



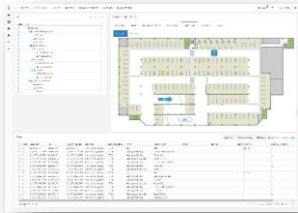
Monitor parking space availability
in real time
on mobile devices, dashboards
and graphic maps

Areashell
Parking Services

Parking Availability Services

- Collect data about parking space availability from parking sensors
- Calculate and record parking lot and zone parking availability
- Provide administrators and users with the information about parking availability by zone in real time
- Generate reports based on the recorded data

Management & Monitoring Interface



User Mobile Application



Management Software



Parking sensors

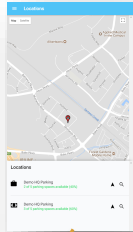


Internet of Things Ecosystem

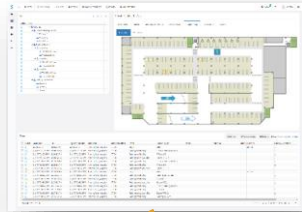


- Based on ASN Inc. IoT controllers and sensors
- Battery-based parking sensors (working 5 years without changing the battery)
- Wireless communication between coordinators, routers and sensors
 - Parking sensors send availability information to the nearest router
 - The network of routers transfers data from the parking sensors to the coordinator
 - The coordinator transfers data to the Areashell software

