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Part 10-11: Quality of Service Device Control Protocol – Quality of Service
Manager Service**

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CONTENTS

FOREWORD	4
ORIGINAL UPNP DOCUMENTS (informative)	6
1. Overview and Scope	8
1.1. Referenced Specifications	8
2. Service Modeling Definitions	9
2.1. ServiceType	9
2.2. State Variables	9
2.2.2. A_ARG_TYPE_TrafficDescriptor	10
2.2.3. A_ARG_TYPE_TrafficHandle	15
2.2.4. A_ARG_TYPE_NumTrafficDescriptors	15
2.2.5. A_ARG_TYPE_NumPolicyHolders	15
2.2.6. A_ARG_TYPE_ListOfTrafficDescriptors	15
2.2.7. Relationships Between State Variables	16
2.3. Eventing and Moderation	17
2.3.1. Event Model	17
2.4. Actions	18
2.4.1 RequestTrafficQos	18
2.4.2 UpdateTrafficQos	21
2.4.3 ReleaseTrafficQos	23
2.4.4 BrowseAllTrafficDescriptors	23
2.4.5 Non-Standard Actions Implemented by a UPnP Vendor	24
2.4.6 Relationships Between Actions	25
2.4.7 Common Error Codes	25
2.5. Theory of Operation	27
3. XML Service Description	29
4. Test	31
Annex A (normative) TrafficDescriptor XML Schema	32
Annex B (normative) Traffic Descriptor Matrix	39

LIST OF TABLES

Table 2-1: State Variables	10
Table 2-2: Event Moderation	17
Table 2-3: Actions.....	18
Table 2-4: Arguments for RequestTrafficQos.....	18
Table 2-5: Error Codes for RequestTrafficQos.....	20
Table 2-6: Arguments for UpdateTrafficQos	21
Table 2-7: Error Codes for UpdateTrafficQos	22
Table 2-8: Arguments for ReleaseTrafficQos.....	23
Table 2-9: Error Codes for ReleaseTrafficQos.....	23
Table 2-10: Arguments for BrowseAllTrafficDescriptors	23
Table 2-11: Error Codes for BrowseAllTrafficDescriptors	24
Table 2-12: Common Error Codes	25

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Part 10-11: Quality of Service Device Control Protocol Quality of Service Manager Service

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5 956 487 / US; 6 170 007 / US; 6 139 177 / US; 6 529 936 / US; 6 470 339 / US; 6 571 388 / US; 6 205
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ISO/IEC 29341-10-11 was prepared by UPnP Implementers Corporation and adopted, under the PAS procedure, by joint technical committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

The list of all currently available parts of the ISO/IEC 29341 series, under the general title *Universal plug and play (UPnP) architecture*, can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies, and the voting results may be obtained from the address given on the second title page.

ORIGINAL UPNP DOCUMENTS (informative)

Reference may be made in this document to original UPnP documents. These references are retained in order to maintain consistency between the specifications as published by ISO/IEC and by UPnP Implementers Corporation. The following table indicates the original UPnP document titles and the corresponding part of ISO/IEC 29341:

