NAME

mip6d.conf – MIPL Mobile IPv6 Configuration file

SYNOPSIS

/usr/local/etc/mip6d.conf

DESCRIPTION

MIPL Mobile IPv6 daemon's configuration file

Below is a list of currently supported configuration options. All configuration lines are terminated with a semicolon. Sub-sections are enclosed in '{' and '}'. Strings are quoted with double quotes.

COMMON OPTIONS

The file contains the following common definitions:

NodeConfig CN | HA | MN**;**

Indicates if the daemon should run in Correspondent Node, Home Agent or Mobile Node mode.

Default: CN

DebugLevel number**;**

Indicates the debug level of the daemon. If the value is greater than zero, the daemon will not detach from tty (i.e. debug messages will be printed on the controlling tty).

Default: 0

DoRouteOptimizationCN boolean**;**

Indicates if a node should participate in route optimization with a Mobile Node.

Default: enabled

NonVolatileBindingCache boolean**;**

This option is currently ignored. Binding cache is always stored in volatile memory, and is not retained between shutdown and startup.

OPTIONS COMMON TO HOME AGENT AND MOBILE NODE

These options are used both in the Home Agent and Mobile Node:

Interface name**;**

Interface name **{**
    MnIfPreference number**;**
    IsRouter boolean**;**
    IfType CN | HA | MN**;**
}

Specifies an interface and options associated with it. If no options are present, **Interface** can be terminated with semi-colon. This is used for home agent to specify which interfaces are used for HA operation. For the home agent to function properly, a Router Advertisement daemon (e.g. radvd) must broadcast advertisements with the Home Agent bit and Home Agent Information Option set on these interfaces. This option is also used by multihomed Mobile Nodes to define

which interfaces are used by it.

Only option **MnIfPreference** is used with Mobile IPv6. It sets interface preference value for an interface, in a multi-homed mobile node. Preference is relative only to other preference values, and may be a signed number.

IsRouter and **IfType** are only used with NEMO.

UseMnHaIPsec boolean**;**

Indicates if the MN-HA MIPv6 signalling should be protected with IPsec.

Default: enabled

KeyMngMobCapability boolean**;**

If dynamic keying with MIPv6-aware IKE is used, this options should be enabled. It turns on the K-bit for binding updates and binding acknowledgements.

Default: disabled

IPsecPolicySet {
HomeAgentAddress address**;**
HomeAddress address/length**;**
IPsecPolicy ...
...
}

IPsecPolicySet is a set of policies to apply for matching packets. A policy set can contain multiple **HomeAddress** options, but only one **HomeAgentAddress** option. For home agent, home agent address field contains its own address, and home address fields may contain any number of mobile nodes for which the same policy applies.

IPsecPolicy has the following format:

IPsecPolicy type **UseESP UseAH UseIPComp;**

Field **type** can be one of HomeRegBinding, MobPfxDisc, ICMP, TunnelMh, TunnelHomeTesting, or TunnelPayload. At least one of the IPsec protocols must be specified. Tunnel protection only allows exactly one protocol. Set IPsec protocol X with the "UseX" flag. Although not required, one can specify explicitly "NoX" (e.g. UseESP NoAH NoIPComp).

HOME AGENT SPECIFIC OPTIONS

The following definitions are ignored unless the node is configured as a HA:

SendMobPfxAdvs boolean**;**

Controls whether home agent sends Mobile Prefix Advertisements to mobile nodes in foreign networks.

SendUnsolMobPfxAdvs boolean**;**

Controls whether home agent send unsolicited Mobile Prefix Advertisements to mobile nodes in foreign networks.

MinMobPfxAdvInterval number**;**

Sets a minimum interval (in seconds) for Mobile Prefix Advertisements.

Default: 600

MaxMobPfxAdvInterval number**;**

Sets a maximum interval (in seconds) for Mobile Prefix Advertisements.

