

DNI 3 = DNI 2 + SDN

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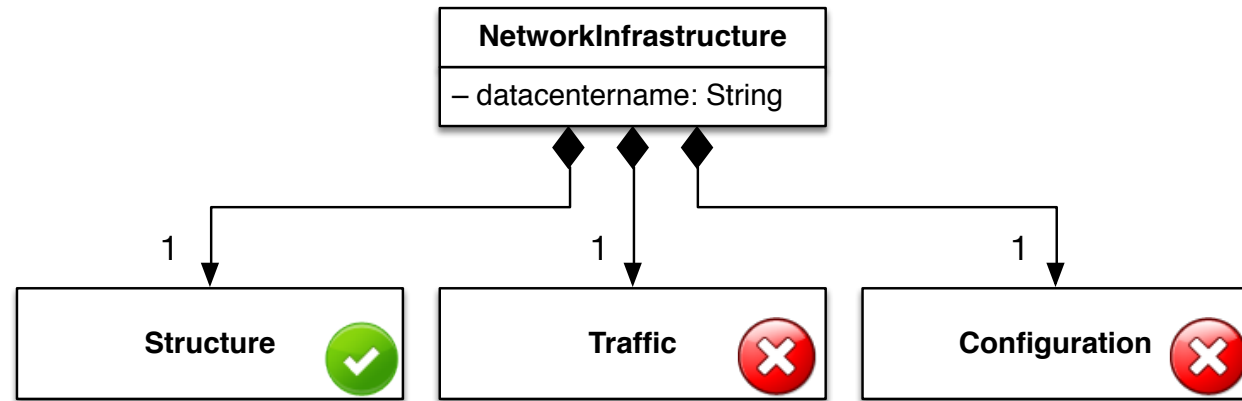
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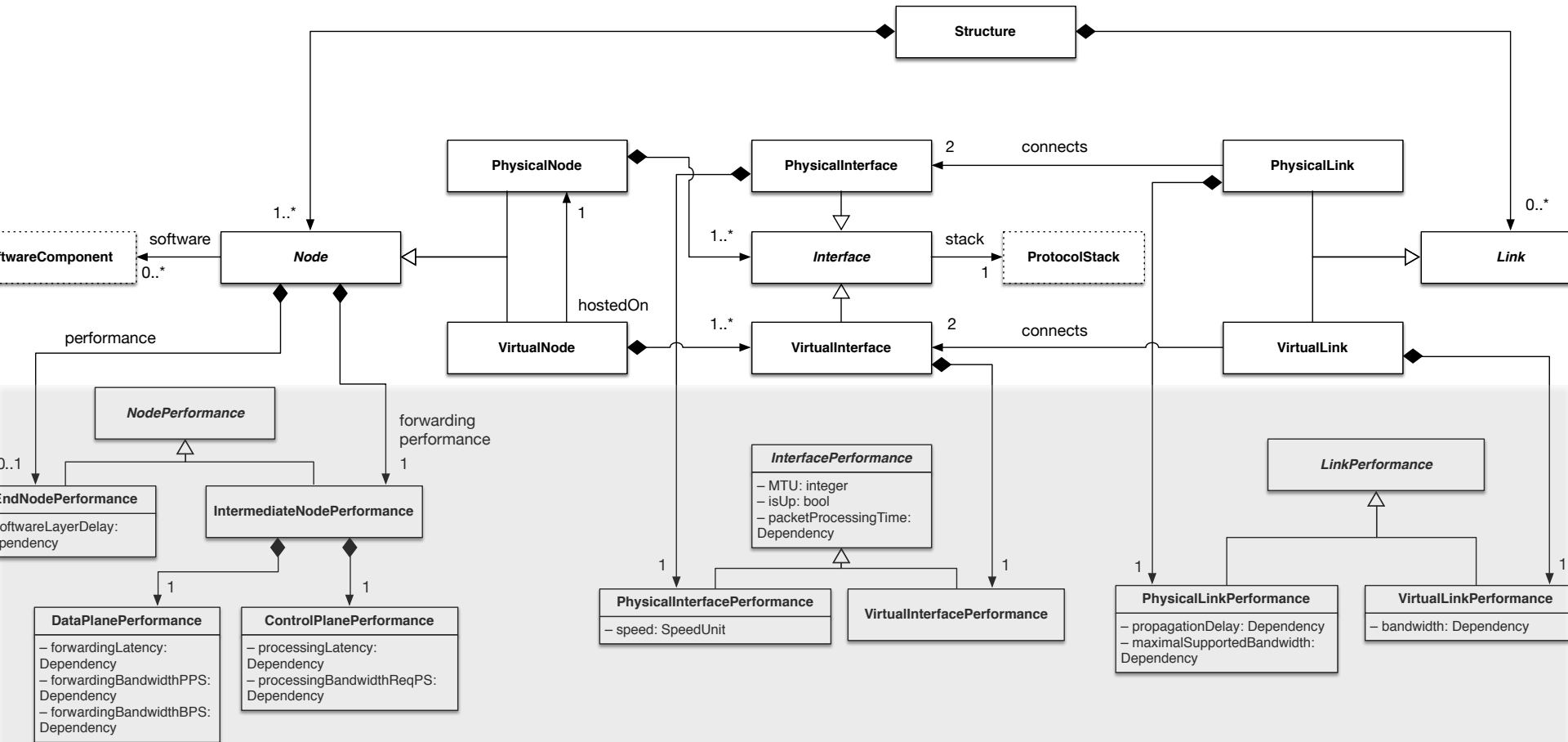
Hier, bei uns, 29.01.2016

