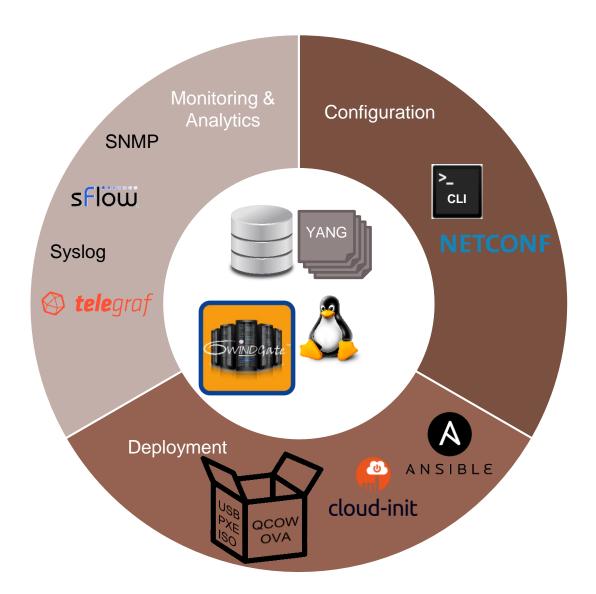


## **6WINDGate Open and Customizable Management**



- YANG-based management engine
- Configuration
  - Linux, NETCONF and CLI
- Granular statistics polling
  - CLI, NETCONF and SNMP
- sFlow
- KPIs
  - Streamed to a time-series database for analysis through a customizable graphical fronted
- Day-0 deployment and Day-1 configuration



## **6WINDGate Standard-Based Management Architecture**

## Configuration

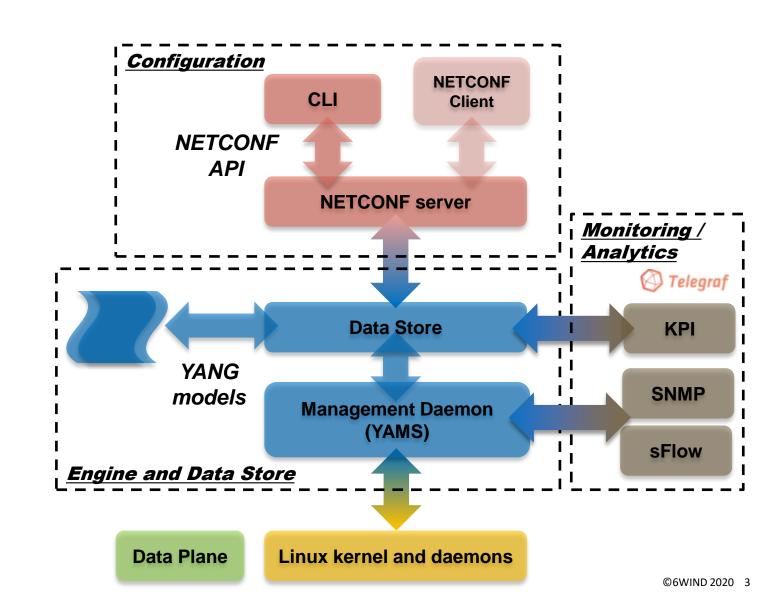
- NETCONF-based configuration
- 6WINDGate CLI client

## Engine and data store

- YAMS: Python-based engine configuring and monitoring all network components
- YANG model data store

## Monitoring / analytics

- SNMP / sFlow APIs
- Telegraf KPI agent collecting all statistics ready for streaming



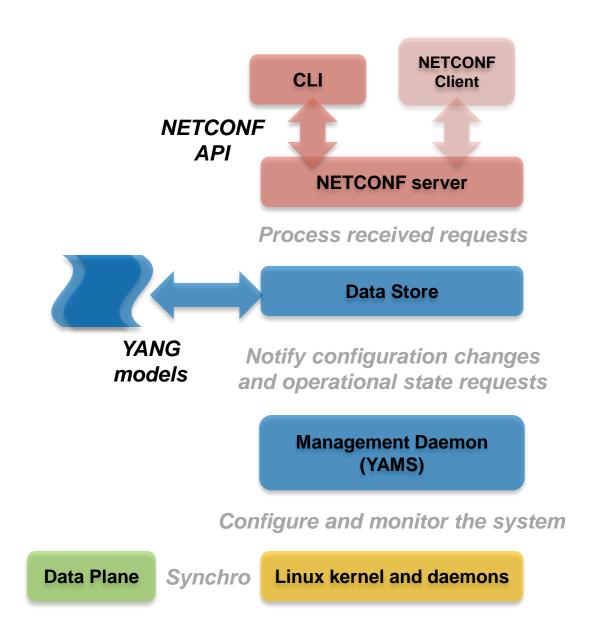


# **6WINDGate Configuration**

## YANG-based configuration engine and datastore with NETCONF support

- Startup, running and candidate datastore support
- Data consistency and constraints enforcement according to YANG models
- Full transaction and concurrency support
- Programmatic interface

- NETCONF client with YANG-based command validation
- Contextual help and completion
- Configuration files management (save/restore)





