Audit et sécurisation (hardening) d'AD CS

Il est important que notre PKI soit sécurisée. Il existe différents outils permettant de l'auditer : Certipy, Exegol, PSPKIAudit ou encore Locksmith.

Exemple de Certify et Certipy :

```
C:\>certify find /vulnerable


   _____          _   _  __
  / ____|        | | (_)/ _|
 | |     ___ _ __| |_ _| |_ _   _
 | |    / _ \ '__| __| |  _| | | |
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  \_____\___|_|   \__|_|_|  \__, |
                             __/ |
                            |___./
  v1.0.0

[*] Action: Find certificate templates
[*] Using the search base 'CN=Configuration,DC=ad,DC=khroners,DC=fr'

[*] Listing info about the Enterprise CA 'Khroners Labs Enterprise CA'

    Enterprise CA Name            : Khroners Labs Enterprise CA
    DNS Hostname                  : SRV-CA35-01.ad.khroners.fr
    FullName                      : SRV-CA35-01.ad.khroners.fr\Khroners Labs Enterprise CA
    Flags                         : SUPPORTS_NT_AUTHENTICATION, CA_SERVERTYPE_ADVANCED
    Cert SubjectName              : CN=Khroners Labs Enterprise CA, DC=ad, DC=khroners, DC=fr
    Cert Thumbprint               : 8FD1AEAF57EE974EB726D884775133B4D4C9D270
    Cert Serial                   : 1500000004A03185E3D30CA7C3000000000004
    Cert Start Date               : 02/10/2023 08:09:54
    Cert End Date                 : 02/10/2028 08:19:54
    Cert Chain                    : CN=KhronersLabsCertificateAuthority ->
```

```
CN=KhronersLabsEnterpriseCA,DC=ad,DC=khroners,DC=fr
    UserSpecifiedSAN              : Disabled
    CA Permissions                :
      Owner: BUILTIN\Administrateurs       S-1-5-32-544

      Access Rights                                       Principal

      Allow  Enroll                                       AUTORITE NT\Utilisateurs
authentifiésS-1-5-11
      Allow  ManageCA, ManageCertificates                 BUILTIN\Administrateurs       S-1-5-
32-544
      Allow  ManageCA, ManageCertificates                 AD\Admins du domaine          S-1-5-
21-1812995439-3560927909-1751902240-512
      Allow  ManageCA, ManageCertificates                 AD\Administrateurs de l'entrepriseS-1-
5-21-1812995439-3560927909-1751902240-519
    Enrollment Agent Restrictions : None

[+] No Vulnerable Certificates Templates found!



Certify completed in 00:00:00.5455163
```

```
certipy find -u gilles.besson@ad.khroners.fr -password Password -scheme ldap

Certipy v4.8.2 - by Oliver Lyak (ly4k)

[*] Finding certificate templates
[*] Found 36 certificate templates
[*] Finding certificate authorities
[*] Found 1 certificate authority
[*] Found 14 enabled certificate templates
[*] Trying to get CA configuration for 'Khroners Labs Enterprise CA' via CSRA
[!] Got error while trying to get CA configuration for 'Khroners Labs Enterprise CA' via CSRA:
CASessionError: code: 0x80070005 - E_ACCESSDENIED - General access denied error.
[*] Trying to get CA configuration for 'Khroners Labs Enterprise CA' via RRP
[!] Failed to connect to remote registry. Service should be starting now. Trying again...
[*] Got CA configuration for 'Khroners Labs Enterprise CA'
[*] Saved BloodHound data to '20231007001536_Certipy.zip'. Drag and drop the file into the
BloodHound GUI from @ly4k
```

```
[*] Saved text output to '20231007001536_Certipy.txt'
[*] Saved JSON output to '20231007001536_Certipy.json'
```

3 fichiers sont ensuite générés. On peut analyser nous même le txt ou importer dans BloodHound GUI le .zip.

Revision #1
Created 6 October 2023 22:02:49 by Khroners
Updated 6 October 2023 22:41:37 by Khroners