- DNI should support SDN
- Meta-Model was updated to add the SDN support
- Your feedback about the changes

- We focus on the **network structure** part
- Class structure only (no attributes so far)



- **Next:**
- Old DNI (v2)
- NEW – Node “aspects”
- NEW – SDN Entities



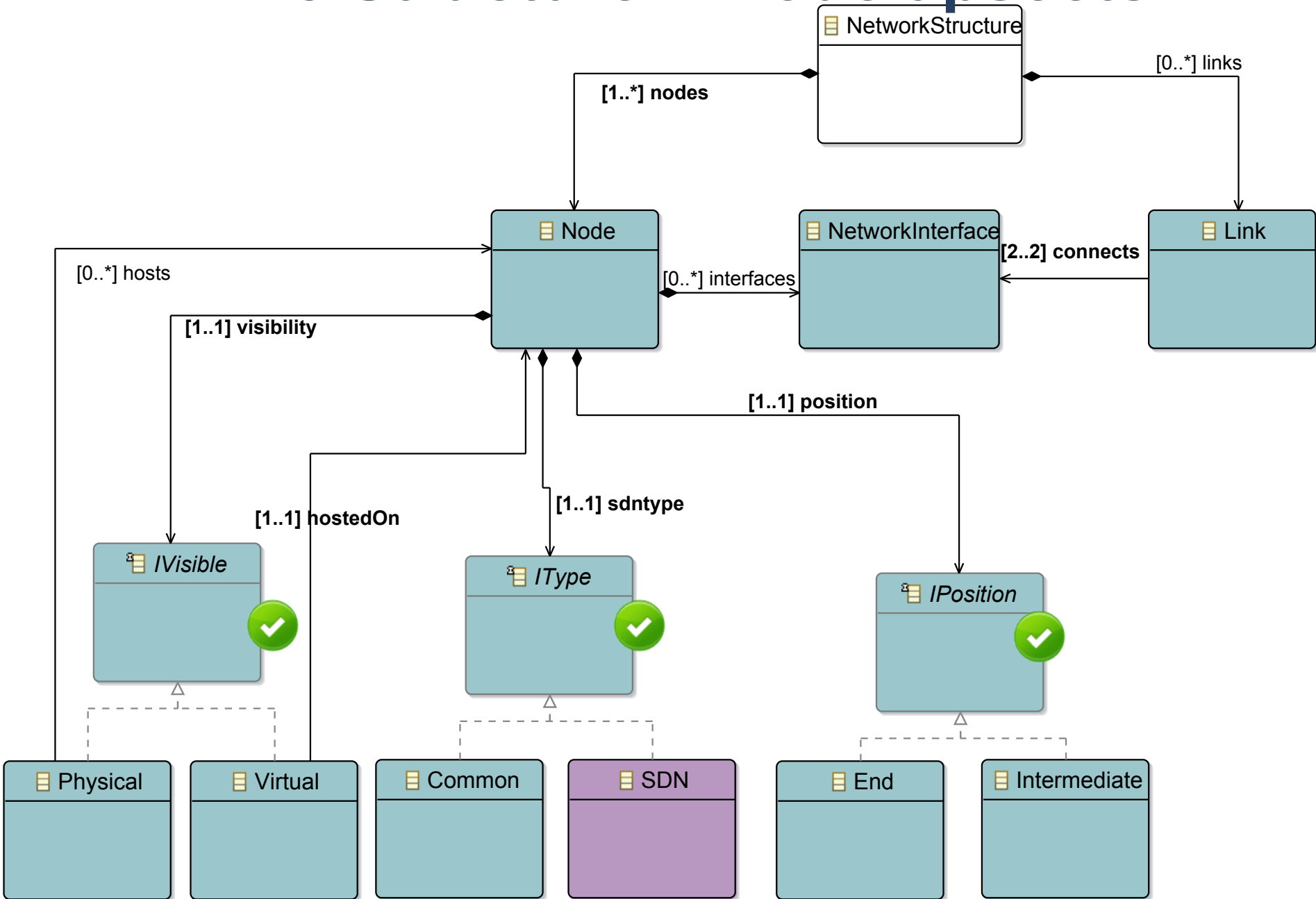
Why new Structure in DNI 3?

