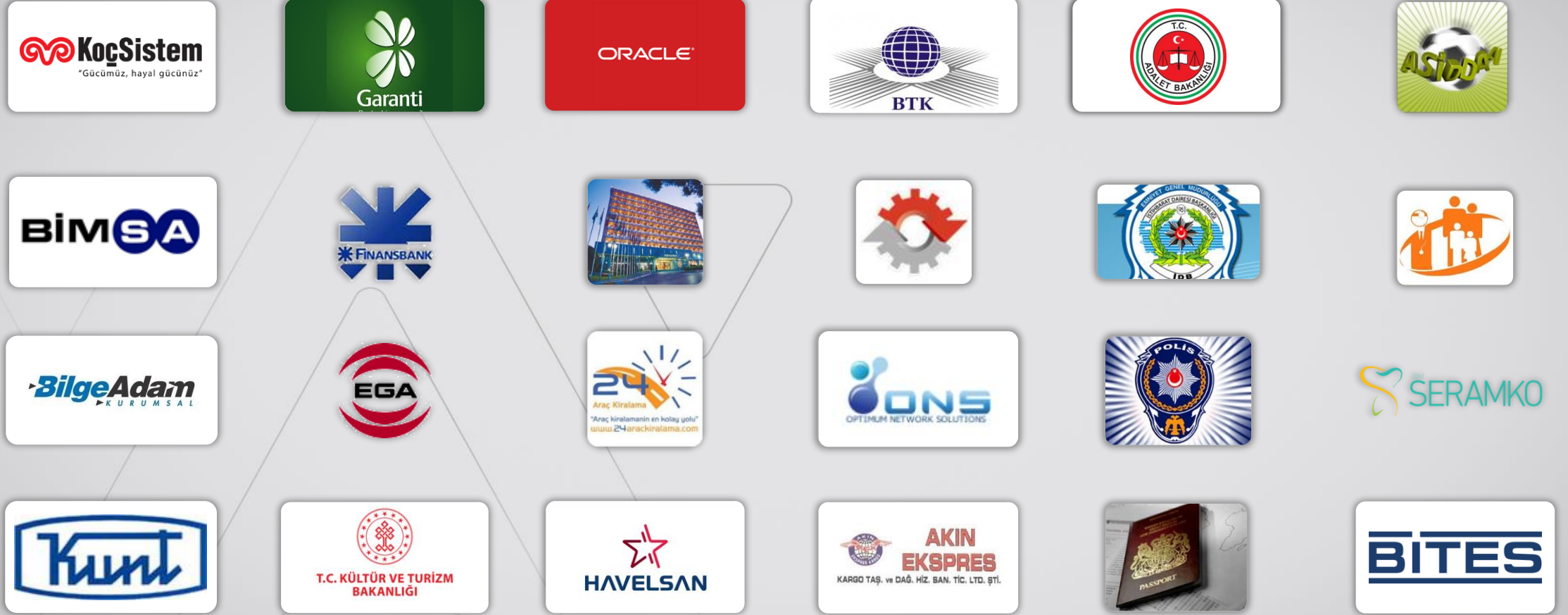




ZTS – Zero Tolerance Security

Alchemy Smart Information Technologies
2021 Q2

Some of our references



Details Covered



- Login & Usage
- Multi Factor Auth & Auth (OTP, FaceID, FingerPrint, PhoneValidation)
- Client Agent
- Access Management
 - Only Allowed,
 - Quick Access List
- Access & Remote Management
- System Management
 - Active & Connected User List
 - Session Recording
 - Session Sharing (Watch Only or Online Help)
 - Session Recordings – Watch Online or Later



