

Configuration in SONiC: Design Proposal and Update

Sep 26

Outline

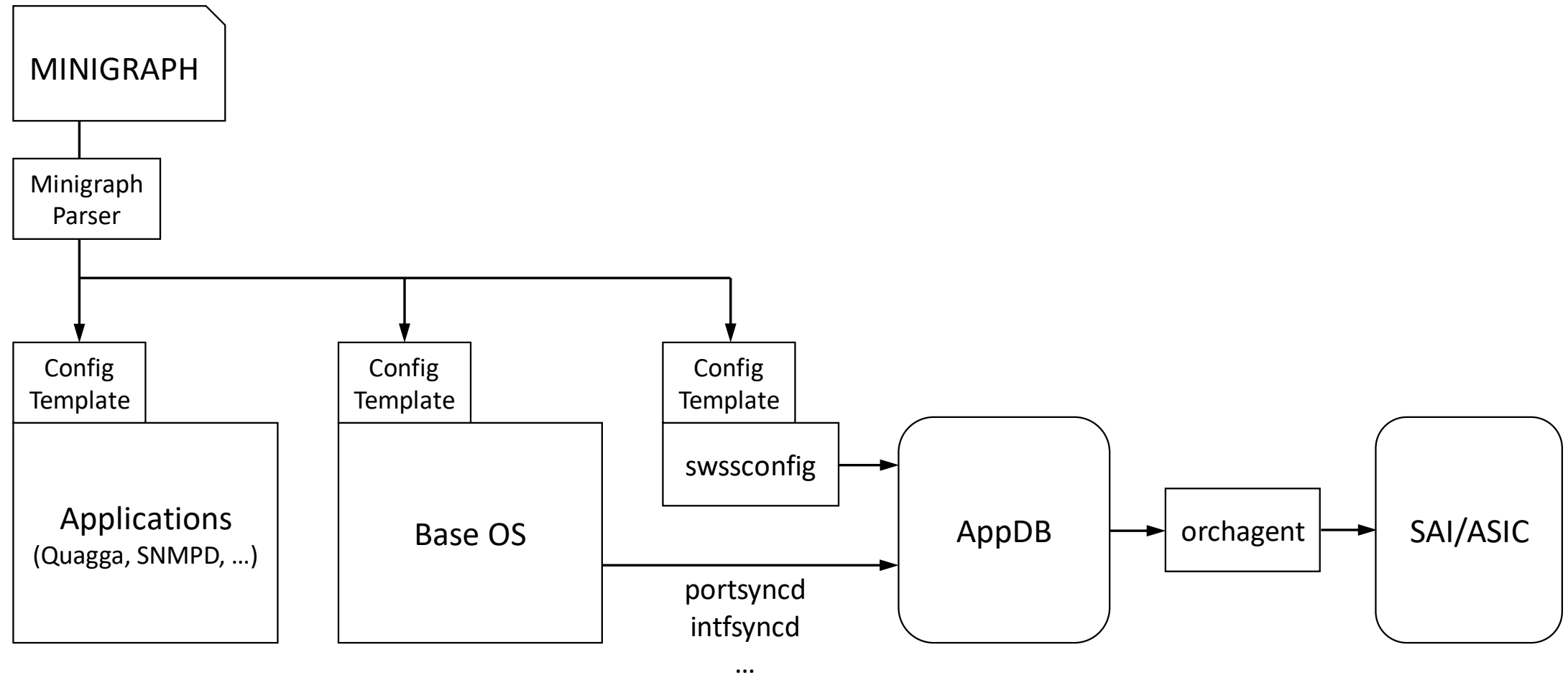


1. Past:
MINIGRAPH

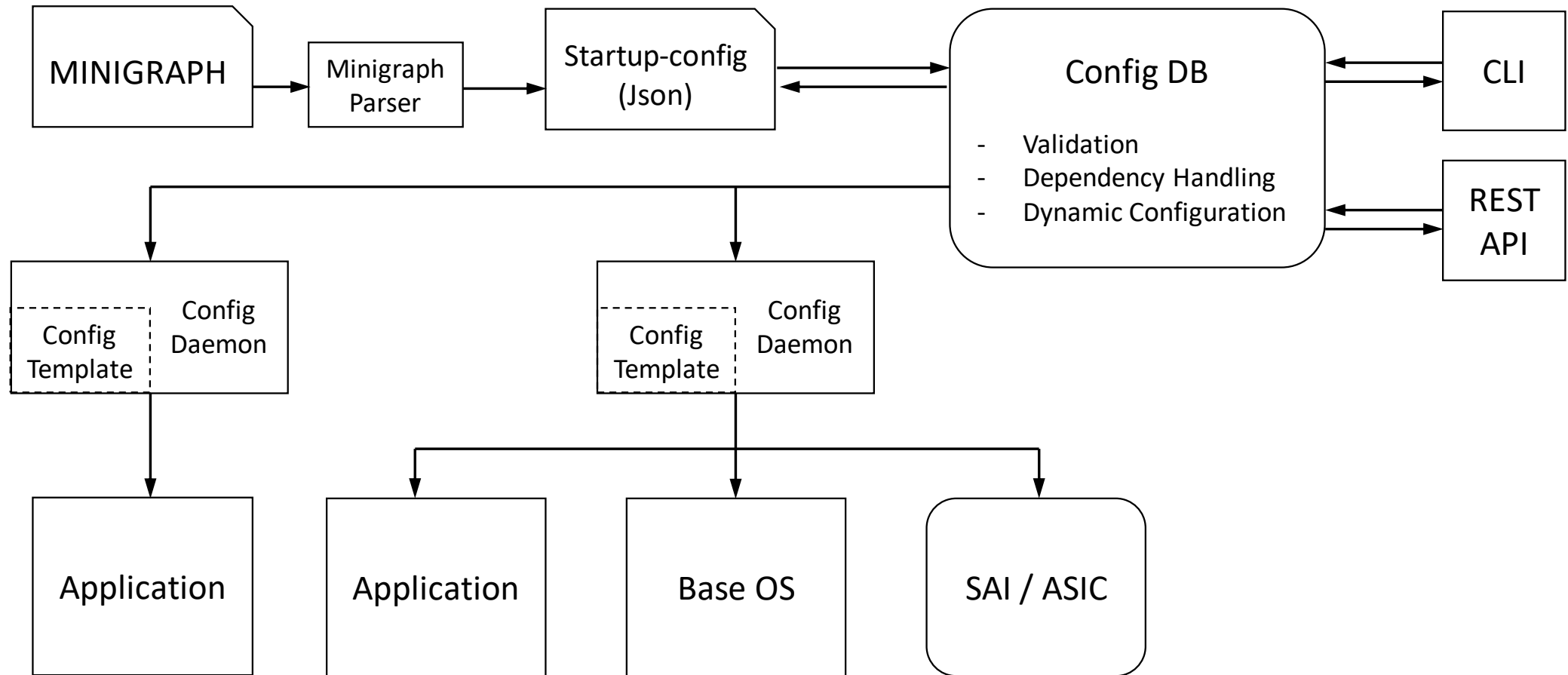
