LANDevice:1 Device Template Version 1.01

For UPnP ™ Version *1.0*
Status: Standardized DCP
Date: November 12, 2001

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1. Overview and Scope

This device template is compliant with the UPnP™ Architecture, Version *1.0*.

LANDevice is an OPTIONAL virtual device under the root device
urn:schemas-upnp-org:device:*InternetGatewayDevice*

Figure 1 below illustrates a generic Internet Gateway device consisting of one or more physical WAN and LAN interfaces. The ***InternetGatewayDevice*** MUST support one LAN interface, but MAY support more than one physical LAN interfaces to connect to the residential network. ***LANDevice*** models the attributes and functions of a LAN interface. An implementation MAY host the WAN interface and LAN interface on the same physical network interface card.

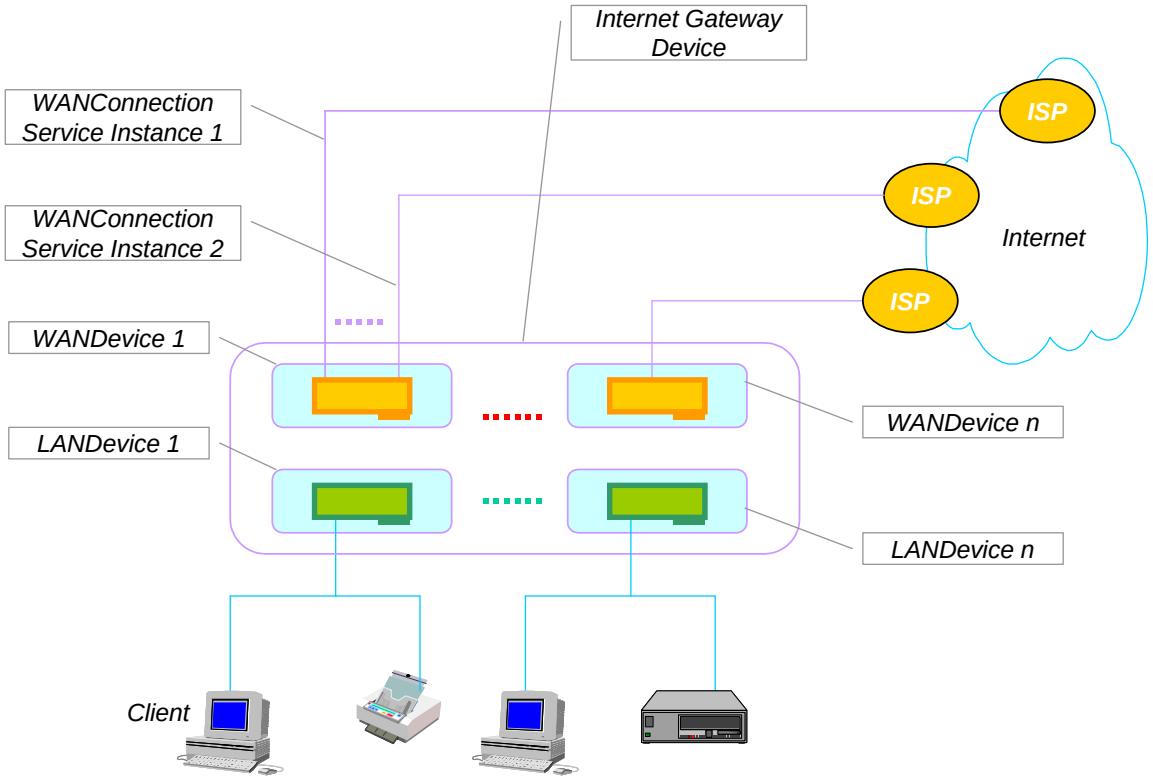

Figure 1: *InternetGatewayDevice* with LAN interfaces

The ***InternetGatewayDevice*** MAY support multiple physical LAN interfaces. It MAY support distinct subnets of client nodes on the residential network.

Figure 2 conceptually illustrates the hierarchy of devices and services in ***InternetGatewayDevice*** with emphasis on ***LANDevice***.

