Figure 3: Smart Proxy Trust Verification

ProxyTrustVerifier	proxy (or its InvocationHandler)	ProxyTrustIterator	TrustVerifier. Context

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.]

TrustVerifier

isTrustedObject(object)

isTrustedObject(object,context)

true

true

Actions vary depending on the **TrustVerifier** implementation

[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().]

Server JVM

ProxyTrust (bootstrap proxy or derivative bootstrap proxy)	**ProxyTrust** (bootstrap remote object)	**ServerProxyTrust** (main remote object)

getProxyVerifier()

getProxyVerifier()

getProxyVerifier()

TrustVerifier

TrustVerifier

TrustVerifier

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

TrustVerifier (from server)

isTrustedObject(proxy,context)

true

true