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SYSLOG YANG model
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Abstract

This document describes a data model for Syslog protocol which is used to convey event notification messages.

Status of This Memo

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1. Introduction

Operating systems, processes and applications generate messages indicating their own status or the occurrence of events. These messages are useful for managing and/or debugging the network and its services. The BSD Syslog protocol is a widely adopted protocol that is used for transmission and processing of the messages.

Since each process, application and operating system was written somewhat independently, there is little uniformity to the content of Syslog messages. For this reason, no assumption is made upon the formatting or contents of the messages. The protocol is simply designed to transport these event messages. No acknowledgement of the receipt is made.

Essentially, a Syslog process receives messages (from the kernel, processes, applications or other Syslog processes) and processes those. The processing involves logging to a local file, displaying on console, user terminal, and/or relaying to syslog processes on other machines. The processing is determined by the "facility" that originated the message and the "severity" assigned to the message by the facility.

We are using definitions of Syslog protocol from [RFC3164] in this draft.

1.1. Definitions and Acronyms

IP: Internet Protocol

IPv4: Internet Protocol version 4

IPv6: Internet Protocol version 6

UDP: User Datagram Protocol

VRF: Virtual Routing and Forwarding

2. Problem Statement

This document defines a YANG [RFC6020] configuration data model that may be used to monitor and control one or more syslog processes running on a system. YANG models can be used with network management agents such as NETCONF [RFC6241] to install, manipulate, and delete the configuration of network devices.

This module makes use of the YANG "feature" construct which allows implementations to support only those Syslog features that lie within their capabilities.

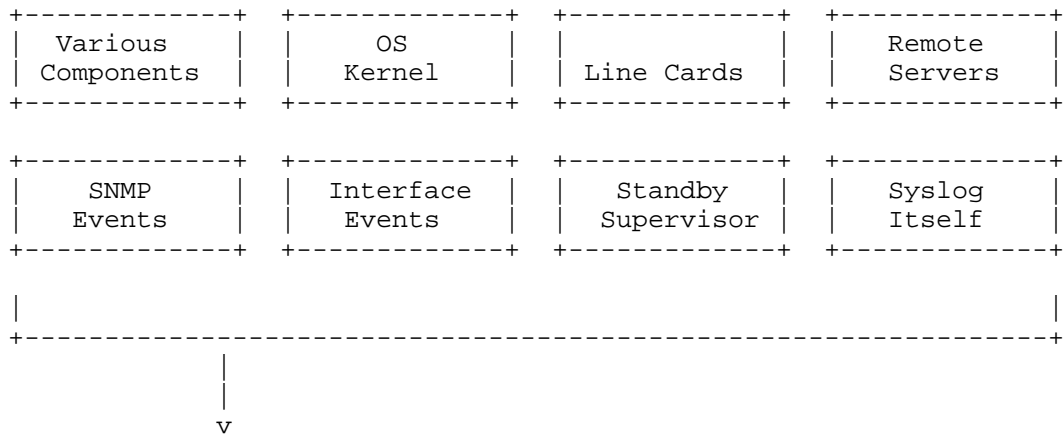
3. Design of the SYSLOG Model

The syslog model was designed by comparing various syslog features implemented by various vendors' in different implementations.

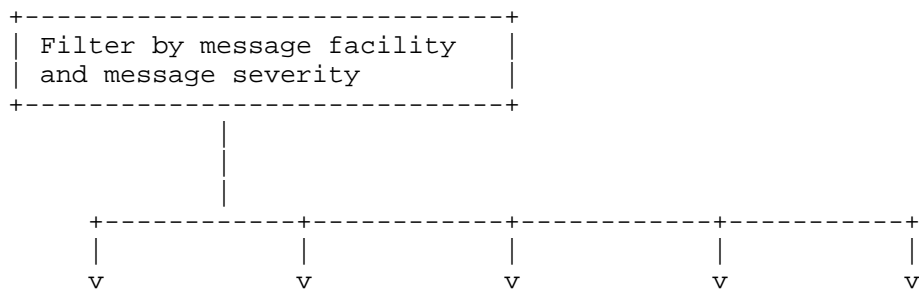
This draft addresses the common leafs between all vendors and creates a common model, which can be augmented with proprietary features, if necessary. The base model is designed to be very simple for maximum flexibility.

