

Course ID
SNMP-AGENT
Course Duration
1 day

Course Title
SNMP: Agent Development

Aimed At SNMP Agent software developers.

Group Size 5-25

Prerequisites

- SNMP Essentials: A Fast-Track Tutorial (SNMP-ESSENT, 3 days)
- SNMPv3: Secure SNMP (SNMPV3, 1 day)

Course in a Nutshell

After an Enterprise's MIB design is finalized and fully validated, the next task is Agent software development. A number of issues need to be considered in selecting a development kit.

- Targeted operating system (or systems)
- Pre-existence of SNMP agents on those platforms
- Embedded platforms or not
- Tool cost vs. time-to-market (and market opportunity cost)
- Protocol validation issues

Once a tool is selected, many common coding issues will be encountered. This intensive, one-day tutorial will prepare you to deal with these issues and allow you to proceed quickly to a deliverable product. Example topics include choosing how to best access and manage MIB-related data, and the number (and purposes) of agent code threads that may be needed. We will reveal a number of very surprising problems drawn from our own extensive SNMP experience related to deployed agents, followed by a discussion of agent testing strategies, descriptions of specific tests, and the presentation of a comprehensive test plan from a past project. You will learn the important details of syntax encoding for "get", "set", "trap" and other message types. The course will conclude with the review of a checklist for productizing Enterprise MIBs and agents.

Learn How To

- Watch out for common agent problems
- Make agent architectural and SDK choices
- Define agent semantics
- Coexist (if necessary) with native agents
- Be aware of important coding issues
- Describe the details of SNMP message syntax
- Fully test your agent prior to deployment
- Productize your MIB and agent products

**Course
Outline**

- True stories of delivered agents with significant deficiencies
- Agent development steps
- Defining goals and tradeoffs
- Agent SDK selection criteria
- Agent architectural choices and issues
- Agent semantics
- Coexistence of enterprise agents with native platform agents
- Trap design
- Agent coding issues
 - Data acquisition
 - Read-write data management
 - Returning multiple values
 - Processing get-next requests
 - Table index data type choices
 - Multi-step “set” processing
 - Code threads and uses
 - Trap send logic
 - Agent initialization and log files
- SNMP message syntax and coding
- Agent testing (static and dynamic)
- Productizing an Enterprise MIB and agent
- Wrap-up: Course recap, Q/A, and evaluations

**How You Will
Learn**

- You will learn in interactive lecture/workshop format from an instructor who’s an expert practitioner and teacher of SNMP.
- Along with lecture, we will use interaction and activities to enrich the instruction and drive home the essential points.
- The course materials are designed to be an instructional aid as well as a lasting professional reference.

Revised

February 19, 2007