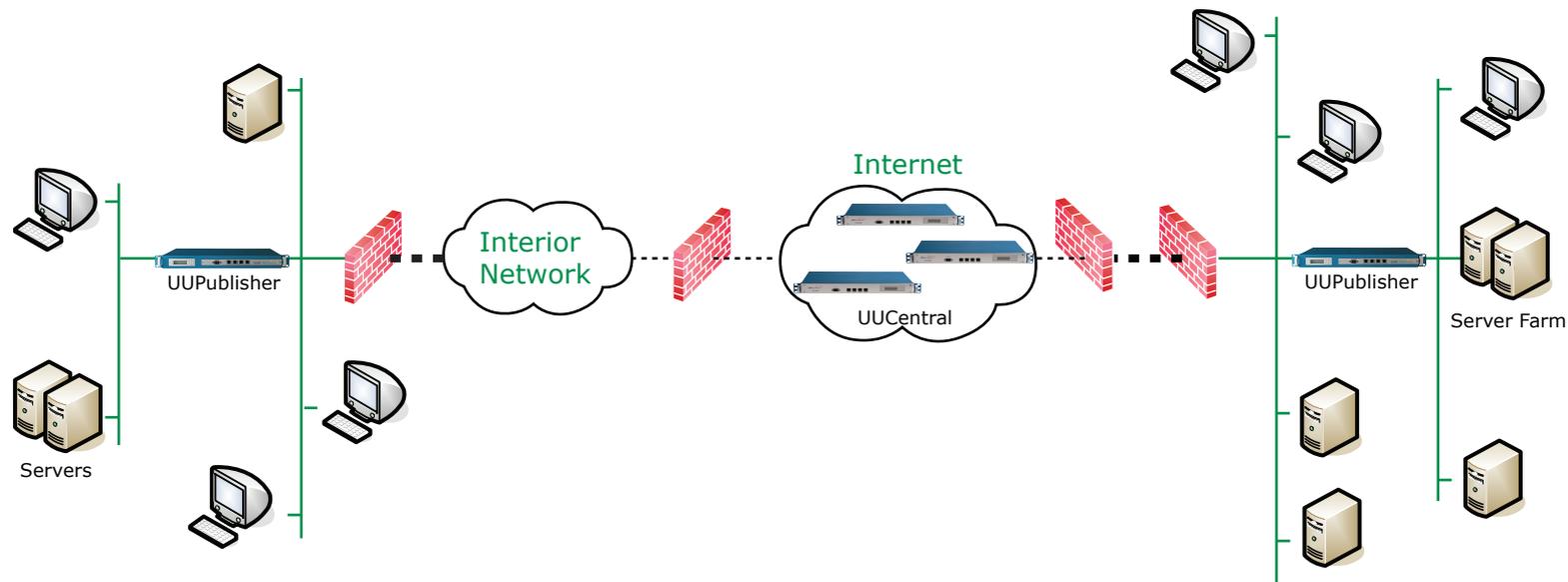


UUDynamics' **iSTAR™** (instant Secure Tunnel ARchitecture) offers you a powerful application platform that addresses the shortcomings of today's IPSec, SSL VPN, or other gateway-centric products. It provides universal connectivity and true end-to-end security with plug-n-play deployability. **iSTAR™** offers a complete solution without the need for a hybrid deployment or duplicate investment. It supports a fully integrated secure infrastructure that addresses all your connectivity needs and can be easily tailored to meet your security requirements.



UUDynamics' **iSTAR™** achieves this unprecedented scalability and integration by adopting an innovative architecture, with an application switch, UUCentral, at its core. A server publishes its services through an **iSTAR™** publisher to authorized clients. A client locates its desired services by looking up the list of registered publishers at the UUCentral. Around the UUCentral, iSTAR™ constructs a private network overlay for achieving location-independence, mobility, and optimized routing for global coverage. This next-generation architecture has been certified by ICSALabs since mid-2005.

