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<table>
<thead>
<tr>
<th>Authors</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
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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.

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`. 
1.1. Change Log

Changes from \textit{LANDevice:0.5}
- Editorial changes to comply with device template 0.996

Changes from \textit{LANDevice:0.6}
- Update text and functional diagram to reflect changes to the DCP design

Changes from \textit{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 \textit{LANDevice:0.71}
- Updated to device template v1.01
- Verified against TDC checklist v1.01

Changes from \textit{LANDevice:0.8}
- Added XML comment tags to comments text in XML template

Changes from \textit{LANDevice:0.81}
- Changed from Required to Optional
- Changed definition of ServiceIDs for contained services

Changes from \textit{LANDevice:0.9}
- Formatting changes for version 1.

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

Changes from \textit{LANDevice:0.991}
- Copyright messages and document status updated.
2. Device Definitions

2.1. Device Type

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

\texttt{urn:schemas-upnp-org:device:LANDevice:1}

2.2. Device Model

Products that expose devices of the type \texttt{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

<table>
<thead>
<tr>
<th>DeviceType</th>
<th>Root</th>
<th>Req. or Opt.(^1)</th>
<th>ServiceType</th>
<th>Req. or Opt.(^1)</th>
<th>Service ID(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>\texttt{LANHostConfigManagement:1}</td>
<td>O</td>
<td>\texttt{LANHostCfg1}</td>
</tr>
<tr>
<td>Non-standard services embedded by a UPnP vendor go here.</td>
<td></td>
<td></td>
<td>Non-standard services embedded by an UPnP vendor go here.</td>
<td>X</td>
<td>TBD</td>
</tr>
</tbody>
</table>

\(^1\) R = Required, O = Optional, X = Non-standard.
\(^2\) Prefixed by \texttt{urn:upnp-org:serviceId}:

2.2.1. Description of Device Requirements

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

2.2.2. Relationships Between Services

There are no relationships among the services currently defined in \texttt{LANDevice}. A UPnP device vendor may define additional services within relationships among these services as well as to other standard services.
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.
3. XML Device Description

```xml
<?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>
    </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>
    </serviceList>
    <!-- Declarations for other services added by UPnP vendor (if any) go here -->
  </device>
</root>
```
4. Test

No semantic tests are defined for this device.
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.