

**UPnP Gateway
committee: IGD:2
improvements over IGD:1
March 10, 2009**



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Overview

- **UPnP Gateway device allows:**
 - A. Manage and configure physical connections e.g. connect or disconnect
 - B. Automatic and seamless configuration of Internet access among networked devices
 - C. Status and events on connections like External IP address
 - D. Control NAT traversal & firewall
- This presentation focuses only on WANIPConnection:2, there are other work items that are included in IGD:2
 - DeviceProtection allows securing access to UPnP services with authentication and access control. This work is still in early phases.
 - Security requirements for InternetGatewayDevice:2
 - IPv6 updates and firewall control protocol
- This presentation covers on-going work and may change before publication. Target timeline is:
 - WANIPConnection:2 Q4/2009
 - DeviceProtection:1 Q1/2010
 - IPv6 update and firewall control: Q1/2010

Key Use Cases

- **Use case #1 Add portmapping**
 - User has an application that needs to be contacted from the internet
 - Usually, no user interaction is needed, but application uses IGD control point to make required portmappings, but UI can be used
 - It is possible to get any free portmapping or require very specific one
- **Use case #2 – delete portmappings**
 - Applications may remove portmappings automatically or user may use UI to delete specific mappings
 - It is possible to remove single items or ranges
- **Use case #3 – find out existing portmappings**
 - Control point UI allows user to retrieve list of portmappings for diagnostic

List of Key changes Features - actions

- DeletePortMappingRange() allows removing a range of portmappings
- RetrieveListOfPortmappings() allows retrieving a list of existing portmappings.
- AddAnyPortmapping() allows requesting specific external port and if the port is not free the gateway assign a free port. Policy how to determine the assigned port is left to vendors

List of Key changes Features New – state variables

- SystemUpdateID is used to track changes in NAT portmappings
- A_ARG_TYPE_MANAGE is a parameter used in new actions
- A_ARG_PortListing is a data structure used to return a list of portmappings

List of Key changes Features – policy changes

- PortmappingLeaseTime can have values between 1 to 604800 seconds
- If control point uses value 0 to indicate infinite lease time mapping, it is required that gateway uses maximum value instead
- In IGD there is access control feature introduced. This is explained in separate document as part of DeviceProtection work.
- If a Control point has not been authenticated and authorized as defined in [DeviceProtection], control points may edit portmappings only for their own IP address
- If a Control point has not been authenticated and authorized as defined in [DeviceProtection], the External port value must be >1023
- It is not possible to require that ExternalPort must be equal to InternalPort



For the interconnected lifestyle