HomeView

SSL CERTIFICATE DAR

Uniting Streaming Services on One Site

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Unite
Christian Lam
Daniel Monge
Eric Truong (Team Leader)
Erina Lara
Michael Lamera

Introduction

Unite has considered the following three options for HomeView's SSL Certificate:

- ○ Let's Encrypt
- ○ CloudFlare
- ○ Wildcard

	Let's Encrypt	CloudFare	Wildcard
Pros	• Free • Simple installation process • HTTPS encryption accessible to any website owner • Immediately starts serving over HTTPS • Features to enable automatic HTTP to HTTPS redirects on Apache • Provides secure connection between site visitor and site server • Google Chrome are "platinum sponsors", small chance Google Chrome will distrust • Single certificate can protect multiple domain names • No downtime when issuing certificate +0.90	• Offers security features to protect website from threats • Pre-cache most popular pages to make load times quicker • Caches JavaScript, CSS, and images • Tracks site traffic +0.40	• Covers unlimited domains under one certificate • Multiple server flexibility • Simple certificate management +0.30

Cons	• Period of Validity is only 90 days compared to other SSL certificates • Does not offer Extended Domain Validation • No verification on owner of domain or website • Compatibility issues with some platforms -0.40	• Security features are only available for paid plans • Free version takes 24 hours to propagate and update data • If Service goes down, your website will go down too -0.30	• Free version only secures one primary domain's subdomain • Must share and transfer a private key to each server if hosting subdomain on multiple servers -0.20
Subtotal	+0.50	+0.10	+0.10
Metrics			
Pricing + 0.20	Free +0.20	Free, limited features +0.15	Free, only on primary domain's subdomain +0.10
Multiple Domain Names + 0.20	Multiple +0.20	Single +0.10	Single +0.10
Security + 0.20	HTTPS +0.20	Limited security features +0.15	Private key that must be shared and transferred +0.10
Total	1.10	0.50	0.40

Conclusion

Based on the above metrics and research, Let's Encrypt had scored the most points during the review. As compared to the other SSL certificates, Let's Encrypt covers multiple domain names, security, and is free to use. In addition, Let's Encrypt immediately starts serving over HTTPS and has no downtime when issuing the certificate.

For the first calculated subtotal, our team decided to score each SSL certificate's pros and cons. The highest possible number of points to gain from the pros would be +0.90, whereas the highest possible deduction of points from the cons would be -0.40. To calculate each option's subtotal from the recorded pros and cons, the number of cons would be subtracted from the option's total number of pros. In our case, Let's Encrypt scored the highest (by having +0.90 pros and -0.40 cons, resulting in a subtotal score of +0.50). Following the same procedure, CloudFare tied for second with Wildcard with a subtotal of +0.10,

After calculating the subtotal, we analyzed the metrics of each option. For the number of Domain names the SSL certificate supports, Let's Encrypt scored +0.20 for being available to use multiple whereas CloudFare and Watchmode scored +0.10 for only one domain. For the pricing options, Let's Encrypt is completely free giving it the highest score of +0.20. Secondly, CloudFare scores +0.15 for having a free tier that came with some security features. Lastly, Wildcard scored +0.10 for having a free tier that only secures one primary domain's subdomain.

For the last metric of security the certificate provides, Let's Encrypt scored a total of +0.20 for their HTTPS encryption. CloudFare scored +0.15 for their limited security features and Wildcard scored +0.10 with a single private key that must shared and transferred if a subdomain is on multiple servers.

After calculating the subtotal and metrics from each certificate, the highest possible scoring was a 1.10. Let's Encrypt scored the highest, with a score of 1.10, whereas CloudFare scored 0.50 and Wildcard scored 0.40. As a conclusion, based on its metrics and pros and cons, our team conclusively and unanimously decided to utilize Let's Encrypt to obtain our SSL certificate.

References

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