

Checking Remote Server Certificate Status

When you acquire a signed certificate from a certificate authority, the certificate authority will notify you when your certificate is about to expire. This allows you to renew your certificate without a service interruption. Let's Encrypt is a popular service which provides signed valid certificates free of charge. They recently announced that they will stop sending expiry notifications. It's now responsibility to the users to check their certificates status prior to expiration.

The Latest version of TekCERT has a command line option to check certificate status of a secure web server. You can dump certificate information and certificate status of an HTTP server though the command line:

```
C:\TekCERT>tekcercert -dc https://www.kaplansoft.com
Certificate subject is 'CN=www.kaplansoft.com', issued by 'CN=Go Daddy Secure Certificate Authority
- G2, OU=http://certs.godaddy.com/repository/, O="GoDaddy.com, Inc.", L=Scottsdale, S=Arizona,
C=US'. Certificate is valid.
```

You can save remote certificate in .der or .pem format by adding -o option:

```
C:\ \TekCERT>tekcercert -dc https://www.ipadresi.com -o "c:\Users\yasin\Desktop\deneme.der" -wt 10
Certificate subject is 'CN=www.ipadresi.com', issued by 'CN=R11, O=Let's Encrypt, C=US'. Certificate
will be expired in 5 day(s).
```

File names must be surrounded by double quotes. -wt parameter enables you to specify a warning threshold for expiration in days (*Default 30 days*).

TekCERT will provide return codes as DOS Error Level which can be used in automation script:

- 111 Dumped certificate is valid (Command line dump certificate option -ds)
- 112 Dumped certificate will expire in 30 days (Command line dump certificate option -ds)
- 113 Dumped certificate is expired (Command line dump certificate option -ds)
- 114 Server connection failure (Command line dump certificate option -ds)
- 115 Specify an HTTPS URL (Command line dump certificate option -ds)

Example Visual Basic Script for Automated Notifications

You can create a sample script which can be invoked by Windows Task Scheduler to check server certificate status and get notification messages via e-mail.

```
Option Explicit

dim program1, ret1, objMessage, strArgs, WshShell

Const ds_Certificate_Valid = 111
Const ds_Certificate_About_to_Expire = 112
Const ds_Certificate_Expired = 113
Const ds_Connection_Error = 114
Const ds_Invalid_URL = 115

Set strArgs = WScript.Arguments

If strArgs.length < 1 then
    WScript.Echo "Usage : ccheck HTTPS_URL [Warning threshold in days, default 30 days]"
    WScript.quit
End If
```

```
.....  
' Email Settings  
.....  
Set objMessage = CreateObject("CDO.Message")  
objMessage.Subject = "TekCERT Certificate Status for '" & Trim(strArgs(0)) & "'"  
objMessage.From = ""TekCERT Certificate Checker"" <checker@example.com>"  
objMessage.To = "admin@example.com"  
objMessage.TextBody = ""  
  
objMessage.Configuration.Fields.Item ("http://schemas.microsoft.com/cdo/configuration/sendusing") =  
2  
objMessage.Configuration.Fields.Item ("http://schemas.microsoft.com/cdo/configuration/smtpserver") =  
"mail.example.com"  
objMessage.Configuration.Fields.Item  
("http://schemas.microsoft.com/cdo/configuration/smtpserverport") = 25  
objMessage.Configuration.Fields.Item  
("http://schemas.microsoft.com/cdo/configuration/smtpauthenticate") = 1  
objMessage.Configuration.Fields.Update  
.....  
  
Set WshShell = WScript.CreateObject ("WScript.Shell")  
  
program1 = "%COMSPEC% /c ""C:\Program Files (x86)\TekCERT\TekCERT.exe"" -dc " & Trim(strArgs(0))  
& " -wt 10""  
ret1 = WshShell.Run(program1, 1, True)  
  
if ret1 = ds_Connection_Error then  
  objMessage.HTMLBody = "Certificate check failure (" & ret1 & ")."  
else  
  if ret1 = ds_Certificate_Expired then  
    objMessage.HTMLBody = "Certificate is expired."  
  elseif ret1 = ds_Certificate_About_to_Expire then  
    objMessage.HTMLBody = "Certificate will expire soon."  
  else  
    objMessage.HTMLBody = "Certificate is valid."  
  end if  
end if  
  
objMessage.Send  
  
WScript.Quit (ret1)
```