Providing Infrastructure Functions for Virtual Networks by Applying Node Plug-in Architecture
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- **Background:** A component of VNode (i.e., redirector) contains an L3 switch, but slices could not use its functions, such as switching or routing.
- **Proposal:** A method for supporting L3 switch functions by extending the VNode plug-in architecture is proposed.

**Outline of plug-in architecture**
- New types of virtual nodes and links can be added to VNode.
- New types are implemented by a combination of two types of plug-ins: *Data plug-ins* and *Control plug-ins*.
- New types can be specified in a slice definition (RSpecs).

Plug-in architecture

A Slice design with a new type

```
<nodeSliver name="vrf1" ...>
  <instance type="virtual_router">
    <params>
      <param key="P1" value="V1"/>
      ...
      <param key="Pn" value="Vn"/>
    </params>
  </instance>
  <vports>
    <vport name="p1"/>
    ...
    <vport name="pm"/>
  </vports>
</nodeSliver>
```