

# HOW TO IMPORT KEYS TO SPSDK/SPT

NXP SE  
FEB.2025



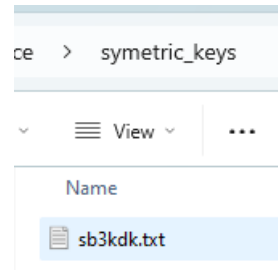
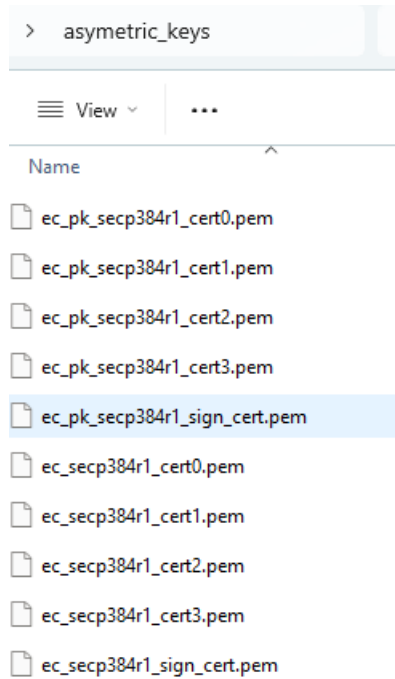
SECURE CONNECTIONS  
FOR A SMARTER WORLD

PUBLIC

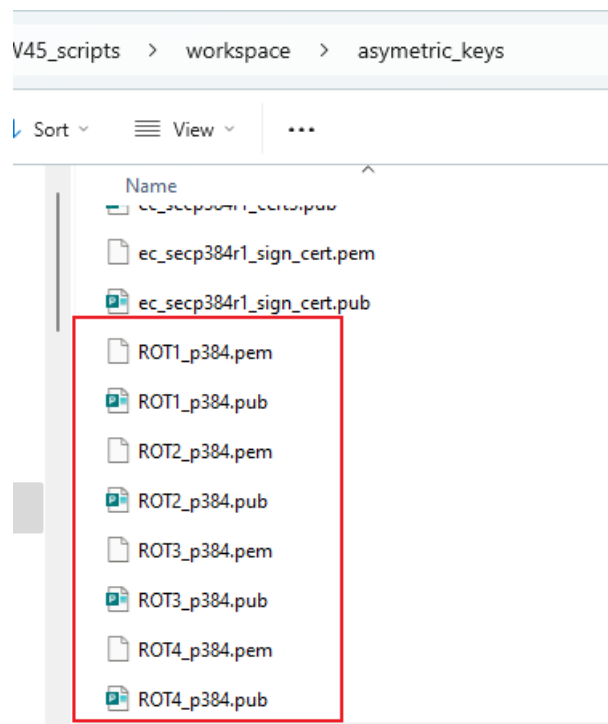
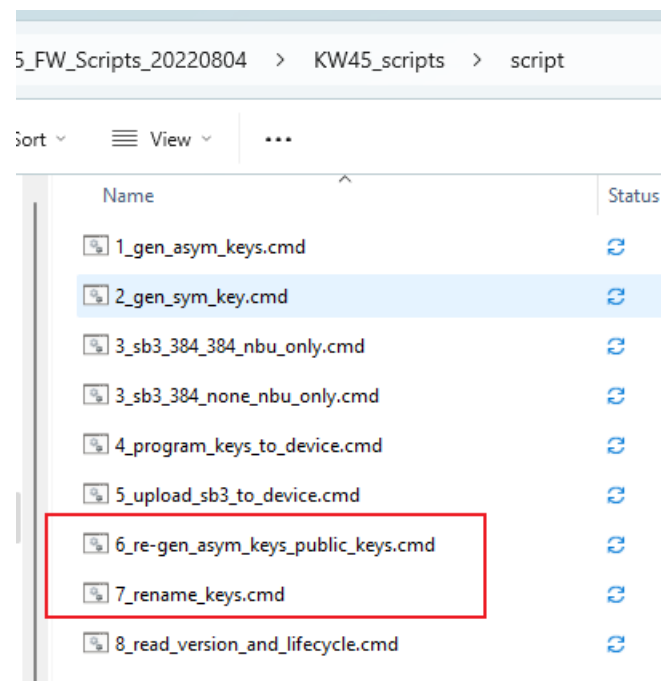
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# THE KEYS HAVE BEEN GENERATED BY KW45\_FW\_SCRIPTS\_20220804

