MAY 2018

In the Boxing Ring

Network Box Technical News

from Mark Webb-Johnson
Chief Technology Officer, Network Box

Welcome to the May 2018 edition of In the Boxing Ring

This month, to our valued customers, we make **A plea for Dual Factor** implementation. For over a year now, both Box Office and the Admin Web Portal have supported dual factor authentication, yet only a small number of accounts have utilized this facility. This is a simple process to implement, and can greatly improve your security. By highlighting this in our feature article, we hope to persuade more customer to adopt this technology. On page 2, we discuss this in more detail, and outline the process to implement this.

Also this month, we make a short announcement regarding Network Box and PCI compliance. Please refer to page 3 for more details.

On page 3, we highlight the features and fixes to be released in this month's patch Tuesday for Network Box 5.

Finally, in light of the launch of the Network Box 5.5 security platform, Network Box was featured in **Capital Magazine**. In addition, Network Box USA was at HIMSS 2018. During the event, Network Box USA's CTO, Pierluigi Stella, gave a talk titled, "Phishing is in Fashion." And we are proud to announce that Network Box Germany received an Initiative Mittelstand **INNOVATIONSPREIS-IT 2018** Award in the category of *IT Security*.

Mark Webb-Johnson
CTO, Network Box Corporation Ltd.
May 2018

Stay Connected

You can contact us here at Network Box HQ by email: **nbhq@network-box.com**, or drop by our office next time you are in town. You can also keep in touch with us by several social networks:

https://twitter.com/networkbox

https://www.facebook.com/networkbox
https://www.facebook.com/networkboxresponse

https://www.linkedin.com/company/network-box-corporation-limited/

https://plus.google.com/u/0/107446804085109324633

In this month's issue:

Page 2
A plea for Dual Factor

The traditional concept of Username + Password for authentication is fundamentally broken. Users tend to use the same password on multiple sites, and the password themselves may not strong enough to be resilient against brute force or hash attacks. For this reason, we are making a plea to our customers to **Enable Dual Factor,** for their Box Office and Admin Web Portal accounts. This is an easy process, highlighted on page 2.

Page 3
Network Box 5 Features

The features and fixes to be released in this month's patch Tuesday for Network Box 5.

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Network Box Highlights:

- **Network Box Media Coverage**
  Capital Magazine
- **Network Box USA**
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- **Network Box Germany**
  INNOVATIONSPREIS-IT 2018

NETWORK BOX

A plea for Dual Factor

Both Network Box Office and Admin Web Portal have supported dual factor authentication for more than a year now, but the uptake is not as we had hoped. Even today, only a small number of accounts utilise this facility. Given how such a simple thing can provide such a huge improvement in security, we hope we can change this and persuade more customers to adopt this technology.

Fundamentally, the traditional concept of Username + Password is broken. People use the same passwords on multiple sites, they rarely change them, and they are not strong enough to be resilient to brute force or hash attacks. Even users with strong passwords are still susceptible to man-in-the-middle attacks, and keystroke loggers. We've tried introducing password policies - forcing complex passwords to be changed often and never repeated; but the result is simply that users start to write down their passwords on little post-it notes on the underside of keyboards or desk draws.

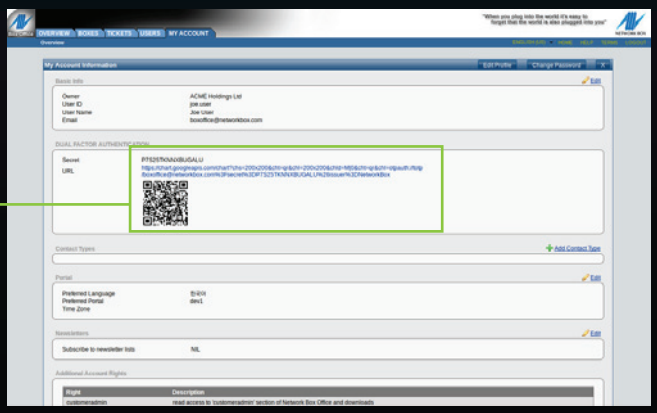
Enter TOTP (Time-based One Time Passwords). At it's core, this is a brilliantly simple concept, and the algorithm is publicly documented in RFC 6238. We start with a random shared secret. Next, we take the time, divided by some step to end up with a number than changes every N (usually 30) seconds. We then encrypt that number with the shared secret, and take the last six digits as our PIN. As both ends know the shared secret, and time must be synchronised, they can both independently come up with the same PIN (one to prove, and one to verify) that changes every 30 seconds (not quite "One Time", but good enough).