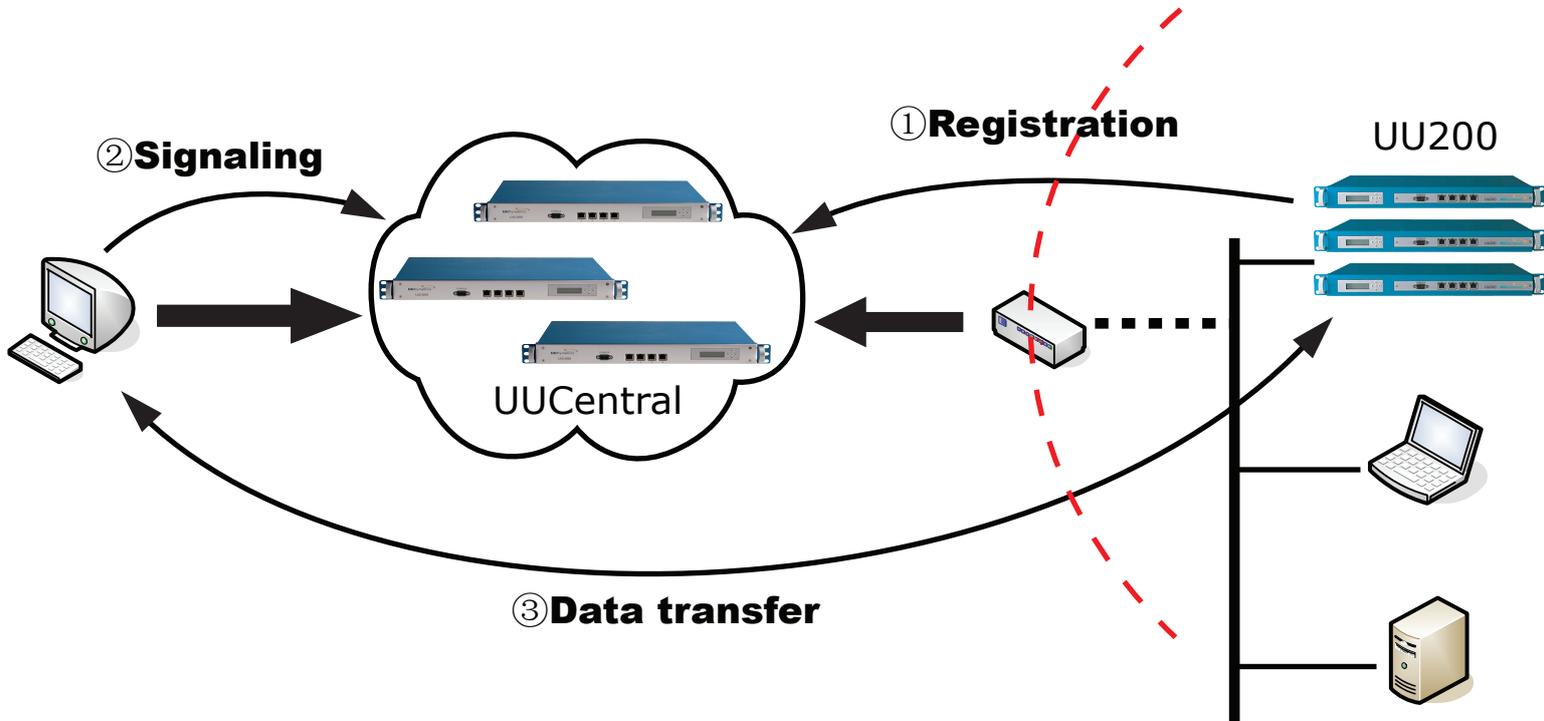
## UUCentral

UUCentral consists of a collection of servers that interconnect **iSTAR™** CPE components such as Publishers and UURemoteSite. Servers in the UUCentral can be distributed over multiple sites, each of which can host one or many servers in an N+1 clustered configuration.

### Single SSL Certificate

UUCentral components are the only ones in the **iSTAR™** architecture that require public IP addresses. For SSL protection UUCentral needs only a single SSL certificate. UUCentral extends this SSL protection to all its remote publishers by issuing additional private certificates to them.

## UUCentral



### Logical Naming and UUID Registration

Instead of depending on IP addresses to reach various publishers, **iSTAR™** is based on a logical naming scheme, where each publisher is given a logical ID (UUID). Before a publisher can be reached, it must register itself to a UUCentral. A client addresses a publisher by its UUID, and signals the publisher through the UUCentral to make access requests.

### Dynamic Protection Zone

With the flexibility afforded by logical UUID addressing, a publisher can be placed deep inside an organization, where the protection is needed, rather than being dictated by the availability of public IP addresses. Network administrators can utilize this fine granularity of protection to construct the security infrastructure inside the corporate perimeter.

### Application Data Switching

When two communicating parties under **iSTAR™** are not able to reach each other directly, such as when both parties have private IP addresses in different private domains, the data packets are switched through the UUCentral components and available UURelays.

