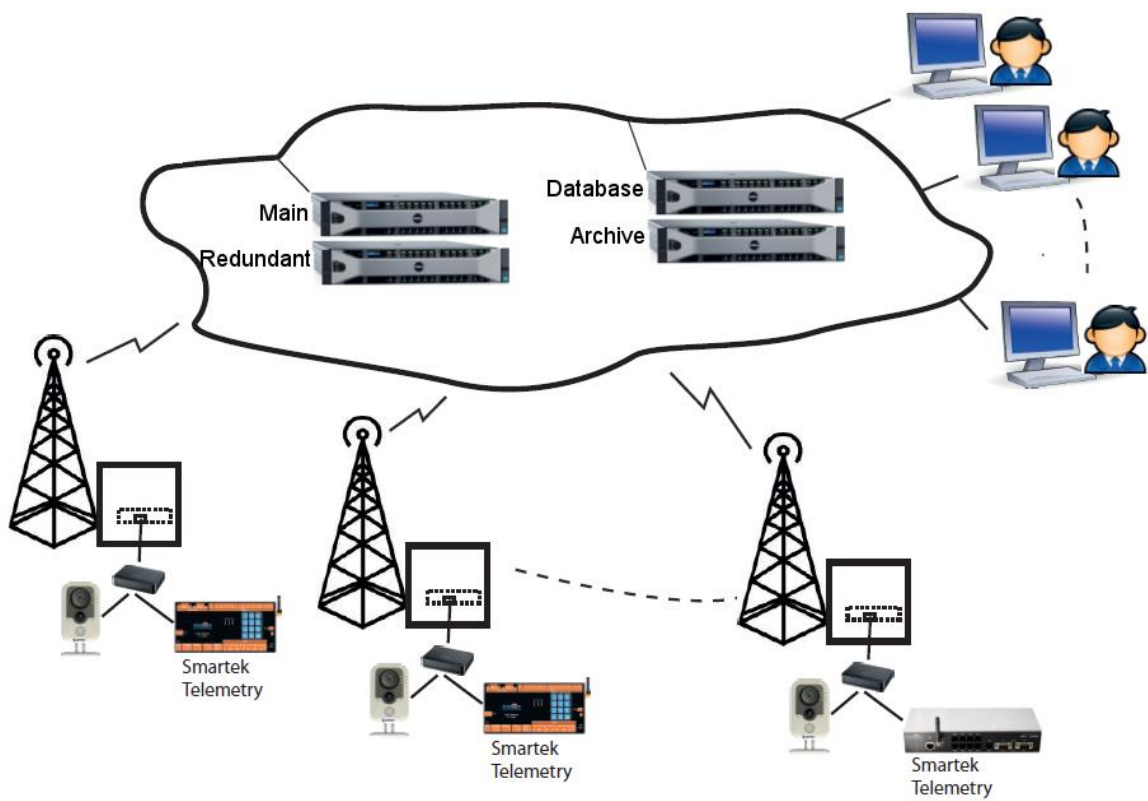


SMARTEK REMOTE SERVER



Remote Server For Smartek Telemetry

SystemDescription:

Remote server software is designed to

- control
- observe
- update
- log record

telemetry devices in web based user friendly GUI.

Since the software is web based, client users can reach the system through network without location restriction.

Communication between server and telemetry device is done by TCP/IP socket.

Multilanguage Support

Server software supports Turkish and English, but more languages can be added upon request.

Client Properties

At the stage of client creation, super administrator can assign client user to one of three different authorization level on telemetry devices:

Authorization Level	Observe	Record	Control	Update
Admin	✓	✓	✓	✓
Supervisor	✓	✓	✓	
User	✓	✓		

Observation and Logging

In normal situation, telemetry devices send I/O status and sensor measurements to the server in predefined period (user can change this value, default is 10 minutes). In case I/O status change, sensor value which cause to change any function defined in the telemetry, log is sent to server immediately. Card access transactions are sent immediately as well. Server listens what the telemetry sent, and record logs to SQL database.