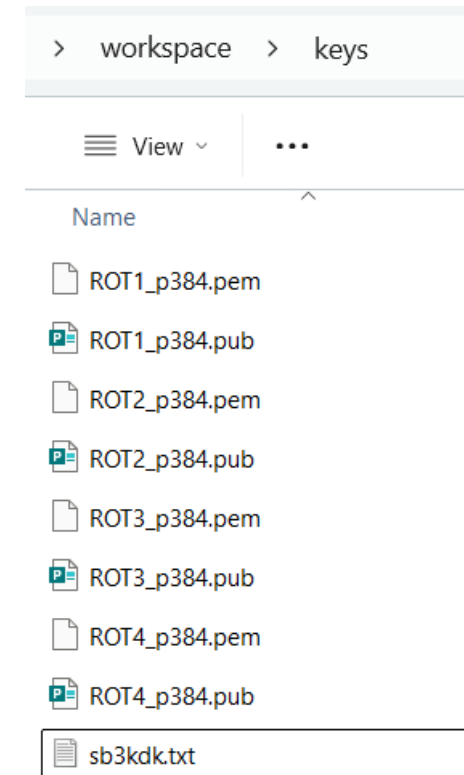


# GENERATE PUBLIC KEYS AND RENAME THE KEYS

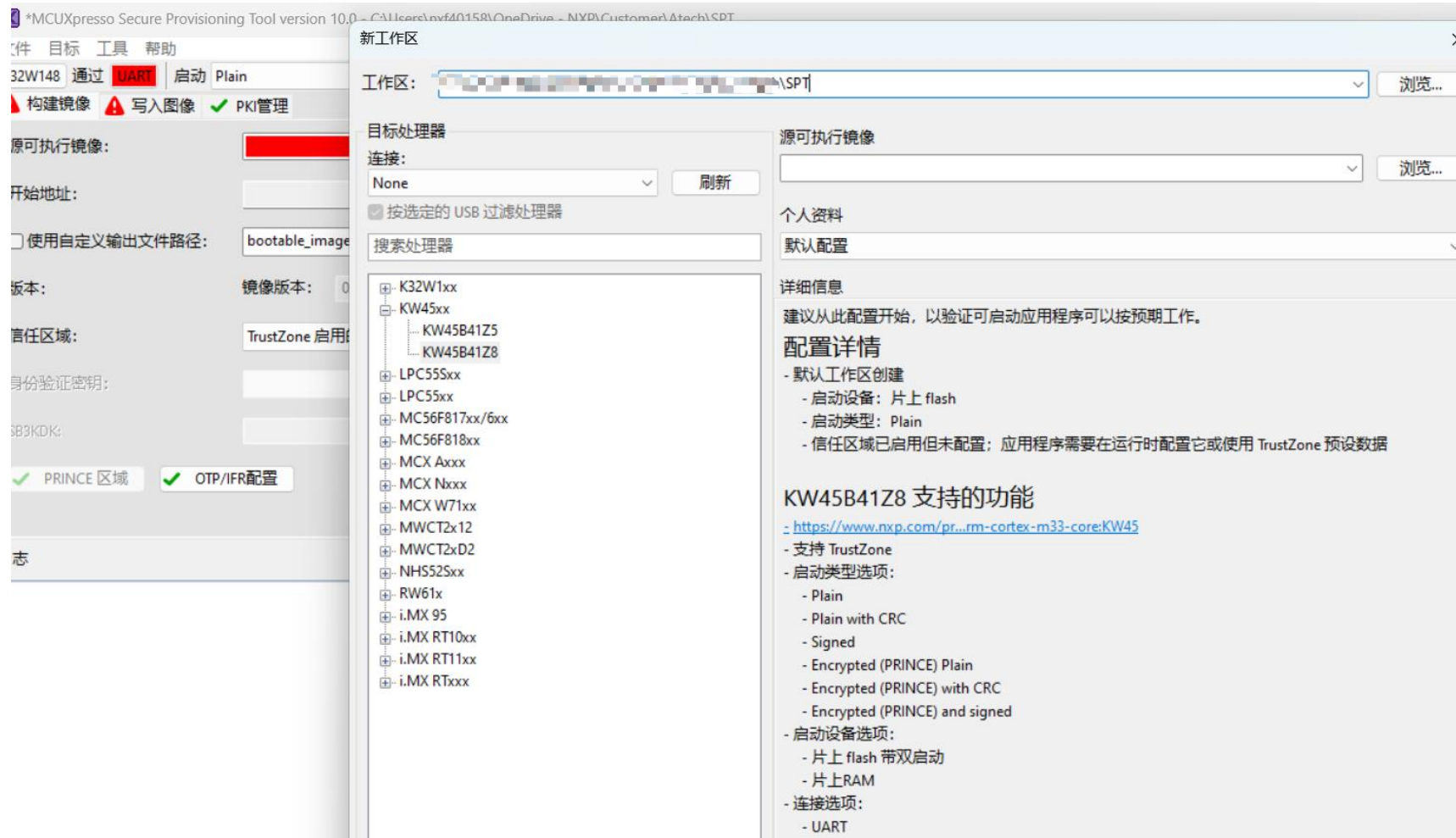


# SPSDK

1. Copy keys from KW45\_FW\_Scripts\_20220804 to SPSDK workspace/keys
2. Run 1.generate\_keys.cmd to generate cert-blocks



# CREATE MCUXPRESSO SECURE PROVISIONING TOOL PROJECT



# GENERATE KEYS

The screenshot displays the NXP MCUX\_Provi v10 software interface. At the top, a toolbar includes buttons for '构建镜像' (Build Image), '写入图像' (Write Image), and 'PKI管理' (PKI Management), with the latter highlighted by a red box. Below the toolbar, a sidebar lists folders: '身份验证密钥' (Authentication Keys), '调试身份验证密钥' (Debug Authentication Keys), and '调试身份验证证书' (Debug Authentication Certificates). The main workspace is currently empty. On the right side, a panel titled '镜像验证' (Image Verification) contains buttons for '生成密钥...' (Generate Key...), '添加密钥...' (Add Key...), and '重新生成证书...' (Regenerate Certificate...), with '生成密钥...' highlighted by a red box. Below this, there is a checkbox for '使用签名提供程序' (Use Signature Provider) which is checked. Further down, a section titled '调试身份验证' (Debug Authentication) includes buttons for '生成调试密钥...' (Generate Debug Key...), '创建调试证书请求...' (Create Debug Certificate Request...), '生成调试证书...' (Generate Debug Certificate...), and '打开调试端口...' (Open Debug Port...). At the bottom right, an '导入/导出' (Import/Export) section has buttons for '导入密钥...' (Import Key...) and '导出密钥...' (Export Key...). A '生成密钥' (Generate Key) dialog box is open in the center, featuring a close button (X) in the top right corner. The dialog has the following fields: '证书链' (Certificate Chain) set to 'Self-signed RoT' (highlighted with a red box), '密钥类型' (Key Type) set to 'ECC', '密钥长度' (Key Length) set to 'p384', and '证书约束' (Certificate Constraints) set to '0'. There is an expandable section for '高级' (Advanced) settings. At the bottom of the dialog are two buttons: '生成' (Generate) with a green checkmark icon, and '关闭' (Close).