### Optimization of Network Routing

The collection of servers within the UUCentral, coupled with the strategically placed UURelays, forms a network overlay, through which publishers can be accessed by the fastest or the most efficient route.

UURelays also support multi-linked configurations (connected to multiple separate service providers). This placement allows iSTAR to overcome bottlenecks that might normally be an obstacle to traffic between different network backbones.

## UUCentral

### Administration

All UUCentral components are administered through the same administrative web interface as that of the **iSTAR™** publishers, by publishing administrative utilities to authorized administrators.

Due to its unique position and importance to the **iSTAR™** architecture, a UUCentral offers many global services to the **iSTAR™** community as a whole. It offers support for account (UUAccount) based services, such as:

- **iSTAR™** CA (Certificate Authority)
- **iSTAR™** web client on Windows Mobile platforms for Pocket PC Phones and Smartphones.
- **iSTAR™** web client on Windows Mobile PDAs.
- **iSTAR™** UUCert
- **iSTAR™** One-click Secure eMail
- Teleporting SIP client

Before any of these functions can be activated, the administrator must first create UUAccounts for his users. All services can be enabled or disabled on demand by the **iSTAR™** network operator.

### **iSTAR™** CA

**iSTAR™** UUCentral has a built-in account-based Certificate Authority, which issues PKI certificates to **iSTAR™** users. Certificates issued by the **iSTAR™** CA are recognized by all publishers registered to the issuing UUCentral. Since it is account-based, it enjoys much better scalability and performance over other third-party CAs. Revocation and validity checking are performed directly on the UUCentral, without the need to go outside for third-party facilities.

### **iSTAR™** Web Client on Windows Mobile Platforms

B/S, C/S applications and file sharing are supported on Windows Mobile platforms, for Pocket PC Phones, Smartphones, and PDAs. It supports both Windows Mobile 2003 and Windows Mobile 5.0.

### **iSTAR™** UUCert

UUCerts are email certificates that support S/MIME. They are issued by the UUCentral CA.

### **iSTAR™** One-Click Secure Email

S/MIME based emailing is supported by **iSTAR™** with the UUCentral as the central depository of all the UUCerts. The retrieval and application of UUCerts in carrying out S/MIME security protection are automatic under the One-Click Secure eMail service. It supports Microsoft Outlook on Windows 2000, 2003 and XP, and POP3 on supported Windows Mobile platforms.

In order to use One-click Secure eMail function, the user needs to have at least one UUCert.

### Teleporting SIP Client

An ALG (Application Layer Gateway) is implemented on **iSTAR™** publishers, which manages all dynamic port allocations and other security requirements of a SIP client. It is embedded into the **iSTAR™** Teleporting technology and is therefore location (or IP address) independent. It can be deployed in any client environment without running into IP address conflicts.

## UUCentral

### UUAcount Capacity

The following is a table for the maximum number of UUAcounts on various types of UUCentral:

Type	Number of UUAcounts	Comments
UU200	1,000	Direct Access
UU1000	10,000	Direct Access
UU2000	20,000	Direct Access
UUSwitch	5,000	Maximum 50,000 with 10 clustered UUSwitches
UUExchange	50,000	Maximum 500,000 with 10 clustered UUExchanges

Note that UUAcounts are attached to UUCentrals, not to be confused with publisher accounts for controlling access to server resources.

Device	Concurrent Users	Hardware SSL Acceleration
UUSwitch	500	No
UUExchange	5000	Yes

### UUExchange:



Power Requirement	Input	AC90~264V @ 47~63Hz
	Output	250W
Physical	Dimensions (W x H x D)	426 x 44 x 350mm (16.7" x 1.7" x 13.7")
	Mounting Dimensions	19 inch, 1U
	Weight	~4.5Kg (~9.9lb)
Environment	Operating Temperature	0~40°C (32~104°F)
	Humidity	5~85%@40°C (104°F)
Network Interface	4 10/100/1000 Base-TX	

## UUCentral

### UUSwitch:



Power Requirement	Input	AC90~264V @ 47~63Hz
	Output	180W
Physical	Dimensions (W x H x D)	426 x 44 x 280mm (16.7" x 1.7" x 11")
	Mounting Dimensions	19 inch, 1U
	Weight	~4.5Kg (~9.9lb)
Environment	Operating Temperature	0~40°C(32~104°F)
	Humidity	5~85%@40°C(104°F)
Network Interface	4 10/100 Base-TX	

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