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BS2_SetCustomCardConfig

[+ 2.9.4] Stores Custom smart card settings.

Warning

To use the custom smart card function, you must disable suprema smart card modes and enable custom smart card modes in useCardOperationMask of [BS2SystemConfig](#).

Declaration

```
#include "BS_API.h"

int BS2_SetCustomCardConfig(void* context, uint32_t deviceId, const
BS2CustomCardConfig* config);
```

[See to structure BS2CustomCardConfig](#)

Parameter

- [In] *context* : Context
- [In] *deviceId* : Device Identifier
- [Out] *config* : Pointer to set Custom smart card information

Return Value

If successfully done, BS_SDK_SUCCESS will be returned. If there is an error, the corresponding error code will be returned.

See Also

[BS2_GetCustomCardConfig](#)

Sample Code(C++)

sample_setcustomcardconfig.cpp

```
ConfigControl cc(context);
BS2CustomCardConfig config = { , };

BS2_DEVICE_ID id = Utility::getSelectedDeviceID(device);
int sdkResult = cc.getCustomCardConfig(id, config);
if (BS_SDK_SUCCESS != sdkResult)
    return sdkResult;

string msg = "Please enter a data type of cards. (0: Binary, 1:
ASCII, 2: UTF16, 3: BCS)";
config.dataType =
(BS2_CARD_DATA_TYPE)Utility::getInput<uint32_t>(msg);
config.useSecondaryKey = Utility::isYes("Do you want to use
secondary key?");

ostringstream oss;

if (Utility::isYes("Do you want to change mifare custom card
settings?"))
{
    memset(&config.mifare.primaryKey, 0x0,
sizeof(config.mifare.primaryKey));
    oss << "Please enter the hexadecimal " <<
sizeof(config.mifare.primaryKey) << "-bytes primary key for mifare
card." << endl;
    oss << " [Like 12 34 56 ... EF]" << endl;
    Utility::getLineHexString<uint8_t>(oss.str(),
config.mifare.primaryKey, sizeof(config.mifare.primaryKey));

    if (config.useSecondaryKey)
    {
        memset(&config.mifare.secondaryKey, 0x0,
sizeof(config.mifare.secondaryKey));
        oss.str("");
        oss << "Please enter the hexadecimal " <<
sizeof(config.mifare.secondaryKey) << "-bytes secondary key for mifare
card." << endl;
        oss << " [Like 12 34 56 ... EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.mifare.secondaryKey, sizeof(config.mifare.secondaryKey));
    }

    msg = "Please enter the start block index of mifare card.";
    config.mifare.startBlockIndex =
(uint16_t)Utility::getInput<uint32_t>(msg);
    msg = "Please enter the card data size of mifare card.";
    config.mifare.dataSize =
(uint8_t)Utility::getInput<uint32_t>(msg);
    msg = "Please enter the skip bytes of mifare card.;"
```

```
        config.mifare.skipBytes =
(uint8_t)Utility::getInput<uint32_t>(msg);
    }

    if (Utility::isYes("Do you want to change desfire custom card
settings?"))
    {
        memset(&config.desfire.primaryKey, 0x0,
sizeof(config.desfire.primaryKey));
        oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.primaryKey) << "-bytes primary key for desfire
card." << endl;
        oss << " [Like 12 34 56 ... EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.primaryKey, sizeof(config.desfire.primaryKey));

        if (config.useSecondaryKey)
        {
            memset(&config.desfire.secondaryKey, 0x0,
sizeof(config.desfire.secondaryKey));
            oss.str("");
            oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.secondaryKey) << "-bytes secondary key for