User Mobile Application



Management & Monitoring Interface



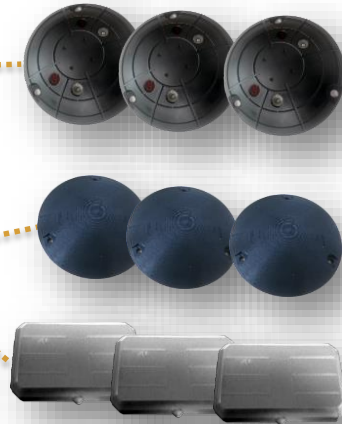
Coordinator



Routers



Parking sensors

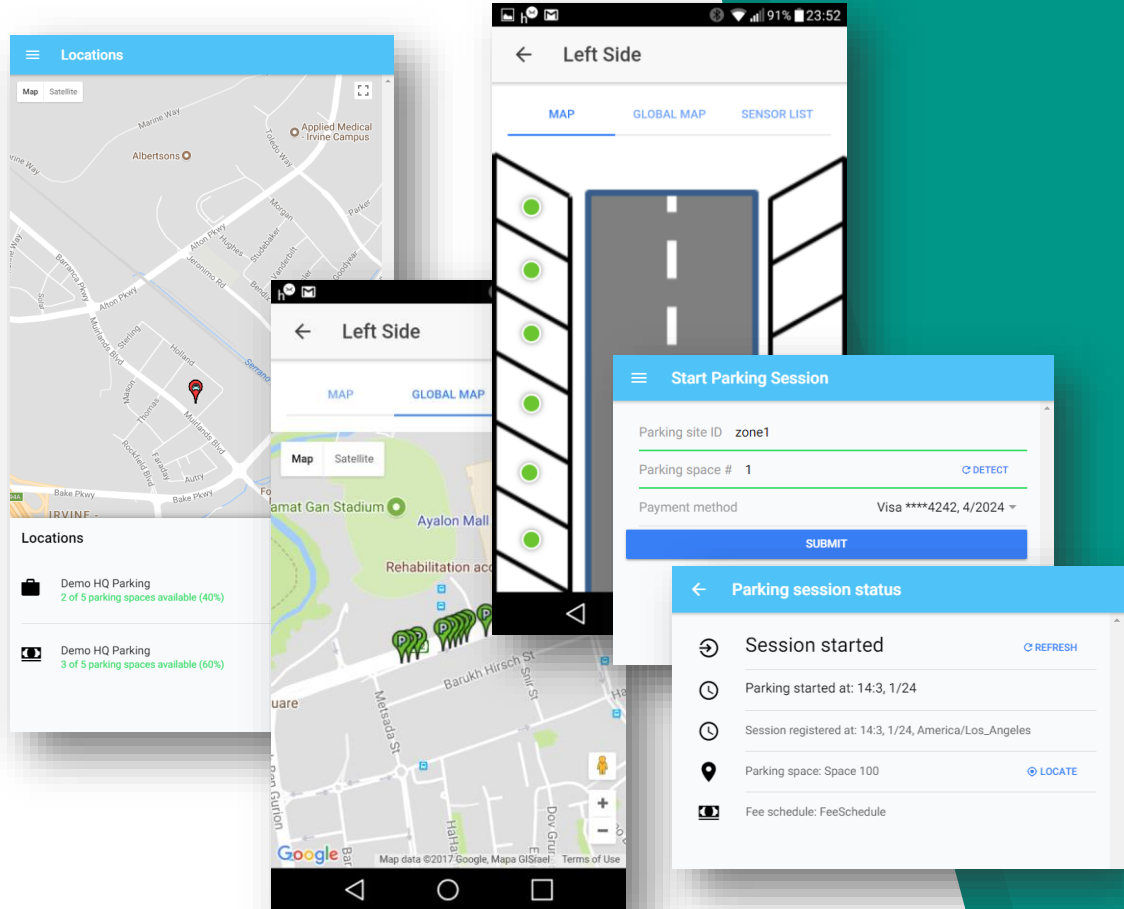


Management Software



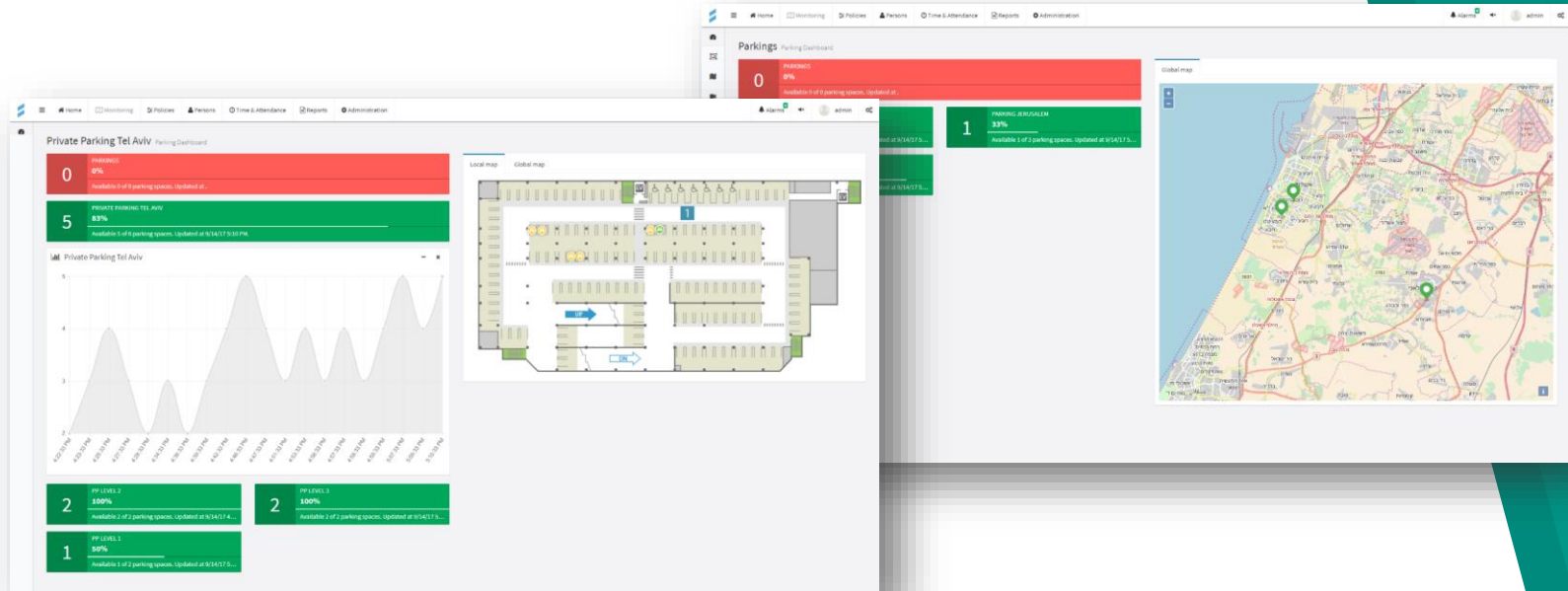
End User **Parking Mobile Application**

- Quickly locate an available parking lot and space
 - Shows information about parking areas both in corporate and public parking structures
- Navigate to the selected parking lot and space
- Pay for parking by credit or debit cards
- Quickly locate parked car in the parking lot



