

 **AutoCert Now!**

**Automated
Certificate
Management (ACM)**



How Certificates Are Used



Web Servers
HTTPS

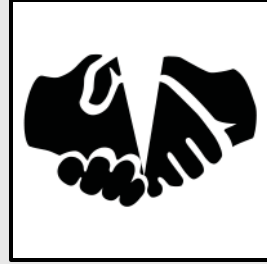
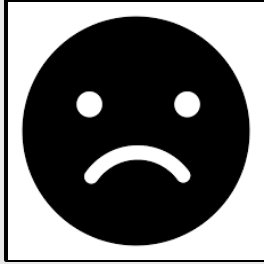


Load
Balancers



Single Sign-On
Authentication

Expired Certificates – Sites Unavailable



**Unhappy
Customers**

Loss of Trust

**Fines -
SLA Agreements**

Wildcard Certificates Not Industry Standard

Wildcard Certificates

Industry Standards Moving
Away from Wildcard Certificates

Typical Company

1 Wildcard Certificate is now
100 Single Domain Certificates

Assumption

Most Companies need to migrate to
Single Domain Certificates

Automation Required – Cost, Productivity, Security

Typical Company

**1 Wildcard Certificate
vs
100 Single Name Certificates**

**Lost Time and
Productivity**

**Technical Advancements
(Better Hackers)**

**Additional Lost Time and
Productivity**

**Certificate Passwords
Management During Install**

Security Nightmare

Automation Required – Cost, Productivity, Security

1 Wildcard Certificate vs 100 Single Name Certificates

- 1 Wildcard SSO Certificate – Manually installed for company with 100 domains
 - 45 Hours (15-20 people for ~3 hours)
- 100 Single Name Certificates = **250 hours**
- Midnight installation to limit website downtime
- Plus, admin time, late arrival day after for company resources, and loss of time from actual project related tasks

Lost Time = 250 hours + Lost Productivity

Automation Required – Cost, Productivity, Security

Technical Advancements (Better Hackers)

- Hackers are faster, smarter, and better
 - Faster Encryption Decoding
 - Website Spoofing
 - Single Sign-On
- Certificate changes are needed more often than 1 time per year
- 2, 3, 4, 6, or 12 times per year are necessary
- Exponentially increasing lost time and lost productivity

Lost Time = 500–6,000 hrs + Lost Productivity

Automation Required – Cost, Productivity, Security

Certificate Passwords Management During Install

- Manual certificate installations
 - Certificate file passwords sent in email or stored in text files on many servers
 - Certificate file passwords unsecured on the system for all to access
- 100 Certificate Passwords Unsecured
Or Worse
- 100 Certificates with the same Password

Security Nightmare

Limited Choices



Automatic certificate management (ACM) is only offered by the big CAs as part of buying their most expensive certificates.



Open source Let's Encrypt and ACME agents are available (1 server only), but there is no support. That expertise, including multiple servers, would need to be developed in-house.



Nothing automatically updates SSO certificate thumbprints (eg. ADFS) in “web.config” files of the SSO relying applications.



SAN Lists are used by some companies to sidestep the wildcard insecurity.
SAN Lists are not actually more secure and probably less secure.
SAN Lists announce your mission critical domains to the world.



Let's Encrypt

- Internet Security Research Group (ISRG) since 2013
- Open Certificate Authority (CA) - run for public benefit
- Largest Certificate Authority on the planet
 - Let's Encrypt - 402,395,813
 - DigiCert - 27,586,852
 - Google Trust Services - 25,079,744
- Certificates are **FREE**
- The maximum expiration term is 90 days

Top Level Sponsors



Other Major Sponsors





Let's Encrypt

General Government Agencies

- The White House - (whitehouse.gov)
- USA.gov – (usa.gov)
- National Aeronautics and Space Administration (NASA) - (nasa.gov)
- Internal Revenue Service - (irs.gov)
- National Institutes of Health - (nih.gov)
- Congressional Budget Office - (cbo.gov)

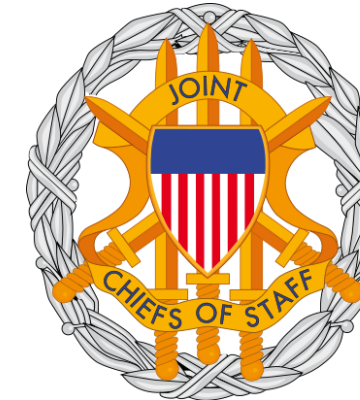




Let's Encrypt

Security Agencies

- National Security Agency (NSA) - ([nsa.gov](https://www.nsa.gov))
- Defense Intelligence Agency (DIA) - ([dia.mil](https://www.dia.mil))
- National Reconnaissance Office (NRO) - ([nro.gov](https://www.nro.gov))
- U.S. Cyber Command (USCYBERCOM) - ([cybercom.mil](https://www.cybercom.mil))
- U.S. Strategic Command (USSTRATCOM) - ([stratcom.mil](https://www.stratcom.mil))
- U.S. Central Command (USCENTCOM) - ([centcom.mil](https://www.centcom.mil))
- Defense Threat Reduction Agency (DTRA) - ([dtra.mil](https://www.dtra.mil))
- U.S. Coast Guard - ([uscg.mil](https://www.uscg.mil))
- Office of Naval Intelligence (ONI) - ([oni.navy.mil](https://www.oni.navy.mil))
- Army Intelligence and Security Command (INSCOM) - ([inscom.army.mil](https://www.inscom.army.mil))
- Defense Logistics Agency (DLA) - ([dla.mil](https://www.dla.mil))
- Defense Counterintelligence and Security Agency (DCSA) - ([dcsa.mil](https://www.dcsa.mil))
- Joint Chiefs of Staff - ([jcs.mil](https://www.jcs.mil))
- U.S. Army Cyber Command (ARCYBER) - ([arcyber.army.mil](https://www.arcyber.army.mil))
- National Guard - ([nationalguard.mil](https://www.nationalguard.mil))
- U.S. Space Command (USSPACECOM) - ([spacecom.mil](https://www.spacecom.mil))
- U.S. Space Force - ([spaceforce.mil](https://www.spaceforce.mil))





