

INTERNATIONAL STANDARD

**Information technology – UPnP Device Architecture –
Part 11-2: Quality of Service Device Control Protocol – Level 2 – Quality of
Service Schemas**

ISO/IEC 29341-11-2:2008

<https://standards.iteh.ai/catalog/standards/sist/69cae7ea-d4c6-4536-a715-1f416694a712/iso-iec-29341-11-2-2008>



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ISO/IEC 29341-11-2

Edition 1.0 2008-11

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

K

ICS 35.200

ISBN 978-2-88910-903-6

CONTENTS

FOREWORD	3
ORIGINAL UPNP DOCUMENTS (informative)	5
1. Introduction	7
2. Schemas.....	8
2.1. ConfRotameterObservations.....	8
2.2. ListOfTrafficDescriptors	9
2.3. MostRecentStreamAction	10
2.4. PathInformation.....	11
2.5. QosDeviceCapabilities	12
2.6. QosDeviceInfo.....	14
2.7. QosDeviceState	15
2.8. RotameterInformation	17
2.9. TrafficDescriptorsPerInterface	19
2.10. TrafficDescriptor	20
2.11. TrafficPolicy.....	24

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INFORMATION TECHNOLOGY – UPNP DEVICE ARCHITECTURE –

Part 11-2: Quality of Service Device Control Protocol – Level 2 – Quality of Service Schemas

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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 WANPPPPConnection: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

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1. Introduction

The following schema definitions are referenced in the Quality of Service Level 2 standards. In the original UPnP standards these were distributed as files with the type "XSD", collected into a ZIP archive. They are presented in this standard, ISO/IEC 29341-11-2, for consistency with ISO/IEC document formatting requirements.

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2. Schemas

2.1. ConfRotameterObservations

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.upnp.org/schemas/ConfRotameterObservations.xsd"
  targetNamespace="http://www.upnp.org/schemas/ConfRotameterObservations.xsd"
  elementFormDefault="qualified" id="ConfRotameterObservations.xsd">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      ConfRotameterObservations
      This is for Version 2.0 of the UPnP QoS specification
      Copyright 2004-2006 Contributing Members of the UPnP Forum. All rights
reserved.
      Schema Location:
"http://www.upnp.org/schemas/qos/ConfRotameterObservations-v2.xsd"
    </xs:documentation>
  </xs:annotation>
  <xs:element name="ConfRotameterObservations"
type="ConfRotameterObservationsType"/>
  <xs:complexType name="ConfRotameterObservationsType">
    <xs:sequence>
      <xs:element name="ROPeriod" type="xs:integer"/>
      <xs:element name="MonitorResolutionPeriod" type="xs:integer"/>
      <xs:element name="v2" type="v2ExtensionType" minOccurs="0"/>
      <!-- allow any element except those from target namespace -->
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:any namespace="##other" processContents="lax"/>
        <xs:any namespace="##local" processContents="lax"/>
      </xs:choice>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="v2ExtensionType">
    <xs:sequence>
      <xs:element name="v3" type="v3ExtensionType" minOccurs="0"/>
      <!-- allow any element except those from (v2) target namespace -->
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:any namespace="##other" processContents="lax"/>
        <xs:any namespace="##local" processContents="lax"/>
      </xs:choice>
    </xs:sequence>
    <xs:anyAttribute/>
  </xs:complexType>
  <xs:complexType name="v3ExtensionType">
    <xs:sequence>
      <xs:any namespace="##targetNamespace" processContents="lax"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:anyAttribute/>
  </xs:complexType>
</xs:schema>
```

2.2. ListOfTrafficDescriptors

```
<?xml version="1.0" encoding="utf-8"?>
<xs:schema
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.upnp.org/schemas/ListOfTrafficDescriptors.xsd"
  targetNamespace="http://www.upnp.org/schemas/ListOfTrafficDescriptors.xsd"
  xmlns:td2="http://www.upnp.org/schemas/TrafficDescriptorv1.xsd"
  elementFormDefault="qualified" id="ListOfTrafficDescriptors.xsd">

  <xs:import namespace="http://www.upnp.org/schemas/TrafficDescriptorv1.xsd"
    schemaLocation="http://www.upnp.org/schemas/qos/TrafficDescriptor-v2.xsd"/>
  <xs:annotation>
    <xs:documentation xml:lang="en">
      ListOfTrafficDescriptors
      This is for Version 2.0 of the UPnP QoS specification
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reserved.
      Schema Location: "http://www.upnp.org/schemas/qos/ListOfTrafficDescriptors-
v2.xsd"
    </xs:documentation>
  </xs:annotation>
  <xs:element name="ListOfTrafficDescriptors" type="ListOfTrafficDescriptorsType"/>
  <xs:complexType name="ListOfTrafficDescriptorsType">
    <xs:sequence>
      <xs:element name="TrafficDescriptor" type="td2:TrafficDescriptorType"
minOccurs="0" maxOccurs="unbounded"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

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2.3. MostRecentStreamAction

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns="http://www.upnp.org/schemas/MostRecentStreamAction.xsd"
  targetNamespace="http://www.upnp.org/schemas/MostRecentStreamAction.xsd"
  elementFormDefault="qualified"
  attributeFormDefault="unqualified" id="MostRecentStreamAction.xsd">
  <xs:annotation>
    <xs:documentation xml:lang="en">
      MostRecentStreamAction
      This is for Version 2.0 of the UPnP QoS specification
      Copyright 2004-2006 Contributing Members of the UPnP Forum. All rights
reserved.
      Schema Location: "http://www.upnp.org/schemas/qos/MostRecentStreamAction-
v2.xsd"
    </xs:documentation>
  </xs:annotation>
  <xs:element name="MostRecentStreamAction" type="MostRecentStreamActionType"/>
  <xs:complexType name="MostRecentStreamActionType">
    <xs:sequence>
      <xs:element name="SetupTrafficQos" type="xs:unsignedInt" minOccurs="1"
maxOccurs="1"/>
      <xs:element name="ReleaseTrafficQos" type="xs:unsignedInt" minOccurs="1"
maxOccurs="1"/>
      <xs:element name="v2" type="v2ExtensionType" minOccurs="0"/>
      <!-- allow any element except those from v1 target namespace -->
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:any namespace="##other" processContents="lax"/>
        <xs:any namespace="##local" processContents="lax"/>
      </xs:choice>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="v2ExtensionType">
    <xs:sequence>
      <xs:element name="v3" type="v3ExtensionType" minOccurs="0"/>
      <!-- allow any element except those from (v2) target namespace -->
      <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:any namespace="##other" processContents="lax"/>
        <xs:any namespace="##local" processContents="lax"/>
      </xs:choice>
    </xs:sequence>
    <xs:anyAttribute/>
  </xs:complexType>
  <xs:complexType name="v3ExtensionType">
    <xs:sequence>
      <xs:any namespace="##targetNamespace" processContents="lax"
maxOccurs="unbounded"/>
    </xs:sequence>
    <xs:anyAttribute/>
  </xs:complexType>
</xs:schema>
```