Real-time Parking Availability Dashboard

- Monitoring parking availability by area of indoor and outdoor parking locations on local and global graphic maps
- Diagrams of changing parking availability by time



Parking Reports

- Parking session report
- Special report for parking events by parking area / subarea
- Parking fee report by parking space by parking event
- Total parking fee report by parking space for a period of time
- Export reports to external files

The screenshot displays a parking management software interface with a sidebar menu on the left and a main content area. The sidebar includes options like Home, Monitoring, Policies, Persons, Reports, and Administration. The main content area shows a 'Parking reports' dropdown menu with options like 'Parking Events', 'Parking Fee Report', and 'Parking Fee Total Report'. Below this, there's a table showing 'Parking sessions' with columns for Session start, Session registered, Session end, Parking space, User, Pay amount, Currency, and Pay transaction ID. Another table shows 'Parking Fee Report' with columns for Parking space, Record start, Record end, Duration, and Fee. A third table shows 'Event Details' with columns for Record start, Record end, Rate start time, Rate end time, Rate grace period, Pay rate, Pay period, Maximum pay per day, and Fee. The interface also includes search bars, filters, and export buttons.

Parking sessions table:

Session start	Session registered	Session end	Parking space	User	Pay amount	Currency	Pay transaction ID
1/15/18 12:35:00 PM	1/15/18 12:35:00 PM		Space 100	admin	0		
1/15/18 12:54:28 PM	1/15/18 12:54:28 PM		Space 100	admin	0		
1/15/18 12:57:48 PM	1/15/18 12:57:48 PM		Space 100	admin	0		
1/15/18 7:53:02 PM	1/15/18 7:53:02 PM		Space 100	admin	0		
1/15/18 8:24:37 PM	1/15/18 8:24:37 PM		Space 100	admin	0		
1/15/18 9:22:20 PM	1/15/18 9:22:20 PM		Space 100	admin	0		
1/15/18 11:16:32 PM	1/15/18 11:16:32 PM	1/16/18 8:20:23 AM	Space 100	admin	10.3	usd	
1/16/18 12:37:17 AM	1/16/18 12:37:17 AM	1/16/18 9:43:19 AM	Space 100	admin	10.3	usd	
1/16/18 9:43:29 AM	1/16/18 1:44:39 AM	1/16/18 10:09:39 AM	Space 100	admin	10.3	usd	
1/16/18 9:54:03 AM	1/16/18 9:54:03 AM	1/17/18 4:29:48 AM	Space 100	admin	10.3	usd	ch_1B1BY1BSUXKXZmout
1/16/18 10:10:49 AM	1/16/18 2:12:24 AM	1/16/18 5:53:09 PM	Space 100	admin	10.3	usd	

Parking Fee Report table:

Parking space	Record start	Record end	Duration	Fee
UGuardParkingSensor1	9:17:35 PM	9:18:45 PM	0:01	3.45
UGuardParkingSensor1	9:19:15 PM	9:19:25 PM	0:00	0.5
UGuardParkingSensor1	9:19:35 PM	9:21:45 PM	0:02	6.45
UGuardParkingSensor1	9:22:05 PM	9:22:45 PM	0:00	2

Event Details table:

Record start	Record end	Rate start time	Rate end time	Rate grace period	Pay rate	Pay period	Maximum pay per day	Fee
9:27:25 PM	9:29:35 PM	1/1/70 6:16:00 PM	1/1/70 11:59:00 PM	5	3	60	30	6.45

Flexible Parking Fee Rates / Schedules

- Parking fee reports are using configurable parking fee schedules
- Parking fee schedule can contain several fee rates different for different days of week, holidays, period of day

The screenshot displays a web application interface for managing parking fees. The top navigation bar includes links for Home, Monitoring, Policies, Persons, Reports, and Administration, along with a user profile 'admin'. A left sidebar lists various management options: Holidays, Time Schedules, Person Roles, Person Groups, T&A Work Areas, T&A Work Shifts, and Parking Rates (which is currently selected). The main content area is titled 'Effective time' and features a 'New rate' button. Below this, there are checkboxes for 'Work on weekdays' (Monday through Saturday) and 'Work on holidays' (On holidays type 1 and type 2). The 'Start time' is set to 12:00 AM and the 'End time' is set to 6:16 PM. The 'Rate parameters' section includes input fields for 'Grace period (minutes)' (5), 'Pay period (minutes)' (60), 'Currency' (USD), 'Pay rate' (2), and 'Maximum pay per day' (15). At the bottom, there are 'Submit' and 'Cancel' buttons.