Syslog consists of message producers, a group level suppression filter, and message distributors. The following diagram shows syslog messages flowing from a message producer, through the group level suppression filter, and if passed by the group filter to message distributors where further suppression filtering can take place.

Message Producers



Group Level Suppression



Message Distributors



The leaves in the base syslog model correspond to the group level suppression filter and each message distributor:

- console
- log buffer
- log file(s)
- user terminals
- remote server(s).

Optional features are used to specified fields that are not present in all vendor configurations.

3.1. SYSLOG Module

module: ietf-syslog

```

  +--rw syslog
    +--rw global-logging-action {global-logging-action}?
      +--rw (logging-level-scope)?
        +--:(logging-facility-all)
          | +--rw severity? syslogtypes:severity
        +--:(logging-facility-none)
          | +--rw none? empty
        +--:(logging-facility)
          +--rw logging-facilities* [facility]
            +--rw facility identityref
            +--rw severity? syslogtypes:severity
      +--rw logging-advanced-level-processing {selector-advanced-level-proces
sing-config}?
        +--rw select-message-severity? enumeration
        +--rw logging-match-processing {selector-match-processing-config}?
          +--rw pattern-match? string
      +--rw console-logging-action
        +--rw (logging-level-scope)?
          +--:(logging-facility-all)
            | +--rw severity? syslogtypes:severity
          +--:(logging-facility-none)
            | +--rw none? empty
          +--:(logging-facility)
            +--rw logging-facilities* [facility]
              +--rw facility identityref
              +--rw severity? syslogtypes:severity
        +--rw logging-advanced-level-processing {selector-advanced-level-proces
sing-config}?
          +--rw select-message-severity? enumeration
          +--rw logging-match-processing {selector-match-processing-config}?
            +--rw pattern-match? string
      +--rw buffered-logging-action
        +--rw (logging-level-scope)?
          +--:(logging-facility-all)
            | +--rw severity? syslogtypes:severity
          +--:(logging-facility-none)
            | +--rw none? empty
          +--:(logging-facility)
            +--rw logging-facilities* [facility]
              +--rw facility identityref
              +--rw severity? syslogtypes:severity
        +--rw logging-advanced-level-processing {selector-advanced-level-proces
sing-config}?
          +--rw select-message-severity? enumeration
          +--rw logging-match-processing {selector-match-processing-config}?
            +--rw pattern-match? string
            +--rw buffer-size? uint64
      +--rw file-logging-action
        +--rw logging-files* [file-name]
          +--rw file-name inet:uri
          +--rw (logging-level-scope)?
            +--:(logging-facility-all)
              | +--rw severity? syslogtypes:severit
            +--:(logging-facility-none)
              | +--rw none? empty
            +--:(logging-facility)
              +--rw logging-facilities* [facility]
                +--rw facility identityref
                +--rw severity? syslogtypes:severity
        +--rw logging-advanced-level-processing {selector-advanced-level-pro
cessing-config}?

