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module ieee802-dot1q-lldp-pbbn-aa-tlv {
  yang-version "1.1";
  namespace urn:ieee:std:802.1Q:yang:ieee802-dot1q-lldp-pbbn-aa-tlv;
  prefix lldp-aa-tlv;
  import ieee802-dot1q-llab-lldp {
    prefix lldp;
  }
  import ieee802-dot1q-types {
    prefix dot1qtypes;
  }
  organization
    "Institute of Electrical and Electronics Engineers";
  contact
    "WG-URL: http://ieee802.org/1/
    WG-EMail: stds-802-1-1@ieee.org
    Contact: IEEE 802.1 Working Group Chair
    Postal: C/O IEEE 802.1 Working Group
    IEEE Standards Association
    445 Hoes Lane
    Piscataway, NJ 08854
    USA

    E-mail: stds-802-1-chairs@ieee.org";
  description
    "IEEE Std 802.1Qcj extension TLVs for LLDP

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    This version of this YANG module is part of IEEE Std 802.1Q; see the
    standard itself for full legal notices.";
  revision 2022-09-06 {
    description
      "LLDP extension tlv for auto attach. Published as part of IEEE Std
      802.1Qcj-2023.";
    reference
      "Annex D of IEEE Std 802.1Qcj-2023";
  }
  typedef port-netid-type {
    type binary {
      length "12";
    }
    description
      "A 12 octet binary string representing the NetPortID fields of the
      PPBN Auto Attach System TLV as specified in D.2.17 of IEEE Std
      802.1Qcj-2023. The 12 octet field uniquely identifies a system
      auto attach port within the administrative domain used for auto
      attach connection management. The first 6 octets of the string are
      the binary representation of the system MAC address. The next 2
      octets are reserved and have the value 0. The last 4 octets are
      the integer IfIndex for the port.";
    reference
      "D.2.17.9 of IEEE Std 802.1Qcj-2023";
  }
  identity assoc-state-selector {
    description
      "Specify the state of the association between the AAS entities as
      described by Table D-16 of IEEE Std 802.1Qcj-2023";
  }
  identity not-ready {
    base assoc-state-selector;
    description
      "Indicates the association state of NOT_READY as specified in
      Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x00.";
  }
}

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}
identity ready-to-assoc {
    base assoc-state-selector;
    description
        "Indicates the association state of READY_TO_ASSOC as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x01.";
}
identity assoc-tentative {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_TENTATIVE as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x02.";
}
identity assoc-failed-types {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_FAILED_TYPES as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x12.";
}
identity assoc-failed-tags {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_FAILED_TAGS as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x22.";
}
identity assoc-failed-topo {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_FAILED_TOPO as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x32.";
}
identity assoc-failed-other {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_FAILED_OTHER as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x42.";
}
identity assoc-active {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_ACTIVE as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x03.";
}
identity assoc-standby {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_STANDBY as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x13.";
}
identity assoc-invalid {
    base assoc-state-selector;
    description
        "Indicates the association state of ASSOC_INVALID as specified in
        Table D-16 of IEEE Std 802.1Qcj-2023. Signalled as the value 0x23.";
}
identity system-type-selector {
    description
        "Specify the selection of the PPBN Auto-attach system type as specified
        in Table D-17 of IEEE Std 802.1Qcj-2023";
}
identity aab-system {
    base system-type-selector;
    description

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"Indicates the system type of an Auto Attach BEB (AAB) in the PPBN
Auto Attach System TLV specifie in D.2.17 of IEEE Std 802.1Qcj-2023.
Signalled as value 1.";
}
identity aad-cvlan-system {
  base system-type-selector;
  description
    "Indicates the system type of a C-VLAN aware Auto Attach Device (AAD)
in the PPBN Auto Attach System TLV specifie in D.2.17 of IEEE Std
802.1Qcj-2023. Signalled as value 2.";
}
identity aad-vlan-unaware-system {
  base system-type-selector;
  description
    "Indicates the system type of a VLAN unaware Auto Attach Device (AAD)
in the PPBN Auto Attach System TLV specifie in D.2.17 of IEEE Std
802.1Qcj-2023. Signalled as value 3.";
}
identity tagging-selector {
  description
    "Specify the tagging field selection of the PPBN Auto Attach System
TLV as secified in Table D-18 of IEEE Std 802.1Qcj-2023";
}
identity tagged-only {
  base tagging-selector;
  description
    "Indicates the AAD link tagging requirement of all VLAN tagged in
AAD sourced frames. Signalled as value 0 in the PPBN Auto Attach
System TLV specified in D.2.17 of IEEE Std 802.1Qcj-2023.";
}
identity untagged-or-tagged {
  base tagging-selector;
  description
    "Indicates the AAD link tagging requirement of untagged and VLAN
tagged in AAD sourced frames. Signalled as value 1 in the PPBN Auto
Attach System TLV specified in D.2.17 of IEEE Std 802.1Qcj-2023.";
}
identity untagged-only {
  base tagging-selector;
  description
    "Indicates the AAD link tagging requirement of all untagged in
AAD sourced frames. Signalled as value 2 in the PPBN Auto Attach
System TLV specified in D.2.17 of IEEE Std 802.1Qcj-2023.";
}
identity assignment-status-selector {
  description
    "Specify the status of an auto attachment assignment in the PBBN
Auto Attach assignment TLV sent by the AAB for each VID / I-SID
assignment request.";
}
identity pending {
  base assignment-status-selector;
  description
    "Indicates the AAB is processing the assignment. This status is used by
the AAD while it is waiting for a response from the AAB as described in
D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled as value 1.";
}
identity accepted {
  base assignment-status-selector;
  description
    "Indicates the AAB assignment processing request is complete for the
VID / I-SID and the VLAN to BSI connection has been established as
described in D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled as value 2.";
}