Login & Usage

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Login & Usage



Login & Usage

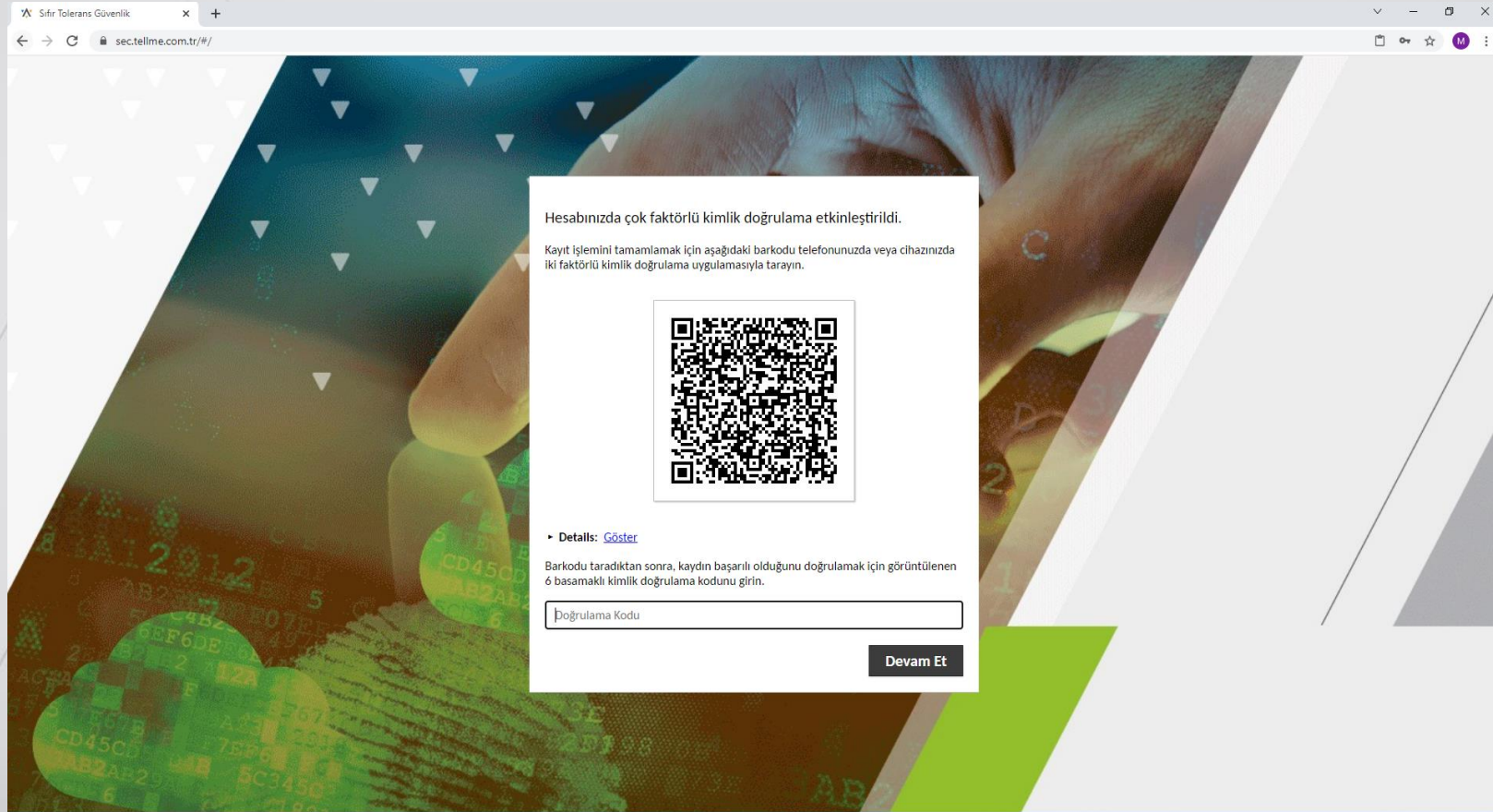
- Single Point of Auth
- SSO
- Support for;
 - White-Labeling,
 - Theme Selection,
 - Configurational Infrastructure for market needs
- Support for;
 - LDAP,
 - Active Directory,
 - OAuth