```

```

|         | +--rw select-message-severity?  enumeration
|         | +--rw logging-match-processing {selector-match-processing-config}?
|         | +--rw pattern-match?  string
|         | +--rw file-logging-structured-data?  boolean {file-logging-str
uctured-data}?
|         | +--rw file-logging-archive {file-logging-archive-config}?
|         |         +--rw file-number?  uint32
|         |         +--rw file-size?  uint64
|         |         +--rw file-permission?  enumeration
|         | +--rw remote-logging-action
|         |         +--rw remote-logging-destination* [destination]
|         |         +--rw destination  inet:host
|         |         +--rw (logging-level-scope)?
|         |         | +--:(logging-facility-all)
|         |         | | +--rw severity?  syslogtypes:severit
y
|         |         | +--:(logging-facility-none)
|         |         | | +--rw none?  empty
|         |         | +--:(logging-facility)
|         |         |         +--rw logging-facilities* [facility]
|         |         |         +--rw facility  identityref
|         |         |         +--rw severity?  syslogtypes:severity
|         |         +--rw logging-advanced-level-processing {selector-advanced-level-pro
cessing-config}?
|         |         | +--rw select-message-severity?  enumeration
|         |         | +--rw logging-match-processing {selector-match-processing-config}?
|         |         | +--rw pattern-match?  string
|         |         | +--rw remote-logging-structured-data?  boolean {remote-logging-s
tructured-data}?
|         |         | +--rw destination-port?  inet:port-number
|         |         | +--rw destination-facility?  identityref
|         |         | +--rw source-interface?  if:interface-ref
|         |         | +--rw vrf-name?  string {remote-logging-us
e-vrf}?
|         |         | +--rw syslog-sign! {signed-messages-config}?
|         |         |         +--rw cert-initial-repeat  uint16
|         |         |         +--rw cert-resend-delay  uint16
|         |         |         +--rw cert-resend-count  uint16
|         |         |         +--rw sig-max-delay  uint16
|         |         |         +--rw sig-number-resends  uint16
|         |         |         +--rw sig-resend-delay  uint16
|         |         |         +--rw sig-resend-count  uint16
|         |         +--rw terminal-logging-action
|         |         | +--rw (user-scope)?
|         |         | +--:(all-users)
|         |         |         +--rw all-users
|         |         |         | +--rw (logging-level-scope)?
|         |         |         | | +--:(logging-facility-all)
|         |         |         | | +--rw severity?  syslogtypes:s
everity
|         |         |         | +--:(logging-facility-none)
|         |         |         | | +--rw none?  empty
|         |         |         | +--:(logging-facility)
|         |         |         |         +--rw logging-facilities* [facility]
|         |         |         |         +--rw facility  identityref
|         |         |         |         +--rw severity?  syslogtypes:severity
|         |         |         +--rw logging-advanced-level-processing {selector-advanced-lev
el-processing-config}?
|         |         |         | +--rw select-message-severity?  enumeration
|         |         |         | +--rw logging-match-processing {selector-match-processing-conf
ig}?
|         |         |         | +--rw pattern-match?  string
|         |         |         | +--:(per-user) {terminal-facility-user-logging-config}?
|         |         |         |         +--rw user-name* [uname]
|         |         |         |         +--rw uname  string
|         |         |         |         +--rw (logging-level-scope)?
|         |         |         |         | +--:(logging-facility-all)

```

```

everity      | |  +--rw severity?                               syslogtypes:s
|
|  +--:(logging-facility-none)
|  |  +--rw none?                                     empty
|  +--:(logging-facility)
|  |  +--rw logging-facilities* [facility]
|  |  |  +--rw facility      identityref
|  |  |  +--rw severity?    syslogtypes:severity
|  +--rw logging-advanced-level-processing {selector-advanced-lev
el-processing-config}?
|  |  +--rw select-message-severity?  enumeration
+--rw logging-match-processing {selector-match-processing-conf
ig}?
|  |  +--rw pattern-match?  string