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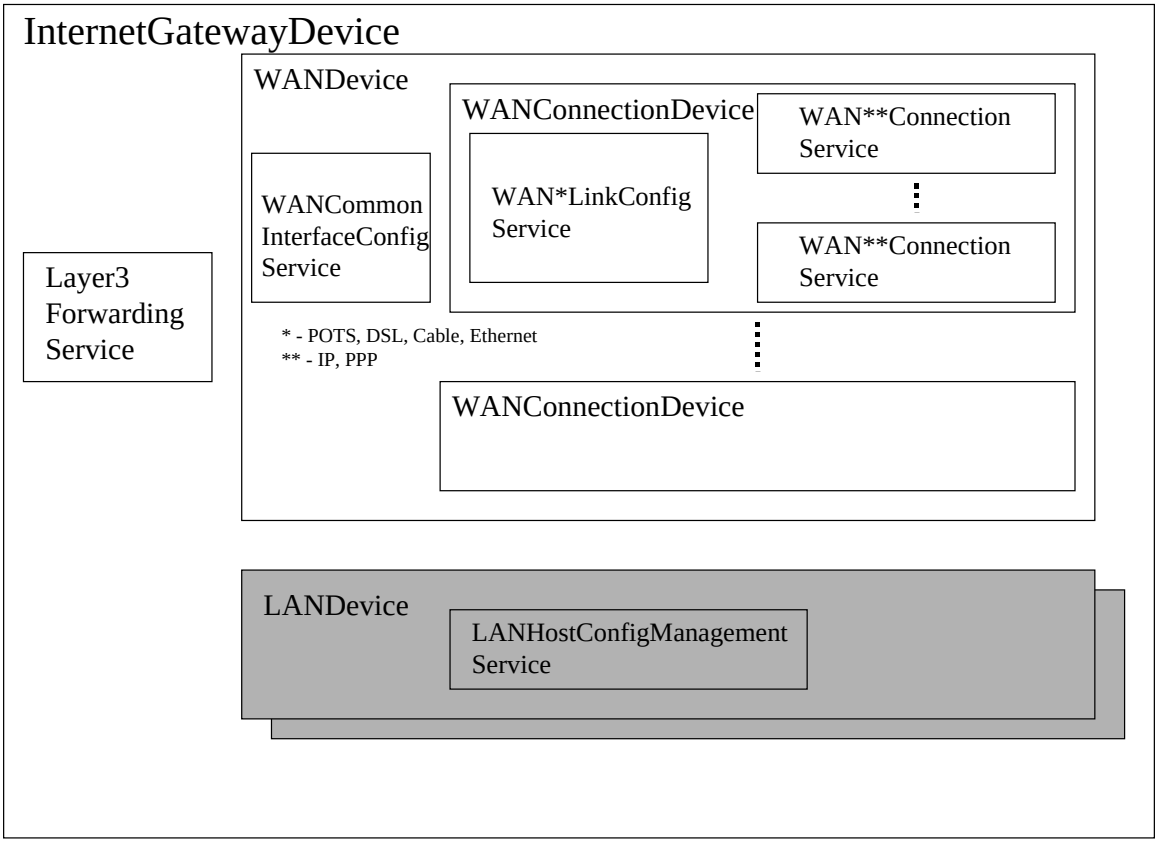

Figure 2: *LANDevice* Devices and Services Hierarchy

1.1. Change Log

Changes from ***LANDevice:0.5***
- Editorial changes to comply with device template 0.996

Changes from ***LANDevice:0.6***
- Update text and functional diagram to reflect changes to the DCP design

Changes from ***LANDevice:0.7***
- Text updates per F2F meeting on 11/30 and 12/1/00
- Updated document status to Template Design Complete (TDC)

Changes from ***LANDevice:0.71***
- Updated to device template v1.01
- Verified against TDC checklist v1.01

Changes from ***LANDevice:0.8***
- Added XML comment tags to comments text in XML template

Changes from ***LANDevice:0.81***
- Changed from Required to Optional
- Changed definition of ServiceIDs for contained services

Changes from ***LANDevice:0.9***
- Formatting changes for version 1.

Changes from ***LANDevice:0.99***
- Version updated to reflect 45-day review completion. No other changes to this draft.

Changes from ***LANDevice:0.991***
- Copyright messages and document status updated.

