Anatomy of a model script

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Defining a model constitutes writing a model script defining the states and behaviors for the system or process that is being modeled.

A model script consists of four sections:

1. Header
2. States
3. Behaviors
4. Model

The following sections are explained w.r.t. the simple script:

```
[header]
NAMESPACE = NET.BASE_PROTO
NAME = IPPKTPAIR
QUALIFIER = {eventtype='PACKET_*'}

[states]
ip_pkt_sd = {sipaddr = $1, dipaddr = $2, protocol=$3}
ip_pkt_ds = {sipaddr = $ip_pkt_sd.dipaddr , dipaddr = $ip_pkt_sd.sipaddr,
                      protocol=$ip_pkt_sd.protocol}

[behavior]
b = ip_pkt_sd ~> ip_pkt_ds

[model]
IP_PKTPAIR(eventno, eventtype, timestamp, timestampusec, sipaddr, dipaddr, protocol) = b
```

Header Section

The header section contains the meta-information about the model and defines four variables:

NAME

An overall NAME for the model. The NAME is unique in the namespace and is used for identifying scripts independent of their filename and for importing models into other scripts.

NAMESPACE

A NAMESPACE defines a logical space for the state, behavior and model variables in the script.

QUALIFIER

The QUALIFIER defines a constraint expression that specifies the events that can be processed by this script. For example, eventtype = PACKET * means that this model can only process events beginning with PACKET.

IMPORT

IMPORT variable identifies one or more previously defined models from the knowledge base that should be imported into the current model.

State Section

The states section consists of one or more state definitions.

Refer to the models in the knowledgebase for details. This section will be updated.

Behavior Section

The behavior section consists of one or more behavior definitions that combine states or other behaviors using the logical, temporal and interval temporal operators provided by the language.

Refer to the models in the knowledgebase for details. This section will be updated.

Model Section

Refer to the models in the knowledgebase for details. This section will be updated.
