| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/StartTlsResponse.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/javax/naming/ldap/StartTlsRequest.html)   [**NEXT CLASS**](http://docs.google.com/javax/naming/ldap/UnsolicitedNotification.html) | [**FRAMES**](http://docs.google.com/index.html?javax/naming/ldap/StartTlsResponse.html)    [**NO FRAMES**](http://docs.google.com/StartTlsResponse.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#2s8eyo1) | [METHOD](#3rdcrjn) |

## **javax.naming.ldap**

Class StartTlsResponse

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.naming.ldap.StartTlsResponse**

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html), [ExtendedResponse](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html)

public abstract class **StartTlsResponse**extends [Object](http://docs.google.com/java/lang/Object.html)implements [ExtendedResponse](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html)

This class implements the LDAPv3 Extended Response for StartTLS as defined in [Lightweight Directory Access Protocol (v3): Extension for Transport Layer Security](http://www.ietf.org/rfc/rfc2830.txt) The object identifier for StartTLS is 1.3.6.1.4.1.1466.20037 and no extended response value is defined.

The Start TLS extended request and response are used to establish a TLS connection over the existing LDAP connection associated with the JNDI context on which extendedOperation() is invoked. Typically, a JNDI program uses the StartTLS extended request and response classes as follows.

import javax.naming.ldap.\*;  
   
 // Open an LDAP association  
 LdapContext ctx = new InitialLdapContext();  
  
 // Perform a StartTLS extended operation  
 StartTlsResponse tls =  
 (StartTlsResponse) ctx.extendedOperation(new StartTlsRequest());  
  
 // Open a TLS connection (over the existing LDAP association) and get details  
 // of the negotiated TLS session: cipher suite, peer certificate, ...  
 SSLSession session = tls.negotiate();  
  
 // ... use ctx to perform protected LDAP operations  
  
 // Close the TLS connection (revert back to the underlying LDAP association)  
 tls.close();  
  
 // ... use ctx to perform unprotected LDAP operations  
  
 // Close the LDAP association  
 ctx.close;

**Since:** 1.4 **See Also:**[StartTlsRequest](http://docs.google.com/javax/naming/ldap/StartTlsRequest.html), [Serialized Form](http://docs.google.com/serialized-form.html#javax.naming.ldap.StartTlsResponse)

| **Field Summary** | |
| --- | --- |
| static [String](http://docs.google.com/java/lang/String.html) | [**OID**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#OID)            The StartTLS extended response's assigned object identifier is 1.3.6.1.4.1.1466.20037. |

| **Constructor Summary** | |
| --- | --- |
| protected | [**StartTlsResponse**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#StartTlsResponse())()            Constructs a StartTLS extended response. |

| **Method Summary** | |
| --- | --- |
| abstract  void | [**close**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#close())()            Closes the TLS connection gracefully and reverts back to the underlying connection. |
| byte[] | [**getEncodedValue**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#getEncodedValue())()            Retrieves the StartTLS response's ASN.1 BER encoded value. |
| [String](http://docs.google.com/java/lang/String.html) | [**getID**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#getID())()            Retrieves the StartTLS response's object identifier string. |
| abstract  [SSLSession](http://docs.google.com/javax/net/ssl/SSLSession.html) | [**negotiate**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#negotiate())()            Negotiates a TLS session using the default SSL socket factory. |
| abstract  [SSLSession](http://docs.google.com/javax/net/ssl/SSLSession.html) | [**negotiate**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#negotiate(javax.net.ssl.SSLSocketFactory))([SSLSocketFactory](http://docs.google.com/javax/net/ssl/SSLSocketFactory.html) factory)            Negotiates a TLS session using an SSL socket factory. |
| abstract  void | [**setEnabledCipherSuites**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setEnabledCipherSuites(java.lang.String%5B%5D))([String](http://docs.google.com/java/lang/String.html)[] suites)            Overrides the default list of cipher suites enabled for use on the TLS connection. |
| abstract  void | [**setHostnameVerifier**](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setHostnameVerifier(javax.net.ssl.HostnameVerifier))([HostnameVerifier](http://docs.google.com/javax/net/ssl/HostnameVerifier.html) verifier)            Sets the hostname verifier used by negotiate() after the TLS handshake has completed and the default hostname verification has failed. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Field Detail** |
| --- |

### OID

public static final [String](http://docs.google.com/java/lang/String.html) **OID**

The StartTLS extended response's assigned object identifier is 1.3.6.1.4.1.1466.20037.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#javax.naming.ldap.StartTlsResponse.OID)

| **Constructor Detail** |
| --- |

### StartTlsResponse

protected **StartTlsResponse**()

Constructs a StartTLS extended response. A concrete subclass must have a public no-arg constructor.

| **Method Detail** |
| --- |

### getID

public [String](http://docs.google.com/java/lang/String.html) **getID**()

Retrieves the StartTLS response's object identifier string.