desfire card." << endl;
            oss << " [Like 12 34 56 ... EF]" << endl;
            Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.secondaryKey, sizeof(config.desfire.secondaryKey));
        }

        oss.str("");
        oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.appID) << "-bytes appID for desfire card." <<
endl;
        oss << " [Like 12 34 EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.appID, sizeof(config.desfire.appID));

        msg = "Please enter the fileID for desfire card.";
        config.desfire.fileID =
(uint8_t)Utility::getInput<uint32_t>(msg);
        msg = "Please enter a encryption type for desfire card. (0:
DES/3DES, 1: AES)";
        config.desfire.encryptionType =
(uint8_t)Utility::getInput<uint32_t>(msg);
        msg = "Please enter a operation mode for desfire card. (0:
Legacy, 1: Advanced(AppLevelKey))";
        config.desfire.operationMode =
(uint8_t)Utility::getInput<uint32_t>(msg);
        msg = "Please enter the card data size of desfire card.";
        config.desfire.dataSize =
(uint8_t)Utility::getInput<uint32_t>(msg);
```

```
    msg = "Please enter the skip bytes of desfire card.";
    config.desfire.skipBytes =
(uint8_t)Utility::getInput<uint32_t>(msg);

    if (config.desfire.operationMode ==
DESFIRECARD_OPERATION_MODE_APPLEVELKEY)
    {
        memset(&config.desfire.desfireAppKey.appMasterKey, 0x0,
sizeof(config.desfire.desfireAppKey.appMasterKey));
        memset(&config.desfire.desfireAppKey.fileReadKey, 0x0,
sizeof(config.desfire.desfireAppKey.fileReadKey));
        memset(&config.desfire.desfireAppKey.fileWriteKey, 0x0,
sizeof(config.desfire.desfireAppKey.fileWriteKey));

        oss.str("");
        oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.desfireAppKey.appMasterKey) << "-bytes
appMasterKey for desfire card." << endl;
        oss << " [Like 12 34 56 ... EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.desfireAppKey.appMasterKey,
sizeof(config.desfire.desfireAppKey.appMasterKey));

        oss.str("");
        oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.desfireAppKey.fileReadKey) << "-bytes fileReadKey
for desfire card." << endl;
        oss << " [Like 12 34 56 ... EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.desfireAppKey.fileReadKey,
sizeof(config.desfire.desfireAppKey.fileReadKey));

        oss.str("");
        oss << "Please enter the hexadecimal " <<
sizeof(config.desfire.desfireAppKey.fileWriteKey) << "-bytes
fileWriteKey for desfire card." << endl;
        oss << " [Like 12 34 56 ... EF]" << endl;
        Utility::getLineHexString<uint8_t>(oss.str(),
config.desfire.desfireAppKey.fileWriteKey,
sizeof(config.desfire.desfireAppKey.fileWriteKey));

        msg = "Please enter the fileReadKeyNumber of desfire
card.";
        config.desfire.desfireAppKey.fileReadKeyNumber =
(uint8_t)Utility::getInput<uint32_t>(msg);
        msg = "Please enter the fileWriteKeyNumber of desfire
card.";
        config.desfire.desfireAppKey.fileWriteKeyNumber =
(uint8_t)Utility::getInput<uint32_t>(msg);
    }
}
```

```

msg = "Please enter a smart card byte order. (0: MSB, 1: LSB)";
config.smartCardByteOrder =
(BS2_CARD_BYTE_ORDER)Utility::getInput<uint32_t>(msg);
msg = "Please enter a formatID.";
config.formatID = (BS2_UID)Utility::getInput<uint32_t>(msg);

return cc.setCustomCardConfig(id, config);

```

Sample Code(C#)

