IETF ACL YANG Enhancements

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Agenda

- Support for combinations of ACL address family types
- Inclusion of match & action parameters
- Open Issues found on further review
Support for combinations of ACL address family types

What’s in the current model?

Draft 10 allowed different types of ACEs (IPv4, IPv6, L2) to be configured within a single ACL.

What is the problem with that?

- Model is error prone because it does not perform strict type checks of the ACL.
- Extending the model to include additional types would modify the main model.
- Lacks flexibility as it supported only IPv4, IPv6 & L2.
Support for combinations of ACL address family types

What is the enhancement in Draft 11?

- Identified all possible L2 & L3 ACL combinations
- Added identity/feature/container statements for the above types

What are the benefits of this enhancement?

- Stricter ACL type checks
- Only supports parts of the model identified by the feature and removes all other parts of model
- Easy to extend ACL types by adding new identity, feature and container statements
Support for combinations of ACL address family types

What are the different ACL types supported in draft 11?

- acl_base
- ipv4-acl
- ipv6-acl
- eth-acl
- mixed-l2-l3-ipv4-acl
- mixed-l2-l3-ipv6-acl
- mixed-l2-l3-ipv4-ipv6-acl
- any-acl
Inclusion of more match & action parameters

feature tcp-acl {}
container tcp-acl {
    if-feature tcp-acl;
    uses packet-fields:
        acl-tcp-header-fields;
}

feature icmp-acl {}
container icmp-acl {
    if-feature icmp-acl;
    uses packet-fields:
        acl-icmp-header-fields;
}

feature udp-acl {}
container udp-acl {
    if-feature udp-acl;
    uses packet-fields:
        acl-udp-header-fields;
}

leaf logging {type boolean;}
Open issues

https://github.com/netmod-wg/acl-model/issues