Navigation: Home, Monitoring, Policies, Persons, Reports, Administration | admin

Left Sidebar: Holidays, Time Schedules, Person Roles, Person Groups, T&A Work Areas, T&A Work Shifts, **Parking Rates**

Effective time configuration:

- Work on weekdays:** ☒ Monday ☒ Tuesday ☒ Wednesday ☒ Thursday ☒ Friday ☒ Saturday ☒ Sunday
- Work on holidays:** ☒ On holidays type 1 ☒ On holidays type 2
- Start time:** 12:00 AM
- End time:** 6:16 PM

Rate parameters:

- Grace period (minutes):** 5
- Pay period (minutes):** 60
- Currency:** USD
- Pay rate:** 2
- Maximum pay per day:** 15

Buttons: Save changes, New rate, Move left (earlier), Move right (later), Delete, Submit, Cancel

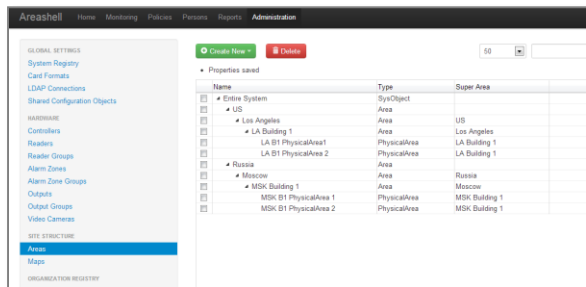
Integration with Areashell Cloud Parking Services

- Any Areashell instance can be integrated with the Areashell Parking Services (running in the Areashell cloud)
- Areashell instances regularly send information about availability of the parking spaces to Areashell Cloud Parking Services
- Areashell Cloud Parking Services provides parking availability, location and other information to Areashell Parking mobile applications

**Areashell
Parking
mobile
application**



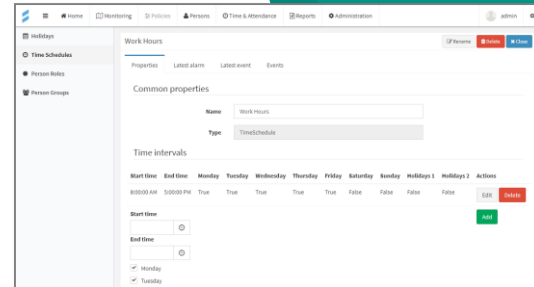
Fully Web-based Management & Monitoring Interface