Control

Client user can connect to the telemetry device through the server and able to:

- Force change of digital output
- Read meter in Readout or defined OBIS codes
- Download logs, settings, functions from telemetry device.
- Use transparent port

Update

There are two types of updates. One update is about “settings” and “functions” parameters which define how the telemetry device work. The other update is firmware of telemetry device.



Client user who has “Admin” level may update any of definitions or firmware on telemetry device.

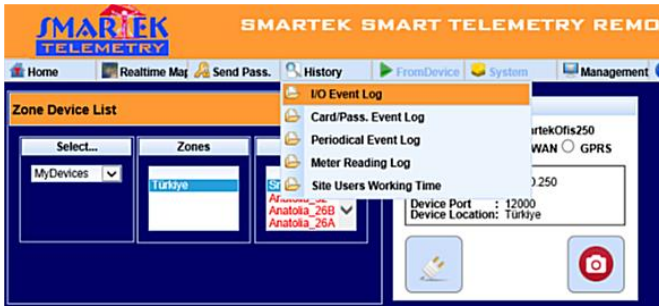
Periodical Log

On the main screen, user can observe periodical and situational log records of selected device on the server.

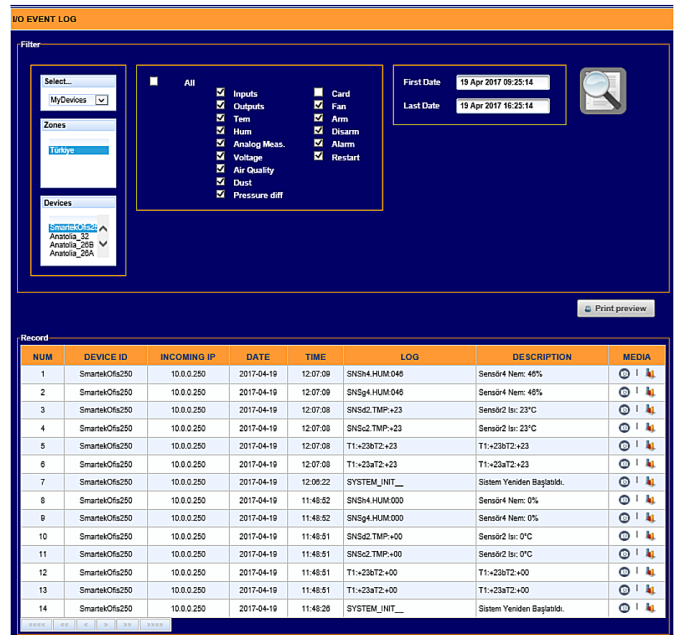
PERIODICAL EVENT LOG																	
REFRESH																	
NUM	INCOMING IP	GPRS IP	VERS.	DATE	TIME	SECURITY	INPUT 12-9	INPUT 8-1	OUTPUT 6-1	SEN51	SEN52	SEN53	SEN54	SEN55	SEN56	PWM	RPM
1	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	18:23:47	DISARM	0111	11111111	000000	25.8°C	25.3°C	N.C.	49%	N.C.	13%	00	0 RPM
2	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	18:13:51	DISARM	0111	11111111	000000	25.8°C	25.5°C	N.C.	49%	N.C.	13%	00	0 RPM
3	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	18:03:58	DISARM	0111	11111111	000000	25.9°C	25.5°C	N.C.	49%	N.C.	13%	00	0 RPM
4	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:53:59	DISARM	0111	11111111	000000	25.9°C	25.5°C	N.C.	49%	N.C.	12%	00	0 RPM
5	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:44:04	DISARM	0111	11111111	000000	26.0°C	25.8°C	N.C.	49%	N.C.	13%	00	0 RPM
6	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:34:08	DISARM	0111	11111111	000000	26.4°C	26.3°C	N.C.	47%	N.C.	13%	00	0 RPM
7	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:24:13	DISARM	0111	11111111	000000	26.8°C	26.5°C	N.C.	47%	N.C.	12%	00	0 RPM
8	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:14:17	DISARM	0111	11111111	000000	26.8°C	26.5°C	N.C.	46%	N.C.	12%	00	0 RPM
9	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	17:04:21	DISARM	0111	11111111	000000	26.4°C	26.3°C	N.C.	46%	N.C.	13%	00	0 RPM
10	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	16:54:25	DISARM	0111	11111111	000000	26.3°C	26.0°C	N.C.	46%	N.C.	13%	00	0 RPM
11	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	16:44:30	DISARM	0111	11111111	000000	26.0°C	25.9°C	N.C.	46%	N.C.	13%	00	0 RPM
12	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	16:34:34	DISARM	0111	11111111	000000	25.9°C	25.5°C	N.C.	46%	N.C.	13%	00	0 RPM
13	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	16:24:38	DISARM	0111	11111111	000000	25.6°C	25.5°C	N.C.	46%	N.C.	13%	00	0 RPM
14	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	14:55:18	DISARM	0111	11111111	000000	25.1°C	24.8°C	N.C.	45%	N.C.	13%	00	0 RPM
15	10.0.0.250	NO_GPRS	4-5.04	2017-04-19	14:45:23	DISARM	0111	11111111	000000	25.0°C	24.8°C	N.C.	45%	N.C.	12%	00	0 RPM

