

# YANG Model for Automatic Multicast Tunneling

draft-liu-mboned-amt-yang-00

**Yisong Liu (China Mobile)(Presenter)**

Changwang Lin (New H3C )

Zheng Zhang (ZTE)

Xuesong Geng (Huawei)

Vinod Kumar Nagaraj (Juniper)

IETF-115

# Status

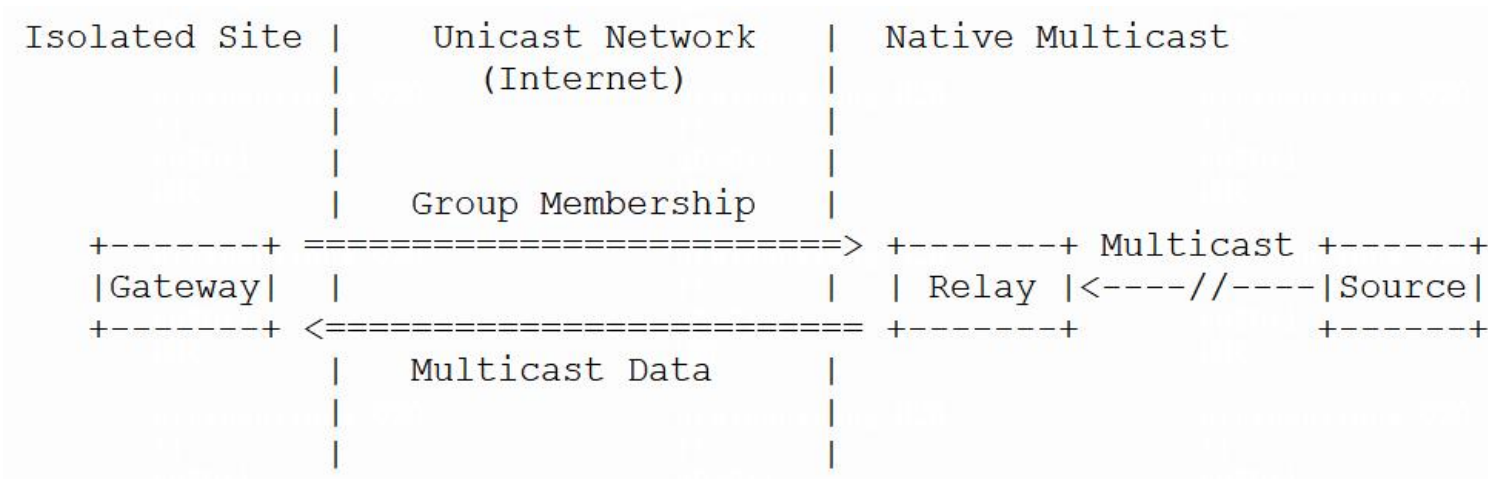
- Version 00
  - First version for presentation
  - Effort from operators and vendors
    - China Mobile/H3C/ZTE/Huawei/Juniper

# Automatic Multicast Tunneling

## RFC 7450:

**Automatic Multicast Tunneling (AMT)** is a protocol that uses UDP-based encapsulation to overcome the aforementioned lack of multicast connectivity.

AMT enables sites, hosts, or applications that do not have native multicast access to a network with multicast connectivity to a source, to request and receive SSM and ASM traffic from a network that does provide multicast connectivity to that source.





# AMT YANG Model

- Configure the parameters of AMT Relay service

```
augment /rt:routing/rt:control-plane-protocols
+--rw amt
  +--rw relay
    +--rw relay-addresses
      | +--rw relay-address* [family]
      |   +--rw family      identityref
      |   +--rw anycast-prefix  inet:ip-address
      |   +--rw local-address  inet:ip-address
    +--rw tunnel-limit?      uint32
    +--rw secret-key-timeout? uint32
```

# AMT YANG Model

- Manage AMT tunnels established on AMT Relay

```
augment /rt:routing/rt:control-plane-protocols
```

```
+--rw amt!
```

```
+--rw relay
```

```
+--ro amt-tunnels
```

```
+--ro amt-tunnel* [gateway-address gateway-port]
```

```
+--ro gateway-address inet:ip-address
```

```
+--ro gateway-port inet:port-number
```

```
+--ro local-address inet:ip-address
```

```
+--ro local-port inet:port-number
```

```
+--ro state enumeration
```

```
+--ro multicastflows
```

```
+--ro multicastflow* [source-address group-address]
```

```
+--ro source-address ip-multicast-source-address
```

```
+--ro group-address rt-types:ip-multicast-group-address
```

# AMT YANG Model

- Configure AMTRelay DNS resource records on AMT Relay

```
augment /rt:routing/rt:control-plane-protocols
```

```
+--rw amt!
```

```
+--rw relay
```

```
+--rw amtrelay-dns-resource-records
```

```
+--rw amtrelay-dns-resource-record* [source-address]
```

```
+--rw source-address      inet:ip-address
```

```
+--rw precedence?        uint32
```

```
+--rw d-flag?            boolean
```

```
+--rw relay-type?        enumeration
```

```
+--rw discovery-address? inet:ip-address
```

```
+--rw domain-name?      inet:domain-name
```

# AMT YANG Model

- Configure and manage the AMT gateway service

```
augment /rt:routing/rt:control-plane-protocols
```

```
+--rw amt
```

```
+--rw gateway
```

```
+--rw pseudo-interfaces
```

```
+--rw pseudo-interface* [ifIndex]
```

```
+--rw ifIndex          if:interface-ref
```

```
+--rw discovery-method enumeration
```

```
+--rw relay-discovery-address? inet:ip-address
```

```
+--rw relay-address?         inet:ip-address
```

```
+--rw upstream-interface?   if:interface-ref
```

```
+--rw discovery-timeout?    uint32
```

```
+--rw discovery-retrans-count? uint32
```

```
+--rw request-timeout?     uint32
```

```
+--rw request-retrans-count? uint32
```

```
+--rw dest-unreach-retry-count? uint32
```

```
+--rw relay-port?          inet:port-number
```

```
+--ro local-address?      inet:ip-address
```



# Next Steps

- Add AMT statistics/accounting items in next version
- Seeking for more feedback from WG
- Questions and comments are welcome