Default: 86400

MOBILE NODE SPECIFIC OPTIONS

The following definitions are ignored unless the node is configured as a MN:

SendMobPfxSols boolean**;**

Controls whether mobile node sends Mobile Prefix Solicitations to the home network.

DoRouteOptimizationMN boolean**;**

Indicates if the Mobile Node should initialize route optimization with Corresponent Nodes.

Default: enabled

UseCnBuAck boolean**;**

Indicates if the Acknowledge bit should be set in Binding Updates sent to Corresponent Nodes.

Default: disabled

MnRouterProbesRA number**;**

Indicates how many times the MN should send Neighbor Unreachability Detection probes to its old router after receiving a Router Advertisement from another one. If the option is set to zero, the MN will move to the new router straight away.

Default: 0

MnRouterProbesLinkUp number**;**

Indicates how many times the MN should send Neighbor Unreachability Detection probes to its old router before initiating router discovery when the link goes up.

Default: 0

MnHomeLink name **{**
HomeAddress address/length**;**
HomeAgentAddress address**;**
MnRoPolicy ...
...
}

Each **MnHomeLink** definition has a name. This is the name (enclosed in double quotes) of the interface used for connecting to the physical home link. All the home link specific definitions are detailed below:

HomeAddress address/length**;**

Address is an IPv6 address, and length the prefix length of the address, usually 64. This option must be included in a home link definition. More than one **HomeAddress** options may appear in one **MnHomeLink.**

HomeAgentAddress address**;**

Address is the IPv6 address of the Mobile Node's Home Agent. DHAAD is used if it is the unspecified address ::.

Default: ::

The route optimization policies are of the form:

MnRoPolicy proto sport/type dport/code boolean**;**

Any number of these policies may be defined. If no policies are defined default behavior depends on the **DoRouteOptimizationMN** option.

The fields for a route optimization policy entry are as follows: **proto** is either a protocol number or one of the pre-defined protocols ICMP, TCP, UDP, or SCTP. **sport/type** is source port for all protocols using ports, and type for ICMP. **dport/code** is destination port, or code for ICMP. Last field **boolean** sets route optimization either enabled or disabled for packets matching this entry.

For sport/type and dport/code fields a wildcard value "any" is allowed.

EXAMPLES

A Correspondent Node example:

NodeConfig CN;

DoRouteOptimizationCN enabled;

A Home Agent example:

NodeConfig HA;

Interface "eth0";
Interface "eth1";

```
UseMnHaIPsec enabled;

IPsecPolicySet {
    HomeAgentAddress 3ffe:2620:6:1::1;

    HomeAddress 3ffe:2620:6:1::1234/64;
    HomeAddress 3ffe:2620:6:1::1235/64;

    IPsecPolicy HomeRegBinding UseESP;
    IPsecPolicy TunnelMh UseESP;
}
```

A Mobile Node example:

```
NodeConfig MN;

DoRouteOptimizationCN enabled;

DoRouteOptimizationMN enabled;

UseCnBuAck enabled;


MnHomeLink "eth0" {
    HomeAgentAddress 3ffe:2620:6:1::1;
    HomeAddress 3ffe:2620:6:1::1234/64;

    #           proto   type    code    route opt.
    MnRoPolicy      ICMP    any     any     disabled;
    MnRoPolicy      ICMP    129     0       enabled;
    #           proto   dst     src     route opt.
    MnRoPolicy      TCP     any     any     disabled;
    MnRoPolicy      TCP     80      any     enabled;
}

UseMnHaIPsec enabled;

IPsecPolicySet {
    HomeAgentAddress 3ffe:2620:6:1::1;
    HomeAddress 3ffe:2620:6:1::1234/64;

    IPsecPolicy HomeRegBinding UseESP;
    IPsecPolicy TunnelMh UseESP;
}
```

SEE ALSO

mip6d(1), **mipv6**(7),

RFC3775: Mobility Support in IPv6,

RFC3776: Using IPsec to Protect Mobile IPv6 Signaling Between Mobile Nodes and Home Agents