

Simple Service Discovery Protocol

From Wikipedia, the free encyclopedia

The **Simple Service Discovery Protocol** (**SSDP**) is a network protocol based on the Internet Protocol Suite for advertisement and discovery of network services and presence information. It accomplishes this without assistance of server-based configuration mechanisms, such as the Dynamic Host Configuration Protocol (DHCP) or the Domain Name System (DNS), and without special static configuration of a network host. SSDP is the basis of the discovery protocol of Universal Plug and Play and is targeted for use in residential or small office environments. It was formally described in an IETF Internet draft by Microsoft and Hewlett-Packard in 1999.

Contents

- 1 Protocol transport and addressing
- 2 See also
- 3 References
- 4 External links

Protocol transport and addressing

SSDP is a text-based protocol based on the Hypertext Transfer Protocol (RFC 2616). However, it uses the User Datagram Protocol (UDP) as underlying transport protocol. Services are announced by the hosting system with multicast addressing to a specifically designated IP multicast address at port number 1900. In IPv4, the multicast address is 239.255.255.250^[1] and SSDP over IPv6 uses the address set `FF0X::C` for all scope ranges indicated by *x*.^[2]

This results in the following *well-known* practical multicast addresses for SSDP:

- 239.255.255.250 (IPv4 site-local address)
- [FF02::C] (IPv6 link-local)
- [FF05::C] (IPv6 site-local)
- [FF08::C] (IPv6 organization-local)
- [FF0E::C] (IPv6 global)

Additionally, applications may use the source-specific multicast addresses derived from the local IPv6 routing prefix, with group ID *C* (decimal 12).

SSDP uses a NOTIFY HTTP method to announce the establishment or withdrawal of services (presence) information to the multicast group. A client that wishes to discover available services on a network, uses the M-SEARCH method. Responses to such search requests are sent via unicast addressing to the originating address and port number of the multicast request.

Microsoft's IPv6 SSDP implementations in Windows Media Player and Server use the link-local scope

Internet Protocol Suite

Application Layer

BGP · DHCP · DNS · FTP · HTTP · IMAP · IRC · LDAP · MGCP · NNTP · NTP · POP · RIP · RPC · RTP · SIP · SMTP · SNMP · SSH · Telnet · TLS/SSL · XMPP ·

(more)

Transport Layer

TCP · UDP · DCCP · SCTP · RSVP · ECN ·

(more)

Internet Layer

IP (IPv4, IPv6) · ICMP · ICMPv6 · IGMP · IPsec ·

(more)

Link Layer

ARP/InARP · NDP · OSPF · Tunnels (L2TP) · PPP · Media Access Control (Ethernet, DSL, ISDN, FDDI) · (more)

address. Microsoft uses port number 2869 for event notification and event subscriptions. However, early implementations of SSDP also used port 5000 for this service.^[3]

See also

- Service Location Protocol
- JINI
- Zero configuration networking
- Neighbor Discovery Protocol

References

1. ^ "Internet Multicast Addresses". IANA. 2010-06-22. <http://www.iana.org/assignments/multicast-addresses/>.
2. ^ "Internet Protocol Version 6 Multicast Addresses". IANA. <http://www.iana.org/assignments/ipv6-multicast-addresses/>. Retrieved 2010-08-10.
3. ^ Microsoft Knowledge Base Article 832017

External links

- IETF draft revision 3 (outdated and expired)

Retrieved from "http://en.wikipedia.org/wiki/Simple_Service_Discovery_Protocol"

Categories: Computer network stubs | Network protocols | Windows communication and services

- This page was last modified on 18 November 2010 at 12:33.
- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. See Terms of Use for details.
Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.