```

4. SYSLOG YANG Models

4.1. SYSLOG-TYPES module

<CODE BEGINS> file "ietf-syslog-types.yang"

```
module ietf-syslog-types {
  namespace "urn:ietf:params:xml:ns:yang:ietf-syslog-types";
  prefix syslogtypes;

  organization "IETF NETMOD (NETCONF Data Modeling Language) Working
                Group";
  contact
    "WG Web:    <http://tools.ietf.org/wg/netmod/>
    WG List:    <mailto:netmod@ietf.org>

    WG Chair: Juergen Schoenwaelder
               <mailto:j.schoenwaelder@jacobs-university.de>

    WG Chair: Tom Nadeau
               <mailto:tnadeau@brocade.com>

    Editor:     Clyde Wildes
               <mailto:cwildes@cisco.com>

    Editor:     Agrahara Kiran Koushik
               <mailto:kkoushik@brocade.com>";
  description
    "This module contains a collection of YANG type definitions for
    SYSLOG.";

  revision 2015-03-05 {
    description
      "Initial Revision";
    reference
      "This model references RFC 5424 - The Syslog Protocol.";
  }

  typedef severity {
    type enumeration {
      enum "emergency" {
        value 0;
        description
          "Emergency Level Msg";
      }
      enum "alert" {
        value 1;
        description
          "Alert Level Msg";
      }
    }
  }
```



```
    enum "critical" {
        value 2;
        description
            "Critical Level Msg";
    }
    enum "error" {
        value 3;
        description
            "Error Level Msg";
    }
    enum "warning" {
        value 4;
        description
            "Warning Level Msg";
    }
    enum "notice" {
        value 5;
        description
            "Notification Level Msg";
    }
    enum "info" {
        value 6;
        description
            "Informational Level Msg";
    }
    enum "debug" {
        value 7;
        description
            "Debugging Level Msg";
    }
}
description
    "The definitions for Syslog message severity.";
}

identity syslog-facility {
    description
        "The base identity to represent syslog facilities";
}

identity kern {
    base syslog-facility;
    description
        "The facility for kernel messages as defined in RFC 5424.";
}
```

```
identity user {
  base syslog-facility;
  description
    "The facility for user-level messages as defined in RFC 5424.";
}

identity mail {
  base syslog-facility;
  description
    "The facility for the mail system as defined in RFC 5424.";
}

identity daemon {
  base syslog-facility;
  description
    "The facility for the system daemons as defined in RFC 5424.";
}

identity auth {
  base syslog-facility;
  description
    "The facility for security/authorization messages as defined
    in RFC 5424.";
}

identity syslog {
  base syslog-facility;
  description
    "The facility for messages generated internally by syslogd
    facility as defined in RFC 5424.";
}

identity lpr {
  base syslog-facility;
  description
    "The facility for the line printer subsystem as defined in
    RFC 5424.";
}

identity news {
  base syslog-facility;
  description
    "The facility for the network news subsystem as defined in
    RFC 5424.";
}

identity uucp {
  base syslog-facility;
  description
    "The facility for the UUCP subsystem as defined in RFC 5424.";
}

identity cron {
  base syslog-facility;
  description
    "The facility for the clock daemon as defined in RFC 5424.";
}

identity authpriv {
  base syslog-facility;
  description
    "The facility for privileged security/authorization messages
    as defined in RFC 5424.";
}
```

```
identity ftp {
    base syslog-facility;
    description
        "The facility for the FTP daemon as defined in RFC 5424.";
}

identity ntp {
    base syslog-facility;
    description
        "The facility for the NTP subsystem as defined in RFC 5424.";
}

identity audit {
    base syslog-facility;
    description
        "The facility for log audit messages as defined in RFC 5424.";
}
```

```
identity console {
  base syslog-facility;
  description
    "The facility for log alert messages as defined in RFC 5424.";
}

identity cron2 {
  base syslog-facility;
  description
    "The facility for the second clock daemon as defined in
    RFC 5424.";
}

identity local0 {
  base syslog-facility;
  description
    "The facility for local use 0 messages as defined in
    RFC 5424.";
}

identity local1 {
  base syslog-facility;
  description
    "The facility for local use 1 messages as defined in
    RFC 5424.";
}

identity local2 {
  base syslog-facility;
  description
    "The facility for local use 2 messages as defined in
    RFC 5424.";
}

identity local3 {
  base syslog-facility;
  description
    "The facility for local use 3 messages as defined in
    RFC 5424.";
}

identity local4 {
  base syslog-facility;
  description
    "The facility for local use 4 messages as defined in
    RFC 5424.";
}

identity local5 {
  base syslog-facility;
  description
    "The facility for local use 5 messages as defined in
    RFC 5424.";
}

identity local6 {
  base syslog-facility;
  description
    "The facility for local use 6 messages as defined in
    RFC 5424.";
}

identity local7 {
  base syslog-facility;
```

```
description
  "The facility for local use 7 messages as defined in
    RFC 5424.";
}
```

