

Definitions of Managed Objects for HTTP

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[<draft-hazewinkel-httpmib-00.txt>](#)

Harrie Hazewinkel
University of Twente
hazewink@cs.utwente.nl

Eric van Hengstum
University of Twente
hengstum@cs.utwente.nl

Aiko Pras
University of Twente
pras@cs.utwente.nl

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1. Abstract

This draft defines a MIB to manage the HTTP protocol. The HTTP protocol is used by World Wide Web applications to transfer information between WWW clients and WWW servers. HTTP is based on the request/response paradigm.

The HTTP MIB is especially useful to manage the WWW server-side. The MIB is defined in such a way that it allows multiple servers to run within a single system.

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2. The SNMPv2 Network Management Framework

The SNMPv2 Network Management Framework consists of four major components. They are:

- o STD 17, [RFC 1213](#) [2] defines MIB-II, the core set of managed objects for the Internet suite of protocols.
- o [RFC 1901](#) Introduction to Community-based SNMPv2
- o [RFC 1902](#) Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)
- o [RFC 1903](#) Textual Conventions for Version 2 of the Simple Network Management Protocol (SNMPv2)
- o [RFC 1904](#) Conformance Statements for Version 2 of the Simple Network Management Protocol (SNMPv2)
- o [RFC 1907](#) Management Information Base for Version 2 of the Simple Network Management Protocol (SNMPv2)
- o [RFC 1908](#) Coexistence between Version 1 and Version 2 of the Internet-standard Network Management Framework

The Framework permits new objects to be defined for the purpose of experimentation and evaluation.

2.1. Object Definitions

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the subset of Abstract Syntax Notation One (ASN.1) defined in the SMI[1]. In particular, each object type is named by an OBJECT IDENTIFIER, an administratively assigned name. The object type together with an object instance serves to uniquely identify a specific instantiation of the object. For human convenience, we often use a textual string, termed the object descriptor, to refer to the object type.

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3. Introduction.

The HTTP protocol instantiates the information transport in the WWW application which is done with protocol entities exchanging information with each other via the underlying service.

The work performed for this MIB is a result of a project performed for the Centre of Earth Observations. The document should not be considered to be complete, but should be seen as a first step towards standardization of WWW management.

An implementation of this MIB already exists. Due to the use of a commercial development package it cannot be distributed. However, a public domain version is now being developed.

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4. HyperText Transfer Protocol MIB structure

The HTTP MIB module contains detailed network management information concerning HTTP. The MIB module is divided into entity- and traffic-related information.

The HTTP MIB consists of three groups:

1. httpSystem,
2. httpStatistics, and
3. httpTimeOuts.

4.1. System group

The System group consists of the httpEntityTable. This table contains not only basic network management information for (potentially) multiple HTTP entities running on a single host machine, but also entity information for virtual domains which give the physical interface of the host multiple addresses. The table is indexed with a unique number specifying the entity in the table which is also used as index of the other tables in this MIB. For each entity the following information is provided and:

- The protocol implemented by the entity; this value should be derived from the assigned number for the service; in the case of HTTP, this would be 80.
- A brief description of the entity and a contact e-mail address for the person responsible.
- The version of the protocol implemented by the entity, the producer of the software, the release version, and (optionally) an object identifier for the producer.
- Configuration information such as the address of the host machine (both in text form and as an IP address), the port in use, the time of last initialization, and whether the entity is a client, server, proxy, or a caching proxy.

4.2. Statistics group

The Statistics group provides network management information for the network traffic received and transmitted by the entity. The group consists of the httpSummaryTable, the httpRequestTable, and the httpResponseTable.

- The SummaryTable contains a set of counters for each HTTP entity which provide a quick summary of the number of requests received, bytes transmitted, and so on. The SummaryTable also holds counters for Requests and Responses which have been discarded or received in error. However certain variables are redundant with respect to the

Request and Response tables, they are added to reduce network traffic.

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- The Request and Response tables provide much more detailed information broken down by entity and the type of Request or Response. For each entity, each type of Request or Response has a separate entry giving a count of the number received, sent, and time stamps for the last interaction.

