**NETCONF Cheat Sheet**

### Network Configuration Protocol (NETCONF)
- Standard based IETF Protocol
- Provide configuration modification
- NETCONF Architecture is consist of two main elements as client and server.
- NETCONF uses RPC (Remote Procedure Calls)

### NETCONF in SDN
- Northbound Interface
  - Application Plane: Security, Routing, TE, QoS, MPLS, Other...
  - Management Plane: Control Plane, Southbound Interface, NETCONF
- Data Plane: Packet Forwarding

### NETCONF Protocol Stack
- Configuration Data
  - <data>
- Operations
  - Actions: <edit-config>, <notification>, <get-config>, <get> etc.
- Messages
  - RPC: <rpc>, <rpc-reply>
  - Connection Method: SSH, SSL etc.
- Transport
  - UDP, SSH, BEEP, SOAP, TLS

### NETCONF Configuration Data Stores
- Active Configuration
- Running Configuration
- Candidate Configuration
- Startup Configuration
- Modified but Not Applied Configuration
- Separately Stored Configuration

### NETCONF Server and Client
- Switch: <hello> (with capabilities)
- NMS: <close-session>
### NETCONF Cheat Sheet

#### NETCONF Operational Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;get&gt;</code></td>
<td>To get Running Configuration and the State Info.</td>
</tr>
<tr>
<td><code>&lt;get-config&gt;</code></td>
<td>To get all or a part of a configuration from a Configuration Data Store.</td>
</tr>
<tr>
<td><code>&lt;edit-config&gt;</code></td>
<td>To load all or a part of a Configuration to a Configuration Data Store.</td>
</tr>
<tr>
<td><code>&lt;copy-config&gt;</code></td>
<td>To replace all Configuration Data Store with another.</td>
</tr>
<tr>
<td><code>&lt;delete-config&gt;</code></td>
<td>To delete a Configuration Data Store.</td>
</tr>
<tr>
<td><code>&lt;commit&gt;</code></td>
<td>To copy Candidate Data Store to Running Data Store.</td>
</tr>
<tr>
<td><code>&lt;cancel-commit&gt;</code></td>
<td>To cancel confirmed commit.</td>
</tr>
<tr>
<td><code>&lt;discard-changes&gt;</code></td>
<td>To clear changes.</td>
</tr>
<tr>
<td><code>&lt;lock&gt;</code></td>
<td>To lock the configuration Data Store System.</td>
</tr>
<tr>
<td><code>&lt;unlock&gt;</code></td>
<td>To release the previously unlock configuration Data Store System.</td>
</tr>
<tr>
<td><code>&lt;close-sessions&gt;</code></td>
<td>To terminate NETCONF session gracefully.</td>
</tr>
<tr>
<td><code>&lt;kill-sessions&gt;</code></td>
<td>To terminate NETCONF session forcedly.</td>
</tr>
</tbody>
</table>