3. Now

2. Future:
ConfigDB

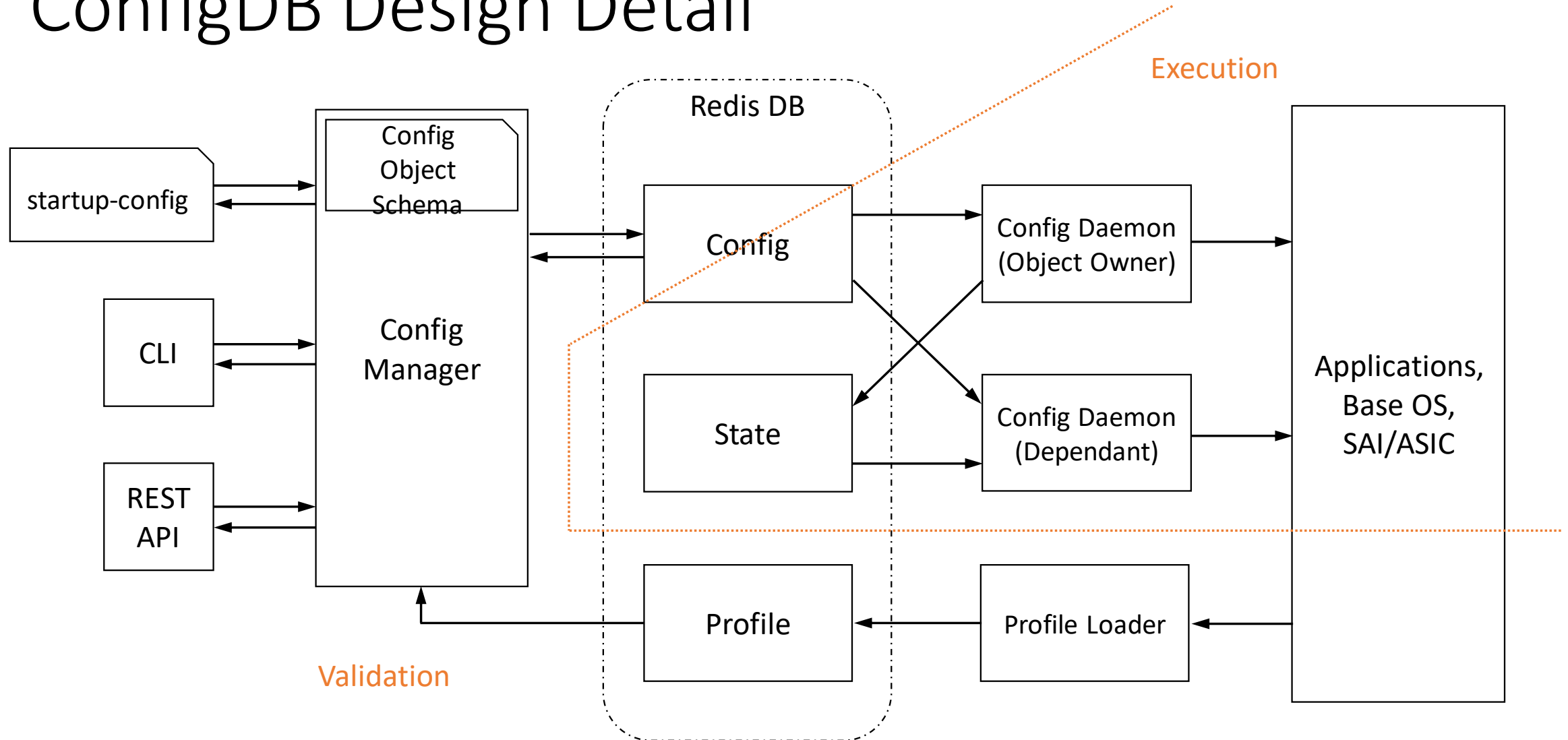
Legacy: Configuration with Minigraph



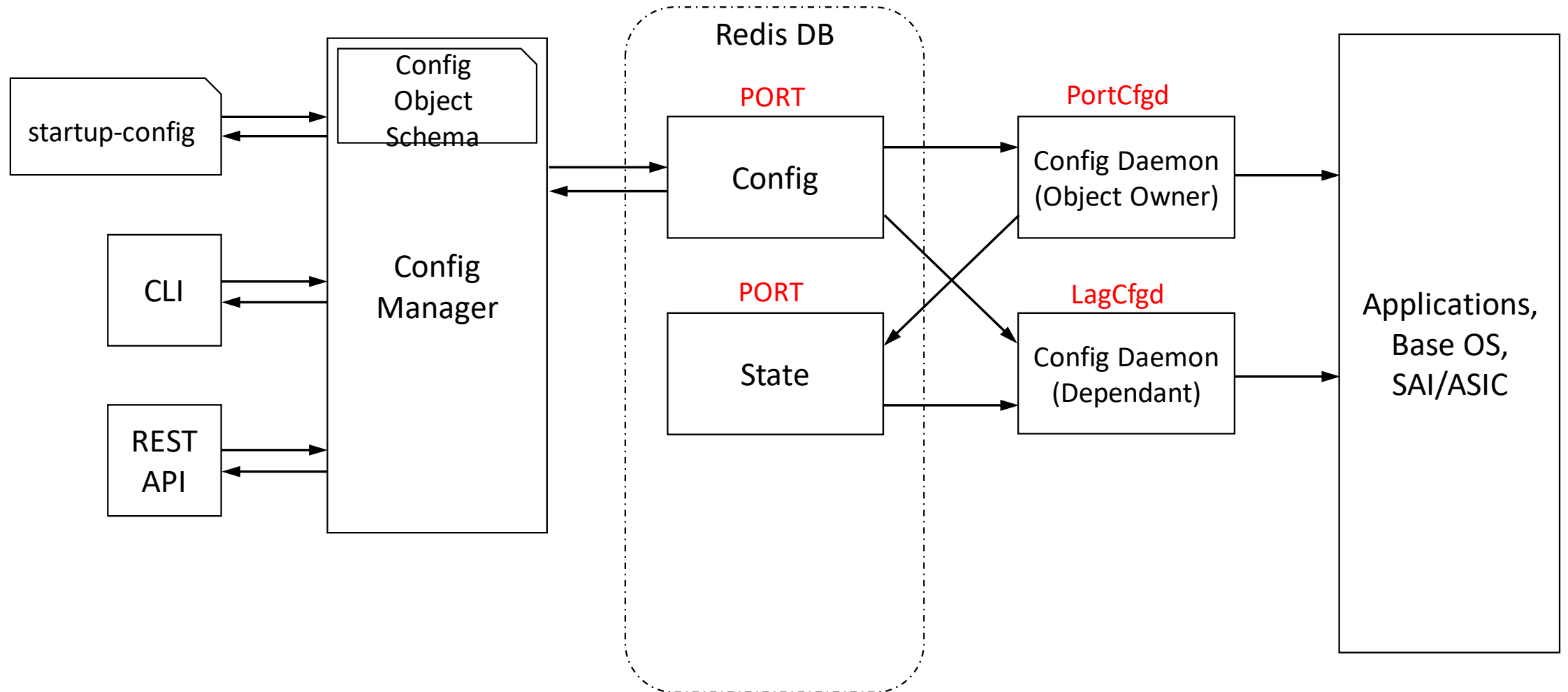
