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**BIRDonCloud**

**Enabling HTTPS Access Document**

*From*

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# Create a Server Certificate

## Step – 1: Generate the server certificate.

Type the following command all on one line:

**Syntax: -**

|  |
| --- |
| **java-home/bin**/keytool -genkey -alias <alias name> -keyalg RSA - keypass <password> -storepass <password> -keystore <any-filename-.jks> |

**Example: -**

|  |
| --- |
| **java-home/bin/**keytool -genkey -alias **birdoncloud** -keyalg RSA -keypass **birdoncloud** -storepass **birdoncloud** -keystore **bird\_keystore.jks** |

When you press Enter, keytool prompts you to enter the server name, organizational unit, organization, locality, state, and country code.

You must type the server name in response to keytool’s first prompt, in which it asks for first and last names.

## Step – 2: Export the generated server certificate in keystore.jks into the file server.cer (Optional).

Type the following command all on one line:

**Syntax: -**

|  |
| --- |
| **java-home/bin**/keytool -export -alias <alias name> -storepass <password> -file server.cer -keystore <any-filename-.jks> |

**Example: -**

|  |
| --- |
| **java-home/bin** /keytool -export -alias **birdoncloud** -storepass **birdoncloud** -file server.cer -keystore **bird\_keystore.jks** |

## Step – 3: To add the server certificate to the truststore file, cacerts.jks, run keytool from the directory where you created the keystore and server certificate (Optional).

Use the following parameters. Press enter and type yes

**Syntax: -**

|  |
| --- |
| **java-home/bin**/keytool -import -v -trustcacerts -alias <alias name> -file server.cer -keystore cacerts.jks -keypass <password> -storepass <password> |

**Example:-**

|  |
| --- |
| **java-home/bin**/keytool -import -v -trustcacerts -alias **birdoncloud** -file server.cer -keystore cacerts.jks -keypass **birdoncloud** -storepass **birdoncloud** |

# SSL/TLS Configuration

## Step - 1:- Place the keystore file in tomcat home directory.

## Step - 2:- Change Connector configurations of port number 8080 in <Tomcat - Home>/conf/server.xml file as follows

|  |
| --- |
| <Connector port="8080" enableLookups="false"  redirectPort="8443" /> |

## Step – 3:- Uncomment and Change Connector configurations of port number 8443 in <Tomcat - Home>/conf/server.xml file as follows

|  |
| --- |
| <Connector  protocol="org.apache.coyote.http11.Http11NioProtocol"  port="8443" maxThreads="200"  scheme="https" secure="true" SSLEnabled="true"  keystoreFile="${catalina.home}/**bird\_keystore.jks**" keystorePass="**birdoncloud**"  clientAuth="false" sslProtocol="TLS"/> |

Note: - Please change keystoreFile and keystorePass properties accordingly.

## Step – 4:- Add Following configurations in web.xml file (in <web-app> tag) for automatic redirect from HTTP to HTTPS.

|  |
| --- |
| <security-constraint>  <web-resource-collection>  <web-resource-name>Entire Application</web-resource-name>  <url-pattern>/\*</url-pattern>  </web-resource-collection>  <user-data-constraint>  <transport-guarantee>CONFIDENTIAL</transport-guarantee>  </user-data-constraint>  </security-constraint> |

Reference Links:

<https://tomcat.apache.org/tomcat-8.0-doc/ssl-howto.html>

<http://docs.oracle.com/javase/6/docs/technotes/tools/solaris/keytool.html>