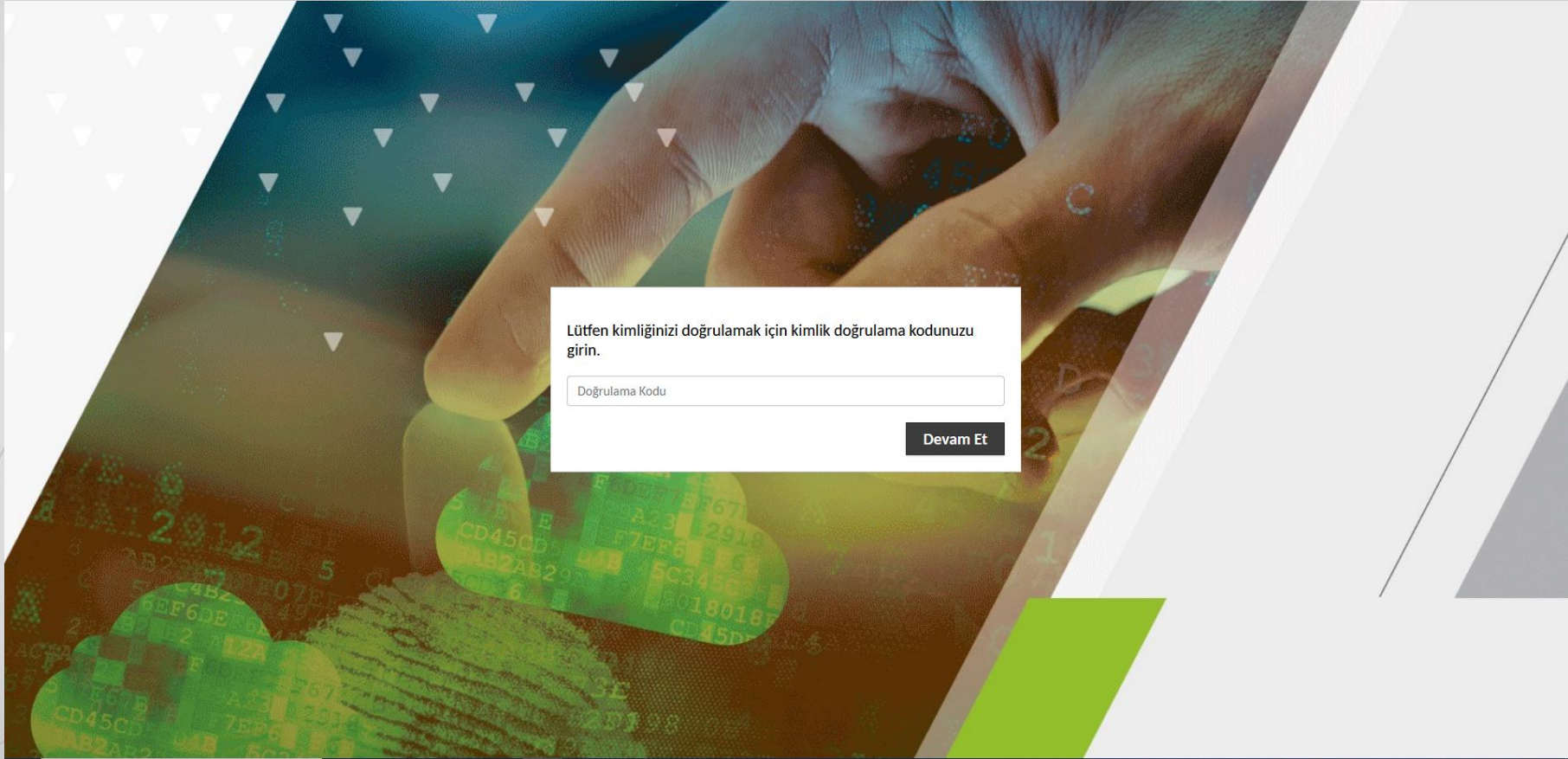
Multi Factor Auth & Auth

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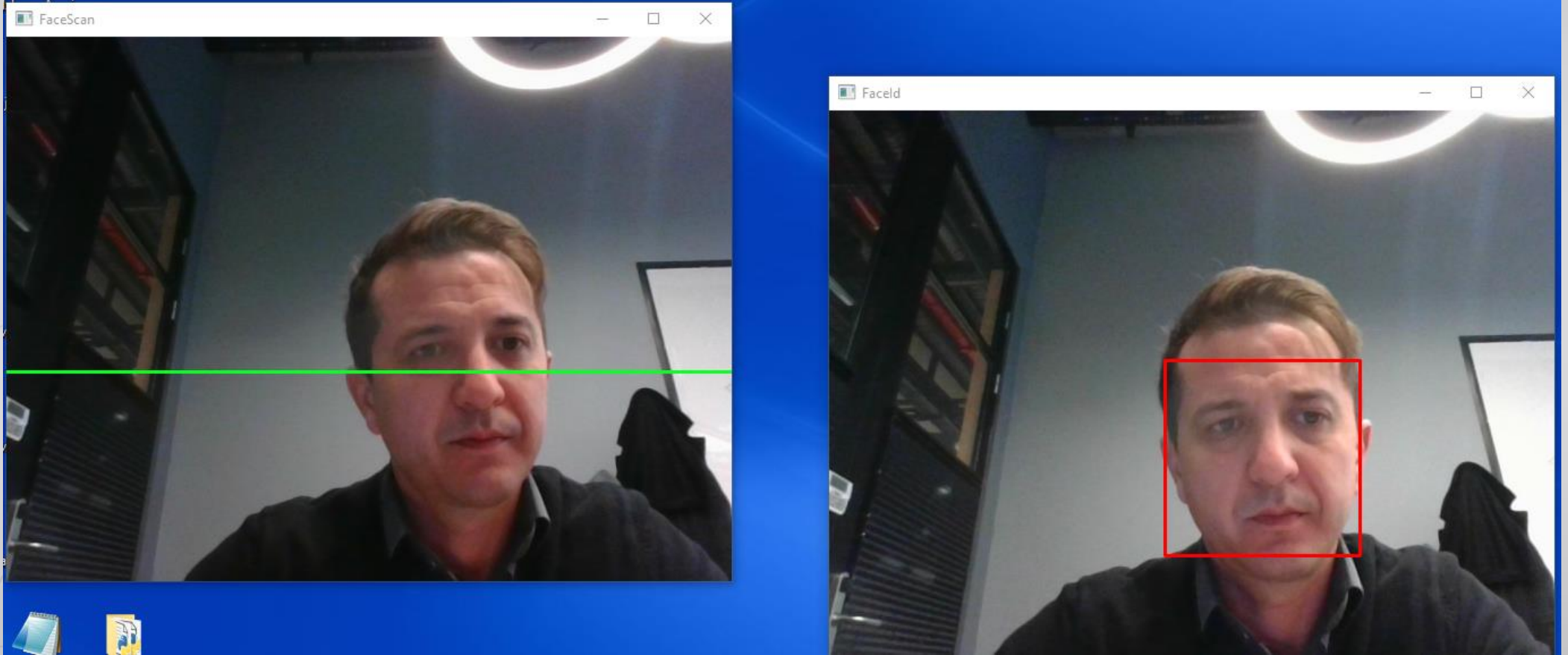
Multi Factor Auth & Auth OTP



Multi Factor Auth & Auth OTP



Multi Factor Auth & Auth FaceID



Multi Factor Auth & Auth

Device Serial Number, MAC Address

The screenshot displays the 'İşletim Sistemi Bilgileri' (Operating System Information) window of the Alchemy ZTNA Windows Agent. The window title is 'İşletim Sistemi Bilgileri' and the subtitle is 'Yerel Öğe Değer Bilgi'. The interface includes a sidebar with navigation icons (home, plug, info, document, folder, image) and a top bar with search, settings, and window control icons. The main content area shows a table with the following data:

Yerel Öğe	Değer	Bilgi
1 IS Versiyonu	Windows-10-10.0.19041-SP0	İşletim Sistemi Versiyonu
2 Seri Numarası	GNHSZ93	Pc Seri Numarası
3 Mac Adresi	E0:2B:E9:27:C2:61	Mac Adresi

At the bottom of the window, there is a status bar with the text 'By: Alchemy Smart' and 'v1.0.0'. A green indicator shows 'Bağlı Durumu: Bağlı' (Connected Status: Connected).