UPnP Document Title	ISO/IEC 29341 Part
UPnP Device Architecture 1.0	ISO/IEC 29341-1
UPnP Basic:1 Device	ISO/IEC 29341-2
UPnP AV Architecture:1	ISO/IEC 29341-3-1
UPnP MediaRenderer:1 Device	ISO/IEC 29341-3-2
UPnP MediaServer:1 Device	ISO/IEC 29341-3-3
UPnP AVTransport:1 Service	ISO/IEC 29341-3-10
UPnP ConnectionManager:1 Service	ISO/IEC 29341-3-11
UPnP ContentDirectory:1 Service	ISO/IEC 29341-3-12
UPnP RenderingControl:1 Service	ISO/IEC 29341-3-13
UPnP MediaRenderer:2 Device	ISO/IEC 29341-4-2
UPnP MediaServer:2 Device	ISO/IEC 29341-4-3
UPnP AV Datastructure Template:1	ISO/IEC 29341-4-4
UPnP AVTransport:2 Service	ISO/IEC 29341-4-10
UPnP ConnectionManager:2 Service	ISO/IEC 29341-4-11
UPnP ContentDirectory:2 Service	ISO/IEC 29341-4-12
UPnP RenderingControl:2 Service	ISO/IEC 29341-4-13
UPnP ScheduledRecording:1	ISO/IEC 29341-4-14
UPnP DigitalSecurityCamera:1 Device	ISO/IEC 29341-5-1
UPnP DigitalSecurityCameraMotionImage:1 Service	ISO/IEC 29341-5-10
UPnP DigitalSecurityCameraSettings:1 Service	ISO/IEC 29341-5-11
UPnP DigitalSecurityCameraStillImage:1 Service	ISO/IEC 29341-5-12
UPnP HVAC_System:1 Device	ISO/IEC 29341-6-1
UPnP HVAC_ZoneThermostat:1 Device	ISO/IEC 29341-6-2
UPnP ControlValve:1 Service	ISO/IEC 29341-6-10
UPnP HVAC_FanOperatingMode:1 Service	ISO/IEC 29341-6-11
UPnP FanSpeed:1 Service	ISO/IEC 29341-6-12
UPnP HouseStatus:1 Service	ISO/IEC 29341-6-13
UPnP HVAC_SetpointSchedule:1 Service	ISO/IEC 29341-6-14
UPnP TemperatureSensor:1 Service	ISO/IEC 29341-6-15
UPnP TemperatureSetpoint:1 Service	ISO/IEC 29341-6-16
UPnP HVAC_UserOperatingMode:1 Service	ISO/IEC 29341-6-17
UPnP BinaryLight:1 Device	ISO/IEC 29341-7-1
UPnP DimmableLight:1 Device	ISO/IEC 29341-7-2
UPnP Dimming:1 Service	ISO/IEC 29341-7-10
UPnP SwitchPower:1 Service	ISO/IEC 29341-7-11
UPnP InternetGatewayDevice:1 Device	ISO/IEC 29341-8-1
UPnP LANDevice:1 Device	ISO/IEC 29341-8-2
UPnP WANDevice:1 Device	ISO/IEC 29341-8-3
UPnP WANConnectionDevice:1 Device	ISO/IEC 29341-8-4
UPnP WLANAccessPointDevice:1 Device	ISO/IEC 29341-8-5
UPnP LANHostConfigManagement:1 Service	ISO/IEC 29341-8-10
UPnP Layer3Forwarding:1 Service	ISO/IEC 29341-8-11
UPnP LinkAuthentication:1 Service	ISO/IEC 29341-8-12
UPnP RadiusClient:1 Service	ISO/IEC 29341-8-13
UPnP WANCableLinkConfig:1 Service	ISO/IEC 29341-8-14
UPnP WANCommonInterfaceConfig:1 Service	ISO/IEC 29341-8-15
UPnP WANDSLLinkConfig:1 Service	ISO/IEC 29341-8-16
UPnP WANEthernetLinkConfig:1 Service	ISO/IEC 29341-8-17
UPnP WANIPConnection:1 Service	ISO/IEC 29341-8-18
UPnP WANPOTSLinkConfig:1 Service	ISO/IEC 29341-8-19
UPnP WANPPConnection:1 Service	ISO/IEC 29341-8-20
UPnP WLANConfiguration:1 Service	ISO/IEC 29341-8-21
UPnP Printer:1 Device	ISO/IEC 29341-9-1
UPnP Scanner:1.0 Device	ISO/IEC 29341-9-2
UPnP ExternalActivity:1 Service	ISO/IEC 29341-9-10
UPnP Feeder:1.0 Service	ISO/IEC 29341-9-11
UPnP PrintBasic:1 Service	ISO/IEC 29341-9-12
UPnP Scan:1 Service	ISO/IEC 29341-9-13
UPnP QoS Architecture:1.0	ISO/IEC 29341-10-1
UPnP QosDevice:1 Service	ISO/IEC 29341-10-10
UPnP QosManager:1 Service	ISO/IEC 29341-10-11
UPnP QosPolicyHolder:1 Service	ISO/IEC 29341-10-12
UPnP QoS Architecture:2	ISO/IEC 29341-11-1
UPnP QOS v2 Schema Files	ISO/IEC 29341-11-2