REALTIME EVENT LOG							
REFRESH							
NUM	DEVICE ID	INCOMING IP	DATE	TIME	CODE	LOG	DESCRIPTION
1	SmartekOfs250	10.0.0.250	2017-04-19	12:07:09	QUE_I/O	SNS#4 HUM:048	Sensör4 Nem: 49%
2	SmartekOfs250	10.0.0.250	2017-04-19	12:07:09	QUE_I/O	SNS#4 HUM:048	Sensör4 Nem: 49%
3	SmartekOfs250	10.0.0.250	2017-04-19	12:07:08	QUE_I/O	SNS#2 TMP:+23	Sensör2 Isr: 23°C
4	SmartekOfs250	10.0.0.250	2017-04-19	12:07:08	QUE_I/O	SNS#2 TMP:+23	Sensör2 Isr: 23°C
5	SmartekOfs250	10.0.0.250	2017-04-19	12:07:08	QUE_I/O	T1+23#T2+23	T1+23#T2+23
6	SmartekOfs250	10.0.0.250	2017-04-19	12:07:08	QUE_I/O	T1+23#T2+23	T1+23#T2+23
7	SmartekOfs250	10.0.0.250	2017-04-19	12:06:22	QUE_I/O	SYSTEM_INIT_	Sistem Yeniden Başlatıldı.
8	SmartekOfs250	10.0.0.250	2017-04-19	11:51:17	QUE_CRD	[03]1*104 000 022 185 023	
9	SmartekOfs250	10.0.0.250	2017-04-19	11:51:08	QUE_CRD	[78]1*014 000 042 181 004	
10	SmartekOfs250	10.0.0.250	2017-04-19	11:51:01	QUE_CRD	[03]0*014 000 012 079 219	
11	SmartekOfs250	10.0.0.250	2017-04-19	11:50:48	QUE_CRD	[03]1*104 000 022 185 023	
12	SmartekOfs250	10.0.0.250	2017-04-19	11:50:22	QUE_CRD	[78]1*014 000 042 181 004	
13	SmartekOfs250	10.0.0.250	2017-04-19	11:50:17	QUE_CRD	[03]0*001 001 182 145 228	
14	SmartekOfs250	10.0.0.250	2017-04-19	11:50:11	QUE_CRD	[03]0*014 000 012 079 219	
15	SmartekOfs250	10.0.0.250	2017-04-19	11:48:52	QUE_I/O	SNS#4 HUM:000	Sensör4 Nem: 0%