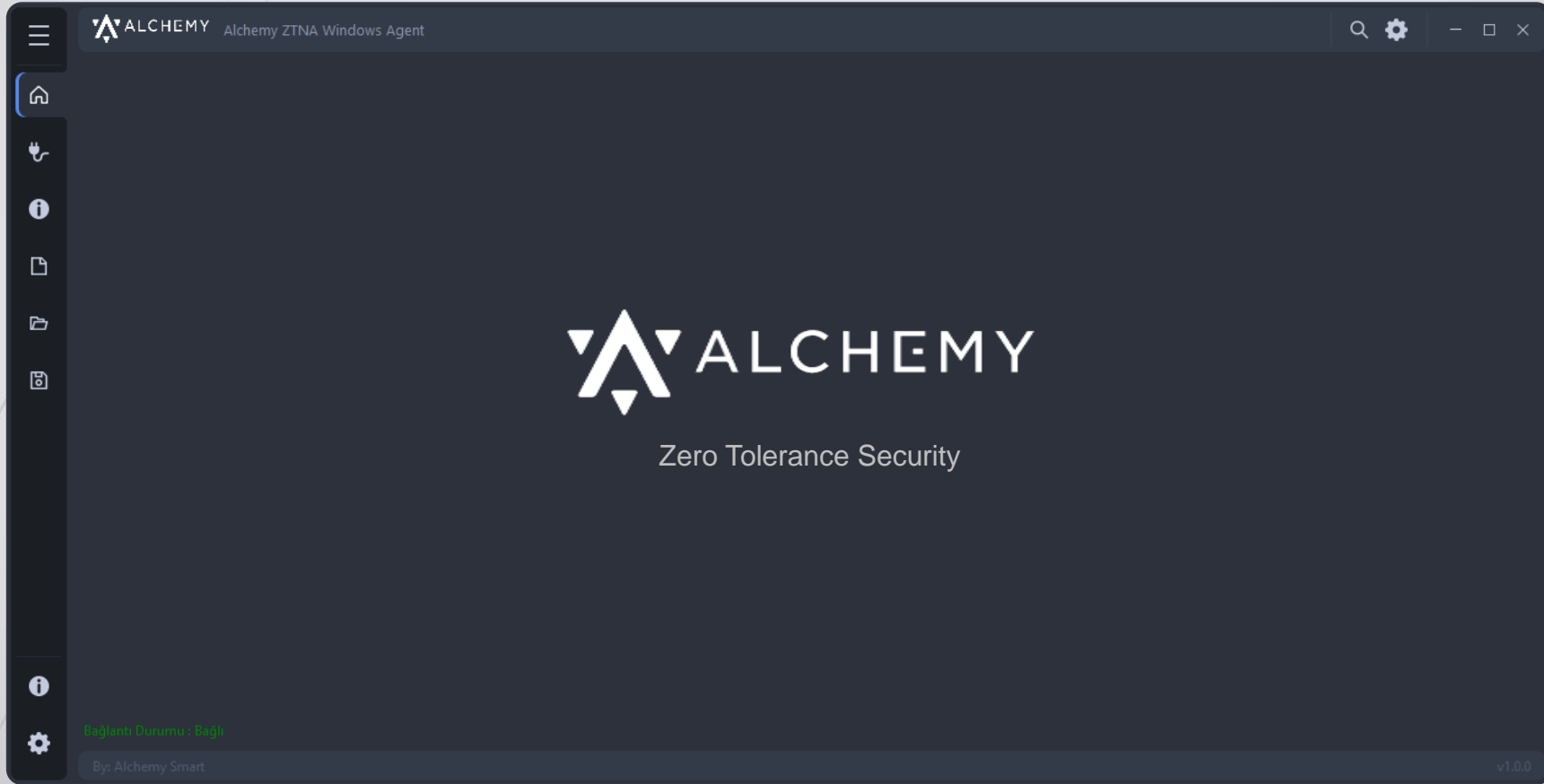


Client Agent

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Client Agent

Client Security



Client Agent

Client Security

The screenshot displays the Alchemy ZTNA Windows Agent interface. The top bar includes a 'Settings' window, the Alchemy logo, and the text 'Alchemy ZTNA Windows Agent'. A search icon and window controls are on the right. The main area is titled 'POLICY INFORMATION' and features three circular gauges: '13% Cpu Usage', '48% Memory Usage', and '89% Disk Usage'. Below these is a table of security items.

	Security Item	Current Version	Status	Info
1	OS Version	Windows-10-10.0.19041-SP0	PASSED	Your OS version should be equal or higher ...
2	Windows Firewall	Disabled	NOT PASSED	Your Firewall should be activated
3	Antivirus	Not installed	NOT PASSED	Your Antivirus should be activated
4	Windows Update Time	2022-01-03 21:00:30	PASSED	Windows Should be updated
5	Bitlocker	Protection ON	PASSED	Your Bitlocker should be activated

At the bottom, a 'Save' button is visible on the left, and the status 'Connection Status: Connected' is shown in green. The footer includes 'By: Alchemy Smart' and 'v1.0.0'.

