```
import os
import sqlalchemy
import sqlalchemy.orm
import time, uuid
import functools, collections, contextlib
import threading
import logging
from pkg_resources import resource_filename
import datetime
import decimal
import zlib
import base64
import pickle
import cPickle
from sqlalchemy.orm.mapper import mapper
from sqlalchemy.orm.interfaces import MapperExtension
from sqlalchemy.exc import OperationalError
from xml.etree.cElementTree import ElementTree, XMLParser, TreeBuilder
import sys
import os.path
import os.path as ospath
from os.path import join as pjoin

from pyof.foundation.base.base import GenericStruct, UnpackException, ConstantError, PyOFException, MetaStruct, GenericType
from pyof.foundation.exceptions import MessageTooLarge, ValueOutsidePossibleLimits, ValueOutsideAllowedLimits, ValueNotAllowed
from pyof.foundation.network_types.ethernet import Ethernet
from pyof.foundation.network_types.vlan import VLAN
from pyof.foundation.network_types.ipv4 import IPv4
from pyof.foundation.network_types.ipv6 import IPv6
from pyof.foundation.network_types.arp import ARP
from pyof.foundation.network_types.icmp import ICMPv4
from pyof.foundation.network_types.icmpv6 import ICMPv6
from pyof.foundation.network_types.tcp import TCP
from pyof.foundation.network_types.udp import UDP
from pyof.foundation.network_types.vxlan import VXLAN
from pyof.foundation.network_types.gre import GRE
from pyof.foundation.network_types.mpls import MPLS
from pyof.foundation.network_types.lldp.lldp import LLDP
from pyof.foundation.network_types.lldp.chassis_id import ChassisID
from pyof.foundation.network_types.lldp.port_id import PortID
from pyof.foundation.network_types.lldp.ttl import TTL
from pyof.foundation.network_types.lldp.end_of_lldpdu import EndOfLLDPDU
from pyof.foundation.network_types.lldp.generic_tlv import GenericTLV
from pyof.foundation.network_types.lldp.exceptions.exceptions import (
    ChassisIDLengthOutsideAllowedRange, ChassisIDLengthOutsidePossibleRange,
    ChassisIDSubtypeNotAllowed, ChassisIDSubtypeNotPossible,
    ChassisIDValueNotAllowed, ChassisIDValueNotPossible,
    PortIDLengthOutsideAllowedRange, PortIDLengthOutsidePossibleRange,
    PortIDSubtypeNotAllowed, PortIDSubtypeNotPossible,
    PortIDValueNotAllowed, PortIDValueNotPossible,
    TTLValueOutsideAllowedRange, TTLValueOutsidePossibleRange,
    TTLValueNotAllowed, TTLValueNotPossible,
    MandatoryTLVMissing, MaxLengthExceeded,
    DuplicateOptionalTLV, UnexpectedOrder,
    InvalidFirstTLV, InvalidLastTLV)
import pyof.foundation.exceptions as PyOFExceptions
import pyof.foundation.network_types.lldp.exceptions.exceptions as LLDPExceptions
import binascii
import struct

# Import the protocol buffer definitions.
from pyof.v0x01.controller2switch.packet_out_pb2 import PacketOut
from pyof.v0x01.controller2switch.packet_out_pb2 import DESCRIPTOR
from google.protobuf.text_format import Parse, ParseError

# Import the binary utilities.
from pyof.utilities.binary.utilities.pack_unpack_utilities import PackUtilities
from pyof.utilities.binary.utilities.exceptions.exceptions import BufferTooShortError

# Import the base classes.
from pyof.v0x01.common.header.Header import Header
from pyof.v0x01.common.utils.BinaryData import BinaryData
from pyof.v0x01.common.action.ActionHeader import ActionHeader, ActionType
from pyof.v0x01.common.action.ActionOutput import ActionOutput
from pyof.v0x01.common.action.ActionVlanVid import ActionVlanVid
from pyof.v0x01.common.action.ActionVlanPcp import ActionVlanPcp
from pyof.v0x01.common.action.ActionStripVlan import ActionStripVlan
from pyof.v0x01.common.action.ActionDlAddr import ActionDlAddr
from pyof.v0x01.common.action.ActionNwAddr import ActionNwAddr
from pyof.v0x01.common.action.ActionNwTos import ActionNwTos
from pyof.v0x01.common.action.ActionTp import ActionTp
from pyof.v0x01.common.action.ActionEnqueue import ActionEnqueue
from pyof.v0x01.common.action.ActionVendor import ActionVendor
from pyof.v0x01.common.utils import ConstantTypeList, GenericStruct, GenericMessageHeader, GenericMessageBody, GenericTypeList, UBInt8, UBInt16, UBInt32, UBInt64, Pad, HexBytes
from pyof.v0x01.common.phy_port import PhyPort
import sqlalchemy.ext.declarative
import sqlalchemy.ext.declarative.clsregistry
import sqlalchemy.ext.mutable
import sqlalchemy.ext.mutable.mutabledict
import sqlalchemy.ext.orderinglist
import sqlalchemy.ext.serializer
import sqlalchemy.ext.sqlsoup
import sqlalchemy.ext.vendor.pkg_resources
import sqlalchemy.ext.vendor.pkg_resources.extern
import sqlalchemy.ext.vendor.pkg_resources.extern.appdirs
import sqlalchemy.ext.vendor.pkg_resources.extern.packaging
import sqlalchemy.ext.vendor.pkg_resources.extern.packaging.exceptions
import sqlalchemy.ext.vendor.pkg_resources.extern.packaging.version
import sqlalchemy.ext.vendor.pkg_resources.extern.packaging._structures
import sqlalchemy.ext.vendor.pkg_resources.extern.packaging._compat
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.pyparsing
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.exceptions
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.unicode
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import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.testing
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.common
import sqlalchemy.ext.vendor.pkg_resources.extern.pyparsing.actions
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