These tables are not only indexed by an entityIndex pointing to an entry in the httpEntityTable, but also with the Request c.q. Response type. The main reason to define this in a table is that the MIB objects are not dependent on the protocol standard. Only the textual convention should be changed then new types can simply be added by the implementation.

2.3. TimeOuts group

The final group in the HTTP module contains timeout information for each of the HTTP entities. The information is presented in the form of a table which may be resized by the Network Management System, and contains the address of the remote entity and the time at which the timeout occurred.

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5. HyperText Transfer Protocol MIB definition

```
HTTP-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
    MODULE-IDENTITY, OBJECT-TYPE, experimental, Counter32
        FROM SNMPv2-SMI
    TEXTUAL-CONVENTION, DisplayString, TimeStamp
        FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP
        FROM SNMPv2-CONF;
```

```
httpMIB MODULE-IDENTITY
```

```
    LAST-UPDATED      "9511080000Z"
    ORGANIZATION      "HTTP MIB Interest Group"
    CONTACT-INFO
        "              Mark Gamble

        Post:         ESYS Limited
                     Berkeley House
                     London Square
                     Cross Lanes
                     GUILDFORD
                     Surrey
                     UK

        Tel:          +44 1483 304545
        Fax:          +44 1483 303878
        Email:        mgamble@esys.co.uk"
```

```
DESCRIPTION
```

```
"The MIB module for http Servers and Clients. The http
in the module name is intended to cover a family of
`Networked Information Retrieval' protocols such as
http, nntp, ftp, gopher and so on.
Membership of this family is difficult to define
exactly, but all members share a similar
request-response structure used to retrieve information
(in the form of files, documents, articles) from a
remote server."
```

```
::= { enterprises universityOfTwente(785) 2 }
```

```
httpMIBObjects OBJECT IDENTIFIER ::= { httpMIB 1 }
```

```
httpMIBConformance OBJECT IDENTIFIER ::= { httpMIB 2 }
```

```
httpMIBCompliances OBJECT IDENTIFIER ::= { httpMIBConformance 1 }
```

```
httpMIBGroups OBJECT IDENTIFIER ::= { httpMIBConformance 2 }
```

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HttpMethod ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"This data type is used to describe http methods. The value of a variable of this type is exactly the same method token used in an http request. The currently defined methods for http are GET, HEAD and POST. For ftp, this type would cover the access control, transfer parameter, and service commands."

SYNTAX INTEGER {

get(1), head(2), put(3), post(4),
delete(5), link(6), unlink(7) }

HttpStatusCode ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The status code of an http response as defined in the RFC specification.

The StatusCode (or reply code) is structured as a three digit code of the attempt to understand and satisfy the request.

The following description is derived from the HyperText Transfer Protocol RFC:

The first digit of the Status-Code defines the class of response.

The last two digits do not have any categorization role. There are 5 values for the first digit:

- 1xx: Informational - Not used, but reserved for future use.
- 2xx: Success - The action was successfully received, understood, and accepted.
- 3xx: Redirection - Further action must be taken in order to complete the request.
- 4xx: Client Error - The request contains bad syntax or cannot be full filled.
- 5xx: Server Error - The server failed to fulfill an apparently valid request.

Currently defined values for http are:

ok(200), created(201), accepted(202), noContent(204),
movedPermanently(301), movedTemporarily(302),
notModified(304), badRequest(400), unauthorized(401),
forbidden(403), notFound(404), internalServerError(500),
notImplemented(501), badGateway(502),
serviceUnavailable(503)."

SYNTAX INTEGER (100..999)

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```
--  
-- The http System Group  
--  
-- The http System group contains information about the http  
-- protocol entity.  
--
```

```
httpSystem OBJECT IDENTIFIER ::= { httpMIBObjects 1 }
```

```
httpEntityTable OBJECT-TYPE
```

```
    SYNTAX          SEQUENCE OF HttpEntityEntry
```

```
    MAX-ACCESS      not-accessible
```

```
    STATUS          current
```

```
    DESCRIPTION
```

```
        "The table of http Servers and Clients present on the  
        system."
```