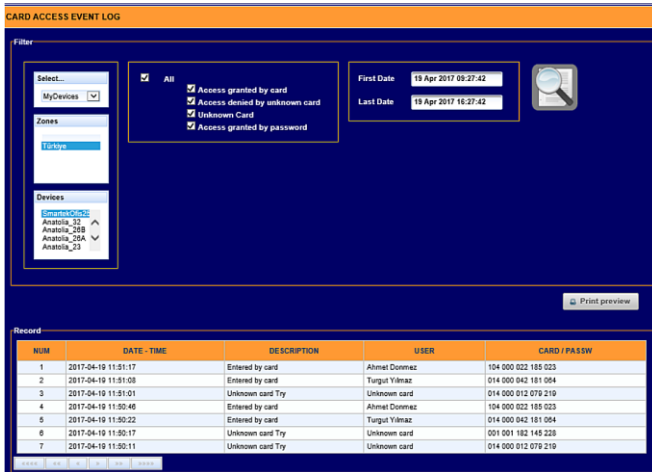
Logs can be observed by type



Card access logs have different filters



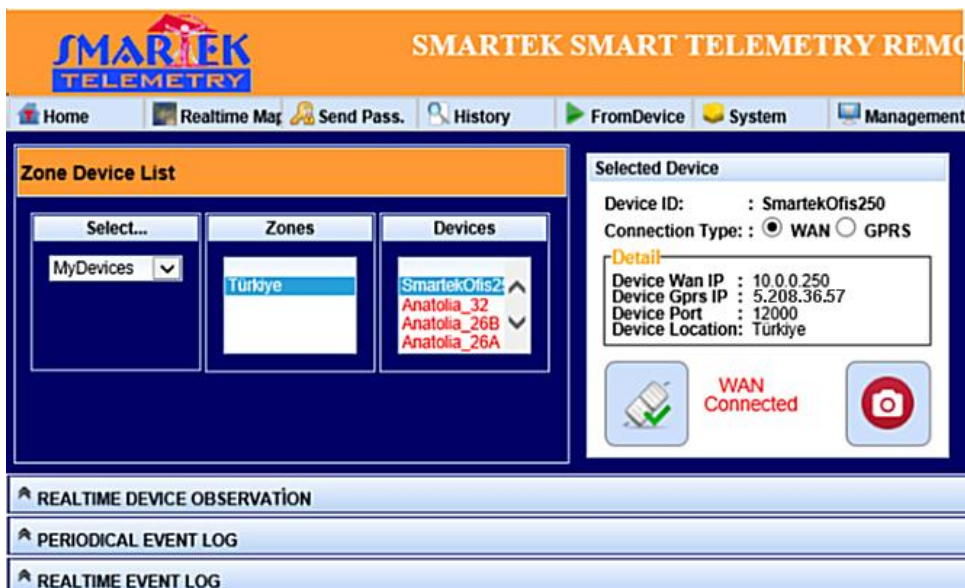
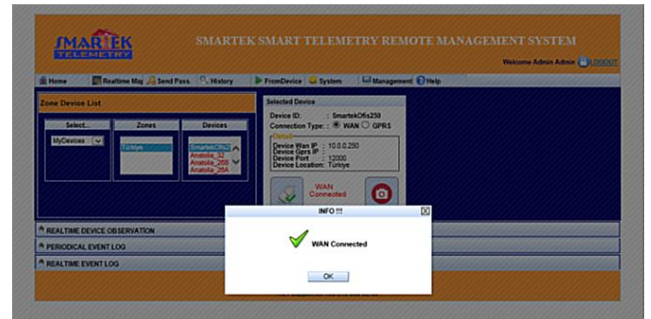
Logs can be filtered by log type, date



