Archived:Listing the certificates on the device using unified certificate store API

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Description

The `CUnifiedCertStore` class provides a certificate store whose contents are the sum of the contents of all certificate store implementations on the device. It is intended as the single point of access for clients wishing to use certificate stores.

Solution

The following sample code shows how to retrieve the certificates present on the device.

MyClass.h

```
#include <unifiedcertstore.h>     // link against certstore.lib
#include <f32file.h>              // link against efsrv.lib
#include <ccertattributefilter.h> // link against ctframework.lib

// Desclaration of CMyClass

 class CMyClass : public CActive
   {
 public:

   enum TState
     {
     EGetCerts,
     EInitialize
     };

   static CMyClass* NewL();
   ~CMyClass();

   void InitL();
   void DoListL();
   void PopulateListL();

 protected: // From CActive
   virtual void DoCancel();
   virtual void RunL();

 private: // Private constructors
   CMyClass();
   void ConstructL();

 private: // Data

   CUnifiedCertStore*          iCertStore;
   RMPointerArray<CCTCertInfo> iCerts;
   CActiveSchedulerWait iWait;
```

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```
    TState iCertCmd;
    RFs iFs;
    };
```

MyClass.cpp

```
  #include "MyClass.h"


   CMyClass* CMyClass::NewL()
     {
     CMyClass* self = new (ELeave) CMyClass;
     CleanupStack::PushL(self);
     self->ConstructL();
     CleanupStack::Pop(); // self
     return self;
     }


   CMyClass::CMyClass()
   : CActive(CActive::EPriorityStandard)
     {
     CActiveScheduler::Add( this );
     }


   CMyClass::~CMyClass()
     {
     Cancel();

     delete iCertStore;
     iFs.Close();
     iCerts.Close();
     }


   void CMyClass::ConstructL()
     {
     User::LeaveIfError( iFs.Connect() );
     iCertStore = CUnifiedCertStore::NewL( iFs, EFalse );
     InitL();
     }


   void CMyClass::InitL()
     {
     if( IsActive() )
       {
       return;
       }

     iCertStore->Initialize( iStatus );
     SetActive();
     iCertCmd = EInitialize;
```

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```
  iWait.Start();
  // RunL called when this completes
  }


void CMyClass::DoListL()
  {
  CCertAttributeFilter* certFilter = CCertAttributeFilter::NewLC();
  certFilter->SetFormat( EX509Certificate );
  iCertStore->List(iCerts, *certFilter, iStatus);
  SetActive();
  iCertCmd = EGetCerts;
  iWait.Start();
  // RunL called when this completes

  CleanupStack::PopAndDestroy(); // certFilter
  }


void CMyClass::RunL()
  {
  iWait.AsyncStop();
  if(iStatus == KErrNone)
    {
    switch(iCertCmd)
      {
      case EInitialize:
        {
        DoListL();
        PopulateListL();
        break;
        }
      default:
        break;
      }
    }
  }


void CMyClass::DoCancel()
  {
  switch(iCertCmd)
    {
    case EInitialize:
      {
      iCertStore->CancelInitialize();
      break;
      }
    case EGetCerts:
      {
      iCertStore->CancelList();
      break;
      }
    default:
      break;
    }
```

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```
    }


void CMyClass::PopulateListL()
    {
    for( TInt i = 0; i < iCerts.Count(); i++ )
      {
      TBuf<KMaxCertLabelLength>   iCertLabel;
      iCertLabel.Copy( iCerts[i]->Label() );
      // ... process each cert label here
      }
    }
```

Required capabilities: ReadDeviceData

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