<CODE ENDS>

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4.2. SYSLOG module

```
<CODE BEGINS> file "ietf-syslog.yang"

module ietf-syslog {
  namespace "urn:ietf:params:xml:ns:yang:ietf-syslog";
  prefix syslog;

  import ietf-inet-types {
    prefix inet;
  }

  import ietf-interfaces {
    prefix if;
  }

  import ietf-syslog-types {
    prefix syslogtypes;
  }

  organization "IETF NETMOD (NETCONF Data Modeling Language)
  Working Group";
  contact
    "WG Web:    <http://tools.ietf.org/wg/netmod/>
    WG List:    <mailto:netmod@ietf.org>

    WG Chair:   David Kessens
                <mailto:david.kessens@nsn.com>

    WG Chair:   Juergen Schoenwaelder
                <mailto:j.schoenwaelder@jacobs-university.de>

    Editor:     Clyde Wildes
                <mailto:cwildes@cisco.com>

    Editor:     Agrahara Kiran Koushik
                <mailto:kkoushik@brocade.com>";

  description
    "This module contains a collection of YANG definitions
    for Syslog configuration.";

  revision 2015-03-05 {
    description
      "Initial Revision";
    reference
      "This model references RFC 5424 - The Syslog Protocol,
      and RFC 5848 - Signed Syslog Messages.";
  }

  feature global-logging-action {
    description
      "This feature represents the ability to suppress log
      messages on the global level.";
  }
```

```
feature file-logging-structured-data {
  description
    "This feature represents the ability to log messages
    to a file in structured-data format as per RFC 5424.";
}

feature remote-logging-structured-data {
  description
    "This feature represents the ability to deliver log
    messages to a remote server in structured-data format
    as per RFC 5424.";
}

feature file-logging-archive-config {
  description
    "This feature represents the ability to archive log files.";
}

feature remote-logging-use-vrf {
  description
    "This feature allows remote logging of messages to a
    particular VRF.";
}

feature terminal-facility-user-logging-config {
  description
    "This feature represents the ability to adjust
    log message settings for individual terminal users.";
}

feature selector-advanced-level-processing-config {
  description
    "This feature represents the ability to select messages
    using the additional operators equal to, or not equal to
    when comparing the Syslog message severity.";
}

feature selector-match-processing-config {
  description
    "This feature represents the ability to select messages based
    on a Posix 1003.2 regular expression pattern match.";
}

feature signed-messages-config {
  description
    "This feature represents the ability to configure signed
    syslog messages according to RFC 5848.";
}

grouping syslog-severity {
  description
    "This grouping defines the Syslog severity which is used to
    filter log messages.";
  leaf severity {
    type syslogtypes:severity;
    description
      "This leaf specifies the Syslog message severity.
      No value implies all severities.";
  }
}
```

```
grouping syslog-selector {
  description
    "This grouping defines a Syslog selector which is used to
    filter log messages for the given action in which the
    selector appears. Choose one of the following:
    logging-facility-all <severity>
    logging-facility-none
    logging-facility [<facility> <severity>...]
    Additional severity comparison operations are available
    using the logging-advanced-level-processing container. If
    the logging-advanced-level-processing container is not
    present all messages of the specified severity and higher
    are logged according to the given action.";
  choice logging-level-scope {
    default logging-facility-all;
    description
      "This choice describes the option to specify all
      facilities, no facilities, or a specific facility.";
    case logging-facility-all {
      description
        "This case specifies all facilities will match when
        comparing the Syslog message facility.";
      uses syslog-severity;
    }
    case logging-facility-none {
      description
        "This case specifies no facilities will match when
        comparing the Syslog message facility. This is a method
        that can be used to turn an action off.";
      leaf none {
        type empty;
        description
          "This leaf specifies that no facilities participate in the
          filtering of Syslog messages for this action.";
      }
    }
    case logging-facility {
      description
        "This case specifies one or more specified facilities
        will match when comparing the Syslog message facility.";
      list logging-facilities {
        key "facility";
        description
          "This list describes a collection of Syslog facilities
          and severities.";
        leaf facility {
          type identityref {
            base syslogtypes:syslog-facility;
          }
          description
            "The leaf uniquely identifies a Syslog facility.";
        }
        uses syslog-severity;
      }
    }
  }
}
```



```
    container logging-advanced-level-processing {
      if-feature selector-advanced-level-processing-config;
      description
        "This container describes the configuration parameters for
        advanced Syslog selector severity comparison.";
      leaf select-message-severity {
        type enumeration {
          enum equals-or-higher {
            description
              "All messages of the specified severity and higher are
              logged according to the given action";
          }
          enum equals {
            description
              "This leaf specifies all messages for the specified
              severity.";
          }
          enum not-equals {
            description
              "This leaf specifies all messages that are not for the
              specified severity.";
          }
        }
        default equals-or-higher;
        description
          "This leaf describes the option to specify how the
          severity comparison is performed.";
      }
    }
  }
  container logging-match-processing {
    if-feature selector-match-processing-config;
    description
      "This container describes the configuration parameters for
      matching Syslog messages using a regular expression pattern
      match.";
    leaf pattern-match {
      type string;
      description
        "This leaf describes a Posix 1003.2 regular expression