The key requirements are:

1. A randomised shared secret (securely stored)
2. An agreed standard algorithm
3. Time synchronisation

Nowadays, #1 is trivial, #2 is RFC6238, and #3 is NTP. We no longer need special hardware tokens, as our smartphones can meet all three requirements and dozens of different Apps are freely available.

Implementing TOTP Dual Factor Authentication is trivial. The administrator clicks "Enable Dual Factor" on the account, and a QR code with the shared secret is shown on the screen. The end-user scans that QR code into their TOTP App, and the secret is transferred. From then on, when the end-user logs in, as well as username and password he must provide the correct TOTP PIN.



This simple, freely available, technology means that even if a malicious agent knows your username and password, he cannot login to your account without the TOTP secret (which is stored on your smartphone, and never keyed in). As a welcome bonus, the technology also allows you to authenticate yourself to a service provide using a one-time TOTP PIN (rather than giving away your password, or revealing a secret, that doesn't change). This doesn't 'fix' passwords. It doesn't make you immune to all attacks. But, it does drastically improve your security with very little inconvenience, and that is a big win. We encourage all Box Office users to adopt the technology.

NETWORK BOX

Network Box 5.5

NEXT GENERATION MANAGED SECURITY

On Tuesday, 1st May, Network Box will release our patch Tuesday set of enhancements and fixes. The regional SOCs will be conducting the rollouts of the new functionality in a phased manner over the next 14 days.

Network Box 5 Features
May 2018

This month, for Network Box 5, these include:

- Improvements to GMS sensor for scanning engine status
- Expose CONNECT destination port, for policy enforcement on directed HTTP proxy connections
- Reductions in memory consumption of HTTP protocol processing
- Enforce only TLS v1.2 for cluster sync connections (PCI compliance)
- Support deprecation of DLV (DNSSEC Lookaside Validation)
- Preparations for global unrestricted release of Network Box 5.5
- Other minor improvements

A short note on PCI-DSS v3.2 compliance

Network Box PCI compliance is ongoing and we expect to achieve PCI-DSS v3.2 compliance for our first two Security Operation Centres (HQ SOC and HK SOC), this month (May 2018). Other regional SOCs will follow after that. We are also committed to ensuring that the services we offer to our customers are fully PCI compliant. This means that Box Office, Admin Web Portal, and Network Box 5 in general, will include processes and procedures to assist with this. We expect to complete roll-out of these upgrades early Summer 2018.

In most cases, the above changes should not impact running services or require a device restart. However, in some cases (depending on configuration), a device restart may be required. Your local SOC will contact you to arrange this if necessary.

Should you need any further information on any of the above, please contact your local SOC. They will be arranging deployment and liaison.

NETWORK BOX

Network Box Media Coverage
Capital Magazine

In light of the recent launch of the Network Box 5.5 Managed Security Platform, Network Box was featured in **Capital Magazine**, Greater China's premier business magazine:

"In recent years, network security has become one of the most critical issues for enterprises. In addition to providing protection hardware, Network Box, a global network security company, also provides SaaS services. It recently announced an upgrade to its protection platform, and also added more security functions. It is expected that the most critical vulnerability in 2018, is that users may not be able to update their protection software in time. Network Box has strengthened this update function; with patented PUSH technology it can collect the latest virus data and patches, leveraging of 78 protection engines, and send them to Network Box systems around the world within 3-45 seconds."

LINK: http://capital-hk.com/feature/commercial-event/network-boxtui-sheng-ji-wang-luo-fang-hu-ban-ben

Network Box USA
HIMSS 18

Network Box USA was at **HIMSS 18** (Healthcare Information and Management System Society), held at Venetian-Palazzo, Sands Expo Center, Las Vegas.

During the event, Network Box USA's Chief Technology Officer, Pierluigi Stella, gave a talk titled, "Phishing is in Fashion." As perimeter defenses and email scanning techniques get stronger, and defending teams get better and faster at creating protection against every new invention hackers hurl our way, the single most vulnerable point in every network remains the human element. And that is a glaring bullseye upon which hackers are targeting more than ever now.

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Network Box Germany
INNOVATIONSPREIS -IT 2018

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