UPnP Document Title	ISO/IEC 29341 Part
UPnP QoSDevice:2 Service	ISO/IEC 29341-11-10
UPnP QoSManager:2 Service	ISO/IEC 29341-11-11
UPnP QoSPolicyHolder:2 Service	ISO/IEC 29341-11-12
UPnP RemoteUIClientDevice:1 Device	ISO/IEC 29341-12-1
UPnP RemoteUIServerDevice:1 Device	ISO/IEC 29341-12-2
UPnP RemoteUIClient:1 Service	ISO/IEC 29341-12-10
UPnP RemoteUIServer:1 Service	ISO/IEC 29341-12-11
UPnP DeviceSecurity:1 Service	ISO/IEC 29341-13-10
UPnP SecurityConsole:1 Service	ISO/IEC 29341-13-11

1. Overview and Scope

This service definition is compliant with the UPnP Device Architecture version 1.0.

This service-type enables modeling of ‘Quality of Service Manager’ function capabilities. QosManager function is a combination of QosManager service and a control point functionality that discovers and controls QosDevice and QosPolicyHolder services running on the network. QosManager function is responsible for requesting, updating, releasing and in general controlling the Quality of Service assigned by networking devices to various traffic streams. The QosManager service will be invoked from a UPnP Control Point to perform the functions related to setting up Quality of Service for that traffic. Once the network is configured with respect to the Quality of Service for the upcoming traffic stream, the QosManager service will hand back control to the control point. This service provides a mechanism for Control Points to:

- Be agnostic of the Quality of Service capabilities and associated details about the various devices on the network.
- Hand-over the tasks of setting up, modifying and revoking the Quality of Service associated with every traffic stream
- Hand-over the task of control point functionality with respect to the UPnP QosDevice service – its discovery, control and eventing.
- Hand-over the task of control point functionality with respect to the UPnP QosPolicyHolder service – its discovery, control and eventing.

Thus, a QosManager is a dual-role entity in the sense that it exposes QosManager service to the Control Point while acting as a Control Point for the QosPolicyHolder and QosDevice services running on the network. This document describes the components of the UPnP QosManager service.

- This service template does not address:

The control point functionality within a QosManager. However, useful information about the control point functionality in the QosManager can be found in the following documents:

- UPnP QoS Architecture document
- UPnP QosDevice Service Definition Document
- UPnP QosPolicyHolder Service Definition Document

1.1. Referenced Specifications

Unless explicitly stated otherwise herein, implementation of the mandatory provisions of any standard referenced by this specification shall be mandatory for compliance with this specification.

This section lists the normative references used in this document and includes the tag inside square brackets that is used for each sub reference:

[IEEE] - IEEE 802.1D-2004, Annex G, *IEEE Standard for Information technology – Telecommunications and information exchange between systems - IEEE standard for local and metropolitan area networks, Common specifications - Media access control (MAC) Bridges*, 2004.

[XML] – *Extensible Markup Language (XML) 1.0 (Second Edition)*, T. Bray, J. Paoli, C. M. Sperberg McQueen, E. Maler, eds. W3C Recommendations, 6 October 2000.

[DEVICE] - *UPnP Device Architecture, version 1.0*.

[POLICY HOLDER] – UPnP QosPolicyHolder:1 Service Document.

[QOS DEVICE] – UPnP QosDevice:1 Service Document.