. Any changes to the service profile change the configuration of all DRGs to which the profile refers. For customization purposes, multiple service profiles can be created as required.

### Software upgrades

The HDD enables remote upgrades of software on both single and multiple DRGs. The operator simply selects a software version that is to be replaced and specifies a new version. As soon as a DRG polls the HDD it gets a notice about the upgrade and downloads the software package.

After a software update or upgrade, the HDD may re-adjust some of the system parameters of the DRG by ordering the DRG to download a new configuration template.

### Inventory, Events and Alarms

The HDD gives an up-to-date inventory of every unit that is defined in the system. The HDD not only keeps track of the DRGs that are currently connected, it also tracks the last time any given unit was visible in the network to identify and troubleshoot faulty or disconnected, units.

For further troubleshooting, HDD shows alarms for specific events. For example, the quality of each voice call is monitored by the DRG unit and reported to HDD. In cases where the quality does not meet predefined quality threshold values, a warning or an error is generated, depending on the severity of the quality problem.

The HDD provides an event history list for each defined DRG unit. This list makes it easy to track events and shows, for example, configuration and software changes, warnings and alarms.

### Easy-to-use web-based interface

HDD is managed using a standard web browser. Because the web interface is familiar to most users, getting started with HDD is easy. The normal web layout, colors and icons have been carefully chosen. File management is done by means of the ordinary operating systems dialogues.

HDD has been specifically designed for its primary task of increasing efficiency for handling large-scale DRG deployments from a central Operations and Maintenance center.

### External API

In many cases, it is preferable to integrate the management of the DRGs in an overall Operational Support System. The HDD has a standard based SOAP/XML interface. This allows external applications to do all of the tasks normally handled by the user through the web interface.

## Technical requirements for HDD

### Hardware platform requirements

Network interface e.g. Ethernet LAN  
Windows XP SP2, Linux CentOS and Debian, or Solaris 10  
PostgreSQL database  
Intel P4 1.5 GHz or equal  
Screen resolution of minimum 1024x768, 16 bit colour  
1 GB RAM  
100 GB Harddisk

*Subject to change without notice*