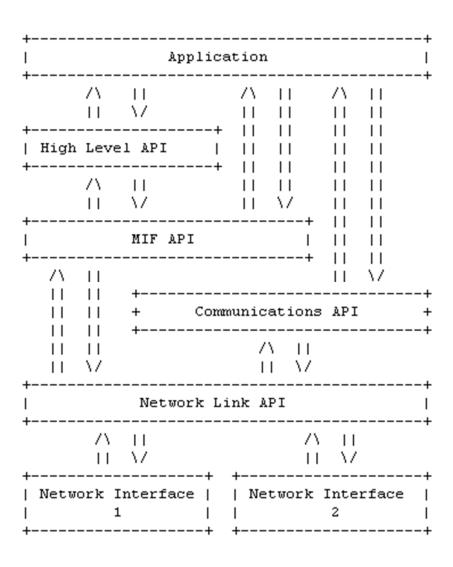
MIF API

draft-ietf-mif-api-extension-01

Basic Concept of MIF API



- Application
- High Level API:
 - general-purpose high-level API
- MIF API:
 - used by higher-level APIs
 - it is permissible for applications to use the MIF API when it is deemed necessary
- Communication API
 - E.g. POSIX socket API and a variety of other related APIs
- Network Link API
 - the software that is responsible for actually managing whatever network links are present on a node, whether these are physical links or tunnels.

Communication Model

- POST MESSAGE call
 - Post message, then returns
- CHECK MESSAGE call
 - Check to see if there is a massage waiting from the High Level API, the MIF API, or the Communications API.
- GET MESSAGE call
 - Check to see if there is a message waiting.

MIF API Usage Example

PP		AF
	How many interfaces?	
	2 interfaces	
	How many Nets on IF1?	
	2 Nets	
	Net1, IF1, DNS configuration?	
•	Net1, IF1, DNS address: 2001::1	
	Net2, IF1, DNS configuration?	
	Net2, IF1, DNS address: 192.168.1.1	
	How many Nets on IF2?	
	1 Interface	
	Net1, IF2, DNS configuration?	
	Net1, IF2, DNS address: 2001::2	
D	NS query 2001::1, host.example.com A,A	AAA
DNS	S query 192.168.1.1, host.example.com A,	AAAA
	NS query 2001::1, host.example.com A,A	^ ^ ^

APP

2001::1 DNS response:
host.example.com
IN A 14.15.16.17
IN AAAA 2001:192:321::1
2002::1 DNS response: ...
192.168.1.1 DNS response:
IN A 192.168.1.1

API

SYN: 14.15.16.17 @ IF1

SYN: 2001:192:321::1 @ IF1

SYN: 2001:192:321::1 @ IF2

SYN: 192.168.1.1 @ IF1

SYN+ACK @ 192.168.1.1 IF1

SYN+ACK @ 2001:192:321::1 IF2

SYN+ACK @ 2001:192:321::1 IF1

Update From the Previous Version

Application Connectivity Management

Application: Wants to Connect

 This message is sent by the application to the MIF API that indicates the application wants to connect to the network.

Application: Connection Is Idle

 This message is sent by the application to the MIF API to indicate that although connection is open, it is idle, it may be terminated if necessary but it is preferred to keep open.

Application: Connection Can Be Broken

 This message is sent by the application to the MIF API that indicates that the application can tolerate to connection broken with no penalty.

Interface Is Going Away

 This message is sent by the MIF API to the application that indicates the interface is going away. This may due to the switch off of an interface.

Interface Is Going Up

 This message is sent by the MIF API to the application that indicates the interface is going up. This may due to the switch on of an interface.

Next Step

- New version of draft add more of functionality discussed in Paris meeting.
- We solicit criticism from working group members particularly those who have worked on related problems.
- We would like to do a final version of the document and go to last call before the next meeting.

Q&A?