



Homework 6

Web & DNSSEC & VIEW

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Homework 6

- Secure your web server
 - HTTPS
- Secure your DNS server
 - DNSSEC
- Geo Location DNS service
 - VIEW

Homework 6 - Web

❑ 請把 HW1 ~ HW4 有用到 HTTP 的重新實作 HTTPS

❑ 實作重點

- 1. SSL Certificate – Let's Encrypt or Others
- 2. SSL Cipher Suite
- 3. SSL Protocol
- 4. SSL Honor Cipher Order
- 4. HSTS - Strict Transport Security
- 5. OCSP stapling
- 6. Forward Secrecy

❑ Goal

- 1. 取得 <https://www.ssllabs.com> A+
 - 確認憑證鍊 Chain issues 為 None
 - 若出現 Contains anchor 代表憑證檔放置有誤
- 2. 維持先前作業的可用性 (HTTP 不要動到)

Homework 6 - Web

Previous Page

- [https://nap2016-web1.nasa.\[your_domain\]/](https://nap2016-web1.nasa.[your_domain]/)
- [https://web2.nasa.\[your_domain\]/for_ta_info.php](https://web2.nasa.[your_domain]/for_ta_info.php)
- [https://web2.nasa.\[your_domain\]/myip.php](https://web2.nasa.[your_domain]/myip.php)
- [https://web2.nasa.\[your_domain\]/](https://web2.nasa.[your_domain]/)

<https://ip ???>

Hownwork 6 - DNSSEC

□ 請把你的 Zone 完成 DNSSEC 設置

□ 實作重點

- 1. Key

- 請使用支援 NSEC3 的 Algorithm (e.g. RSA/SHA-256)
 - NXDOMAIN

- KSK – Key Signing Key

- ZSK – Zone Signing Key

- 2. 思考實作流程避免 domain 失效 (hint: TTL, he.net)

- 3. 於上層 Domain Registrar 填寫正確的資訊完成信任鍊

□ Goal

- <http://dnsviz.net/d/jal.tw/dnssec/> 確認已完成整個信任鍊

Homework 6 – BIND View

❑ Geo Location DNS Server

- Download IP National from
 - <http://geoip.site/>
 - Or others
- Convert it to acl configuration
- Implement bind view function

❑ Requirement

- 0. 請用 dns.geo.nasa.[your domain] 紀錄宣告實作的主機
 - A, CNAME, AAAA
- 1. from Japan IP query
 - geo.nasa.[your domain]. IN CNAME jal.jp
- 2. from Taiwan IP query
 - geo.nasa.[your domain]. IN CNAME jal.tw
- 3. from Other country
 - geo.nasa.[your domain]. IN CNAME jal.com