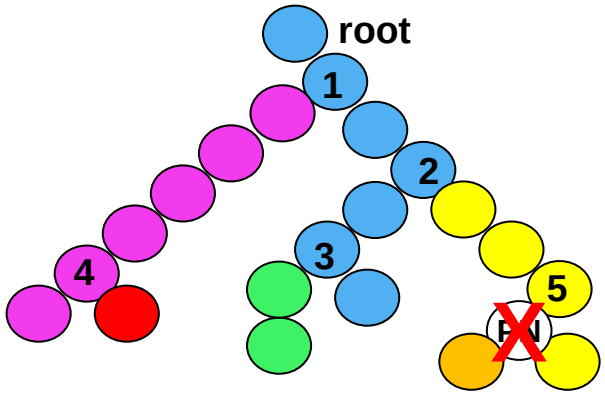
802.1Qca Tree ordered representation – recipe and attributes



Construction

- start at the root;
- encode an arbitrary **p2p path** to its leaf, recording the branch points.in the order they are encountered;
- starting at the 1st branch point, encode the **p2p path** leading from that, starting that path segment with (a repetition of) the branch point Hop sub-TLV (**1**).
- recurse until entire tree has been encoded;
- assemble the p2p fragments in branch-point order :
  - to ensure the branch node has been encoded already

So what ?

This is simple to compute :

- either **recursively**, after the full tree has been determined;
- or **incrementally**, as a route computation (e.g. CSPF) is performed.

It can represent any structure :

- by using repeated Node Ids for loop closure, this technique can represent any topology, including but not limited to GADAG structures, and shared media LANs.
- Circuit Ids are required only when there are multiple physical links between adjacencies.

This is compact :

- precisely one basic **Hop TLV** per node in the tree, plus one **Hop TLV** per branch point :
- structure size = (**N + # branches**) x 9 bytes *(= 216 bytes for the structure above*)

If there is no benefit from an unordered structure, what is wrong with KISS ?

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