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}
identity rejected-generic {
  base assignment-status-selector;
  description
    "Indicates an undefined rejection has occurred as described in D.2.18.6
    of IEEE Std 802.1Qcj-2023. Signalled as value 3.";
}
identity rejected-resource {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred due to system resources being unavailable
    as described in D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled as value 4.";
}
identity rejected-invalid-vlan {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred because the VID value is outside the range
    of 1 to 4094 as described in D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled
    as value 5.";
}
identity rejected-vlan-resource {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred due to maximum VLAN resource limits have
    been reached as described in D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled
    as value 6.";
}
identity rejected-invalid-isid {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred because the I-SID value is outside of the
    range 1 to 16777215 as described in D.2.18.6 of IEEE Std 802.1Qcj-2023.
    Signalled as value 7.";
}
identity rejected-isid-resource {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred due to maximum I-SID resource limits have
    been reached as described in D.2.18.6 of IEEE Std 802.1Qcj-2023. Signalled
    as value 8.";
}
identity rejected-application {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred because an issue with auto attach agent
    functions on the AAB as described in D.2.18.6 of IEEE Std 802.1Qcj-2023.
    Signalled as value 9.";
}
identity rejected-policy {
  base assignment-status-selector;
  description
    "Indicates a rejection has occurred because the auto attach assignment
    processing is subject to a policy or rule on the AAB where the assignment
    requested is not permitted or denied as described in D.2.18.6 of IEEE
    Std 802.1Qcj-2023. Signalled as value 10.";
}
grouping aa-system-tlv {
  description
    "PBBN Auto Attach System TLV";
  reference
    "D.2.17 of IEEE Std 802.1Q-2022";
  leaf assoc-state {
    type identityref {

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    base assoc-state-selector;
}
description
    "Association state between AAS entities on the link";
reference
    "D.2.17.5 of IEEE Std 802.1Qcj-2023.";
}
leaf system-type {
    type identityref {
        base system-type-selector;
    }
    description
        "Identifies the capability of the advertising system type.";
    reference
        "D.2.17.6 of IEEE Std 802.1Qcj-2023.";
}
leaf tagging {
    type identityref {
        base tagging-selector;
    }
    description
        "Indicates AAD link tagging requirements in AAD-sourced frames
        and current provisioning mode information.";
    reference
        "D.2.17.7 of IEEE Std 802.1Qcj-2023.";
}
leaf portnetid {
    type port-netid-type;
    description
        "Uniquely identifies a system auto attach port within the
        administrative domain used for auto attach connection management.";
    reference
        "D.2.17.9 of IEEE Std 802.1Qcj-2023.";
}
}
grouping aa-assign-tlv {
    description
        "PBBN Auto Attach Assignment TLV";
    reference
        "D.2.18 of IEEE Std 802.1Q-2022";
    leaf num-assigns {
        type uint8 {
            range "0..101";
        }
        description
            "Contains the number of Status/VID/I-SID triples in the PBBN Auto Attach
            assignment TLV.";
        reference
            "D.2.18.5 of IEEE Std 802.1Qcj-2023.";
    }
    list assignments {
        key "vlan-id i-sid";
        description
            "A triplet of fields in the PBBN Auto Attach assignment TLV that indicates
            the mapping of VLAN ID to I-SID and the status of that mapping.";
        leaf assignment-status {
            type identityref {
                base assignment-status-selector;
            }
            reference
                "D.2.18.6 of IEEE Std 802.1Qcj-2023.";
        }
        leaf vlan-id {

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type dot1qtotypes:vlanid;
description
  "Advertises the VLAN ID of the VLAN being mapped by the assignment. If
  this is an association with a VLAN unaware AAD this field is transmitted
  as zero and ignored on receive. If this is a VLAN aware AAD, then this
  field is a valid VID.";
reference
  "D.2.18.7 of IEEE Std 802.1Qcj-2023.";
}
leaf i-sid {
  type dot1qtotypes:isid-type;
  description
    "Advertises the I-SID value of the PBBN Backbone Service Instance (BSI)
    identifier mapped by this assignment.";
  reference
    "D.2.18.8 of IEEE Std 802.1Qcj-2023.";
}
}
}
augment "/lldp:lldp/lldp:port" {
  description
    "Augments port with the PBBN Auto Attach extension TLVs";
  leaf tlvs-tx-org-aa-system-enable {
    type bits {
      bit aaSystem {
        position 0;
        description
          "D.2.17 of IEEE Std 802.1Q-2022";
      }
      bit aaAssign {
        position 1;
        description
          "D.2.18 of IEEE Std 802.1Q-2022";
      }
    }
  }
  description
    "Bitmap that includes the aaSet of tlvs from Table D.1 of
    802.1Qcj-2023";
  reference
    "D.1 of IEEE Std 802.1Qcj-2023";
}
container aa-system-tlv-extension {
  description
    "The PBBN Auto Attach System TLV";
  uses aa-system-tlv;
}
container aa-assign-tlv-extension {
  description
    "The PBBN Auto Attach Assignment TLV";
  uses aa-assign-tlv;
}
}
augment "/lldp:lldp/lldp:port/lldp:remote-systems-data" {
  description
    "Augments port remote-systems-data with received aa extension tlvs";
  container aa-system-tlv-extension {
    description
      "Holds a received PBBN Auto Attach System TLV";
    uses aa-system-tlv;
  }
  container aa-assign-tlv-extension {
    description
      "Holds a received PBBN Auto Attach Assignment TLV";
  }
}

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    uses aa-assign-tlv;  
  }  
}
```