Client Agent

Client Security

- Can run central policies
 - Checks virus protection software & last update time,
 - Checks whether firewall is on,
 - Checks OS version & last update time,
 - Other
 - BitLocker
 - Has Camera
 - Has Fingerprint
 - Has TPM
- Shows and records CPU Usage
- Shows and records RAM Usage
- Shows and records Disk Usage
- Multi-language Support




Access Management

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Access Management

Only Allowed & Quick Access List

SON BAĞLANTILAR alchemy




CANLI-APP01




CANLI-APP02


BAĞLANTILAR Filtre




CANLI-APP01




CANLI-APP02




CANLI-SQL-CLS01



CANLI-SQL-CLS02



SSH_STORAGE



TIS-APP

Access Management

- Allowed Access List
- Access List is managed by the System Administrators
- End Users are only allowed to use from the allowed list, not editable
- End User item selection
 - Starting Session after entry of credentials
 - Starting Session without knowing the credentials
 - Credentials are changed day-by-day and kept in a vault



Access & Remote Management

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Access & Remote Management

```
https://sectellme.com.tr/#/client/NQBjAG15c3Fs
Import bookmarks... Getting Started MIT App Inventor W DO-178B - Wikipedia GitHub - kwonghung-... Spring Boot Security u... Requesting HERE OAU... Usage Examples - Py... Docker Master Binaries HUYSERVER1 - User2 OpenId Connect ve O... Simple PHP example ... aquafonicks >>
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.10.10.10 netmask 255.255.255.0 broadcast 10.10.10.255
inet6 fe80::a29f:6803:79c0:d07e prefixlen 64 scopeid 0x20<link>
ether 52:54:00:21:68:01 txqueuelen 1000 (Ethernet)
RX packets 303690521 bytes 92781125394 (86.4 GiB)
RX errors 0 dropped 8 overruns 0 frame 0
TX packets 301578528 bytes 177661550462 (165.4 GiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

flannel.1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1450
inet 10.244.0.0 netmask 255.255.255.255 broadcast 10.244.0.0
inet6 fe80::54cd:56ff:fe09:5354 prefixlen 64 scopeid 0x20<link>
ether 56:cd:56:09:53:54 txqueuelen 0 (Ethernet)
RX packets 88910144 bytes 48749000415 (45.4 GiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 78018887 bytes 12122368958 (11.2 GiB)
TX errors 0 dropped 11 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,L00PBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 2003897963 bytes 582307212636 (542.3 GiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 2003897963 bytes 582307212636 (542.3 GiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

veth2ee4044a: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1450
inet6 fe80::1ca0:acff:fed6:1753 prefixlen 64 scopeid 0x20<link>
ether 1e:a0:ac:d6:17:53 txqueuelen 0 (Ethernet)
RX packets 12499132 bytes 1196694102 (1.1 GiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 12765454 bytes 1128921362 (1.0 GiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

veth34be90e0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1450
inet6 fe80::f019:d7ff:fe7c:b4d8 prefixlen 64 scopeid 0x20<link>
ether f2:19:d7:7c:b4:d8 txqueuelen 0 (Ethernet)
RX packets 12514221 bytes 1197674980 (1.1 GiB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 12737462 bytes 1127029458 (1.0 GiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@kmaster ~]#
```


Access & Remote Management

- Sample screen for a session,
- Allows full control if permitted,
- Web-based Access,
- No need for any installations,
 - RDP,
 - Putty,
 - WinSCP,
 - FileZilla,
 - MS Office Tools,
 - Other Applications



System Management

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Active & Online Users

System Management

AYARLAR alchemy

Aktif Oturum | Bağlantı Günlüğü | Kullanıcılar | Gruplar | Sunucu Bağlantıları | Özellikler

Bu sayfa şu anda aktif olan bağlantılarla doldurulacaktır. Listelenen bağlantılar ve bu bağlantıları kesme yeteneği, erişim seviyenize bağlıdır. Bir veya daha fazla oturumu sonlandırmak istiyorsanız, bu oturumların yanındaki kutuyu işaretleyin ve Oturumları Sonlandır ı tıklayın. Bir oturumu kapatmak, kullanıcının ilgili bağlantıyla olan bağlantısını anında kesecektir.

Oturumu Sonlandır

Q Filtre

	Kullanıcı Adı	Başlangıç Zamanı	Sunucu	Sunucu Bağlantısı
<input type="checkbox"/>	alchemy	20-09-2021 13:48:02	10.10.10.1	kmaster

- Active User List
- Active & Online User List
(User who is currently connected to a system)
- Quick Access Link to watch Active Session
- Quick Access Link to terminate Active Session
- Multi Selection, Multi Management



Session Recording - System Management

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Session Recording System Management

AYARLAR

Aktif Oturum **Bağlan Günlüğü** Kullanıcılar Guruplar Sunucu Bağlantıları Özellikler

Geçmiş bağlantıların kayıtları burada listelenir ve sütun başlıklarına tıklayarak sıralanabilir. Belirli kayıtları aramak için bir filtre dizesi girin ve Ara yı tıklayın. Yalnızca sağlanan filtre dizesiyle eşleşen kayıtlar listelenecektir.