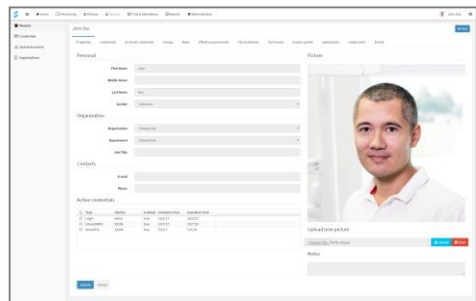
System configuration management



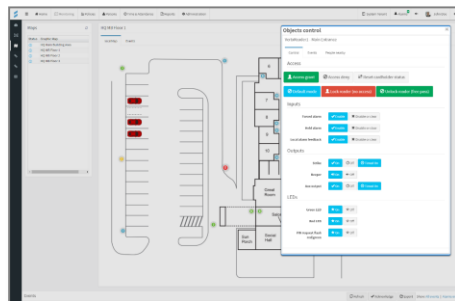
Hardware management



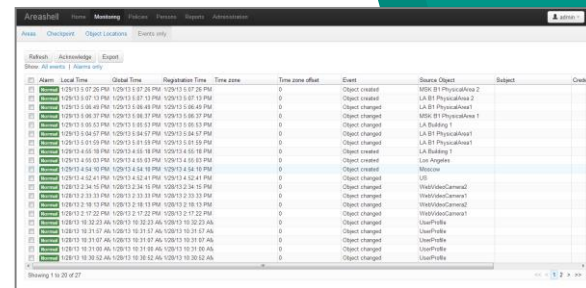
Policy management



User management



Real-time monitoring & control



Reporting

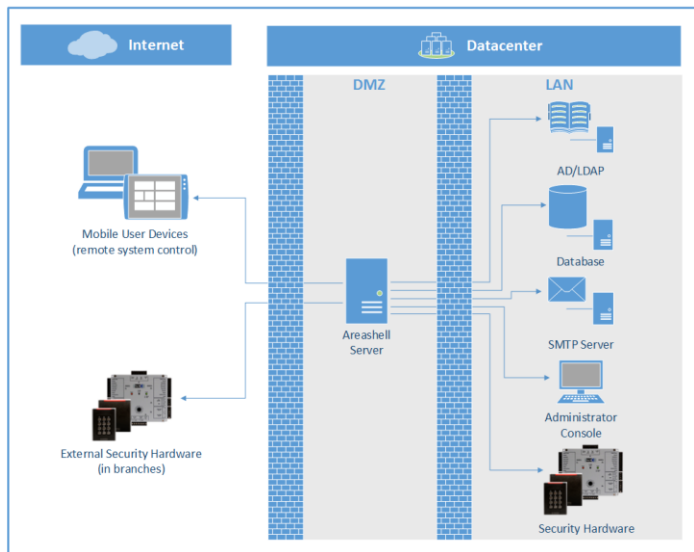
Advanced Scalable **Architecture**

- Ready for Public and Private Clouds
 - Web-based interface
 - Standard Java™ EE Application
 - IP-based communications with hardware controllers
 - Multi-tenant configuration options
 - One instance of Areashell software can serve several independent isolated systems
 - Administrators of one of the tenants cannot manage or see the configurations or events of any other tenant
- Multi-platform
 - Works on different hardware, operating systems, virtual platforms, web-servers, application servers, on premise and in cloud
 - Supports free open source and commercial operating systems, application servers and database management servers

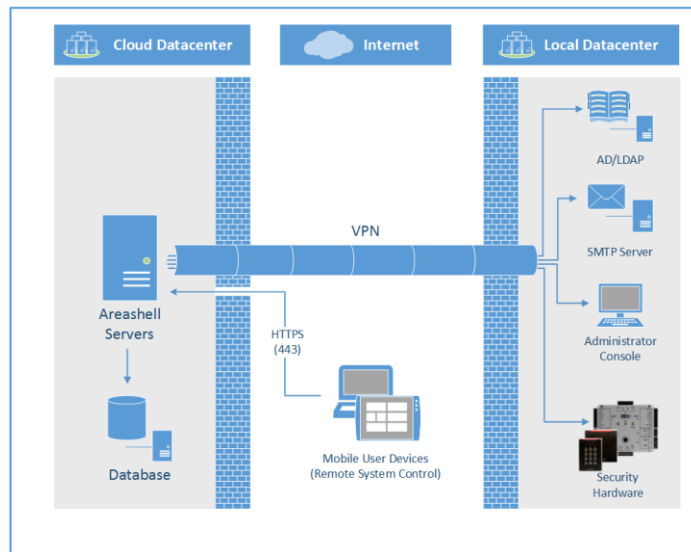
Flexible Deployment

- Areashell provides great flexibility of deployment. With Areashell you have a choice how to deploy your access control system: **in cloud** or **on premise**.
- In both variants you can securely control the system from any workplace, including mobile devices, and integrate your system with locally installed security hardware and other information systems.

