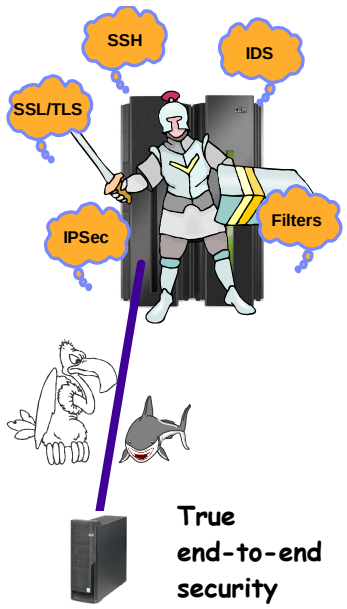
This presentation will give you an overview of the enhancements to the Communications Server in z/OS V1R11 for security.

Security

- IPSec enhancements
- AT-TLS enhancements



There are two main groups of enhancements to the z/OS Communications Server networking security functions in this release. The AT-TLS function is enhanced with support for many new SSL features. IPSec is enhanced within the network management area.

IKEv1 enhancements for IPSec

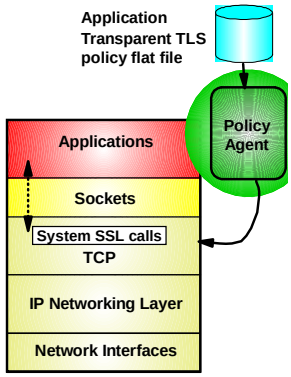
- **The Internet Key Exchange (IKE) daemon has been updated:**
  - Retransmission scheme has been updated to better conform to some of the points in RFC 2408.
    - Rather than using fixed intervals for IKE message retransmission, the daemon now uses a geometrically increasing retransmission interval.
- **In addition, several fine-grained attributes are now reported through:**
  - The ipsec command reports
  - The Network Management Interface (NMI)
  - The System Management Facility (SMF) records

The Internet Key Exchange (IKE) version one protocol handling is updated to better conform with the latest standards with respect to how retransmissions are done.

In addition, several detailed management data is being made available by way of the various network management interfaces that are supported by z/OS Communications Server: ipsec command, NMI, and SMF.

AT-TLS enhancements

- **AT-TLS to support System SSL functions that have been added since z/OS V1R7**:
  - TLS V1.1
  - Using RFC3280 to validate a certificate
  - Negotiation and use of a truncated HMAC
  - Negotiation and use of a maximum SSL fragment size
  - Negotiation and use of handshake server name indication
  - Setting the CRL LDAP server access security level



- **AT-TLS is also updated to address FIPS 140-2 requirements for applications that use AT-TLS to provide secure connections**.
- **AT-TLS performance enhancements for short-lived connections**

ATTLS was initially developed and implemented in z/OS V1R7. Since then, System SSL has added support for new features and protocol extensions. The ATTLS support is in this release enhanced to allow those features to be configured by way of the Configuration Assistant and for ATTLS to exploit these new features.

Among the more obvious ones is support for an updated TLS protocol – the TLS version 1.1 protocol level.

In combination with System SSL, ATTLS is also enhanced to aid in addressing FIPS 140-2 requirements – allowing such system SSL capabilities to be configured and used.

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