

In the Boxing Ring

MAR 2022



Network Box Technical News

from Mark Webb-Johnson

Chief Technology Officer, Network Box

Welcome to the March 2022 edition of In the Boxing Ring

Following last month's article on our newly released mobile apps, we are talking about the **Network Box Mobile Applications Framework** this month. The framework for mobile and web applications marries the best of both worlds, leveraging the App Stores to deliver framework applications to the end-users but allowing for the functionality to be enhanced and extended automatically within the Apps from the cloud. On pages 2 to 3, we describe this in further detail.

Also this month, we are pleased to announce that Network Box received a **Singapore Business Award 2022** for *Best Value IT Security Network*. Additionally, Network Box was listed as one of the **Major companies in the global market Cloud Intrusion Detection and Prevention**. And in this month's Global Security Headlines, security vulnerabilities were found with **Credit Suisse**, and the **CIA** was accused of collecting data in warrantless searches.



Mark Webb-Johnson
 CTO, Network Box Corporation Ltd.
 March 2022

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://www.youtube.com/user/NetworkBox>

In this month's issue:

Page 2 to 3

Network Box Mobile Applications Framework

Traditionally, web services have been delivered purely in the cloud, and applications have run purely on end-user devices. The Network Box web and mobile App framework avoids that issue by providing functionality updates to the Apps from the cloud. This is discussed in further detail in our featured article.

Page 4

Network Box Highlights:

- **Singapore Business Awards:**
Best Value IT Security Network 2022
- **Cloud Intrusion Detection and Prevention Market 2021 Global Industry Analysis**
- **Global Security Headlines:**
 - Credit Suisse
 - CIA

Network Box

Mobile Applications Framework

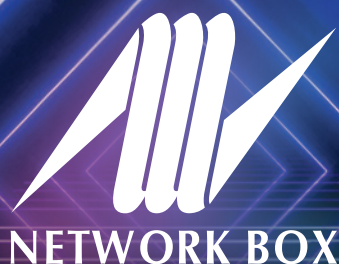
Following on from last month's article on our newly released mobile apps, this month, we describe in more detail the framework behind our mobile and web applications.

PUSH Code

When Network Box was first founded more than 20 years ago, we realized that the usual approach to delivering code and threat protection signatures was insufficient for the rapidly evolving cybersecurity landscape. While our competitors were pulling updates to protected devices once a week or once a day, Network Box deployed and patented our PUSH technology. As soon as we produce a new protection signature, we connect to each managed device to install and activate the protection within seconds. Unlike traditional PULL technology, we don't wait for the device to connect to us (via polling).

Similarly, the traditional delivery of protection code updates via patch updates and monthly release cycles is too cumbersome and slow. By the time the updates is released and installed, the threat has long since passed. So we developed **PushCode** - the ability to deploy code updates in a similar way to protection signatures, by actively PUSHing them and installing them on protected devices.

The traditional method of developing mobile applications, where all the code functionality in the App is delivered via platform-specific stores, is similarly constrained by the App store model. With Apple, Google, and others, acting as gatekeepers (and possible roadblocks) every time an update is released - often delaying the update release by days/hours and pacing the release rollout.

