

March 2016

# TeskaLabs Case Study

Project Name:TeskaLabsCompany: TeskaLabs Ltd.FIWARE Accelerator:CEEDTechCountry: Czech RepublicGrant Funding:StartupYard (March to June 2015)Web: www.teskalabs.comLevel of Grant funding secured:€110,000Contact person:Target Sector:Mobile and IoT SecurityEmail: vladimira.teskova@teskalabs.com

# Vision and Market Need

TeskaLabs helps enterprises securely build and operate mobile and Internet-of-Things (IoT) applications using a plug-n-play solution based on TeskaLabs Security Management Center.

The adoption of mobile applications by business has been impacted by security concerns, with over 2/3 of Fortune 500 companies having experienced security breaches due to mobile applications.

The market potential was identified based on existing market research from Gartner focused on mobile security and Ales Teska's prior experience working as a technology manager in a global logistics company. TeskaLab validated the solution during 2014.

# Target Market and Revenue Streams

Target markets for Mobile and IoT security related solutions include utilities, transportation and financial services. TeskaLabs is currently focused on the mobile application market due to its relative maturity. Going forward, TeskaLabs will focus on the IoT space as this market continues to grow in importance.

The current primary revenue stream opportunity is based on a Software-as-a-Service (SaaS) business model, with a monthly subscription fee per endpoint (mobile device, end user). Secondary revenue stream opportunities include security training and auditing of existing mobile applications.

TeskaLabs are currently focused on the European market and have existing offices in Prague (Czech Republic) and London (UK).

# Competitive Positioning

While there are many players active in the mobile security market, most focus on protection at the device level. However, TeskaLabs is focused on the application layer, as according to Capgemini "80% of cyber-attacks occur on the APPLICATION layer." Furthermore, TeskaLabs technology addresses the weaknesses of an entry point from a public network to an enterprise's private network required to access business data.

Direct competitors include BlueBox and Mocana, while indirect competitors include MDM (Mobile Device Management) solutions. BlueBox and Mocana secure mobile apps via app-wrapping method. Bluebox is a cloud-based Mobile Application Management solution, offering application security through app-wrapping. With app wrapping, it is not necessary to change the source code to add security features. Bluebox is a bit ahead regarding



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online visual analytics. Bluebox seem to have a strong presence in the US. Mocana has a strong background in security and are based in the US. Recently they switched their focus to application security. Similar to Bluebox, they secure mobile and IoT via app wrapping technology.

MDM (such as MobileIron, Airwatch, Good.com) providers offer security protection at the device level. MDM solutions monitor manage employees mobile devices. This type of solution is popular in big enterprises because they have a large number of employees, thus mobile devices to manage. As the Bring Your Own Device (BYOD) becomes popular, it is increasingly necessary for enterprises to control the devices brought by employees and monitor their mobile activities.

TeskaLabs' Unique Selling Proposition is that our solution is designed around making existing mobile and IoT applications FIPS 140-2 compliant. The solution can be deployed on premise or on the cloud.

#### Enabling Technology

TeskaLabs use Microsoft Azure and Amazon cloud platforms to leverage their around-theworld data centers and interact with standard enterprise software to ensure our platform is compatible and easy to integrate.

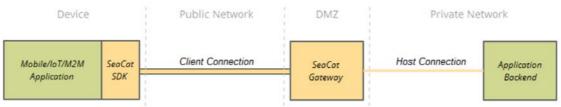


Diagram 1: SeaCat High-level Architecture

Leveraging FIWARE allowed TeskaLabs to focus on the core added value of SeaCat (implementation of security best practices for application developers). Combining SeaCat with services available through the FIWARE catalogue allows TeskaLabs to provide more comprehensive solutions tailored to customer needs. Key FIWARE functionality of particular value was Single Sign-on, and integration of User Management and Access Control to extend the scope of SeaCat.