        string that can be used to select a Syslog message for
        logging. The match is performed on the RFC 5424
        SYSLOG-MSG field.";
    }
  }
}

container syslog {
  description
    "This container describes the configuration parameters for
    Syslog.";
  container global-logging-action {
    if-feature global-logging-action;
    description
      "This container describes the configuration parameters for
      global logging. Global logging represents the ability to
      perform global log message suppression.";
    uses syslog-selector;
  }
}
```

```
container console-logging-action {
  description
    "This container describes the configuration parameters for
    console logging.";
  uses syslog-selector;
}
container buffered-logging-action {
  description
    "This container describes the configuration parameters for
    local memory buffer logging.";
  uses syslog-selector;
  leaf buffer-size {
    type uint64;
    description
      "This leaf describes the amount of memory that will be
      dedicated to local memory buffer logging. The default
      value varies by implementation.";
  }
}
container file-logging-action {
  description
    "This container describes the configuration parameters for
    file logging.";
  list logging-files {
    key "file-name";
    description
      "This list describes a collection of local logging
      files.";
    leaf file-name {
      type inet:uri;
      description
        "This leaf specifies the name of the log file.";
    }
  }
  uses syslog-selector;
  leaf file-logging-structured-data {
    if-feature file-logging-structured-data;
    type boolean;
    default false;
    description
      "This leaf describes how log messages are written to the
      log file. If true, messages will be written in
      structured-data format; if false, messages will be
      written in standard message format.";
  }
}
container file-logging-archive {
  if-feature file-logging-archive-config;
  description
    "This container describes the configuration parameters
    for log file archiving.";
  leaf file-number {
    type uint32;
    default 1;
    description
      "This leaf specifies the maximum number of log files
      retained.";
  }
}
```

```
    leaf file-size {
        type uint64;
        default 262144;
        description
            "This leaf specifies the maximum log file size.";
    }
    leaf file-permission {
        type enumeration {
            enum world-readable {
                value 1;
                description
                    "This enum specifies that the log files
                     are readable by world.";
            }
            enum no-world-readable {
                value 2;
                description
                    "This enum specifies that the log files
                     are not readable by world.";
            }
        }
        default no-world-readable;
        description
            "This leaf describes who can read log files";
    }
}

container remote-logging-action {
    description
        "This container describes the configuration parameters for
         remote logging.";
    list remote-logging-destination {
        key "destination";
        description
            "This list describes a collection of remote logging
             destinations.";
        leaf destination {
            type inet:host;
            description
                "The leaf uniquely specifies the address of the
                 remote host. One of the following must be specified:
                 an ipv4 address, an ipv6 address, or a host name.";
        }
        uses syslog-selector;
        leaf remote-logging-structured-data {
            if-feature remote-logging-structured-data;
            type boolean;
            default false;
            description
                "This leaf describes how log messages are sent to the
                 remote server. If true, messages will be sent in
                 structured-data format; if false, messages will be
                 sent in standard message format.";
        }
        leaf destination-port {
            type inet:port-number;
            default 514;
            description
                "This leaf specifies the port number used to deliver
                 messages to the remote server.";
        }
    }
}
```



```
leaf destination-facility {
  type identityref {
    base syslogtypes:syslog-facility;
  }
  default syslogtypes:local7;
  description
    "This leaf specifies the facility used in messages
    delivered to the remote server.";
}
leaf source-interface {
  type if:interface-ref;
  description
    "This leaf sets the source interface for the remote
    Syslog server. Either the interface name or the
    interface IP address can be specified. If not set,
    messages sent to a remote syslog server will contain
    the IP address of the interface the syslog message
    uses to exit the network element";
}
leaf vrf-name {
  if-feature remote-logging-use-vrf;
  type string;
  description
    "This leaf specifies the name of the virtual routing
    facility (VRF) that connects to the syslog server
    host. If not set, the default VRF will be used.";
}
container syslog-sign {
  if-feature signed-messages-config;
  presence
    "If present, syslog-sign is activated.";
  description
    "This container describes the configuration parameters
    for signed syslog messages as described by RFC 5848.";
  leaf cert-initial-repeat {
    type uint16;
    mandatory true;
    description
      "This leaf specifies the number of times each
      Certificate Block should be sent before the first
      message is sent.";
  }
  leaf cert-resend-delay {
    type uint16;
    mandatory true;
    description
      "This leaf specifies the maximum time delay in seconds
      until resending the Certificate Block.";
  }
  leaf cert-resend-count {
    type uint16;
    mandatory true;
    description
      "This leaf specifies the maximum number of other
      syslog messages to send until resending the
      Certificate Block.";
  }
  leaf sig-max-delay {
    type uint16;
    mandatory true;
    description
      "This leaf specifies when to generate a new Signature
      Block. If this many seconds have elapsed since the
      message with the first message number of the
```

```
Signature Block was sent, a new Signature Block  
should be generated.";  
}
```

