



SBM MIB

<http://www.ietf.org/internet-drafts/draft-ietf-iss11-is802-sbm-mib-00.txt>

45th IETF, Oslo, Norway

Andrew Smith - Extreme Networks

Ramesh Pabbati - Microsoft

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Scope

“This memo includes a set of manageable objects for RSVP/SBM server implementations. These are in addition to those already described in RFC 2206, RFC 2213 and RFC 2214. Specifically, it describes parameters for control of the base signaling protocols themselves, as well as some of the admission control decisions. These definitions are not intended to be exhaustive but they have been identified as useful for practical implementations.”

“SBM server components of the ISSLL/IS802 architecture require some configuration parameters for operational use. These fall into 2 main areas: configuration of RSVP protocol operation and configuration of SBM-specific parts. For the former, RFC 2206, RFC 2213 and RFC 2214 cover some configuration operations as SNMP MIBs and some additional objects are provided here.”

Groups

sbmSbmConfigGroup

This group contains objects for configuration of SBM protocol parameters including control of DSBM elections, the parameters that DSBMs will advertise if they win the election and the lower-layer traffic class mappings to be used when admitting flows to these classes.

sbmRsvpConfigGroup

This group contains objects for configuration of RSVP-related parameters, in particular for policy RSVP policy decision handling.

sbmSbmStatisticsGroup

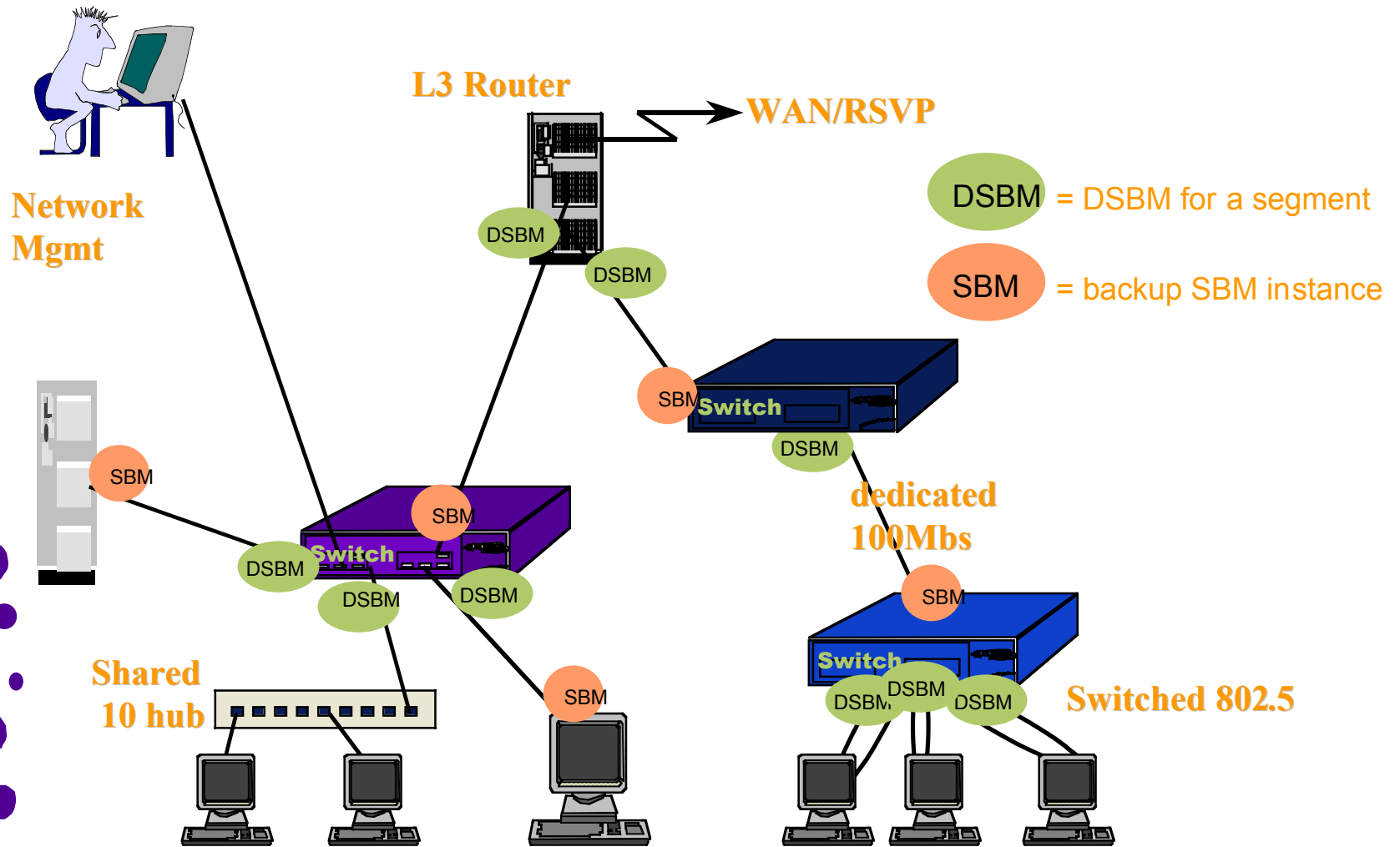
This group contains a whole bunch of per-SBM protocol statistics and error counters.



