Figure 3: Smart Proxy Trust Verification

isTrustedObject(proxy, context)

getProxyTrustIterator()

ProxyTrustIterator

hasNext()

true

next()

object (a bootstrap proxy?)

[If object is not a ProxyTrust instance, then attempt to obtain ProxyTrustIterator from object as above, recursively; otherwise, if object is not a RemoteMethodControl instance, go back to hasNext(); otherwise, the object is a bootstrap proxy, so proceed.]

isTrustedObject(object)

true

[If true, then proceed below; otherwise, if certain conditions are met, then create a "derivative bootstrap proxy", and if this proxy is trusted, then use it to obtain the trust verifier from the server below; otherwise, go back to hasNext().]

getProxyVerifier()

ProxyTrust

(bootstrap proxy or derivative bootstrap proxy)

TrustVerifier

ProxyTrust

(bootstrap remote object)

server JVM

getProxyVerifier()

getProxyVerifier()

TrustVerifier

TrustVerifier

TrustVerifier

TrustVerifier

ServerProxyTrust

(main remote object)

Server JVM

Actions vary depending on the TrustVerifier implementation

Bootstrap and main remote object can be a single, combined object