

ASN-1Step

Meeting New Challenges

Complex ASN.1 messages and changing ASN.1 syntaxes challenge even the most resourceful developers. Reduce the time and risk involved in ASN.1 application development and maintenance with OSS Noklava's new, full featured, easy to use tool, ASN-1Step.

The Challenge

ASN.1 messages exchanged between systems can be highly complex. Ensuring the accuracy of these messages demands the creation or verification of many messages, often involving different ASN.1 syntaxes. Immature systems, with frequently changing ASN.1 syntax, provide yet another challenge because messages must be recreated whenever new syntax definitions are released.

Today's solutions require significant development time - creating message building software, and interpreting decoded messages to determine their validity. These solutions are difficult to develop, error prone, and require proficient software engineering skills. All these activities get in the way of your primary goal . . . developing an error free system.

Meet the Challenge

Take a look at some of the exciting, new features of ASN-1Step.

ASN-1Step, a cost saving, easy to use solution, allows you to quickly build and view encoded messages according to any ASN.1 syntax without developing software.

Intuitive GUI

No programming or training is required. In a short time you can use the Windows based GUI to start building and verifying complex messages.

Create new messages by selecting from a list of Available Messages defined by the ASN.1 syntax. Values for mandatory types are automatically created. Simply modify the initial values with the values you desire. Optional types can be included or excluded, and the lengths of variable length types can be set.

Rich Graphical Display

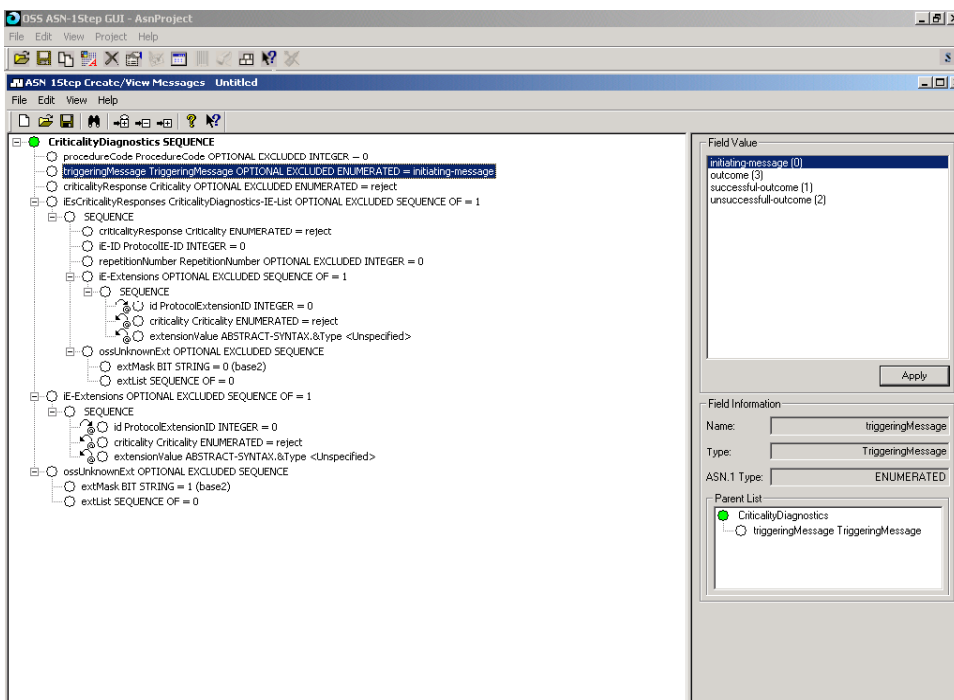
Display received messages in human readable format rather than as a string of bits or hex characters. Easily verify that messages are formed correctly.

Strategic Benefits

- Enhance the capabilities of your existing system
- Reduce product development and maintenance time
- Increase your return on investment
- Boost your value proposition
- Gain an immediate edge on the competition

Key Features

- Easy-to-Use Graphical User Interface
- Create and modify complex ASN.1 messages with out writing any code
- Immediate validation feedback
- Detailed textual view of ASN.1 messages
- Unlimited ASN.1 Syntax Support
- Decode messages into human readable format
- Rich encoding / decoding features including XML support



Validation

Immediate feedback is provided if an incorrect type value is entered. For enumerated types, a drop down list displays all valid values.

Powerful Search

Locate fields in large messages. Use the Find Dialog to search for a particular text string within a message. If the text is found then the associated field is selected.

Rich Decoding Engine

Visibility into the message data is critical. Working with data in primitive trace statements and raw hex dumps is very tedious and error-prone. Complex messages increase the chance for error. With ASN-1Step's decoding feature, you see data in a highly readable format. ASN-1Step can decode messages encoded using BER, DER, PER, and XML encoding rules.

Unlimited ASN.1 Syntax Support

ASN-1Step will operate according to any ASN.1 syntax.

Command Line or GUI

The choice is yours.

Several of the ASN-1Step functions are available through either a command line interface, or an easy to use Windows based GUI.

Syntax Checking

Quickly pinpoint syntax and semantic errors that may have taken hours to otherwise locate.

Encode

See how the encoding of any value will look before even beginning to write your application.

Decode & Analyze

Debug encodings within minutes – a process which may have otherwise taken hours to perform.

Generate Test Encodings

Quickly and easily analyze and document application messages.

Supported ASN.1 Standards

ITU-T Recommendation X.680 (2002)
ITU-T Recommendation X.681 (2002)
ITU-T Recommendation X.682 (2002)
ITU-T Recommendation X.683 (2002)
ITU-T Recommendation X.690 (2002)
ITU-T Recommendation X.691 (2002)
ITU-T Recommendation X.693 (2002)

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OSN ASN-1Step GUI - AsnProject
File Edit View Project Help
Input Files
C:\Documents and Settings\...
Diagnostic Messages:
Syntax Check Summary:
Input ASN.1 module(s) successfully passed the syntax check.
List of valid PDU numbers and associated PDU names:
1 Num
2 E
3 S1
4 I
Trace Data:
type OBJECT IDENTIFIER [length = 3.0]
{ 1 2 3 4 }
Total PDV length = 7.0
PDU successfully encoded, in 7 bytes:
032A0304 02010A
***** Run 1 of the PER ALIGNED ossPrintPER *****
ossPrintPER output...
value AttributeTypeAndValue ::=
{
--TYPE INFORMATION: SEQUENCE
--OFFSET: 0.0
type { 1 2 3 4 }
--TYPE INFORMATION: OBJECT IDENTIFIER
--OFFSET: 0.0; LENGTH: 4.0
--length: .03 (decoded as 3)
--contents: .2A.03.04
--open type length: .02 (decoded as 2)
value INTEGER: 10
--TYPE INFORMATION: OpenType - identified as INTEGER
--OFFSET: 5.0; LENGTH: 2.0
--length: .01 (decoded as 1)
--contents: .0A
}
--TOTAL LENGTH: 7.0
ossPrintPER finished...
***** Run 1 of the PER ALIGNED Decoder *****
Tracing Information from Decoder...
AttributeTypeAndValue SEQUENCE [fieldcount (not encoded) = 2]
type OBJECT IDENTIFIER [length = 3.0]
{ 1 2 3 4 }
```