```
 ::= { httpSystem 1 }
```

```
httpEntityEntry OBJECT-TYPE
```

```
    SYNTAX          HttpEntityEntry
```

```
    MAX-ACCESS      not-accessible
```

```
    STATUS          current
```

```
    DESCRIPTION
```

```
        "Details of a particular http Server or Client."
```

```
    INDEX          { httpEntityIndex }
```

```
 ::= { httpEntityTable 1 }
```

```
HttpEntityEntry ::= SEQUENCE {
```

```
    httpEntityIndex          INTEGER,
```

```
    httpEntityProtocol      INTEGER,
```

```
    httpEntityDescription   DisplayString,
```

```
    httpEntityContact       DisplayString,
```

```
    httpEntityProtocolVersion DisplayString,
```

```
    httpEntityVendor        DisplayString,
```

```
    httpEntityVersion       DisplayString,
```

```
    httpEntityObjectID      OBJECT IDENTIFIER,
```

```
    httpEntityAddress       DisplayString,
```

```
    httpEntityPort          INTEGER,
```

```
    httpEntityIpAddress     IPAddress,
```

```
    httpEntityLastInitialisation TimeStamp,
```

```
    httpEntityType          INTEGER
```

```
 }
```

```
httpEntityIndex OBJECT-TYPE
```

```
    SYNTAX          INTEGER (1..2147483647)
```

```
    MAX-ACCESS      not-accessible
```

```
    STATUS          current
```

```
    DESCRIPTION
```

```
        "A unique (on this machine) identifier for this entity."
```

```
::= { httpEntityEntry 1 }  
-- Instrumentation: Agent internal.
```

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httpEntityProtocol OBJECT-TYPE

SYNTAX INTEGER (1..2147483647)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This should be the number from /etc/services (or its equivalent) which is associated with the service implemented. For example, the value of this variable would be 21 for ftp, 80 for http."

::= { httpEntityEntry 2 }

-- Instrumentation: System file.

httpEntityDescription OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Textual description of the http Server or Client."

::= { httpEntityEntry 3 }

-- Instrumentation: Configuration file.

httpEntityContact OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The textual identification of the contact person for this http Server or Client, together with information on how to contact this person."

::= { httpEntityEntry 4 }

-- Instrumentation: Configuration file.

httpEntityProtocolVersion OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Textual description of the version of the protocol implemented."

::= { httpEntityEntry 5 }

-- Instrumentation: Log file

httpEntityVendor OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Textual description of the organization which implemented the protocol."

```
::= { httpEntityEntry 6 }  
-- Instrumentation: Log file
```

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httpEntityVersion OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Textual description of the implemented version."

::= { httpEntityEntry 7 }

-- Instrumentation: Log file

httpEntityObjectID OBJECT-TYPE

SYNTAX OBJECT IDENTIFIER

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The authoritative identification for the private MIB for this http Entity, presumably based on the vendor.

If no OBJECT IDENTIFIER exists for the private MIB, attempts to access this object will return noSuchName (SNMPv1) or noSuchInstance (SNMPv2)."

::= { httpEntityEntry 8 }

-- Instrumentation: Direct access

httpEntityAddress OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The DNS address at which the http Entity listens for Requests or Responses. This is variable is useful when the entity listens to a virtual domain (address)."

::= { httpEntityEntry 9 }

-- Instrumentation: Config file

httpEntityPort OBJECT-TYPE

SYNTAX INTEGER (0..4096)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The TCP port at which the http Entity listens for Requests or Responses."

::= { httpEntityEntry 10 }

-- Instrumentation: Config file

httpEntityIpAddress OBJECT-TYPE

SYNTAX IpAddress

MAX-ACCESS read-only

STATUS current

DESCRIPTION