- ✓ DNI 2 prohibits all illegal representations
- ✗ More transformation work
- ✗ Difficult manual building
- ✗ Partial models illegal (extraction)

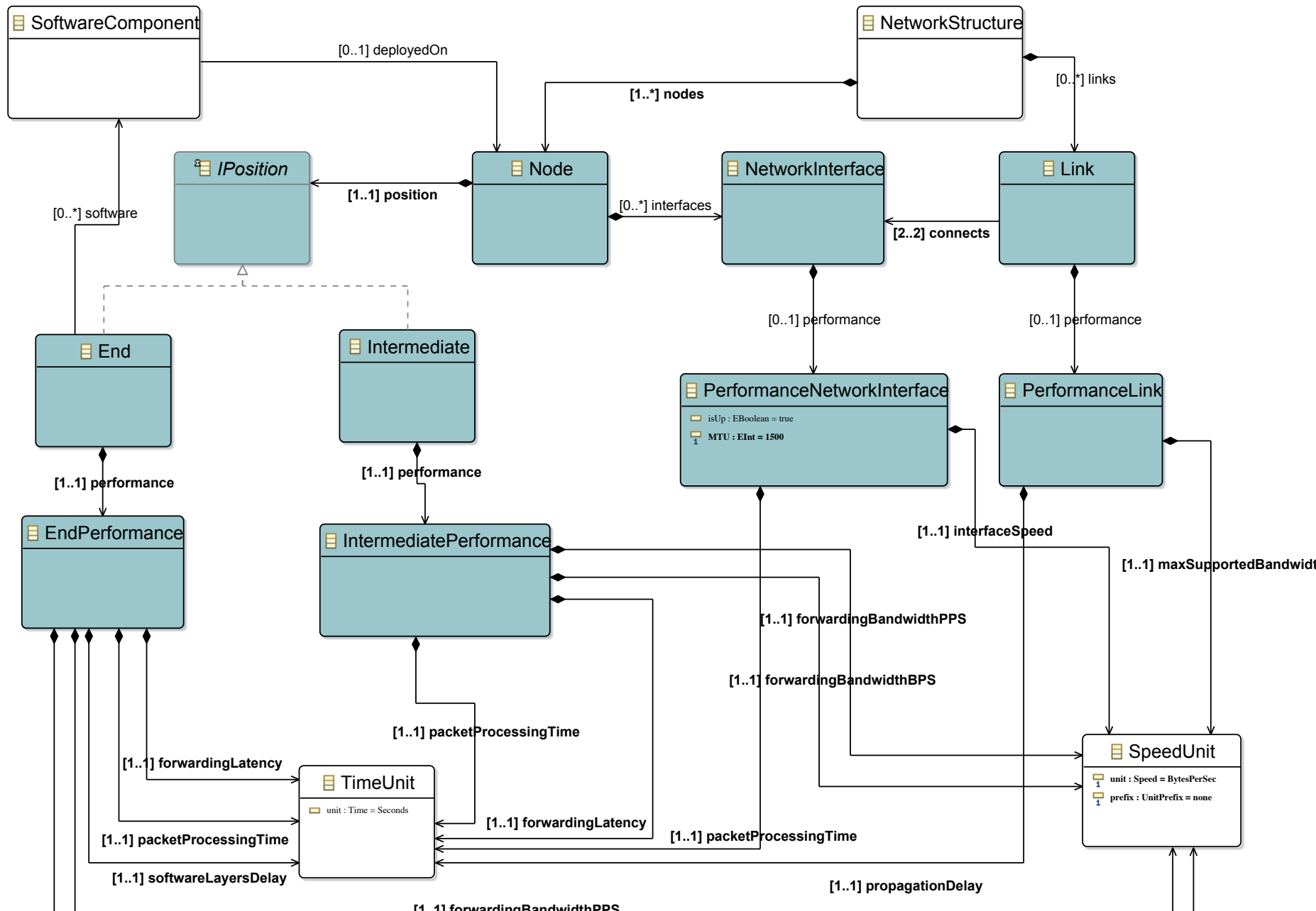
**New
Structure**

SDN

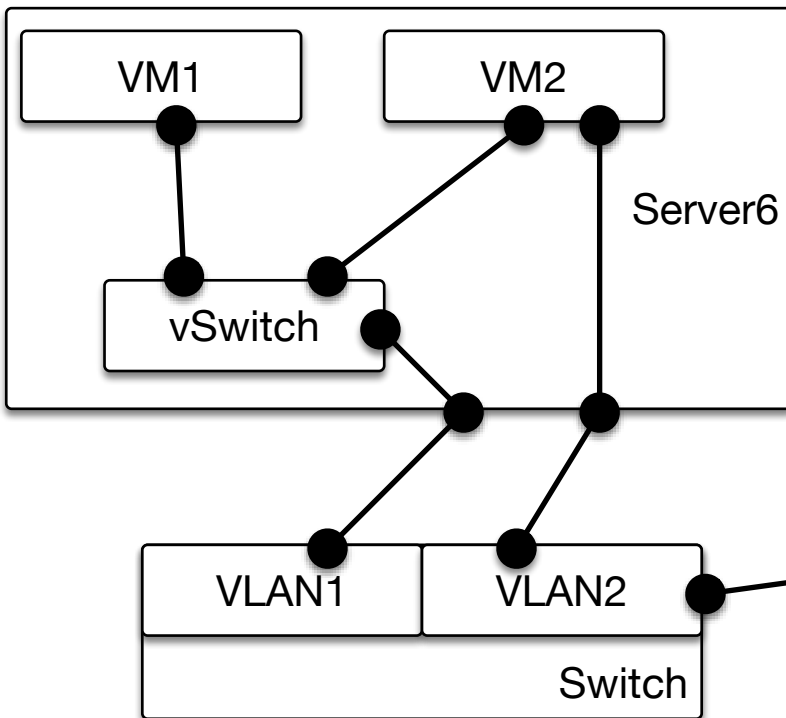
DNI 3 Structure + Node aspects