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```
    leaf sig-number-resends {
        type uint16;
        mandatory true;
        description
            "This leaf specifies the number of times a Signature
             Block is resent. (It is recommended to select a value
             of greater than 0 in particular when the UDP
             transport [RFC5426] is used).";
    }
    leaf sig-resend-delay {
        type uint16;
        mandatory true;
        description
            "This leaf specifies when to send the next Signature
             Block transmission based on time. If this many
             seconds have elapsed since the previous sending of
             this Signature Block, resend it.";
    }
    leaf sig-resend-count {
        type uint16;
        mandatory true;
        description
            "This leaf specifies when to send the next Signature
             Block transmission based on a count. If this many
             other syslog messages have been sent since the
             previous sending of this Signature Block, resend it.";
    }
}

}

}

container terminal-logging-action {
    description
        "This container describes the configuration parameters for
         the terminal logging configuration.";
    choice user-scope {
        default all-users;
        description
            "This choice describes the option to specify all users
             or a specific user. The all users case implies that
             messages will be sent to all terminals";
        case all-users {
            description
                "This case specifies all users.";
            container all-users {
                description
                    "This container describes the configuration parameters
                     for all users.";
                uses syslog-selector;
            }
        }
        case per-user {
            if-feature terminal-facility-user-logging-config;
            description
                "This case specifies a specific user.";
            list user-name {
                key "uname";
                description
                    "This list describes a collection of user names.";
            }
        }
    }
}
```