```
        "The IP Address at which the http Entity listens for  
        Requests or Responses."  
 ::= { httpEntityEntry 11 }  
 -- Instrumentation: System
```

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httpEntityLastInitialisation OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime at the time the http Entity was last initialised. If the http Entity was last initialised prior to the last initialisation of the network management subsystem, then this object contains a zero value."

::= { httpEntityEntry 12 }

-- Instrumentation: Config file

httpEntityType OBJECT-TYPE

SYNTAX INTEGER { server(1), client(2), proxy(3), cachingProxy(4) }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"Identification of the role of the http Entity."

::= { httpEntityEntry 13 }

-- Instrumentation: Direct access

--

-- The http Statistics Group

--

-- The http Statistics group contains information concerning the utilization of the http protocol entity.

--

httpStatistics OBJECT IDENTIFIER ::= { httpMIBObjects 2 }

httpSummaryTable OBJECT-TYPE

SYNTAX SEQUENCE OF HttpSummaryEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table providing overview statistics for the http protocol entities on this system."

::= { httpStatistics 1 }

httpSummaryEntry OBJECT-TYPE

SYNTAX HttpSummaryEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Overview statistics for an individual http entity."

INDEX { httpSummaryEntryIndex }

::= { httpSummaryTable 1 }

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```
HttpSummaryEntry ::= SEQUENCE {
    httpSummaryEntityIndex          INTEGER,
    httpSummaryRequests             Counter32,
    httpSummaryRequestErrors        Counter32,
    httpSummaryRequestDiscards      Counter32,
    httpSummaryResponses            Counter32,
    httpSummaryResponseErrors       Counter32,
    httpSummaryResponseDiscards     Counter32,
    httpSummaryInUnknowns           Counter32,
    httpSummaryInBytes              Counter32,
    httpSummaryOutBytes              Counter32,
    httpSummaryTimeOuts             Counter32
}

httpSummaryEntityIndex OBJECT-TYPE
    SYNTAX          INTEGER (1..2147483647)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The unique (on this machine) identifier for this
        entity. This Index corresponds to httpEntityIndex in
        the System group."
    ::= { httpSummaryEntry 1 }
    -- Instrumentation: Agent internal

httpSummaryRequests OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of Requests generated or received by
        this entity."
    ::= { httpSummaryEntry 2 }
    -- Instrumentation: Log file

httpSummaryRequestErrors OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of Request errors detected by this
        entity (server only)."
    ::= { httpSummaryEntry 3 }
    -- Instrumentation: Log file

httpSummaryRequestDiscards OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
```

DESCRIPTION

"The total number of Requests discarded by this entity
(server only)."
::= { httpSummaryEntry 4 }
-- Instrumentation: Direct Access

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```
httpSummaryResponses OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of Responses generated or received by
        this entity."
    ::= { httpSummaryEntry 5 }
    -- Instrumentation:  Log file

httpSummaryResponseErrors OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of Response errors detected by this
        entity (client only)."
```

```
    ::= { httpSummaryEntry 6 }
    -- Instrumentation:  Direct Access

httpSummaryResponseDiscards OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of Responses discarded by this entity
        (client only.)"
```

```
    ::= { httpSummaryEntry 7 }
    -- Instrumentation:  Direct Access

httpSummaryInUnknowns OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of unknown messages received by this
        entity."
```

```
    ::= { httpSummaryEntry 8 }
    -- Instrumentation:  Log file

httpSummaryInBytes OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of bytes received by this entity."
```

```
    ::= { httpSummaryEntry 9 }
    -- Instrumentation:  Log file
```

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```
httpSummaryOutBytes OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The total number of bytes generated by this entity."
    ::= { httpSummaryEntry 10 }
    -- Instrumentation:  Log file
```

```
httpSummaryTimeOuts OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The number of timeouts for this entities."
    ::= { httpSummaryEntry 11 }
    --Instrumentation:  Log file
```

```
httpRequestTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF HttpRequestEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The table providing detailed request statistics for
        the http protocol entities on this system."
    ::= { httpStatistics 2 }
```

```
httpRequestEntry OBJECT-TYPE
    SYNTAX          HttpRequestEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Request statistics for an individual http entity."
    INDEX { httpRequestEntityIndex, httpRequestMethodIndex }
    ::= { httpRequestTable 1 }
```

```
HttpRequestEntry ::= SEQUENCE {
    httpRequestEntityIndex      INTEGER,
    httpRequestMethodIndex     HttpMethod,
    httpRequestInCount          Counter32,
    httpRequestInLastTime      TimeStamp,
    httpRequestOutCount         Counter32,
    httpRequestOutLastTime     TimeStamp
}
```