W45B41Z8 通过 UART 启动 Plain 来自 片上 flash LC: OEM Open Dbg: 无

构建镜像 写入图像 PKI管理

身份验证密钥  
调试身份验证密钥  
调试身份验证证书

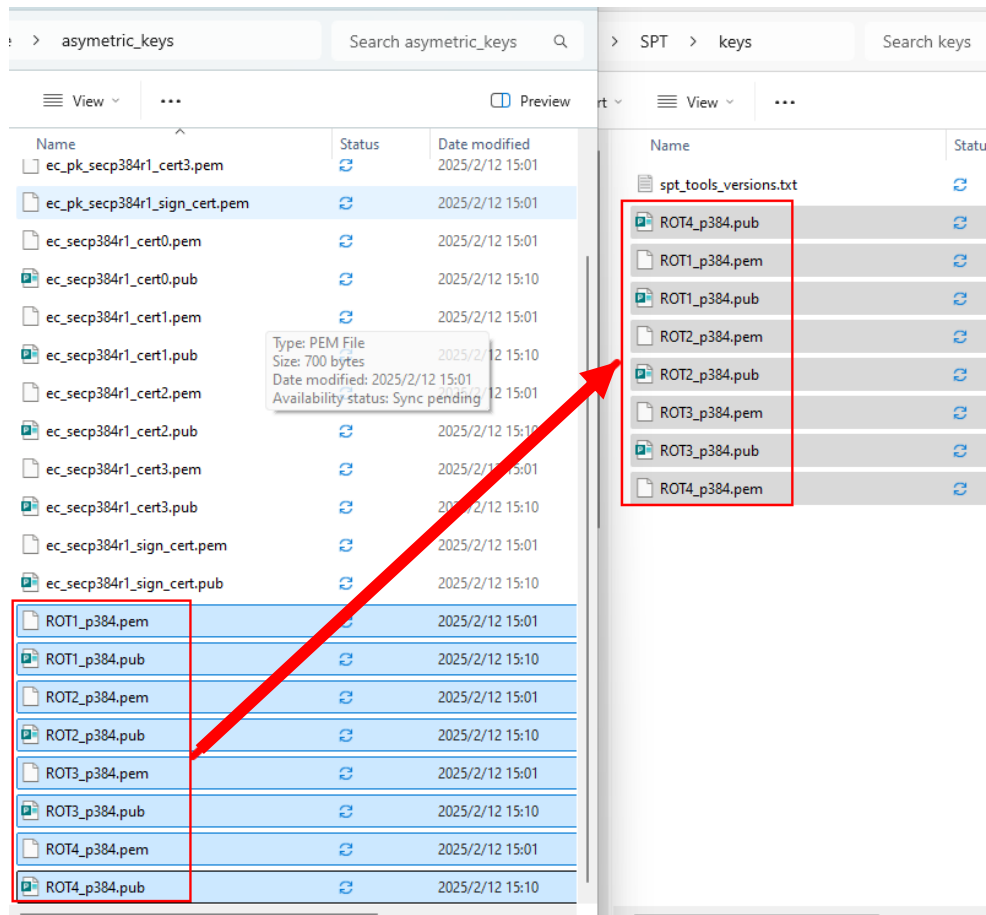
镜像验证  
生成密钥 ... 添加密钥 ...  
重新生成证书 ...  
☐ 使用签名提供程序 ☒  
调试身份验证  
生成调试密钥 ...  
创建调试证书请求 ...  
生成调试证书 ...  
打开调试端口 ...  
导入/导出  
导入密钥 ... 导出密钥 ...

可以从以下位置导入KW45B41Z-EVK开发的密钥: C:\nxp\MCUX\_Provi\_v10\bin\\_internal\data\targets\KW45B41Z  
有关详细信息, 请参阅用户指南。

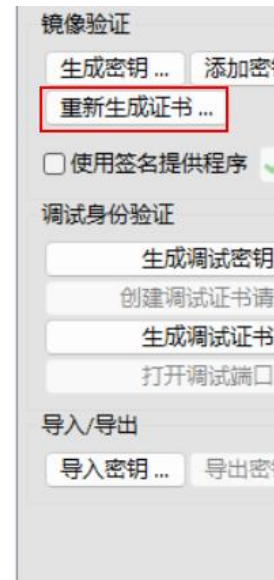
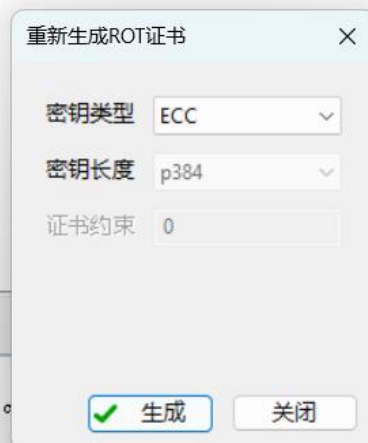
志

