## **Encrypting property values**

By default, Web Application Platform properties are stored as plain text. If required, any of these properties can be encrypted. For property encryption and decryption, you need to generate a pair of keys by using our property encryption tool. The tool is provided as the *encryptor.jar* file and the steps below explain how to use it.



The encryption tool uses Java 11. Therefore, the system **PATH** variable needs to point to the location of the *bin* folder of the Java 11 home directory, e. g. C: Java Java 11\bin or /opt/Java/Java11/bin.

## To encrypt Web Application Platform properties

- 1. Click the link to download the encryptor.jar file.
- 2. Open the command-line interface and navigate to the directory where the encryptor.jar file is located.
- 3. Run the java jar encryptor jar command. You should see the information on how to use the tool as displayed below.

Command Prompt	-		×
C:\Users\ >java -jar encryptor.jar			^
Property Encryption Tool			
To use the tool, enter one of the following commands: java -jar encryptor.jar help - outputs a list of available options java -jar encryptor.jar generate-keys <path_to_folder_for_keys> - creates a public-priv Replace the part <path_to_folder_for_keys> with the value where keys need to be stored. java -jar encryptor.jar encrypt <unencrypted_property_value> <path_to_the public_key=""> - provided property value with the public key. Replace the part <path_to_the public_key=""> with the the public key</path_to_the></path_to_the></unencrypted_property_value></path_to_folder_for_keys></path_to_folder_for_keys>	ate ke encry real	≥y pain ypts tl path †	r. he to
C:\Users\ >_			

4. Run the java -jar encryptor.jar generate-keys <path\_to\_folder\_for\_keys> command to generate a pair of keys for property encryption and decryption. Make sure to replace the <path\_to\_folder\_for\_keys> placeholder with the actual path to the directory where you want to store the keys. You should see a confirmation that the keys have been successfully generated.

Keys for encryption and decryption

After executing the command, the following keys are created in the specified directory:

- propertiesEncryptionKey.pub a public key used to encrypt property values.
   propertiesEncryptionKey a private key used to decrypt property values.
- 5. To encrypt a property, run the java -jar encryptor.jar encrypt <unencrypted\_property\_value> <path\_to\_the public\_key> command. Make sure to replace the <unencrypted\_property\_value> and <path\_to\_the public\_key> placeholders with the actual property value and the path to the propertiesEncryptionKey.pub file. The tool will output the encrypted property value.

Command Prompt					×
:\Users\ >java -jar encryptor.jar encr nkey.pub	rypt MY_PASSWORD C:\\	Users\	propertie	esEncry	/pti
Property Encryption Tool		Encrypted property value			
roperty MY_PASSWORD has been successfully encrypted	d. Encrypted value:				
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e4srlAIF7Kfq36pPywTu58NBYp6M8yktIDTtKtQSvuZF8Qcb38 w0zzUS+EenjWedTxogxpfXLtUbTEuzwYSMGqyi5goX9Wb3vnkM F296KEgI+rA==	Vw560kGCd9Io+vdM5aTN Ps7x1L/ZhqYYIQCXwQaRI	TNi2ls7jnN09BuqD6lZvw EbzLIH3oJEHJxRvUpFIhw	Joc/7LJfr	grfEhxw n/09ukx	sRGw wM3P kØwj
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<pre>le4srlAIF7Kfq36pPywTu58NBYp6M8yktIDTtKtQSvu2F8Qcb38 wd22US+EenjWedTxogxpfXLtUbTEuzwYSMGqy15goX9Wb3vnKM F296kEgI+rA== opy this value as the value of the property to the property_value), i.e.: NC(lcvPbmmI32vn1jD2EYrQfMLu7ydX+/DW8w1jMsk/+UcjrPW RGwMe4srlAIF7Kfq36pPywTu58NBYp6M8yktIDTtKtQSvu2F8Qc M9FSw6z2US+EenjWedTxogxpfXLtUbTEuzwYSMGqy15goX9Wb3v 0wjgF296kEgI+rA=)</pre>	Wu56okGcd9Io+vdMSaTN Ps7xlL/ZhqYYIQCXwQaRI webappplatform.propu XELau1YC1FFTa3UBMptu: cb38Vw560kGcd9Io+vdM vnkMPs7xlL/ZhqYYIQCX	NJOLIPICION(J) Ni2ls7jnN09BuqDbClZvw EbzLIH30JEHJXRvUpFIhw erties file in the fc 3SFK6wjOuLipveVBJYzo@ SaTNTNi2ls7jnN09BuqD6 wQaREbzLIH30JEHJXRvUp	ylatordd Joc/7LJfr prmat ENC( 0k+yfgt1qr 5lZvwJ/ato FIhWJoc/7	(encryp n/09ukx (encryp nD1ud/3 crd0grf 7LJfn/6	sRGw wM3P k0wj oted 3E7L fEhx 99uk
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6. Go to the Web\_App\_Platform\_installation\_directory>\apache-tomcat\shared\conf directory and open the webappplatform.properties file.
7. In the webappplatform.properties file, replace the actual property value with the encrypted property value in the following format: ENC (encrypted\_property\_value).

	$\odot$	Example of an encrypted property
		For example, an encrypted Teamwork Cloud administrator password, should look similar to this one: twc.admin.password=ENC (lcvPbmml32vn1jD2EYrQfMLu7ydX+/DW8wljMsk/ +UcirPWXELau1YC1FETa3UBMptu3sEK6wiOuLinveVBJYzo0k+vfgt1gnD1ud
		/3E7LsRGwMe4srIAIF7Kfq36pPywTu58NBYp6M8yktIDTtKtqSvuZF8Qcb38Vw56OkGCd9lo+vdM5aTN TNi2ls7inN09BugD6lZvw./J4tcrd0arfEbxwM3PSw0zzUS+EepiWedTxgqxnfXLtLbTEuzwYSMGqvi5goX9Wb3ypkMPs7xU
		/ZhqYYIQCXwQaREbzLIH3oJEHJxRvUpFIhWJoc/7LJfn/09ukx0wjgF296kEgI+rA==).
8. 9.	Go to th In the c Encrypt locatio	<pre>we <web_app_platform_installation_directory>\conf directory and open the catalina.properties file. atalina.properties file, add the properties.encryption.private.key.location property and specify the path to the private key (the properties ionKey file) as its value, e.g., properties.encryption.private.key. n=<web_app_platform_installation_directory>\\shared\\conf\\keys\\propertiesEncryptionKey.</web_app_platform_installation_directory></web_app_platform_installation_directory></pre>



The private key (the propertiesEncryptionKey file) should be in the location which Web Application Platform can access.

10. Restart Web Application Platform.