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```
httpRequestEntityIndex OBJECT-TYPE
    SYNTAX          INTEGER (1..2147483647)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The unique (on this machine) identifier for this
        entity. This Index corresponds to httpEntityIndex
        in the System group."
    ::= { httpRequestEntry 1 }
    -- Instrumentation:  Agent internal

httpRequestMethodIndex OBJECT-TYPE
    SYNTAX          HttpMethod
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "The particular request method the statistics apply to."
    ::= { httpRequestEntry 2 }
    -- Instrumentation:  Log file

httpRequestInCount OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The number of requests of this type received by this
        entity."
    ::= { httpRequestEntry 3 }
    -- Instrumentation:  Log file

httpRequestInLastTime OBJECT-TYPE
    SYNTAX          TimeStamp
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The value of sysUpTime at the time the last request
        was received."
    ::= { httpRequestEntry 4 }
    -- Instrumentation:  Log file

httpRequestOutCount OBJECT-TYPE
    SYNTAX          Counter32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The number of requests of this type generated by this
        entity."
    ::= { httpRequestEntry 5 }
    -- Instrumentation:  Log file
```

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httpRequestOutLastTime OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The value of sysUpTime at the time the last request was generated."

::= { httpRequestEntry 6 }

-- Instrumentation: Log file

httpResponseTable OBJECT-TYPE

SYNTAX SEQUENCE OF HttpResponseEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table providing detailed response statistics for the http protocol entities on this system."

::= { httpStatistics 3 }

httpResponseEntry OBJECT-TYPE

SYNTAX HttpResponseEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Response statistics for an individual http Server or Client."

INDEX { httpResponseEntityIndex, httpResponseStatusIndex }

::= { httpResponseTable 1 }

HttpResponseEntry ::= SEQUENCE {

httpResponseEntityIndex INTEGER,

httpResponseStatusIndex HttpStatusCode,

httpResponseInCount Counter32,

httpResponseInLastTime TimeStamp,

httpResponseOutCount Counter32,

httpResponseOutLastTime TimeStamp

}

httpResponseEntityIndex OBJECT-TYPE

SYNTAX INTEGER (1..2147483647)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The unique (on this machine) identifier for this entity. This Index corresponds to httpEntityIndex in the System group."

::= { httpResponseEntry 1 }

-- Instrumentation: Agent internal

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```
httpResponseStatusIndex OBJECT-TYPE
    SYNTAX      HttpStatusCode
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The particular response status the statistics apply
        to."
    ::= { httpResponseEntry 2 }
    -- Instrumentation: Log file

httpResponseInCount OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of responses of this type received by this
        entity."
    ::= { httpResponseEntry 3 }
    -- Instrumentation: Log file

httpResponseInLastTime OBJECT-TYPE
    SYNTAX      TimeStamp
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of sysUpTime at the time the last response
        was received."
    ::= { httpResponseEntry 4 }
    -- Instrumentation: Log file

httpResponseOutCount OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of responses of this type generated by
        this entity."
    ::= { httpResponseEntry 5 }
    -- Instrumentation: Log file

httpResponseOutLastTime OBJECT-TYPE
    SYNTAX      TimeStamp
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of sysUpTime at the time the last response
        was generated."
    ::= { httpResponseEntry 6 }
    -- Instrumentation: Log file
```

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```
--  
-- The Time Out group contains information about the time outs occurred  
-- with the protocol entity.  
--
```

```
httpTimeOuts OBJECT IDENTIFIER ::= { httpMIBObjects 3 }
```

```
httpTimeoutTableSize OBJECT-TYPE
```

```
SYNTAX          INTEGER (0..64)
```

```
MAX-ACCESS      read-write
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The number of last TimeOuts contained by the  
    httpTimeOutTable."
```

```
::= { httpTimeOuts 1 }
```

```
-- Instrumentation: Log file
```

```
httpTimeoutTable OBJECT-TYPE
```

```
SYNTAX          SEQUENCE OF HttpTimeoutEntry
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The table providing detailed timeout statistics for  
    the http protocol entities on this system."
```

