ROA Content Proposal

November 2006

Geoff Huston
EE Resource Certificates

• End Entity (no-CA) Certificates used as one-off ROA signing certificates
  – EE cert can be used for a single-use ROA signing
  – Private key is destroyed after a single use
  – EE Cert SIA is a pointer to the object that has been signed with the corresponding private key
  – ROA validity and resource attributes are controlled by the associated EE certificate(s)
What Information is required for a ROA?

1. Originating AS
2. IP Address Set
3. Period of the Authority (Start & End Times)
4. Information to allow a relying party to validate that:
   - The address set is valid
   - The ROA was generated by the address holder
   - The ROA has not been altered
   - The ROA is valid
What Information is required for a ROA?

1. Originating AS
   - In the ROA

2. IP Address Set
   - In the EE Cert (or in the ROA?)

3. Period of the Authority (Start & End Times)
   - In the EE Cert

4. Information to allow a relying party to validate that:
   - The address set is valid
   - The ROA was generated by the address holder
   - The ROA has not been altered
   - The ROA is valid
   - In the EE Cert, plus a Trust Anchor set
ROA Contents:

1. AS Number
2. Address Resource Set
3. Signature(s) across the join of items 1 + 2
4. Pointers to EE Cert(s)
Alternate ROA Template (2)

ROA Contents:

1. AS Number
2. Pointers (URLs) of EE Cert(s)
3. Signature(s) across the join of items 1 + 2
Alternate ROA Template (3)

ROA Contents:

1. AS Number
2. EE Cert(s)
3. Signature(s) across the join of items 1 + 2
Alternate ROA Template (4)

ROA Contents:

1. AS Number
2. Hash(es) of EE Cert(s)
3. Signature(s) across the join of items 1 + 2