New Certificate Management Product

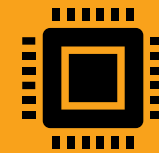
A new product: **AutoCert** - automatically updates certificates for your entire enterprise.



AutoCert is ACME compliant.



AutoCert works with any certificates: automatic ones from Let's Encrypt or certificates from GoDaddy, DigiCert, etc.



AutoCert works on AWS or any other cloud service provider.

AutoCert - Benefits



Human involvement and manual errors are over.



Frequent public and private key changes.



Certificates are never allowed to expire.



Certificate passwords are never shared.

AutoCert - Additional Value



Daily monitoring of all servers and all domains. Notifications are sent with updates and/or issues.



Password-less authentication for cloud services.



Insured to \$1M per Installation.



Tirion Solutions exemplary support.

DigiCert – Estimated Annual Pricing



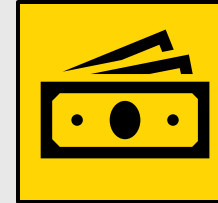
- DigiCert charges annually by domain name not by certificate.
- DigiCert has various certificate levels.
- Midrange certificates at around \$250/domain.

How They Charge



- 100 certificates
- 100 SAN listed domains
- Total = 200 domains

Typical Company



- \$250/Domain x 200 Domains = **\$50,000**
- \$200/Domain x 200 Domains = **\$40,000**

Cost with DigiCert

Disclaimers

- * No Automation
- * Only 1 Cert per year per domain



AutoCert – Annual Pricing

	Recommended Option	Alternate Option
Primary Domains	Full Automation Free Certificates	Full Automation Paid Certificates
< 25	\$7,500	\$5,000
< 50	\$13,500	\$10,000
< 100	\$25,000	\$15,000
100+	Call to Discuss	Call to Discuss
Number of Certificates (SAN Lists – No Charge)	Full Benefits of AutoCert	AutoCert with Customer Purchased Certificates



Recommended Option Savings and Benefits

Free Certificates
(Let's Encrypt)

Full Automation

Up to 50% Savings on Certificates

- 100 Primary Domain Certificates
- DigiCert = \$40,000 - \$50,000*
*Only One Certificate change per year
- AutoCert = \$25,000

Recapture Time and Productivity

- 250 hours recaptured for each Certificate Change per year
- 2-12 changes per year = 500 - 6,000 hours per year
- Recapture admin time, late arrival day after, and loss of time from actual project related tasks

Secure System

- Frequent Certificate Changes and No Certificate Password Sharing EVER
- Certificates NEVER allowed to expire
- Tirion Solutions Exemplary On-going Support



Alternate Option Savings and Benefits

Paid Certificates
(DigiCert, GlobalSign, etc..)

Full Automation

Up to 50% Savings on Automation

- Save up to 50% on AutoCert Pricing per number of Certificates

Recapture Time and Productivity

- 250 hours recaptured for each Certificate Change per year
- 2-12 changes per year = 500 - 6,000 hours per year
- Recapture admin time, late arrival day after, and loss of time from actual project related tasks

Secure System

- Frequent Certificate Changes and No Certificate Password Sharing EVER
- Certificates NEVER allowed to expire
- Tirion Solutions Exemplary On-going Support



Advantages

Secure	Flexible	Monitoring	Peace of Mind
<ul style="list-style-type: none">• Frequent Certificate Changes• No Certificate Password Sharing	<ul style="list-style-type: none">• Works with Let's Encrypt Certificates or Any Other Certificates• Works in AWS or Any Cloud Provider	<ul style="list-style-type: none">• Daily Monitoring of All Servers and All Domains• Notifications for updates and issues	<ul style="list-style-type: none">• Certificates will Never Expire• Tiron Solutions Exemplary On-going Support• Insured to \$1M per Installation

Savings

Free Certificates

- Up to 50% on Certificates (1 cert/domain/year)
- Full Automation – No loss in Productivity
- Unlimited Certificate Changes (Exponential Savings)

Paid Certificates

- Up to 50% on AutoCert Pricing per Domain
- Full Automation – No loss in Productivity
- One Certificate per year per domain

AutoCert - Firsthand Remarks

Web Portal Technical Lead

- 100 Certificates equates to 300 endpoints.
- That's 300 locations where the certificate must be installed.
- Enormous manual effort eliminated!

Application Architect

- Prior to AutoCert, technical leaders were constantly thinking and worrying about installing certificates.
- We don't think about certificates anymore.
- It's a huge relief!

Application Security Technical Lead

- Decrease in mistakes was huge.
- With manual updates on that many servers, the wrong certificate was often applied, or certificates were installed incorrectly.
- That never happens now!



AutoCert Now!

Bottom Line

Full Automation

Saving Exponentially on Certificates

Saving on Staff Time