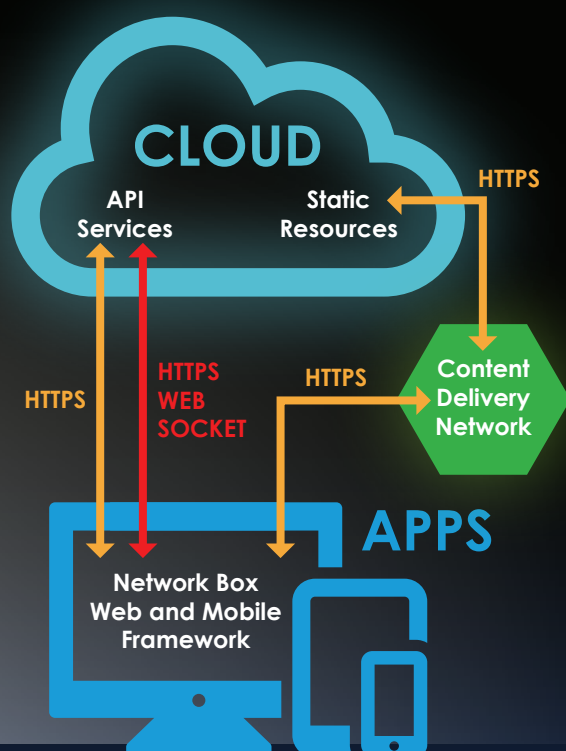


The Network Box Framework

The Network Box Framework for Mobile and Web Applications marries the best of both worlds, leveraging the App Stores to deliver framework applications to the end-users but allowing for the functionality to be enhanced and extended automatically within the Apps from the cloud.

In the cloud, Network Box deploys two forms of servers to support the framework:

1. For static assets (images, code, etc.), we use the standard HTTPS protocol (HTTP over SSL), standard web servers, and Content Delivery Networks to deliver the resources to the Apps.
2. For dynamic data (information displays, reports, entry screens, etc.), we use clusters of API servers. The Apps remotely make API calls using a REST protocol over HTTPS. In addition, for streaming data, web socket connections are used (embedded in the same secure HTTPS protocol).



Network Box provides a single unified web App (accessible from web browsers at <https://siem.network-box.com/>), leveraging javascript to run the App inside the web browser. This web App firstly implements a framework for login/logout authentication. On login, the screen layouts, menu structure, and other such information is returned to the App - which then follows the instructions from the API server as to what to display and where. Each screen is typically made up of cells in a 4-column by 3-row layout, with widgets being able to span one or more cells. The screen layouts are adaptive and support full desktops, tablets, and small screen devices such as mobile phones (where the layout adapts to 1x12). Each widget has an associated API call to retrieve the data, and a display appearance, which is chosen from a set of supported appearances such as forms, tables, bar charts, pie charts, etc. In this way, new screens and reports can be released without requiring a new App update to be deployed.

We also provide mobile Apps for both the Android and iOS platforms. These are built similarly to the web App and connect to the same static asset resources and API servers. For speed and a native look-and-feel, we cross-compile from a single code base to both Android and iOS native APIs to take advantage of each platform's capabilities. The behavior of the mobile Apps is the same as the web App, including support for the same 4x3 screen layout (including 1x12 for small screens such as phones), and the same selection of appearance types (optimized to the capabilities of the device). The mobile Apps also support native features such as PUSH notifications and biometric authentication.

The REST API used by the web and mobile Apps is publicly available (although still under closed NDA at the moment) and can be used for third-party integrations (such as partner ticketing systems, for example) and scripting and other automations.

Traditionally, web services have been delivered purely in the cloud, and applications have run purely on end-user devices. The new hybrid model, separating the server from the client utilizing the industry-standard HTTP protocol to access REST APIs in the cloud from Apps running on end-user devices, provides excellent benefits but introduces the App Store gatekeepers. The Network Box web and mobile App framework avoids that issue by delivering functionality updates to the Apps from the cloud - only requiring App Store updates when changes to the actual framework are needed.

Network Box HIGHLIGHTS



Singapore Business Awards Best Value IT Security Network 2022



Network Box is exceptionally proud to announce that it won the *Best Value IT Security Network* award at the **Apac Insider: Singapore Business Awards 2022**.

"When it comes to IT protection, the team at Network Box have you covered. Their incredible efforts have allowed SMEs the protection they need at a cost that won't break the bank. With such success under their belt, their success in the Singapore Business Awards 2022 is of little surprise."

LINK: <https://www.apac-insider.com/issues/singapore-business-awards-2022/40/>

Cloud Intrusion Detection and Prevention Market 2021 Global Industry Analysis

Network Box was listed as one of the **Major companies in the global market Cloud Intrusion Detection and Prevention**. Other vendor included: AT&T, Check Point, Cisco, Dell, IBM, Juniper, McAfee, and Symantec.

LINK: <https://bit.ly/3BO14yx>



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Global Security Headlines



SCMP

'Swissleaks' investigation targets
Credit Suisse bank

LINK: <https://bit.ly/3BQPPWf>



CNN

Senators allege CIA collected data on
Americans in warrantless searches

LINK: <https://cnn.it/3poc00H>