FIWARE Enablers leveraged by TeskaLabs include the use of application runtime and KeyRock API to allow SeaCat-enabled mobile (and later IoT) applications to consume Identity Management services such as user authorisation and user management. This provides enterprise-grade protection for transmitted data, addressing e.g. challenges connected with transmission of user password over mobile network. TeskaLabs also leveraged application runtime and AuthZForce API to provide transport level security and connectivity. Mobile and IoT applications then use functions of Access Control that is exposed via a SeaCat connection.

SeaCat SDK is a software library, which is designed to be integrated with a protected mobile, IoT or M2M Application. SeaCat SDK secures the Client Connection between the Application to respective Application Backends.



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#import "FooBarAppDelegate.h"
#import <SeaCatClientTrial/SeaCat.h> // <---- This line was added</pre>

(BOOL)application:(UIApplication \*)application didFinishLaunchingWithOption:

[SeaCatClient configure]; // <---- This line was added too

return YES;

{

3

#### Diagram 2: SeaCat SDK is added to application code

| 3. mc [mpavelka-MBP];~ (mc)   |  |  |  |  |
|---|--|--|--|--|
| bash-3,25 opensSl dhparam -outform PEM -out dh_params.pem 2048<br>Generating DH parameters, 2048 bit long safe prime, generator 2<br>This is going to take a long time  |  |  |  |  |
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| **<br>bash-3.2\$ openssl req -out /opt/seacat/gateway_csr.pem -new -newkey rsa:4096 -nodes -keyout /opt/seacat/gateway_key.pem<br>Generating a 4095 bit RSA private key |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |
| You are about to be asked to enter information that will be incorporated<br>into your certificate request.  |  |  |  |  |
| What you are about to enter is what is called a Distinguished Name or a DN.<br>There are quite a few fields but you can leave some blank                                |  |  |  |  |
| For some fields there will be a default value,  |  |  |  |  |
| If you enter ',', the field will be left blank.   |  |  |  |  |
| Country Name (2 letter code) [AU]:  |  |  |  |  |

#### Diagram 3: Installation of SeaCat Gateway and generation of secure key

| <b>A</b> TESKALAB                         | S Admin Panel            |                    | SeaCat Gateway 🗢 🕹 🗸 |  |
|---|--------------------------|--------------------|----------------------|--|
| Dashboard<br>Clients<br>Authorized<br>New | SeaCat Gateway Dashboard |                    |                      |  |
|   | Gateway Frames I/O       | Worker Count       | Worker Count         |  |
|   |                          | worker_count= 0.00 |                      |  |
|   |                          |                    |                      |  |
|   | 10m                      |                    | 10m                  |  |

Diagram 4: Admin Panel Dashboard (beta version) to check activities of app secured by SeaCat and SeaCat Gateway



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### Progress to Date

Over the next six months as part of the IdeaLondon Programme, TeskaLab's focus is on integrating our solution with Cisco to achieve certification.

Milestones achieved to date include being accepted into StartupYard Czech accelerator (part of CEEDTech Consortium), quickly followed by being one of 11 companies from more than 1,000 startups selected for the Techstars London programme. TeskaLabs also won the GEW (Global Entrepreneur Week) on 19 Nov 2015. TeskaLabs were chosen as a top-4 finalist of the KPMG's Best British Mobile Startup 2016 competition.

TeskaLabs has two existing customers, one in the transportation sector, while the other is in the utility space. These clients offer TeskaLabs solution to their customers as part of their solution portfolio.

TeskaLabs secured a FIWARE Grant for SeaCat under the CEEDTech Accelerator as part of the FI-PPP Phase 3 Programme and invested this to develop the application (40%), develop sales channels (30%), customer support (20%) and validate the solution in the market (10%).

TeskaLabs also secured investment in the form of €337,000 in convertible notes from Techstars and Credo Ventures. TeskaLabs are looking for additional seed round investment over the next six months to fund further product enhancement and marketing and sales.