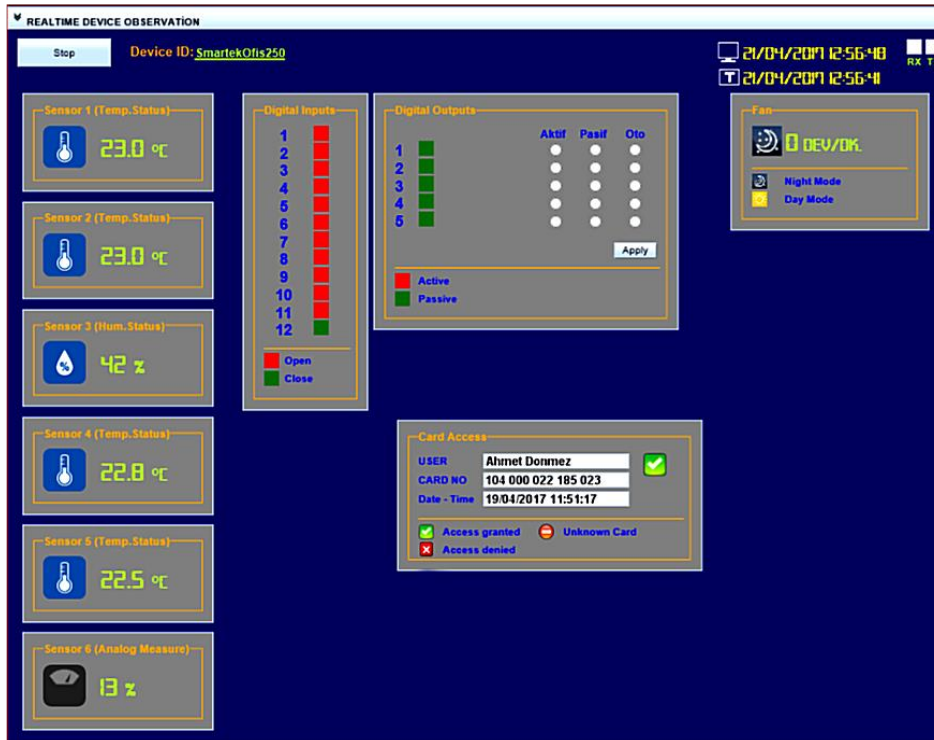
Connection to Telemetry Device

Smartek Telemetry devices support TCP/IP on ethernet and GPRS. If device can not reach to server through ethernet, it tries to connect by GPRS. In order to check GPRS functionality, even ethernet works, GPRS connection is also established. So the server knows the device in both WAN IP and GPRS IP.

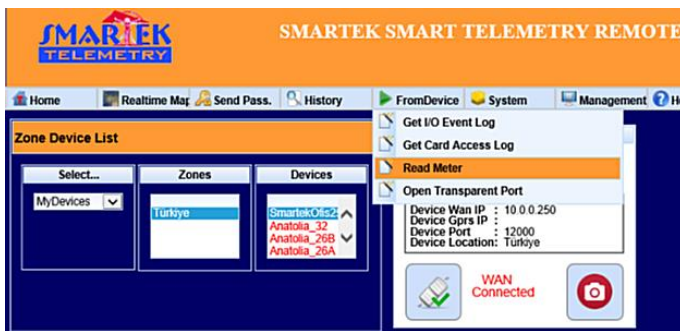
When the user tries to connect to Telemetry device, person can choose WAN or GPRS IP. If the server can not connect to Telemetry device through WAN IP, then tries to connect through GPRS IP automatically.



After successful connection, user can observe realtime device status.

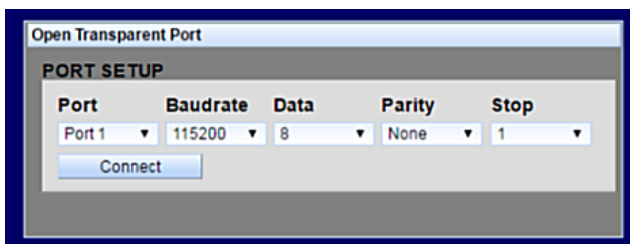


Server can download log records like I/O, Card Access, Meter readings from Telemetry device. Transparent port can also be managed from server.