Toplam: 299 kayıt (1 - 10 arası)

Kullanıcı Adı	Başlangıç Zamanı	Bağlantı Süresi	Bağlantı Adı	Sunucu	Bağlantı Kaydı
alchemy	20-09-2021 13:47:00	40 seconds	kmaster	10.10.10.1	Izle
alchemy	20-09-2021 10:11:53	20 seconds	kmaster	10.10.10.1	Izle
alchemy	20-09-2021 09:21:20	2 seconds	SSH_Storage	10.10.10.1	Izle
alchemy	20-09-2021 09:18:20	3 minutes	SSH_Storage	10.10.10.1	Izle
alchemy	20-09-2021 09:14:27	6 seconds	SSH_Storage	10.10.10.1	Izle
alchemy	20-09-2021 09:14:19	3 seconds	winrdp	10.10.10.1	Izle
alchemy	20-09-2021 09:14:12	3 seconds	Rdp_withoutpassword	10.10.10.1	Izle
alchemy	20-09-2021 09:13:48	17 seconds	kmaster	10.10.10.1	Izle
alchemy	21-06-2021 18:33:43	6.5 minutes	kmaster	10.10.10.1	Izle
alchemy	17-06-2021 22:49:49	29.9 minutes	SSH_Storage	10.10.10.1	Izle
alchemy	17-06-2021 22:35:55	1.1 minutes	SSH_Storage	10.10.10.1	Izle
alchemy	17-06-2021 22:35:48	3 seconds	winrdp	10.10.10.1	Izle
alchemy	17-06-2021 22:35:40	3 seconds	Rdp_withoutpassword	10.10.10.1	Izle
alchemy	17-06-2021 22:34:08	6 seconds	kmaster	10.10.10.1	Izle
alchemy	21-04-2021 11:23:09	25 seconds	winrdp	10.10.10.1	Izle
Support1	21-04-2021 11:21:54	1.8 minutes	winrdp	10.10.10.1	Izle
enes.acun	21-04-2021 10:33:06	9.3 minutes	winrdp	10.10.10.1	Izle
alchemy	21-04-2021 10:17:33	9 seconds	winrdp	10.10.10.1	Izle
alchemy	21-04-2021 10:17:12	19 seconds	winrdp	10.10.10.1	Izle
enes.acun	21-04-2021 10:16:21	3.3 minutes	winrdp	10.10.10.1	Izle

