



# ConfD SNMP Agent

## Fully Featured SNMP Agent

ConfD is a production-ready on-device management software solution for network equipment suppliers. Using ConfD, developers can reduce development costs and speed time-to-market while supporting the latest and most advanced network management capabilities in their products.

### ConfD Components

ConfD SNMP Agent is a fully featured and integrated SNMP agent providing north-bound SNMP v1, v2, and v3 interfaces for element management and monitoring. The SNMP Agent coexists with NETCONF, Web UI, and CLI using the same built-in configuration database and instrumentation. Tail-f's ConfD allows developers to describe their networking application once and then automatically render CLI, Web UI, and NETCONF interfaces from that single underlying model. The SNMP Agent further extends the value of Tail-f's architecture by avoiding the tedious development effort of writing separate instrumentation code to expose configuration and operational data through SNMP. In this environment NETCONF, CLI, Web UI, and SNMP interfaces use a single configuration database and share one set of common instrumentation functions. The XML-centric management backplane in ConfD implements the operations of all management interfaces and works with a single AAA subsystem and data model.

Figure 1

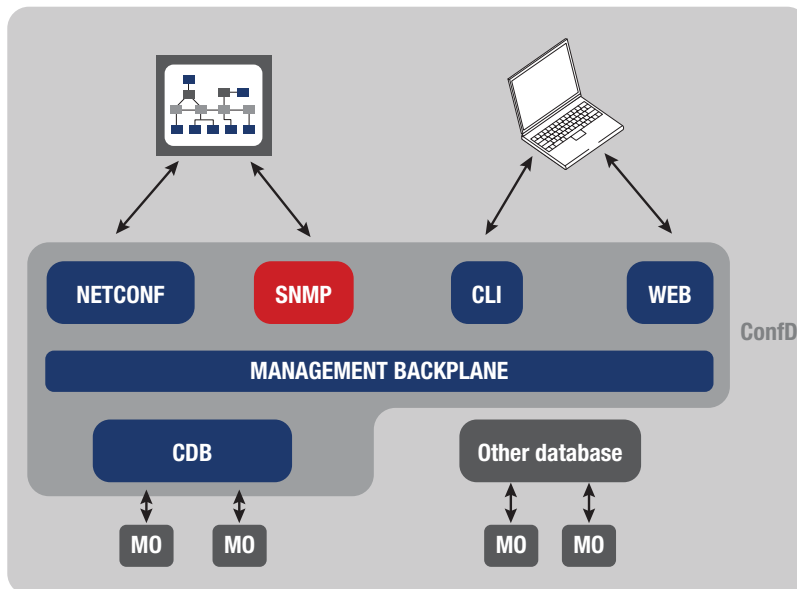


Figure 1: Shows the overall structure of the ConfD architecture.

### Fully Featured SNMP Support

ConfD SNMP Agent is fully featured and supports SNMP v1, v2c, and v3 including the various security features in v3 including USM and VACM. The MIB compiler supports SMIv1 and SMIv2. ConfD can be used both as master-agent or sub-agent in scenarios where an existing SNMP agent needs to coexist in the same element.

### ConfD SNMP Agent Functionality

- Extensible SNMP Agent supporting SNMPv1, SNMPv2c, and SNMPv3
- MIB compiler for SMIv1 and SMIv2
- Configuration data is specified in a ConfSpec (XML specification format)
- Common instrumentation functions for controlling managed objects via all management interfaces
- SNMP Agent can use ConfD AAA as well as SNMP-specific authentication schemes to manage access
- Support for master and sub-agent

### SNMP RFCs Supported

- SNMPv2-MIB (RFC3418)
- SNMP-FRAMEWORK-MIB (RFC3411)
- SNMP-USER-BASED-SM-MIB (RFC3414)
- SNMP-VIEW-BASED-ACM-MIB (RFC3415)
- SNMP-COMMUNITY-MIB (RFC3584)
- SNMP-TARGET-MIB (RFC3413)
- SNMP-NOTIFICATION-MIB (RFC3413)
- SNMP-MPD-MIB (RFC3412)



## Deployment Options

All that is needed to open up a configuration database to be accessed by an SNMP Manager are simple bindings from SNMP MIB objects to Tail-f's XML-based configuration specification language (ConfSpec). MIB objects and XML elements are associated through a mapping file. While standard or proprietary MIBs are usually in place, there are two deployment scenarios that drive how MIB and XML data are interconnected:

1. SNMP access is added for a subset of the elements in an already existing XML specification. In this case, the MIB and the association or mapping file should be written to bind MIB objects to the elements in the XML specification.
2. The MIBs are the basis for generating XML specifications and association or mapping files. In this case, the XML specification generated will resemble the structure of the MIBs.

## SNMP Gateway

ConfD SNMP Gateway makes data from existing SNMP agents available through the management interfaces (such as CLI and NETCONF). In this scenario, ConfD co-exists with an SNMP agent on the device and uses the SNMP protocol to retrieve data from the agent presenting it as a part of a unified view of all configuration and operational data to the northbound agents.

## Supported Platforms

- Linux
- NetBSD
- FreeBSD
- QNX
- Solaris

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