```

        leaf uname {
            type string;
            description
                "This leaf uniquely describes a user name which is
                 the login name of the user whose terminal session
                 is to receive log messages.";
        }
        uses syslog-selector;
    }
}
}
}
}
}
}
}

```

<CODE ENDS>

4.3. A SYSLOG Example

Requirement:

Enable global logging of two facilities:

kern - severity critical(1)

auth - severity error(3)

Enable console logging of syslogs of severity
critical(1)

Here is the example syslog configuration xml:

```

<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
      <running/>
    </target>
    <config>
      <syslog xmlns="urn:ietf:params:xml:ns:yang:ietf-syslog">
        <global-logging-action>
          <logging-facilities>
            <facility>syslogtypes:kern</facility><severity>syslogtypes:critic
al</severity>
          </logging-facilities>
          <logging-facilities>
            <facility>syslogtypes:auth</facility><severity>syslogtypes:error<
/severity>
          </logging-facilities>
        </global-logging-action>
        <console-logging-action>
          <severity>syslogtypes:critical</severity>
        </console-logging-action>
      </syslog>
    </config>
  </edit-config>
</rpc>

<?xml version="1.0" encoding="UTF-8"?>
<rpc-reply message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <ok/>
</rpc-reply>

```


5. Implementation Status

[Note to RFC Editor: Please remove this section before publication.]

This section records the status of known implementations of the Syslog YANG model at the time of posting of this Internet-Draft.

Cisco Systems, Inc. has implemented the proposed IETF Syslog model for the Nexus 7000 NXOS OS as a prototype, together with an augmentation model for operating system specific Syslog configuration features.

Five leaves were implemented in the base IETF model and three leaves were implemented in the Cisco specific augmentation model as follows:

Leaf XPATH	Sample NXOS CLI Command(s)
syslog:global-logging-action	logging level cron 2
syslog:console-logging-action	logging console 1
syslog:file-logging-action	logging logfile mylog.log 2 4096
syslog:terminal-logging-action	logging monitor 2
syslog:remote-logging-action	*logging server server.cisco.com 2 facility user use-vrf management
	*logging source-interface loopback 0
cisco-syslog:logging-timestamp-config	logging timestamp milli-seconds
cisco-syslog:origin-id-cfg	logging origin-id string abcdef
cisco-syslog:module-logging	logging module 1

*The "logging server" and "logging source-interface" commands were combined into one base model leaf.

The description of implementations in this section is intended to assist the IETF in its decision processes in progressing drafts to RFCs.

6. Security Considerations

The YANG module defined in this memo is designed to be accessed via the NETCONF protocol [RFC6241] [RFC6241]. The lowest NETCONF layer is the secure transport layer and the mandatory-to-implement secure transport is SSH [RFC6242] [RFC6242]. The NETCONF access control model [RFC6536] [RFC6536] provides the means to restrict access for particular NETCONF users to a pre-configured subset of all available NETCONF protocol operations and content.

There are a number of data nodes defined in the YANG module which are writable/creatable/deletable (i.e., config true, which is the default). These data nodes may be considered sensitive or vulnerable in some network environments. Write operations (e.g., <edit-config>) to these data nodes without proper protection can have a negative effect on network operations.

TBD: List specific Subtrees and data nodes and their sensitivity/vulnerability.

7. IANA Considerations

This document registers a URI in the IETF XML registry [RFC3688] [RFC3688]. Following the format in RFC 3688, the following registration is requested to be made:

URI: urn:ietf:params:xml:ns:yang:syslog

Registrant Contact: The IESG.

XML: N/A, the requested URI is an XML namespace.

This document registers a YANG module in the YANG Module Names registry [RFC6020].

name: syslog namespace: urn:ietf:params:xml:ns:yang:syslog
prefix: syslog reference: RFC XXXX

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9. Change log [RFC Editor: Please remove]

10. References

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