操作的状态: 成功: 已创建新工作区: C:\Users\nxf40158\OneDrive - NXP\Customer\Atech\SPT

# DELETE THE KEYS GENERATED BY SPT AND COPY KEYS FROM KW45\_FW\_SCRIPTS\_20220804 TO SPT WORKSPACE



# GENERATE CERT BLOCK



日志

XKTH: 735c427235428d3ca29e85efab9c5331b6177145fc163ddf684d7e8b0a2f139f2ff1d5dd69d435a8990ac6842682a4c1  
Success. (Certificate Block: C:/Users/nxf40158/OneDrive - NXP/Customer/Atech/SPT/keys/ROT1\_cert\_block.bin c  
xpimage succeeded



# GENERATE DC

The screenshot displays the NXP iMxImage tool interface. At the top, there are three tabs: '构建镜像' (Build Image), '写入图像' (Write Image), and 'PKI管理' (PKI Management). The '构建镜像' tab is active, showing a tree view of the '身份验证密钥' (Authentication Keys) folder, which includes ROT1, ROT2, ROT3, and ROT4 keys, as well as debug keys and certificates. On the right side, there are sections for '镜像验证' (Image Verification) and '调试身份验证' (Debug Authentication). The '调试身份验证' section has a button labeled '生成调试密钥...' (Generate Debug Key...) which is highlighted with a red box. A dialog box titled '生成调试身份验证密钥' (Generate Debug Authentication Key) is open in the center. It contains two dropdown menus: '密钥类型' (Key Type) set to 'ECC' and '密钥长度' (Key Length) set to 'p384'. A note next to the key length dropdown states: '它必须与 ROT 密钥的长度相同。' (It must be the same length as the ROT key). At the bottom of the dialog are '生成' (Generate) and '取消' (Cancel) buttons. In the background, a status bar shows a message about importing a key from a specific path. At the bottom of the interface, there is a log window showing the execution of build scripts and the successful creation of a Master Boot Image.

生成调试身份验证密钥

密钥类型: ECC

密钥长度: p384 它必须与 ROT 密钥的长度相同。

生成 取消

可以从以下位置导入KW45B41Z-EVK开发的密钥: C:\nxp\MCUX\_Provi\_v10\bin\internal\data\target  
有关详细信息, 请参阅用户指南。

生成构建脚本: build\_image\_lnx.sh  
生成构建脚本: build\_image\_win.bat  
生成构建脚本: build\_image\_mac.sh  
正在执行脚本 "C:\Users\nxf40158\OneDrive - NXP\Customer\Atech\SPT\build\_image\_win.bat"  
\*\*\*脚本: 构建镜像: C:\Users\nxf40158\OneDrive - NXP\Customer\Atech\SPT\build\_image\_win.bat  
\*\*\* Create Master Boot Image using nxpimage tool \*\*\*  
nxpimage mbi export -c "C:\Users\nxf40158\OneDrive - NXP\Customer\Atech\SPT\configs\mbi\_config.yaml"  
RKTH: 1ba5a135e93d799ca79369e461e3be155d32a5b1e8c6d87b14d22dcadba27699113a1f9898f2a0c5e9777955c843af99  
Success. (Master Boot Image: C:/Users/nxf40158/OneDrive - NXP/Customer/Atech/SPT/bootable\_images/0EM\_Return\_Plain.bin created.)

# GENERATE DC

entication\_key\_ECC\_384.pem

密钥: C:\nxp\MCUX\_Provi\_v

```
- NXP\Customer\Atech\S  
eDrive - NXP\Customer\  
mage tool ###  
58\OneDrive - NXP\Cust  
id32a5b1e8c6d87b14d22dc  
xf40158/OneDrive - NXP/Customer/Atech/SPT/bootable_images/OEM_Return_Plain.bin created.)
```

请求调试身份验证证书

处理器 KW45B41Z8

调试公钥 keys\debug\_authentication\_key\_ECC\_384.pub

密钥类型 ECC p384

UUID 0x00000000000000000000000000000000

读取UUID

连接 UART 刷新 读

注释

通路 debug\_auth\debug\_auth\_cert\_request.zip 浏览...

确定 取消

生成密钥 ... 添加密钥 ...

重新生成证书 ...

☐ 使用签名提供程序 ☒ 配置...

调试身份验证

生成调试密钥 ...

创建调试证书请求 ...

生成调试证书 ...

打开调试端口 ...

导入/导出

导入密钥 ...

导出密钥 ...

移除

# GENERATE DC