```
::= { httpTimeOuts 2 }
```

```
httpTimeoutEntry OBJECT-TYPE
```

```
SYNTAX          HttpTimeoutEntry
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "Timeout statistics for a particular http entity."
```

```
INDEX { httpTimeoutEntityIndex, httpTimeoutNumber }
```

```
::= { httpTimeoutTable 1 }
```

```
HttpTimeoutEntry ::= SEQUENCE {
```

```
    httpTimeoutEntityIndex          INTEGER,
```

```
    httpTimeoutNumber              INTEGER,
```

```
    httpTimeoutRemoteAddress       DisplayString,
```

```
    httpTimeoutTime                TimeStamp
```

```
}
```

```
httpTimeoutEntityIndex OBJECT-TYPE
```

```
SYNTAX          INTEGER (1..2147483647)
```

```
MAX-ACCESS      not-accessible
```

```
STATUS          current
```

```
DESCRIPTION
```

```
    "The unique (on this machine) identifier for this  
    entity. This Index corresponds to httpEntityIndex
```

```
        in the http System group."  
 ::= { httpTimeoutEntry 1 }  
 -- Instrumentation: Agent internal
```

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httpTimeoutNumber OBJECT-TYPE

SYNTAX INTEGER (0..64)

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The unique identifier for the last Timeout."

::= { httpTimeoutEntry 2 }

-- Instrumentation: Agent internal

httpTimeoutRemoteAddress OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The address of the remote entity."

::= { httpTimeoutEntry 3 }

-- Instrumentation: Log file

httpTimeoutTime OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time when the time out occurred with the remote entity."

::= { httpTimeoutEntry 4 }

-- Instrumentation: Log file

--

-- Conformance and compliance definitions.

--

httpMIBCompliance MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"The compliance statement for SNMP entities which implement the HTTP MIB."

MODULE -- this module

MANDATORY-GROUPS { httpMIBGroup }

::= { httpMIBCompliances 4 }

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httpMIBGroup OBJECT-GROUP

OBJECTS {

```
    httpEntityIndex, httpEntityProtocol,
    httpEntityDescription, httpEntityContact,
    httpEntityProtocolVersion, httpEntityVendor,
    httpEntityVersion, httpEntityObjectID,
    httpEntityAddress, httpEntityPort, httpEntityIpAddress,
    httpEntityLastInitialisation, httpEntityType,
    httpSummaryEntityIndex,
    httpSummaryRequests, httpSummaryRequestErrors,
    httpSummaryRequestDiscards,
    httpSummaryResponses, httpSummaryResponseErrors,
    httpSummaryResponseDiscards,
    httpSummaryInUnknowns,
    httpSummaryInBytes, httpSummaryOutBytes,
    httpSummaryTimeOuts,
    httpRequestEntityIndex,
    httpRequestMethodIndex, httpRequestInCount,
    httpRequestInLastTime, httpRequestOutCount,
    httpResponseEntityIndex,
    httpResponseStatusIndex, httpResponseInCount,
    httpResponseInLastTime, httpResponseOutCount,
    httpResponseOutLastTime,
    httpTimeoutNumber,
    httpTimeoutEntityIndex, httpTimeoutRemoteAddress,
    httpTimeoutTime }
```

```
STATUS          current
```

DESCRIPTION

```
    "The collection of objects allowing the
    management of HTTP servers and clients."
```

```
::= { httpMIBGroups 1 }
```

```
END
```

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6. Acknowledgments

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Carl W. Kalbfleisch
<cwk@onramp.net>

Mark Gamble
<mgamble@esys1.esys.co.uk>

Rui Meneses
<rui.meneses@jrc.it>

Juergen Schoenwaelder
<schoenw@cs.utwente.nl>

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8. Security Considerations

Security issues are not discussed in this memo.

9. Authors' Addresses

Harrie Hazewinkel / Eric van Hengstum / Aiko Pras
University of Twente
Centre for Telematics and Information Technology (CTIT)
POBox 217
7500 AE Enschede, The Netherlands
Phone: +31-53-4893778

Email: hazewink@cs.utwente.nl
hengstum@cs.utwente.nl
pras@cs.utwente.nl

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