DNI 3 Structure + Performance

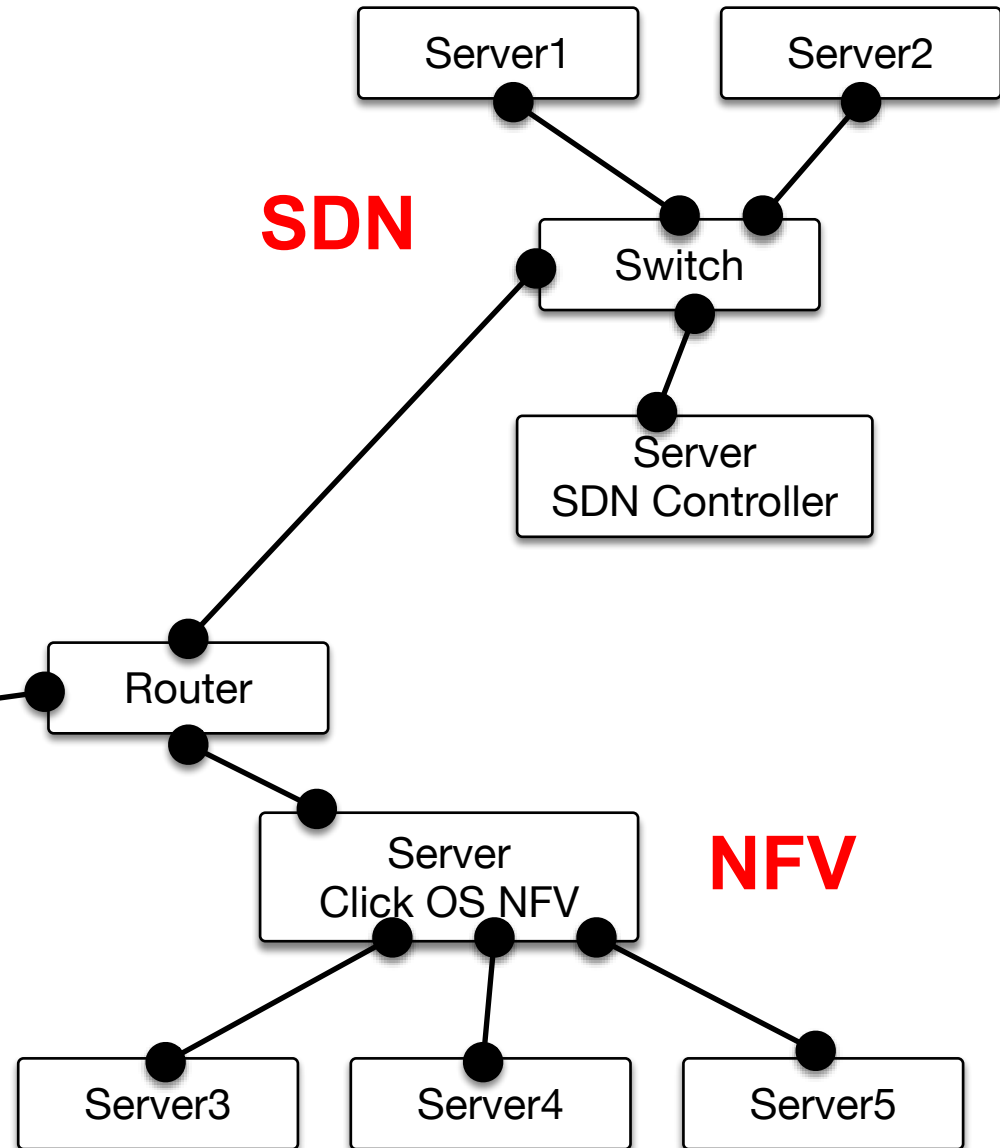


Server + VMs

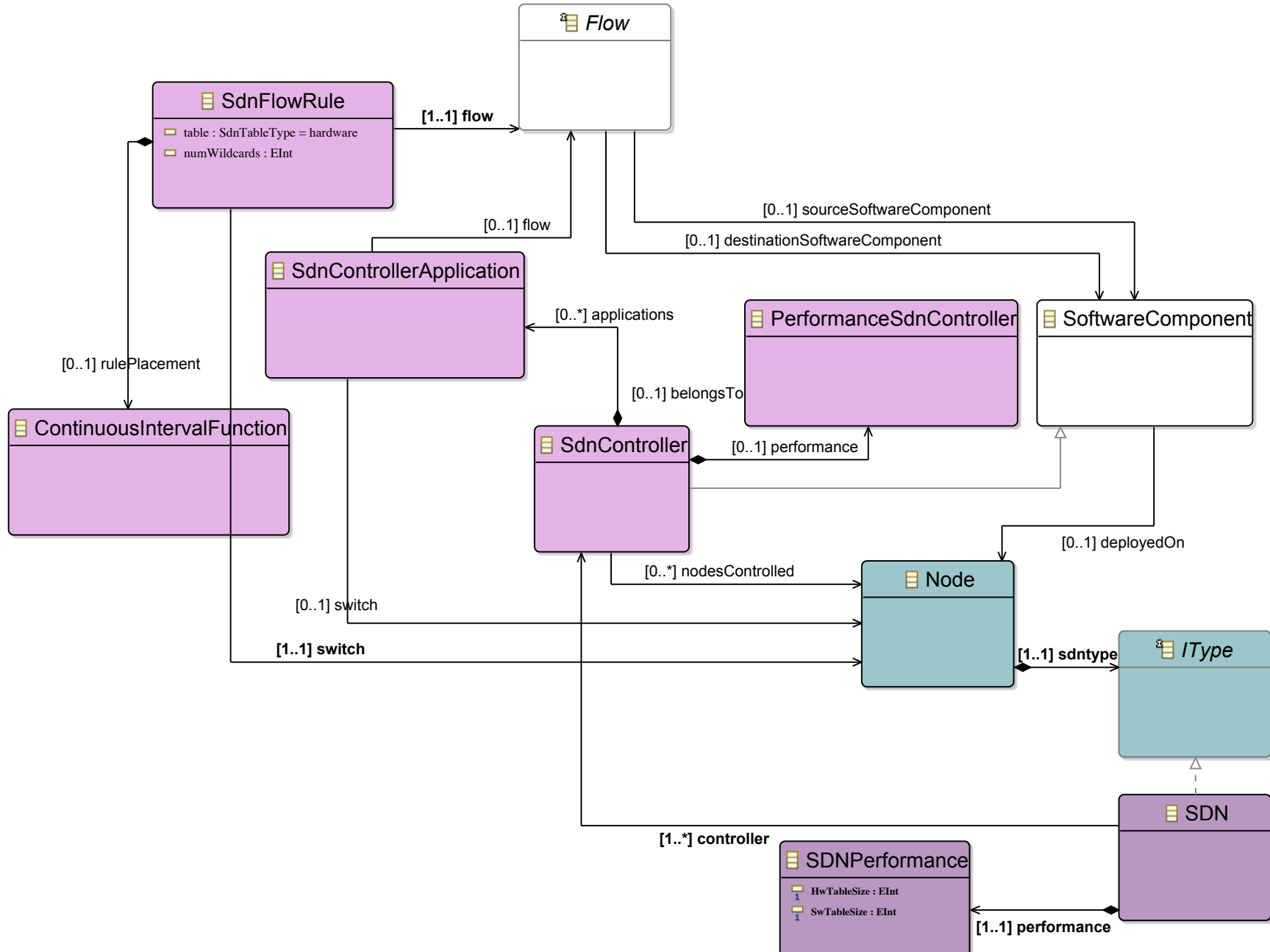


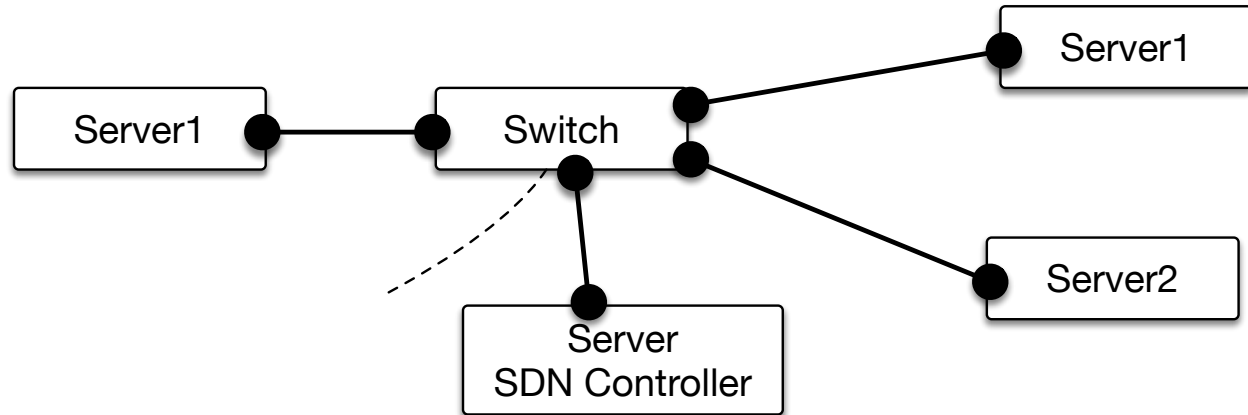