Blueprint: Configuration with ConfigDB



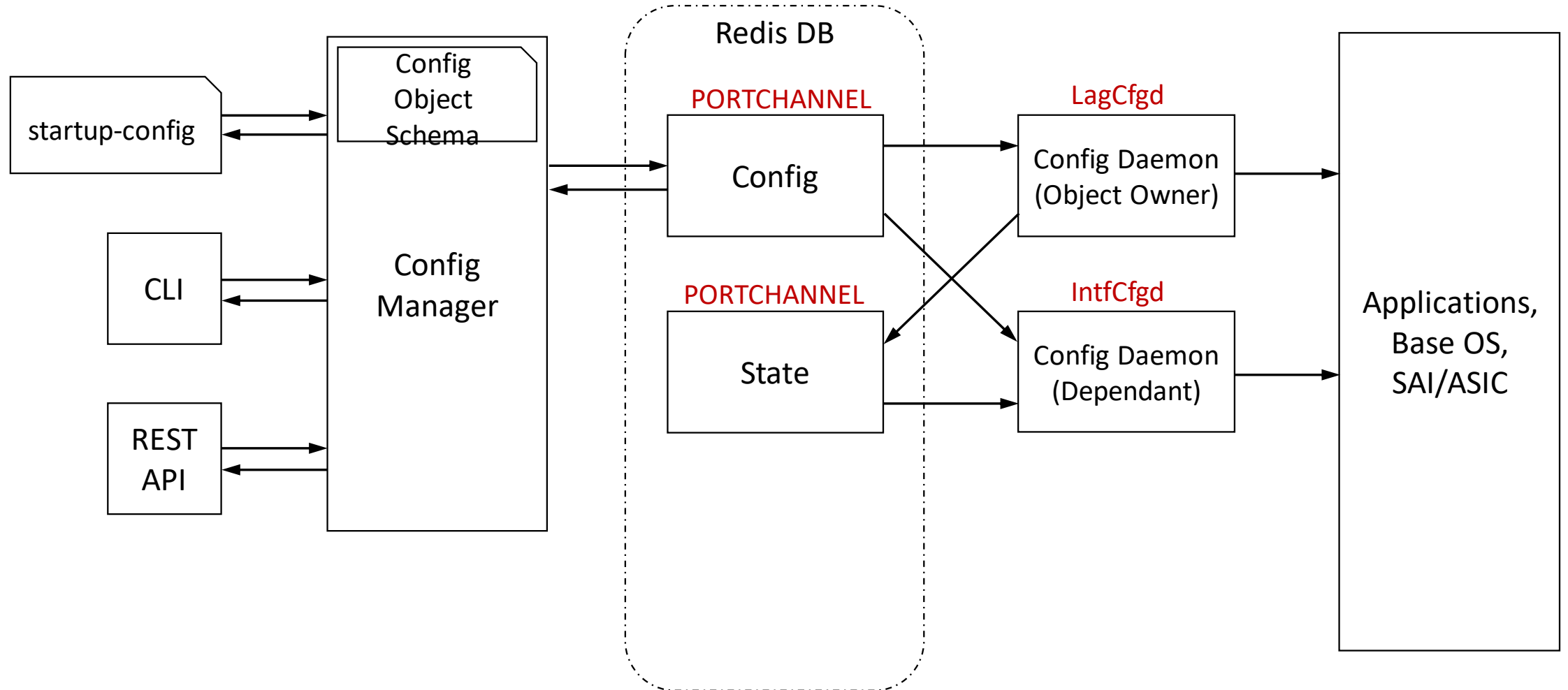
ConfigDB Design Detail



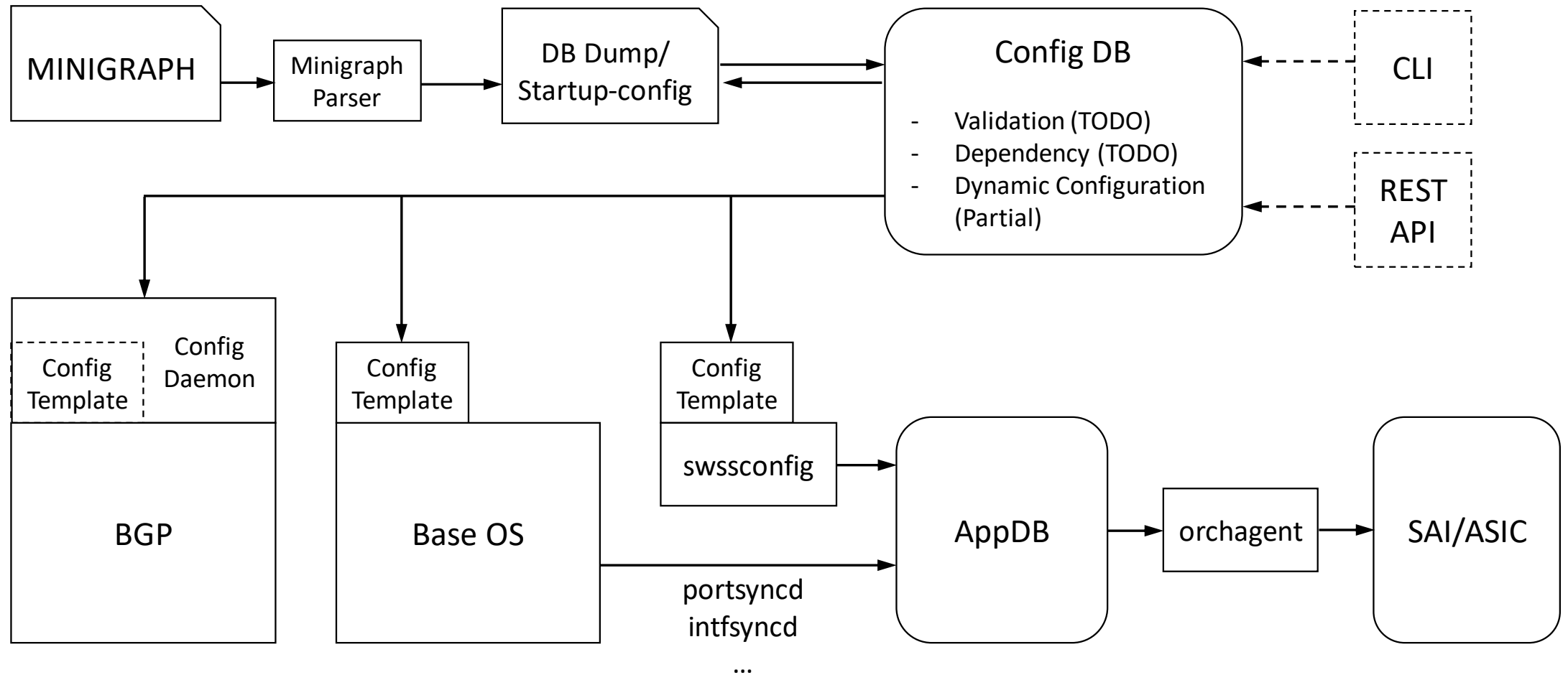
ConfigDB Design Detail - Sample



ConfigDB Design Detail - Sample



Status Quo July 2017



Backlog and Priorities

- Execution

- StateDB and dependency handling
- Config Daemon for Port/Interface/VLAN/LAG
 - Obsolete Netlink – portsyncd/intfsyncd – AppDB datapath

1st

- Config Daemon for remaining objects
 - Hostname, Mgmt. IP, NTP, SYSLOG, SNMP, ...

On Demand

- Validation

- Config Manager and validation w/ object schema
- CLI and REST API
- Validation w/ SAI Profile