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2. Device Definitions

2.1. Device Type

The following device type identifies a device that is compliant with this template:

urn:**schemas-upnp-org:device**:*LANDevice:1*

2.2. Device Model

Products that expose devices of the type **urn:schemas-upnp-org:device:***LANDevice:1* must implement minimum version numbers of all required embedded devices and services specified in the table below.

Table 1: Device Requirements

DeviceType	Root	Req. or Opt.[1]	ServiceType	Req. or Opt.[1]	Service ID[2]
			LANHostConfigManagement:1	*O*	*LANHostCfg1*
			Non-standard services embedded by an UPnP vendor go here.	*X*	*TBD*
Non-standard devices embedded by a UPnP vendor go here.	*TBD*	*X*	*TBD*	*TBD*	*TBD*

[1] R = Required, O = Optional, X = Non-standard.
[2] Prefixed by urn:**upnp-org**:**serviceId**: .

2.2.1. Description of Device Requirements

LANHostConfigManagement MAY have dependencies on other IP routing service(s) in ***LANDevice*** or ***InternetGatewayDevice***. For example the DHCP Relay function may have a dependency on settings in the ***Layer3Forwarding*** service.

2.2.2. Relationships Between Services

There are no relationships among the services currently defined in ***LANDevice***. A UPnP device vendor may define additional services within relationships among these services as well as to other standard services.

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2.3. Theory of Operation

Figure 2 above shows the hierarchy of devices and services relative to ***LANDevice***. A ***LANDevice*** – identified in the device description document with a device ID (UDN) – typically corresponds to a physical LAN interface (or port) on the ***InternetGatewayDevice***. However, an implementation may choose to encapsulate more than one physical LAN interface in a single ***LANDevice*****.** This would be the case if two LAN subnets that are bridged are to be presented as a single virtual LAN interface. Devices (clients) on a LAN may configure, initiate and/or share Internet connections using services on the ***WANDevice***.

LANDevice has one OPTIONAL service called ***LANHostConfigManagement***, which models attributes and functions associated with the management of host configuration functions such as DHCP and DNS.

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3. XML Device Description

```
<?xml version="1.0"?>
<root xmlns="urn:schemas-upnp-org:device-1-0">
  <specVersion>
    <major>1</major>
    <minor>0</minor>
  </specVersion>
  <URLBase>base URL for all relative URLs</URLBase>
  <device>
    <deviceType>urn:schemas-upnp-org:device:LANDevice:1</deviceType>
    <friendlyName>short user-friendly title</friendlyName>
    <manufacturer>manufacturer name</manufacturer>
    <manufacturerURL>URL to manufacturer site</manufacturerURL>
    <modelDescription>long user-friendly title</modelDescription>
    <modelName>model name</modelName>
    <modelNumber>model number</modelNumber>
    <modelURL>URL to model site</modelURL>
    <serialNumber>manufacturer's serial number</serialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <iconList>
      <icon>
        <mimetype>image/format</mimetype>
        <width>horizontal pixels</width>
        <height>vertical pixels</height>
        <depth>color depth</depth>
        <url>URL to icon</url>
      </icon>
      <!-- XML to declare other icons, if any, go here -->
    </iconList>
    <serviceList>
      <service>
        <serviceType>urn:schemas-upnp-
org:service:LANHostConfigManagement:1</serviceType>
        <serviceId>urn:upnp-org:serviceId:LANHostCfg1</serviceId>
        <SCPDURL>URL to service description</SCPDURL>
        <controlURL>URL for control</controlURL>
        <eventSubURL>URL for eventing</eventSubURL>
      </service>
      <!-- Declarations for other services added by UPnP vendor (if any) go
here -->
    </serviceList>
    <deviceList>
      <!-- Description of embedded devices added by UPnP vendor (if any) go
here -->
    </deviceList>
    <presentationURL>URL for presentation</presentationURL>
  </device>
</root>
```

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4. Test

No semantic tests are defined for this device.

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Change History

Change Log for Version 1.0 (10-4-00)

- Revised the Title Page to call out V1.0 of the Device Template
- Changed to be consistent with Sample Designs released to the Technical Committee
- Deleted the DeviceList from the title page.
- Updated Table 1 to shade boxes that do not require entry.

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