Meter reading is done by server instantly, result will be shown after reading is finished.

Transparent port connection settings is done by server. After set values and click connect, Telemetry device is connected to the client user through server.

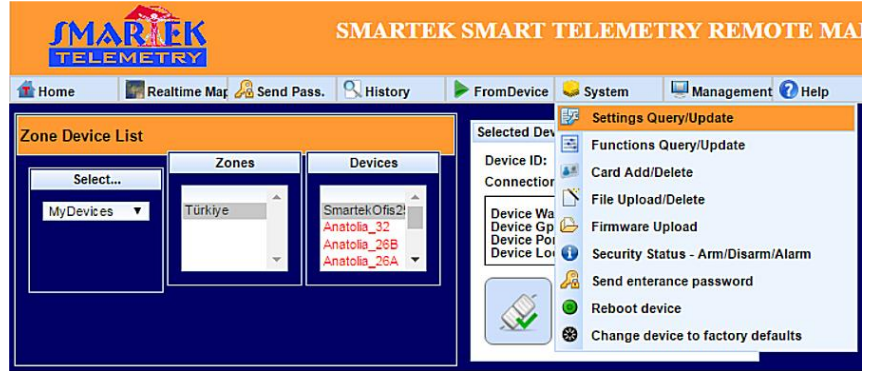


REALTIME METER READING

DESCRIPTION	CODE	VALUE
Device name	QUE_AMR(readout)	
Serial Num.	0.0.0	60009546
Time	0.0.1	11:35:05
Date	0.0.2	17-04-21
Day of week	0.0.5	5
Production date	00.1.3	11-02-25
Calibration date	00.2.5	11-02-25
Change of tariff info	00.2.2	11-02-25,14:00
Top Cover Open Date	00.7.0	16-02-23,10:33
Last Terminal Cover Open Date	00.7.1	17-04-01,00:00(01)
Highest Power Measurement period	0.0.0	15'min
Demand reset count	0.1.0	69
Maximum Active Power	1.0.0	000.020 *kW(17-04-12,17:15)
Battery status code	00.0.1	1
Tariff Time Weekday	00.5.0	00000000170022000000000000000000
Tariff Time Saturday	00.5.1	00000000170022000000000000000000
Tariff Time Sunday	00.5.2	00000000170022000000000000000000
Tariff Segment Weekday	00.6.0	31230000
Tariff Segment Saturday	00.6.1	31230000
Tariff Segment Sunday	00.6.2	31230000
Cumulative Active Energy	1.0.0	000093.834 *kWh
Total Energy T1	1.0.1	000093.081 *kWh
Total Energy T2	1.0.2	000241.452 *kWh
Total Energy T3	1.0.3	000140.301 *kWh
Total Energy T4	1.0.4	000000.000 *kWh
Reactive Inductive Total	0.0.0	000111.161 *kVarh
Reactive Inductive T1	0.0.1	000059.204 *kVarh
Reactive Inductive T2	0.0.2	000027.958 *kVarh
Reactive Inductive T3	0.0.3	000024.001 *kVarh
Reactive Inductive T4	0.0.4	000000.000 *kVarh
Reactive Capacitive Total	0.0.0	000134.030 *kVarh
Reactive Capacitive T1	0.0.1	000059.732 *kVarh
Reactive Capacitive T2	0.0.2	000028.317 *kVarh
Reactive Capacitive T3	0.0.3	000045.991 *kVarh
Reactive Capacitive T4	0.0.4	000000.000 *kVarh
3 Phase cut off count	00.7.0	16
1.Phase cut off count	00.7.1	00
2.Phase cut off count	00.7.2	00
3.Phase cut off count	00.7.3	00
Voltage warning count	00.7.4	00
Current warning count	00.7.5	00
Blank	!	Y57

From System menu, items listed below can be performed:

- Settings Query/Update
- Functions Query/Update
- Card List Query/Update
- File Upload/Delete
(Logs, Card List, Settings, Functions)
- Firmware Upload
- Security status change
- Rebooting device
- Change to factory defaults.