**Specified by:**[getID](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html#getID()) in interface [ExtendedResponse](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html) **Returns:**The object identifier string, "1.3.6.1.4.1.1466.20037".

### getEncodedValue

public byte[] **getEncodedValue**()

Retrieves the StartTLS response's ASN.1 BER encoded value. Since the response has no defined value, null is always returned.

**Specified by:**[getEncodedValue](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html#getEncodedValue()) in interface [ExtendedResponse](http://docs.google.com/javax/naming/ldap/ExtendedResponse.html) **Returns:**The null value.

### setEnabledCipherSuites

public abstract void **setEnabledCipherSuites**([String](http://docs.google.com/java/lang/String.html)[] suites)

Overrides the default list of cipher suites enabled for use on the TLS connection. The cipher suites must have already been listed by SSLSocketFactory.getSupportedCipherSuites() as being supported. Even if a suite has been enabled, it still might not be used because the peer does not support it, or because the requisite certificates (and private keys) are not available.

**Parameters:**suites - The non-null list of names of all the cipher suites to enable.**See Also:**[negotiate()](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#negotiate())

### setHostnameVerifier

public abstract void **setHostnameVerifier**([HostnameVerifier](http://docs.google.com/javax/net/ssl/HostnameVerifier.html) verifier)

Sets the hostname verifier used by negotiate() after the TLS handshake has completed and the default hostname verification has failed. setHostnameVerifier() must be called before negotiate() is invoked for it to have effect. If called after negotiate(), this method does not do anything.

**Parameters:**verifier - The non-null hostname verifier callback.**See Also:**[negotiate()](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#negotiate())

### negotiate

public abstract [SSLSession](http://docs.google.com/javax/net/ssl/SSLSession.html) **negotiate**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Negotiates a TLS session using the default SSL socket factory.

This method is equivalent to negotiate(null).

**Returns:**The negotiated SSL session **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an IO error was encountered while establishing the TLS session.**See Also:**[setEnabledCipherSuites(java.lang.String[])](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setEnabledCipherSuites(java.lang.String%5B%5D)), [setHostnameVerifier(javax.net.ssl.HostnameVerifier)](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setHostnameVerifier(javax.net.ssl.HostnameVerifier))

### negotiate

public abstract [SSLSession](http://docs.google.com/javax/net/ssl/SSLSession.html) **negotiate**([SSLSocketFactory](http://docs.google.com/javax/net/ssl/SSLSocketFactory.html) factory)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Negotiates a TLS session using an SSL socket factory.

Creates an SSL socket using the supplied SSL socket factory and attaches it to the existing connection. Performs the TLS handshake and returns the negotiated session information.

If cipher suites have been set via setEnabledCipherSuites then they are enabled before the TLS handshake begins.

Hostname verification is performed after the TLS handshake completes. The default hostname verification performs a match of the server's hostname against the hostname information found in the server's certificate. If this verification fails and no callback has been set via setHostnameVerifier then the negotiation fails. If this verification fails and a callback has been set via setHostnameVerifier, then the callback is used to determine whether the negotiation succeeds.

If an error occurs then the SSL socket is closed and an IOException is thrown. The underlying connection remains intact.

**Parameters:**factory - The possibly null SSL socket factory to use. If null, the default SSL socket factory is used. **Returns:**The negotiated SSL session **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an IO error was encountered while establishing the TLS session.**See Also:**[setEnabledCipherSuites(java.lang.String[])](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setEnabledCipherSuites(java.lang.String%5B%5D)), [setHostnameVerifier(javax.net.ssl.HostnameVerifier)](http://docs.google.com/javax/naming/ldap/StartTlsResponse.html#setHostnameVerifier(javax.net.ssl.HostnameVerifier))

### close

public abstract void **close**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Closes the TLS connection gracefully and reverts back to the underlying connection.

**Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - If an IO error was encountered while closing the TLS connection

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/StartTlsResponse.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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