[sample_setcustomcardconfig.cs](#)

```

BS2CustomCardConfig config;
Console.WriteLine("Try to get CustomCardConfig");
BS2ErrorCode result =
(BS2ErrorCode)API.BS2_GetCustomCardConfig(sdkContext, deviceID, out
config);
if (BS2ErrorCode.BS_SDK_SUCCESS != result)
    return;

Util.HighlightLine("Please enter a data type of cards. (0: Binary,
1: ASCII, 2: UTF16, 3: BCS)", "data type");
Console.Write(">>>> ");
config.dataType = Util.GetInput((byte));

Util.HighlightLine("Do you want to use secondary key?", "use
secondary key");
Console.Write(">>>> ");
bool useSecondaryKey = Util.IsYes();
config.useSecondaryKey = Convert.ToByte(useSecondaryKey);

Util.HighlightLine("Do you want to change mifare custom card
settings? [Y/n]", "mifare custom card");
Console.Write(">>>> ");
if (Util.IsYes())
{
    int sizeOfKey = config.mifare.primaryKey.Length;
    Array.Clear(config.mifare.primaryKey, , sizeOfKey);
    string tempStr = String.Format("Please enter the hexadecimal
{0}-bytes primary key for mifare card. [KEY1-KEY2-...-KEY6]",
sizeOfKey);
    Util.HighlightLineMulti(tempStr, "primary key", "mifare card");
    Console.Write(">>>> ");
    enterSmartcardKey(config.mifare.primaryKey);

    if (useSecondaryKey)
    {

```

```
        sizeOfKey = config.mifare.secondaryKey.Length;
        Array.Clear(config.mifare.secondaryKey, , sizeOfKey);
        tempStr = String.Format("Please enter the hexadecimal {0}-
bytes secondary key for mifare card. [KEY1-KEY2-...-KEY6]", sizeOfKey);
        Util.HighlightLineMulti(tempStr, "secondary key", "mifare
card");
        Console.Write(">>>> ");
        enterSmartcardKey(config.mifare.secondaryKey);
    }

    Util.HighlightLineMulti("Please enter the start block index of
mifare card.", "start block index", "mifare card");
    Console.Write(">>>> ");
    config.mifare.startBlockIndex = Util.GetInput((UInt16));

    Util.HighlightLineMulti("Please enter the card data size of
mifare card.", "card data size", "mifare card");
    Console.Write(">>>> ");
    config.mifare.dataSize = Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter the skip bytes of mifare
card.", "skip bytes", "mifare card");
    Console.Write(">>>> ");
    config.mifare.skipBytes = Util.GetInput((byte));
}

    Util.HighlightLine("Do you want to change desfire custom card
settings? [Y/n]", "desfire custom card");
    Console.Write(">>>> ");
    if (Util.IsYes())
    {
        int sizeOfKey = config.desfire.primaryKey.Length;
        Array.Clear(config.desfire.primaryKey, , sizeOfKey);
        string tempStr = String.Format("Please enter the hexadecimal
{0}-bytes primary key for desfire card. [KEY1-KEY2-...-KEY6]",
sizeOfKey);
        Util.HighlightLineMulti(tempStr, "primary key", "desfire
card");
        Console.Write(">>>> ");
        enterSmartcardKey(config.desfire.primaryKey);

        if (useSecondaryKey)
        {
            sizeOfKey = config.desfire.secondaryKey.Length;
            Array.Clear(config.desfire.secondaryKey, , sizeOfKey);
            tempStr = String.Format("Please enter the hexadecimal {0}-
bytes secondary key for desfire card. [KEY1-KEY2-...-KEY6]",
sizeOfKey);
            Util.HighlightLineMulti(tempStr, "secondary key", "desfire
card");
            Console.Write(">>>> ");
```

```

        enterSmartcardKey(config.desfire.secondaryKey);
    }

    sizeOfKey = config.desfire.appID.Length;
    Array.Clear(config.desfire.appID, , sizeOfKey);
    tempStr = String.Format("Please enter the hexadecimal {0}-bytes
appID for desfire card. [KEY1-KEY2-...-KEY6]", sizeOfKey);
    Util.HighlightLineMulti(tempStr, "appID", "desfire card");
    Console.Write(">>>> ");
    enterSmartcardKey(config.desfire.appID);

    Util.HighlightLineMulti("Please enter the fileID of desfire
card.", "fileID", "desfire card");
    Console.Write(">>>> ");
    config.desfire.fileID = Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter a encryptionType of
desfire card. (0: DES/3DES, 1: AES)", "encryptionType", "desfire
card");
    Console.Write(">>>> ");
    config.desfire.encryptionType = Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter a operationMode of
desfire card. (0: Legacy, 1: Advanced(AppLevelKey))", "operationMode",
"desfire card");
    Console.Write(">>>> ");
    config.desfire.operationMode = Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter the card data size of
desfire card.", "card data size", "desfire card");
    Console.Write(">>>> ");
    config.desfire.dataSize = Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter the skip bytes of desfire
card.", "skip bytes", "desfire card");
    Console.Write(">>>> ");
    config.desfire.skipBytes = Util.GetInput((byte));

    if (config.desfire.operationMode ==
Convert.ToByte(BS2DesfireCardOperation.BS2_DESFIRECARD_OPERATION_MODE_A
PPLEVELKEY))
    {
        int sizeOfAppMasterKey =
config.desfire.desfireAppKey.appMasterKey.Length;
        int sizeOfFileReadKey =
config.desfire.desfireAppKey.fileReadKey.Length;
        int sizeOfFileWriteKey =
config.desfire.desfireAppKey.fileWriteKey.Length;
        Array.Clear(config.desfire.desfireAppKey.appMasterKey, ,
sizeOfAppMasterKey);
        Array.Clear(config.desfire.desfireAppKey.fileReadKey, ,