Session Recording

System Management



27

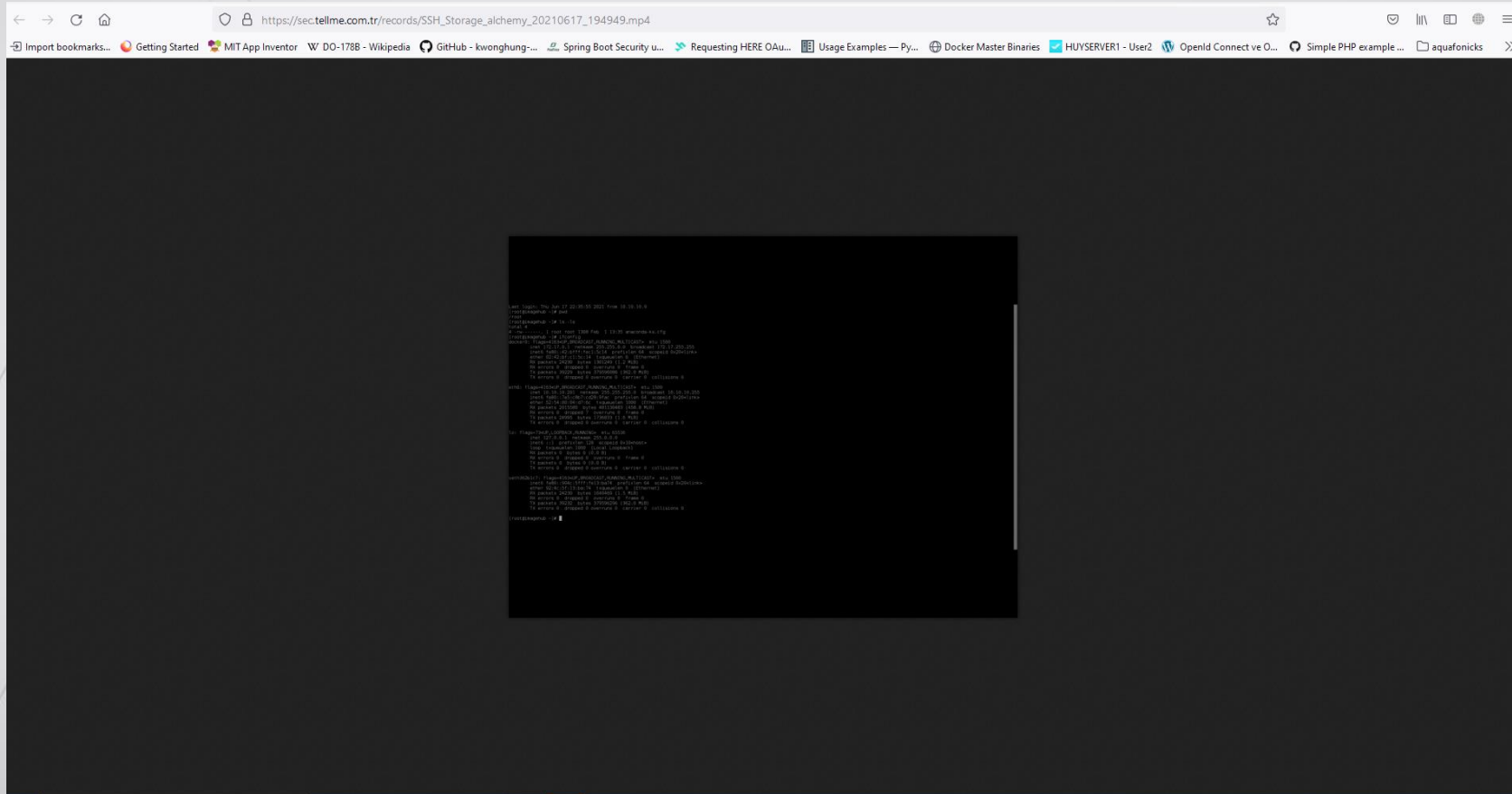
- Session recording interface keeps record of everything,
- Session recording interface also keeps a online saved video file,
- Watch Only Mode,
 - Sessions are available for watching online by system administrators
 - Sessions are available for watching online by any allowed user
- Online Support Mode,
 - Sessions are available for online support by system administrators
 - Sessions are available for online support by any allowed user



Later Watching
– System Management

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Later Watching System Management





Later Watching

System Management

- Connection History over an asset,
- Watch recorded sessions,
- Recorded sessions are at mp4 format,
- Watch sessions online



Current Situation

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Current Situation

- Currently we are making PoCs at some of the Turkish governmental organisations,
- PoC with TürkTelekom is planned, will start soon,

Comparison Table

Current Situation

#	MAIN FEATURES	OTHER – ZTNA Solutions <i>Zero Trust Network Access System</i>	ALCHEMY – Zero Tolerance Security <i>Zero Trust Network Access System</i>
1	service-initiated ZTNA	SUPPORTED	SUPPORTED
2	client-initiated ZTNA	SUPPORTED	Developing
3	Web Based	Web + Agent installation	Totally web-based solution, no need for installation on neither at clients nor servers
4	Multi-factor authentication	SUPPORTED	SUPPORTED
5	User Touch only authorized servers	SUPPORTED	SUPPORTED
6	Record user Activity real time	SUPPORTED	SUPPORTED
7	Join active connection	SUPPORTED	SUPPORTED
8	Start-to End logging	SUPPORTED	SUPPORTED
9	Multi Language support	SUPPORTED	SUPPORTED (English, Turkish, Russian)



Future Plan

Subjects we currently work on

- Better user experience,
- Better user interface,
- Better client agent & reporting,
- Better server agent & reporting,
- Proxying DB Connections,
 - Allow, Disallow operations



Teşekkürler...



ALCHEMY SMART BİLGİ TEKNOLOJİLERİ
ODTÜ TEKNOKENT,
BİLİŞİM VE İNNOVASYON MERKEZİ,
280/G NO.1228,
ÇANKAYA, ANKARA, TURKEY