On Premise

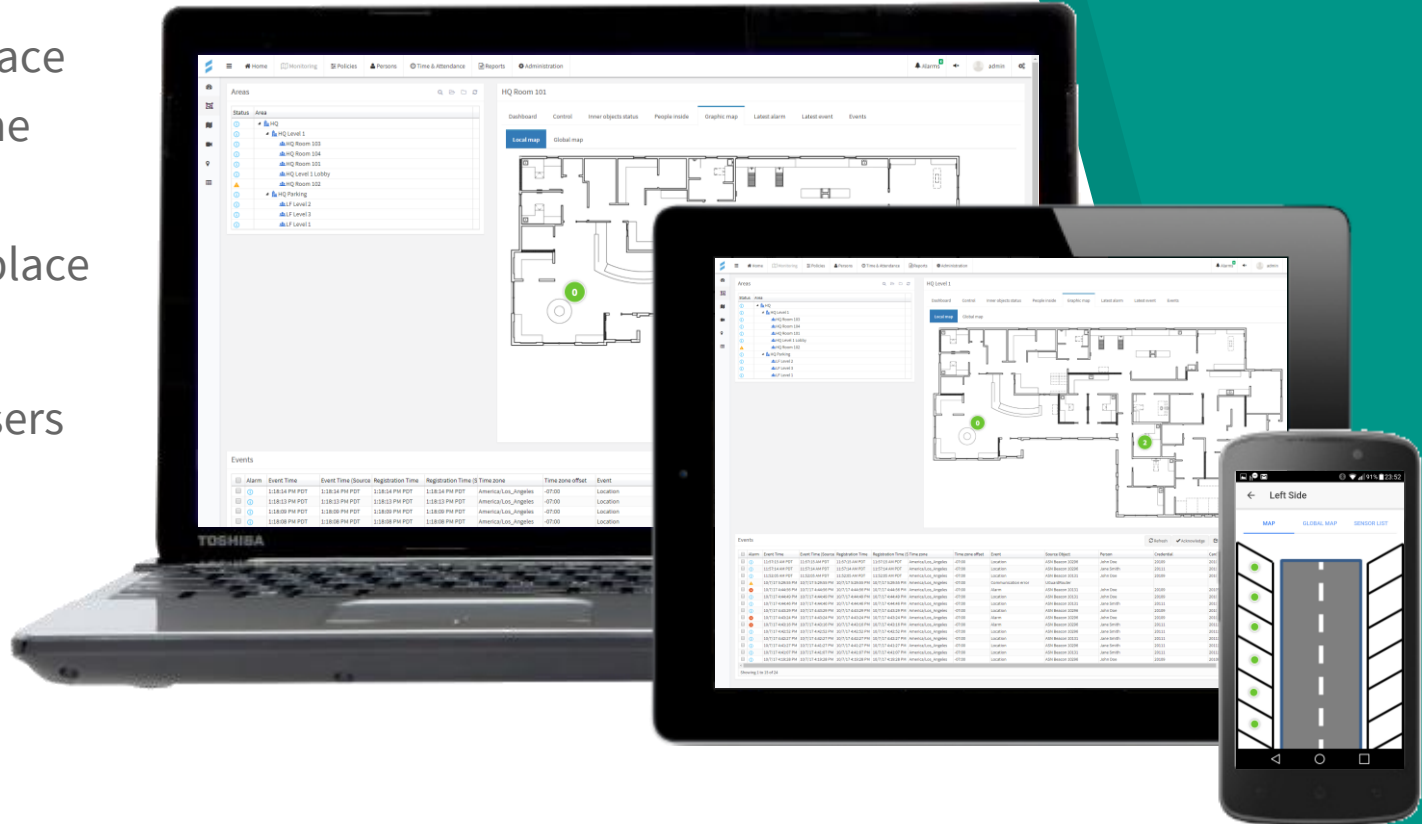


In Cloud



Mobile Friendly

- Web-based interface allows manage the system from any device from any place
- Special mobile application for users



Multitenancy

- Areashell supports multi-tenant configuration:
 - One instance of Areashell software can serve several independent isolated systems – tenants
 - Administrators of one of the tenants cannot see or manage the configurations or events of any other tenant
- This feature makes possible to support several independent system by just one installation of Areashell software

The screenshot displays the Areashell web application interface, which is designed for multi-tenant management. The top navigation bar includes tabs for Home, Monitoring, Policies, Persons, Time & Attendance, Reports, and Administration. The left sidebar provides a menu for System Settings, Hardware, Controllers, Readers, Reader Groups, Sensors, and Alarm Zones. The main content area shows a table of system tenants with columns for Name, Type, Address, Connect Regular, Polling period (n), Communication, Last Modified, and Last Modified by. A circular callout highlights the 'Manage Tenants' dropdown menu, which lists 'System Tenant', 'areashell.com', 'domain1.com', and 'domain2.com'.

Name	Type	Address	Connect Regular	Polling period (n)	Communication	Last Modified	Last Modified by	
UGuardCoordinate	UGuardCoordinate	192.168.1.149:7777	false	false	10000	5000	5:54:47 PM	admin
V2000	V2000	192.168.1.77:4050	false	false	10000	5000	5:54:21 PM	admin

Manage Tenants

- System Tenant
- areashell.com
- domain1.com
- domain2.com



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