Settings Query/Update window is below.

SETUP

DATE/TIME

Date:

Time:

Update

Update

DEVICE

ID:

Lan IP:

Gateway:

Subnet Mask:

Port No:

DHCP

Remote Server

IP Addr(Gprs):

IP Addr(Soket):

Port Num:

Transparent Port:

Periodical send(min):

TIME SERVER

IP Addr:

Port Num:

GMT:

GPS

Sim Pin:

APN:

User Name:

Password:

SECURITY

Door sensor input num:

Door lock output num:

Motion sens. input num:

Siren output num:

Auto arm delay time (min):

Web Server Logging

Admin Name:

Admin Pass:

User Name:

User Pass:

DNS SERVER

Dns Server IP:

SMTP SERVER

Server Name:

Server Port Num:

User Name:

User Pass:

File Upload/Delete window is below:



File Upload/Delete

Acceptable file

File name for cards definitions :

File name for settings :

File name for functions :

Dosya Seç

Server also logs user client transactions:

SERVER TRANSACTIONS

Filter

First Date

Last Date

List

Record

NUM	DATE - TIME	USER	IP	TYPE	DESCRIPTION
1	2017-04-19 13:27:45	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
2	2017-04-19 12:36:51	admin - Admin Admin	10.0.0.46	INFO	Cihazla baglanti kapatildi. Cihaz Adi: IP: 10.0.0.250
3	2017-04-19 12:35:58	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
4	2017-04-19 12:35:44	admin - Admin Admin	10.0.0.46	INFO	Sisteme giris yapti
5	2017-04-19 12:34:06	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
6	2017-04-19 12:33:43	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
7	2017-04-19 12:33:21	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
8	2017-04-19 12:21:56	admin - Admin Admin	10.0.0.46	INFO	Arsivden web hareketleri incelendi
9	2017-04-19 12:16:19	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
10	2017-04-19 12:16:05	admin - Admin Admin	10.0.0.46	INFO	Cihazla baglanti kapatildi. Cihaz Adi: IP: 10.0.0.250
11	2017-04-19 12:15:50	admin - Admin Admin	10.0.0.46	INFO	Arsivden sayac kayitlari incelendi
12	2017-04-19 12:15:04	admin - Admin Admin	10.0.0.46	INFO	Arsivden olay kayitlari incelendi
13	2017-04-19 12:14:12	admin - Admin Admin	10.0.0.46	INFO	Arsivden olay kayitlari incelendi
14	2017-04-19 12:11:05	admin - Admin Admin	10.0.0.46	INFO	Sayac okuma
15	2017-04-19 12:10:45	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
16	2017-04-19 12:10:33	admin - Admin Admin	10.0.0.46	INFO	Cihazla baglanti kapatildi. Cihaz Adi: IP: 10.0.0.250
17	2017-04-19 11:57:56	admin - Admin Admin	10.0.0.46	INFO	Arsivden kartli gecis kayitlari incelendi
18	2017-04-19 11:54:12	admin - Admin Admin	10.0.0.46	INFO	Cihazdan kart listesi indirildi
19	2017-04-19 11:53:49	admin - Admin Admin	10.0.0.46	INFO	Cihaza baglandi. Cihaz Adi: IP: 10.0.0.250
20	2017-04-19 11:53:09	admin - Admin Admin	10.0.0.46	INFO	Sisteme giris yapti
21	2017-04-19 11:53:00	admin - Admin Admin	10.0.0.46	INFO	Sistemden cikti
22	2017-04-19 11:52:55	admin - Admin Admin	10.0.0.46	INFO	Sunucu Kullanicisi binileri denistirildi: 1-admin-smartek2002-12 10 8 8 7 8 5 :