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-dot1ab-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
        Copyright (C) IEEE (2022).
        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.";
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
"Indicates the system type of an Auto Attach BEB (AAB) in the PPBN Auto Attach System TLV specified 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 specified 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 specified 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 specified 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 PPBN 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."
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 {
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.";
}

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 {

type dot1qtypes: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 dot1qtypes: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";
  }
}
uses aa-assgin-tlv;
}
}
}