```

```
sizeofFileReadKey);
    Array.Clear(config.desfire.desfireAppKey.fileWriteKey, ,
sizeofFileWriteKey);

    tempStr = String.Format("Please enter the hexadecimal {0}-
bytes appMasterKey for desfire card. [KEY1-KEY2-...-KEY6]",
sizeofAppMasterKey);
    Util.HighlightLineMulti(tempStr, "appMasterKey", "desfire
card");
    Console.Write(">>>> ");
enterSmartcardKey(config.desfire.desfireAppKey.appMasterKey);

    tempStr = String.Format("Please enter the hexadecimal {0}-
bytes fileReadKey for desfire card. [KEY1-KEY2-...-KEY6]",
sizeofFileReadKey);
    Util.HighlightLineMulti(tempStr, "fileReadKey", "desfire
card");
    Console.Write(">>>> ");
enterSmartcardKey(config.desfire.desfireAppKey.fileReadKey);

    tempStr = String.Format("Please enter the hexadecimal {0}-
bytes fileWriteKey for desfire card. [KEY1-KEY2-...-KEY6]",
sizeofFileWriteKey);
    Util.HighlightLineMulti(tempStr, "fileWriteKey", "desfire
card");
    Console.Write(">>>> ");
enterSmartcardKey(config.desfire.desfireAppKey.fileWriteKey);

    Util.HighlightLineMulti("Please enter the fileReadKeyNumber
of desfire card.", "fileReadKeyNumber", "desfire card");
    Console.Write(">>>> ");
    config.desfire.desfireAppKey.fileReadKeyNumber =
Util.GetInput((byte));

    Util.HighlightLineMulti("Please enter the
fileWriteKeyNumber of desfire card.", "fileWriteKeyNumber", "desfire
card");
    Console.Write(">>>> ");
    config.desfire.desfireAppKey.fileWriteKeyNumber =
Util.GetInput((byte));
}
}

    Util.HighlightLine("Please enter a smart card byte order. (0: MSB,
1: LSB)", "smart card byte order");
    Console.Write(">>>> ");
    config.smartCardByteOrder = Util.GetInput((byte));

    Util.HighlightLine("Please enter a formatID.", "formatID");
    Console.Write(">>>> ");
    config.formatID = Util.GetInput((UInt32));
```

```
Console.WriteLine("Trying to set CustomCardConfig.");
result = (BS2ErrorCode)API.BS2_SetCustomCardConfig(sdkContext,
deviceID, ref config);
if (result != BS2ErrorCode.BS_SDK_SUCCESS)
{
    Console.WriteLine("Got error({0}).", result);
}
```

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<https://kb.supremainc.com/bs2sdk/> - **BioStar Device SDK**

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