# **6WINDGate Monitoring / Analytics**

## Granular statistics polling

- CLI or custom NETCONF client
- Legacy SNMP

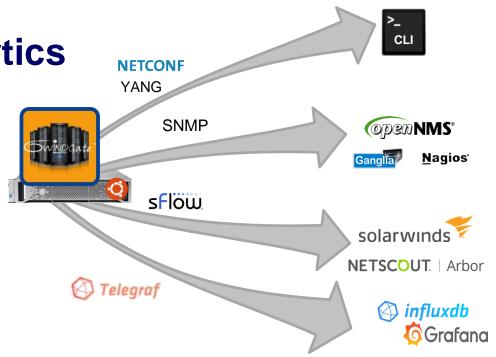
### sFlow

 Data plane packet sampling for integration with third-party collectors

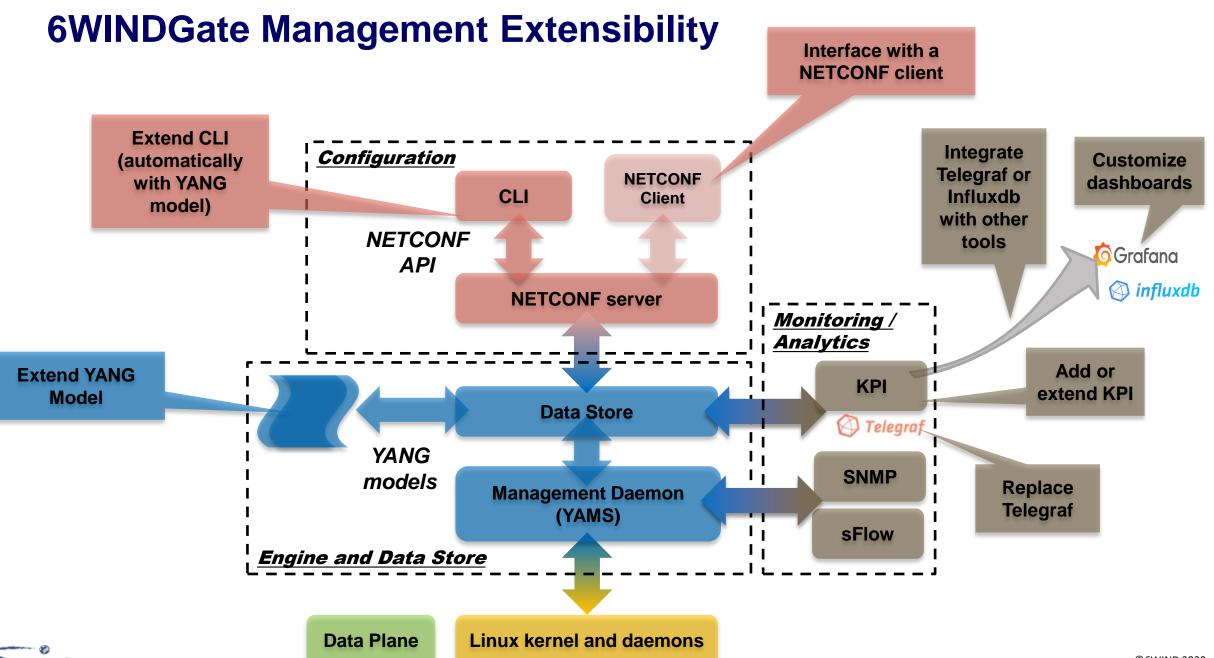
### KPIs

- KPIs are exported to TSDB (Telegraf / InfluxDB)
- Analysis with graphical frontend (Grafana)
- Customizable dashboards on github



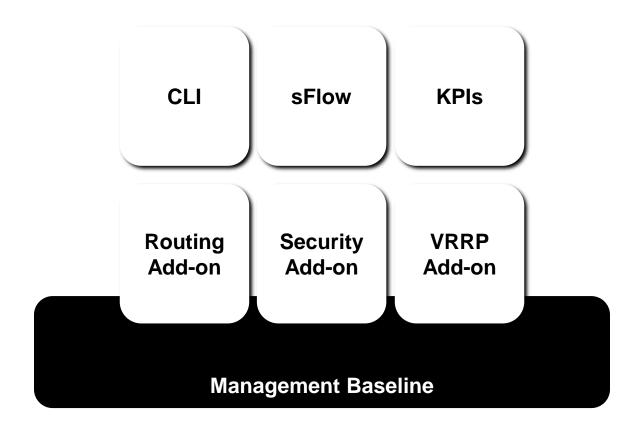






# **6WINDGate Management Plane**







# **6WINDGate Management Modules**

- 6WINDGate can be managed by Linux thanks to the Linux / Fast Path Synchronization module
- 6WINDGate Management modules provide integrated management including CLI and programmatic APIs instead of Linux shell and inconsistent configuration files

- Management Baseline provides Fast Path management
  - NETCONF, SNMP
  - YANG-based datastore (sysrepo)
- CP and HA management through add-ons
  - Routing, Security
  - VRRP
- Additional user interface modules
  - CLI
  - Analytics / KPIs
  - Analytics / sFlow





# **Example: Add Management For A Telnet Server**

■ See example in <u>6WINDGate Management Baseline Module Datasheet</u>