Switch + VLANs

SDN

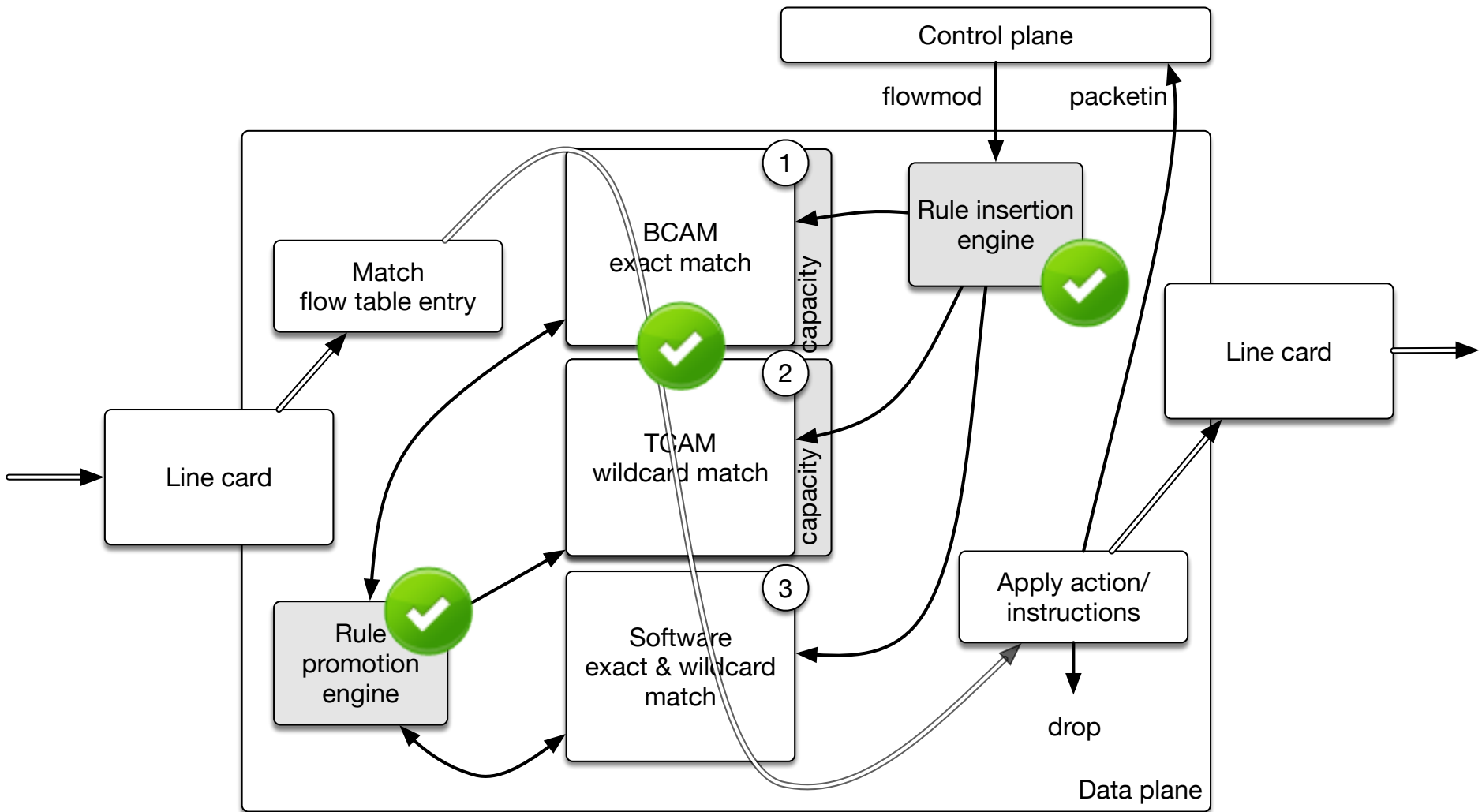


NFV

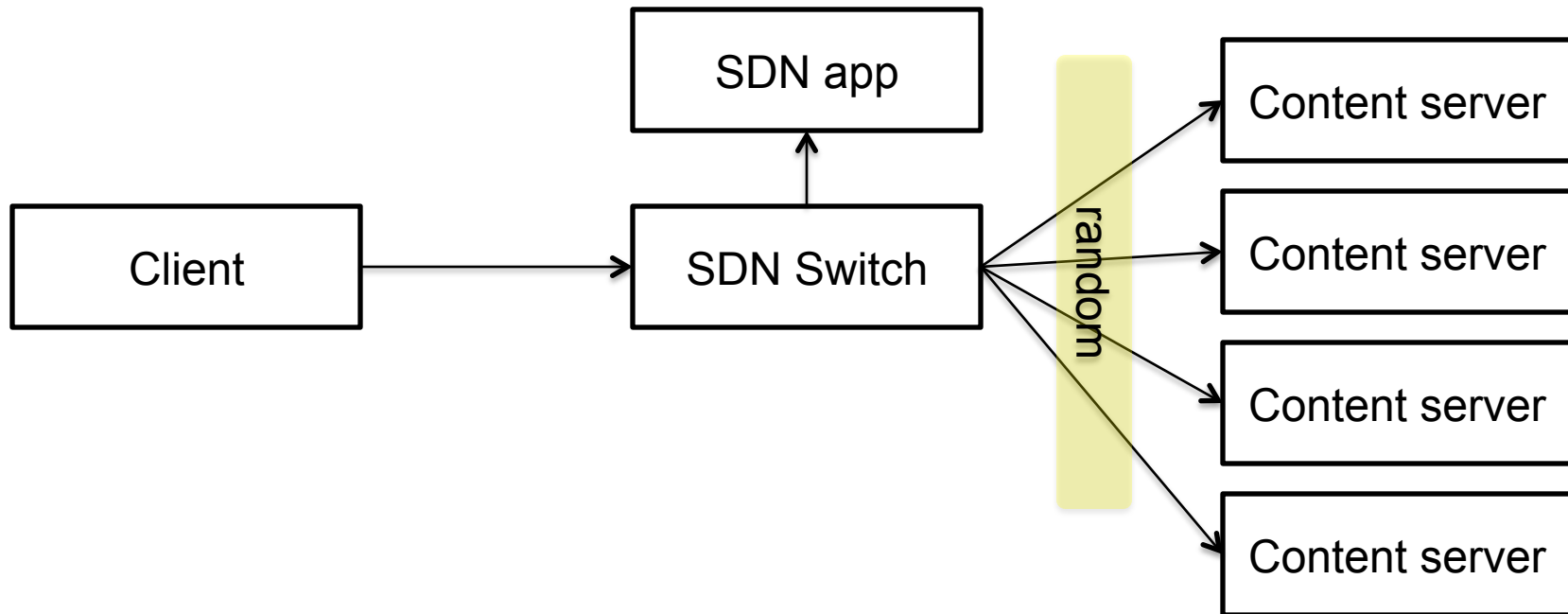




- ✓ DNI 3 allows partial models
- ✓ Thanks to “aspects” transformations are easier
- ✓ Easier manual building of models
- ✗ DNI 3 allows some illegal states. Solvable in OCL



Yet unsupported example



- ❌ Dynamic rerouting DNI2 and DNI3
- ❌ Reactive SDN scenarios (“install rule when...”)
 - Coarse/black box approach needed