2nd

Q/A and Disucssion

Table-Object Schema

- <https://github.com/Azure/SONiC/wiki/Configuration>

```
127.0.0.1:6379[4]> keys BGP_NEIGHBOR:*
1) "BGP_NEIGHBOR|10.0.0.31"
2) "BGP_NEIGHBOR|10.0.0.39"
3) "BGP_NEIGHBOR|10.0.0.11"
4) "BGP_NEIGHBOR|10.0.0.7"
...

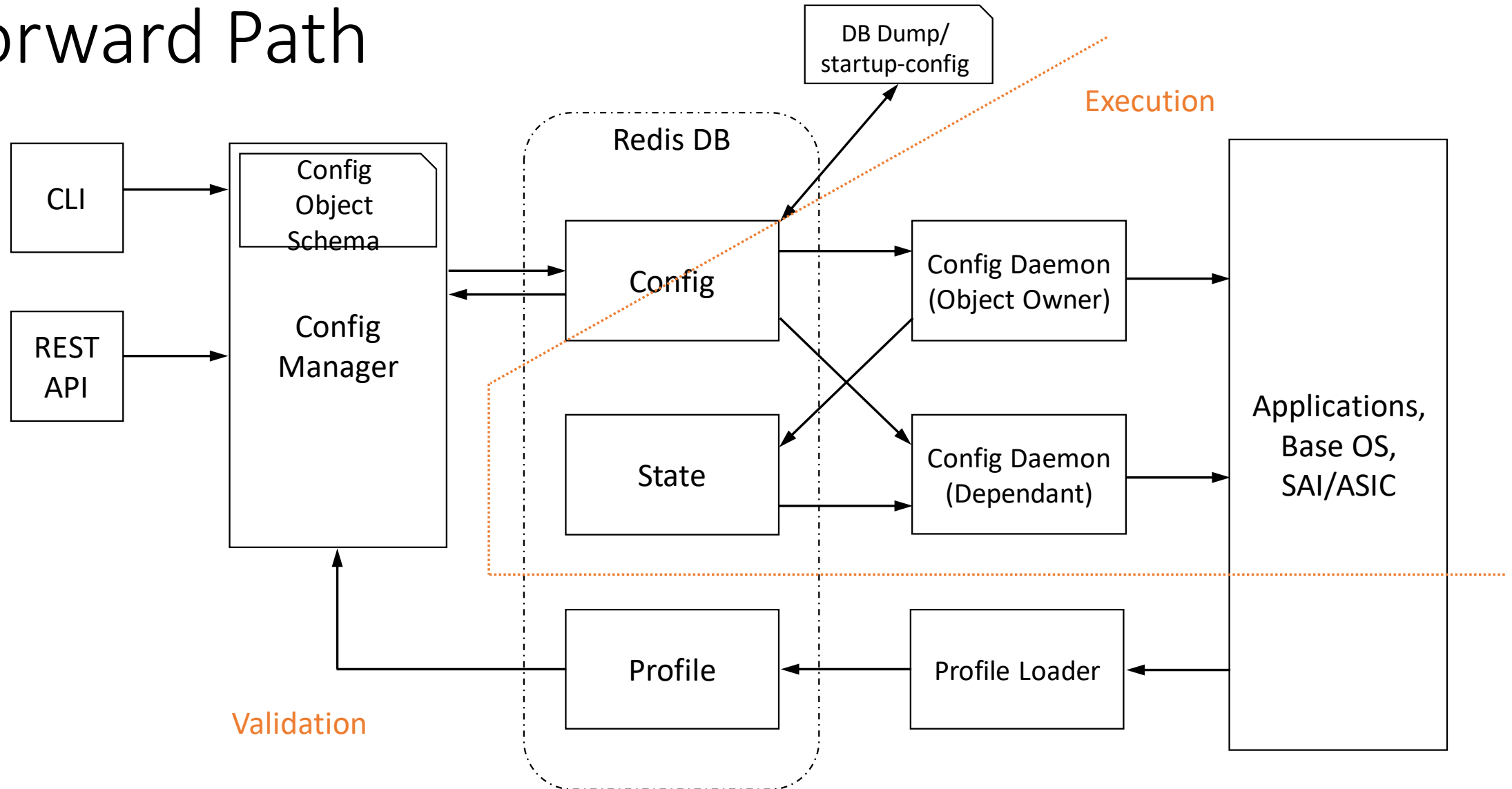
127.0.0.1:6379[4]> hgetall BGP_NEIGHBOR:10.0.0.3
1) "admin_status"
2) "up"
3) "peer_addr"
4) "10.0.0.2"
5) "asn"
6) "65200"
7) "name"
8) "ARISTA07T2"
```

```
"BGP_NEIGHBOR": {
  "10.0.0.61": {
    "local_addr": "10.0.0.60",
    "asn": 64015,
    "name": "ARISTA15T0"
  },
  "10.0.0.49": {
    "local_addr": "10.0.0.48",
    "asn": 64009,
    "name": "ARISTA09T0"
  },
  ...
}
```

Follow up

- Data-reading pipeline (from Config/State DB to CLI/REST)
- Object schema detail
- ConfigDB schema versioning and backward compatibility

Forward Path



Backward Path

