CyberSafe Limited
Commercialized Cross-Platform Kerberos

EASY, SECURE AND COST EFFECTIVE

Tuesday, 14th September 2010
European AFS & Kerberos Conference 2010
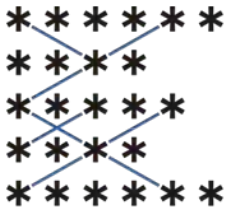
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Agenda

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The Kerberos Solution Provider

- Introductions
- About us   (2 minutes)
- TrustBroker   (5 minutes)
- Open Source Comparison   (5 minutes)
- Platforms, Key Tables & Logging
                                             (3 minutes)
- Product Demonstrations   (5 minutes)
- Questions and Answers   (5 minutes)

About us…

- Almost 20 years Kerberos experience
- Application Security / Authentication
  - Mostly high value business applications (e.g. SAP Solutions)
  - Windows Client + UNIX/Windows Server + Active Directory KDC
- We learn from customer requirements, experiences and feedback, then improve our products…
- World class customer support services
  - Financial implications of failure / outsourcing / downtime !

- Kerberos user authentication
    - Passwords
    - Tokens (hard or soft)
    - Smart Cards / Certificates
- Secure SSO
- Common Authentication
- Network Security

TRUSTBROKER

- Some features:
  - Key table management, security, integrity & support
  - Logging & reporting
- Ease of use/understanding

Open Source Kerberos Comparison

- Support
  - We provide 24x7x365 cover, and are responsive to support requests + provide service level agreement
  - Our products have features to make support easier and speed up time to resolution – minimising downtime…
- Skills ?
  - Some customers have, most don't
- Risk Management …
  - e.g. Asses financial implications of users not being able to logon
- Upgrades / Patching / Vulnerabilities
  - Most don't bother with patching
- Competitive ?
  - Sometimes !

Platforms Supported

- Binary packages for:
  - Windows
    - XP (x86 & x64), Vista (x86 & x64)
    - Windows 7 (x86 & x64),
    - Windows Server 2003, 2003 R2, 2008, 2008 R2 (x86, x64 and IA-64)
  - UNIX
    - HP-UX (PA-RISC and IA-64)
    - AIX (Power) – Also runs on IBM iSeries PASE
    - Solaris (Sparc and x86_64)
  - Linux
    - RedHat & SLES Linux (x86, x86_64, Power)

Product Demonstration

This product demonstration will take about 5 minutes. I hope you enjoy it !

Key Table, Key Extraction

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```
[root@s1 ~]# ktutil -x app1
Active Directory Administrator Account: administrator
Password:
Testing key table file entries...
Encryption Type Test Summary:
 Principal: app1/s1.kerby.com@KERBY.COM
 Encryption Types:            18      17      23      3       1       24
 KDC Host: dc2-3.kerby.com  Yes     Yes     Yes     Yes     No  *   No  *
[root@s1 ~]#
[root@s1 ~]# ktutil
       Key Table File: /krb5/v5srvtab

KVNO   EType   Timestamp                       Principal
----   -----   -----------------------------   ---------
   2     18    Sat 04 Sep 2010 05:30:40 PM BST  app1/s1.kerby.com@KERBY.COM
   2     17    Sat 04 Sep 2010 05:30:40 PM BST  app1/s1.kerby.com@KERBY.COM
   2     23    Sat 04 Sep 2010 05:30:40 PM BST  app1/s1.kerby.com@KERBY.COM
   2      3    Sat 04 Sep 2010 05:30:40 PM BST  app1/s1.kerby.com@KERBY.COM
[root@s1 ~]#
```

Principal (Computer Account) and Key Table Entry Removal

```
[root@s1 ~]# ktutil -R app1
Active Directory Administrator Account: administrator
Password:
Using computer account with the following attributes:
 sAMAccountName: app1-s1-kerby-com$
 userPrincipalName: app1/s1.kerby.com@KERBY.COM
 servicePrincipalName: app1/s1.kerby.com
 DN: CN=app1-s1-kerby-com,CN=Computers,DC=kerby,DC=com
Do you want to remove this computer account from the Directory? [y,n]
(default: n): y
Are you sure? [y,n] (default: n): y
The computer account removed successfully.
Testing key table file entries...
Principal Exists Test Summary:
 Principal: app1/s1.kerby.com@KERBY.COM  Exists
 KDC Host: dc1-3.kerby.com                No  *
[root@s1 ~]# ktutil
      Key Table File: /krb5/v5srvtab

KVNO  EType  Timestamp                        Principal
----  -----  ------------------------------   --------
[root@s1 ~]#
```

Other tests

- Key Version Numbers (KVNO)
- Clock Skew
- UDP/TCP Ports

Logging (Kerberos Client)

```
[root@s1 ~]# kinit "emea\user2"
Password for user2\@emea@KERBY.COM:
[root@s1 ~]#


Sat 04 Sep 2010 05:42:48 PM BST (root) [28370] CSTBk5 S-00004B06,
gitkt.c:810:_handleReferrals - Requesting Kerberos Initial Ticket: kdc
host=dc2-3.kerby.com, client=user2\@emea@KERBY.COM,
server=krbtgt/KERBY.COM@KERBY.COM, etypes=(18,17,23,3,1,24), flags=(R,C).
Realm Referral Details: client realm=EMEA.KERBY.COM

Sat 04 Sep 2010 05:42:48 PM BST (root) [28370] CSTBk5 S-00004B00,
gitkt.c:2390:csfC5getITkt10 - Requesting Kerberos Initial Ticket: kdc
host=dc1-1-3.emea.kerby.com, client=user2\@emea@EMEA.KERBY.COM,
server=krbtgt/EMEA.KERBY.COM@EMEA.KERBY.COM, etypes=(18,17,23,3,1,24),
flags=(R,C). Initial Ticket Issued: client=user2@EMEA.KERBY.COM, valid
from=Sat 04 Sep 2010 05:42:52 PM BST, expires=Sun 05 Sep 2010 01:42:52 AM
BST, etypes={reply=18, session key=18, ticket=18}, addresses=(<null>),
kvno=2, flags=(R,I,A)
```

Thankyou

- Thankyou to:
  - IETF
  - Kerberos 5 WG
  - MIT
  - European AFS & Kerberos conference organisers
  - You !

Questions & Answers

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