UPnP+ is a new certification program within the UPnP ecosystem that greatly enhances the UPnP experience enabling any device to interact securely with any other UPnP device – anywhere in the world. UPnP+ is the cornerstone for participation in the Internet of Things (IoT) while remaining backwards compatible with the previous iterations of UPnP technologies and architecture. UPnP+ enables new, compelling, industry leading features and use case scenarios.

**UPnP+ IS A NEW CERTIFICATION PROGRAM**

To improve the reliability, security, and consistency of UPnP implementations, and to encourage the use of the latest version of UPnP specifications, UPnP Forum has created the UPnP+ Certification Level. Some of the benefits include improved features and performance in:

- Interoperability
- Security
- Evolving standards (HTML5, IPv6, etc.)
- Cloud-based features
- New services

To support this effort, UPnP Forum has updated and released the UPnP+ Certification Test Tool, which is available now. It also has expanded its testing program to improve the quality of open source implementations in addition to closing previous security vulnerabilities that were a result of poor or improper implementations.

UPnP+ certification provides a solid, future-proof basis for integration of cloud-based content and services. One important and fast-growing user requirement is accessing devices from remote locations, often using a mobile device. Home connectivity from outside the home (or workplace) allows for the development of new integrated capabilities, use cases, and business models. Security is a vital element in the design of such applications and UPnP+ has this built in, along with user or group-level access control configurability.
UPnP+ FOR THE INTERNET OF THINGS (IoT)

UPnP+ allows for the development of future-proof interoperable solutions for the Internet of Things (IoT). The new specifications allow for integrating with non-IP connected devices while adding enhanced security, richer audio/video features, and the UPnP Cloud for virtualizing and enabling secure sharing of devices over the Internet.

**UPnP CLOUD**

- Builds upon mature UPnP core technologies that already provide a base for IoT (currently with billions of UPnP devices deployed)
- Uses commonly used web technologies to create secure communication between devices
- Bridges local UPnP networks together through the Internet
- Enables existing UPnP specifications and devices to be UPnP Cloud capable
- Provides a path for low-risk and rapid implementations of UPnP Cloud solutions
- Enables device and service discovery through the UPnP Cloud
- Combines UPnP and XMPP ecosystems to enable new IoT possibilities

**UPnP BRIDGING**

- Allows different local communication and protocol networks to interact as one
- Includes seamless bridging to existing device network protocols such as Bluetooth, Z-Wave, or ZigBee
- Supports simple, data-based device descriptions for the incorporation of resource-constrained devices
- Provides a development platform for “home automation hub” manufacturers to integrate with the billions of UPnP devices already in the home

**IN SUMMARY**

UPnP+ provides the confidence of proven security, superior interoperability, and the new features that make it the most complete and open solution for the Internet of Things. The cloud solution of UPnP+ is the simplest and most complete way to share devices and content securely while UPnP+ certification is inexpensive and a free open source solution can validate implementations. UPnP+ development, test, and certification tools are available TODAY.

UPnP Forum, established in 1999, is an impartial global industry standards body that has paved the way for seamless connectivity between more than a billion devices. Its 1000+ companies and organizations work together to enable device-to-device interoperability in addition to facilitating easier and better home networking. UPnP Forum promotes adoption of uniform technical device interconnectivity standards and certifies devices conforming to these, thus paving the way for seamless connectivity between more than a billion devices in the home running above the IP layer.

UPnP Forum has widened its scope to encompass the cloud, including integration for content and services, as well as bridging to non-UPnP networks (ZigBee, Z-Wave, Bluetooth, ANT+...). This enables a broad range of applications including health and fitness, energy management, and home automation.

**Contact:**
Scott Lofgren
President and Chairman UPnP Forum
+1 503-619-5223
upnpadmin@forum.upnp.org

April 2015
Copyright © 2015 UPnP Forum