Domain Name System Security Extensions (“DNSSEC”)

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Agenda

1. About HKIRC
2. What is DNSSEC
3. Roll Out Schedule
4. What will happen in the market?
5. Q&A

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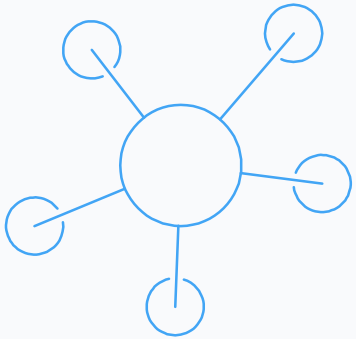
1.

About HKIRC

About HKIRC

- Non-profit-making member-based organization set up in December 2001 and endorsed by the Government of the HKSAR
- To oversee the administration and assignment of the country code top level Internet domain names ending with .hk and .香港.
- Domain name categories:
  - .com.hk, .org.hk, .net.hk, .edu.hk, .gov.hk, .idv.hk, .hk, **.公司.香港, .組織.香港, .網絡.香港, .教育.香港, .政府.香港, .個人.香港, .香港**
- Has the mandate to represent Hong Kong in international Internet forum and promote the use of Internet and related technology
- Currently, HKIRC is managing >280,000 .hk domain names. There are 32 registrars (retailers) all over the world providing .hk domain name registrations.



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HKIRC – Accredited Registrar

As of 1 June 2017: A total of 32 accredited registrars

HKIRC – Accredited Registrar

Registrars in Hong Kong:

Registrars outside Hong Kong:

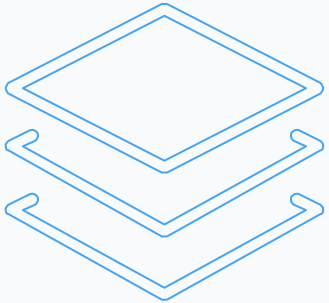
2.

What is DNSSEC

WHOIS

In a nutshell…….

DNSSEC creates a secure domain name system by adding cryptographic signatures to existing DNS records. These digital signatures are stored in DNS name servers alongside common record types like A, AAAA, MX, CNAME, etc. By checking its associated signature, you can verify that a requested DNS record comes from its authoritative name server and wasn't altered en-route, opposed to a fake record injected in a man-in-the-middle attack.



In short, it minimizes the risk for users to be forwarded to a bogus website or the email to be sent to criminals (even correct address was input) due to attack. DNSSEC is one of the mechanism to enhance internet security.

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3.

Roll Out Schedule

Roll Out Schedule of DNSSEC *(tentative)*

Date	Key event
Before 15 Aug 2017	1. Internet's infrastructure available for registrars 2. Some domain registrars launch DNSSEC service to their customers 3. Some local ISPs have turned on DNSSEC validation on their resolvers 4. Government enable DNSSEC for key government domain names 5. Go-to-the-Market communications
Before 12 Dec 2017	1. Official launch and media event

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4.

What will happen in the market?

What will happen in the market in the second half of 2017

Hong Kong Government will enable DNSSEC on government domain names. They may actively promote DNSSEC in many sectors and to the Hong Kong community at large.

What will happen in the market

Internet Service Provider Association (“ISPA”) is considering to put DNSSEC as one of the metric of the upcoming security benchmark for ISPs in HK for recommendation to corporate users.

What will happen in the market

Hong Kong Network Operators' Group (HKNOG) is working out best practice for network operators. DNSSEC is one of the practices to be considered best practice

What will happen in the market

HKIRC also involves in the work with ICANN to produce a check list of DNS for security auditors. In other words, DNSSEC will be one of the elements security auditors will look at in the future when conducting security audit for corporations.

What will happen in the market

We will also prepare to solicit HK Monetary Authority to consider putting enabling DNSSEC as one of the requirements for banks and financial institutions in Hong Kong to comply with for licensing

What will happen in the market in the second half of 2017

HKIRC will hold technical training (with international experts as trainers) to technical persons and non technical training to management of the corporations and public for DNSSEC.

There will also be mass communications

In other words, more and more people in Hong Kong will have the knowledge of DNSSEC and will link this term with providing a secured internet environment.

We envision more and more customers will search for ISPs that are DNSSEC-enabled

What to do for ISPs?

1. Turn on DNSSEC validation on all of the resolvers
2. If the ISP is also DNS hosting service provider, they can provide DNSSEC service to their customers as a new revenue stream.

HKIRC will be very willing to mention your company name in our communications and our speaking opportunities and recommend public to choose a secured ISP.

Thank You!

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