Initial RPSL Dictionary Object

Cengiz Alaettinoglu

<cengiz@isi.edu>

Slides: `ftp://ftp.isi.edu/rps/montreal-ietf`

Local Preference

```
dictionary:RPSL
attribute: pref
           description: BGP local preference attribute
method:    pref.operator= arg integer [0 65535]
           description: set local preference
```

```
action pref = 10
action pref = 0
action pref = 9999
```

~~action pref = -1~~

~~action pref = 0.50~~

Multi-Exit-Discriminator

```
attribute: med
           description: BGP multi_exit_discriminator
method:    med.operator= arg integer [0 65535]
           description: set multi_exit_discriminator
method:    med.operator= arg enum [igp_cost]
           description: set to IGP cost
```

```
action med = 100
action med = igp_cost
```

~~action med = -1~~

~~action med = igp~~

Destination Preference Attribute

```
attribute: dpa
           description: BGP dpa path attribute
method:    dpa.operator= arg integer [0 65535]
           description: set dpa to the argument
```

```
action dpa = 10
action dpa = 20
```


AS Path Attribute

```
attribute: aspath
           description: BGP aspath path attribute
method:    aspath.prepend varargument as_number []
           description: prepend the AS numbers
```

```
action aspath.prepend(AS1)
action aspath.prepend(AS1, AS1, AS1)
```

~~action aspath.prepend(1)~~

~~action aspath.append(AS1)~~

Community Attribute: Appending

```
attribute: community
           description: BGP community
method:    community.operator+= arg integer []
method:    community.operator+= arg enum
                   [no_export no_advertise]
method:    community.append
                   arg as_number []
                   arg integer  [0 65535]
```

```
action community += 10
action community += no_export
action community.append(AS3561, 10)
```

Community Attribute: Deleting

```
method:     community.operator-= arg integer []
method:     community.operator-= arg enum
                [no_export no_advertise]
method:     community.delete
                arg as_number []
                arg integer  [0 65535]

                action community -= 10
                action community -= no_export
                action community.delete(AS3561, 10)
```


Community Attribute: Matching

```
method:     community.operator== arg integer []
method:     community.operator== arg enum
                [no_export no_advertise]
method:     community.contains
                arg as_number []
                arg integer  [0 65535]

                accept   community == no_export
                announce community == 10
                accept   community.contains(AS3561, 10)
```


Flap Dampening

```
attribute: flap_dampen
           description: flap_dampening featute
method:    flap_dampen.enable
           description: enablefeature
method:    flap_dampen.disable
           description: disablefeature

                action flap_dampen.enable()
                action flap_dampen.disable()
```


Conclusion

Provides the most commonly used:

- BGP path attribute
- router features

Other attributes and methods can be added