Relationship to other MIBs

- **SBM interfaces correspond in some cases to *physical* interfaces in ifTable. In other cases they might correspond to *logical* interfaces e.g. per-subnet.**
- **SBM interfaces which are capable of handling outgoing sessions should each be represented by an entry in the per-interface tables of the intserv MIB (RFC 2213).**
 - N.B. see issue 2
- **SBM interfaces which are capable of handling outgoing Guaranteed Service sessions should be represented by an entry in intSrvGuaranteedIfTable (RFC 2214). This entry can be used to characterise the delay parameters that the SBM will use in its admission control algorithms.**

Example of where SBM instances go



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SBM Protocol Configuration

sbmConfigTable

DESCRIPTION

"A table of configuration information per SBM instance. This might be e.g. per-subnet for a shared LAN or per-network-interface for a switched LAN. For a full-duplex switched LAN it might only represent the transmit direction: in this case the receive controls will have no effect. Entries in this table are created automatically by the agent when a new SBM entity is created e.g. by addition of new physical hardware or creation of a new subnet."

INDEX { sbmIndex }

SEQUENCE {

sbmIndex, sbmDescription, sbmIfIndex, sbmEnable,
refreshInterval, deadInterval, electionPriority,
maxNonResvTxBucketRate, maxNonResvTxBucketDepth,
maxNonResvTxPeakRate, maxNonResvTxMinPolicedSize,
maxNonResvTxMaxPacketSize

}

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RSVP-related configuration

Stuff for control of RSVP policy decisions:

`sbmRsvpConfigTable`

```
INDEX { sbmIndex }
```

```
SEQUENCE {
```

```
    sbmRsvpCopsEnabled          TruthValue,
```

```
    sbmRsvpSenderPolicyEnabled TruthValue,
```

```
    sbmRsvpReceiverPolicyEnabled TruthValue,
```

```
}
```

Traffic Class Mappings

sbmTrafficClassConfigTable

DESCRIPTION

"A table of parameters for configuring the characteristics of the mapping of sessions into layer-2 traffic classes."

INDEX { sbmIndex, sbmTrafficClass }

SEQUENCE {

 sbmTrafficClass INTEGER (0..7),

 sbmDelayBoundTarget Integer32,

 sbmTrafficClassEnabled TruthValue

}

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SBM Statistics

per SBM instance, all Counter32, read-only


sentBytes, receivedBytes, receivedRsvpPathMsgs,
receivedRsvpResvMsgs, receivedRsvpPathErrMsgs,
receivedRsvpResvErrMsgs, receivedRsvpPathTearMsgs,
receivedRsvpResvTearMsgs, receivedRsvpConfirmMsgs,
receivedRsvpBadMsgs, sentRsvpPathMsgs,
sentRsvpResvMsgs, sentRsvpPathErrMsgs,
sentRsvpResvErrMsgs, sentRsvpPathTearMsgs,
sentRsvpResvTearMsgs, sentRsvpConfirmMsgs,
admissionControlFailures, inPolicyControlFailures,
outPolicyControlFailures, otherFailures,
inBlockadeStateResvs, resvTimeOuts,
sbmStatsPathTimeOuts, receiveFailsBigMsg,
sendFailsBigMsg, receiveFailsNoResource,
sendFailsNoResource, activeOutgoingFlows,
allocatedOutgoingBits, maxAllocatedBandwidthBits

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Conformance

MANDATORY-GROUPS {sbmSbmConfigGroup,
sbmRsvpConfigGroup,
sbmSbmStatisticsGroup}

i.e. everything



Open Issues

- (1) Should we include DCLASS as well as TCLASS config info here?
- (2) How to represent more detailed e.g. per-queue/per-class information. We could use the per-interface tables from RFC2213/RFC 2214 intserv MIBs but we would then need one of these per queue per interface. This might need something like an ifStackTable to group them together. Could also try to use the intSrvFlowQueue object for this.
- (3) Should we allow creation of new SBM instances? MIB currently only allows configuration of existing SBMs and assumes that the agent itself or some other mechanism will create SBM instances appropriately.
- (4) So many counters ... which ones are really useful?
- (5) Should we break out the generally-applicable RSVP stuff into a separate MIB?