**枚举已安装的提供程序**

* 项目
* 2024/08/16
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反馈

以下示例演示如何使用证书注册 API 枚举计算机上安装的提供程序。

syntax复制

// enumeratinginstalledproviders.cpp : Defines the entry point for the console application.

//

/////////////////////////////////////////////////////////////////////

// EnumProviders.cpp

// Enumerate the cryptographic providers installed on the

// computer. This sample enumerates the Cryptography API

// (CryptoAPI) and Cryptography API: Next Generation (CNG)

// providers.

#include <certenroll.h>

#include <windows.h>

#include <stdio.h>

#include <conio.h>

#include <tchar.h>

#include <atlbase.h>

// Forward declaration.

HRESULT enumProviders(void);

int \_tmain(int argc, \_TCHAR\* argv[])

{

UNREFERENCED\_PARAMETER(argc);

UNREFERENCED\_PARAMETER(argv);

HRESULT hr = S\_OK;

// Initialize COM.

hr = CoInitializeEx(NULL, COINIT\_APARTMENTTHREADED);

if(FAILED(hr)) return hr;

// Enumerate the CryptoAPI and CNG providers.

hr = enumProviders();

CoUninitialize();

return hr;

}

HRESULT enumProviders(void)

{

CComPtr<ICspInformations> pCSPs; // Provider collection

CComPtr<ICspInformation> pCSP; // Provider instgance

HRESULT hr = S\_OK; // Return value

long lCount = 0; // Count of providers

CComBSTR bstrName; // Provider name

VARIANT\_BOOL bLegacy; // CryptoAPI or CNG

// Create a collection of cryptographic providers.

hr = CoCreateInstance(

\_\_uuidof(CCspInformations),

NULL,

CLSCTX\_INPROC\_SERVER,

\_\_uuidof(ICspInformations),

(void \*\*) &pCSPs);

if(FAILED(hr)) return hr;

// Add the providers installed on the computer.

hr = pCSPs->AddAvailableCsps();

if(FAILED(hr)) return hr;

// Retrieve the number of installed providers.

hr = pCSPs->get\_Count(&lCount);

if(FAILED(hr)) return hr;

// Print the providers to the console. Print the

// name and a value that specifies whether the

// CSP is a legacy or CNG provider.

for (long i=0; i<lCount; i++)

{

hr = pCSPs->get\_ItemByIndex(i, &pCSP);

if(FAILED(hr)) return hr;

hr = pCSP->get\_Name(&bstrName);

if(FAILED(hr)) return hr;

hr = pCSP->get\_LegacyCsp(&bLegacy);

if(FAILED(hr)) return hr;

if(VARIANT\_TRUE == bLegacy)

wprintf\_s(L"%2d. Legacy: ", i);

else

wprintf\_s(L"%2d. CNG: ", i);

wprintf\_s(L"%s\n", static\_cast<wchar\_t\*>(bstrName.m\_str));

pCSP=NULL;

}

printf\_s("\n\nHit any key to continue: ");

\_getch();

return hr;

}