

# 13<sup>th</sup> International Cloud Computing Conference

## Cost-Effective Permanent Audit Trails for Securing SME Systems when Adopting Mobile Technologies

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# Increasing Challenges Faced by SMEs

## Introduction

- The ever increasing amount of cyber attacks on large corporations has led to a big increase in spending to provide much tighter security
- This has resulted in more secure systems, but perversely has also resulted in a shift in the attackers' targets
- Now SMEs are the new targets for attackers. As a rule, due to serious resource constraints, their systems are far more insecure, yet when they suffer a breach, the impact can be far more devastating

# Increasing Challenges Faced by SMEs

## Introduction (Cont.)

We shall examine the background to this problem, consider how SMEs deal with Cyber Security, consider existing corporate solutions and the feasibility of trying to adapt these and consider a possible better solution for SMEs

# Increasing Challenges Faced by SMEs

## Background

- Cyber breaches are now one of the greatest risks faced by all businesses around the globe
- With large corporations having both the resources and the skilled personnel to deal with this, attackers are now turning their attention to SMEs
- Why should we worry about SMEs?
- They are really small

# Increasing Challenges Faced by SMEs

## Background (Cont.)

- This means that the need to spend serious money to protect companies has risen to the highest levels, yet in the case of SMEs, they are both the least able to provide the right resources, and the least able to cope with the outcome of a successful breach. Indeed, they will often be put out of business permanently in the event of a cyber breach

# Increasing Challenges Faced by SMEs

## Background (Cont.)

- They are generally small, but there are so many of them that they represent over 90% of the business population, 60 – 70% of employment and 55% of GDP globally of all developed countries
- Countries have tightened up on controls, regulation and fines for poor corporate behaviour

# Increasing Challenges Faced by SMEs

## Background (Cont.)

- Risk management is a key requirement for all businesses, but cyber risk is fast becoming the most vital risk to deal with
- It is far more pressing for SMEs to recognise this need and to do something about it, yet they are the least able to have the means to do this, and the attackers are very happy to take full advantage of this state of affairs

# Increasing Challenges Faced by SMEs

## Cyber Security and SMEs

- SMEs have traditionally assumed that they were too small for attackers to care about
- That has all changed now, meaning the biggest challenge is often getting management to recognise that they are now firmly in the sights of attackers and that they are now an easy target



# Increasing Challenges Faced by SMEs

## Cyber Security and SMEs (Cont.)

There are 5 areas of concern:

- Cyber security threats in SMEs
- Cyber Security Behaviour in SMEs
- Cybersecurity Practices in SMEs
- Cybersecurity Awareness in SMEs
- Cybersecurity Decision-Making in SMEs

# Increasing Challenges Faced by SMEs

## Existing Corporate Solutions

There are many corporate solution to cyber security challenges:

- They share one thing, all are complex to address, they are expensive to install and maintain
- They generally work really well and are often very effective against attacks
- But these solutions are generally well above the limited resources of most SMEs

# Increasing Challenges Faced by SMEs

## Adapting Existing Corporate Solutions

We therefore decided to start with a very basic level starting point and work up from there:

- We suggest starting with adding a VPN solution as these are not overly expensive to install, easy to use and make an effective contribution to security
- This must also include the use of an immutable database to secure the forensic trail
- The addition of a mobile desktop package, such as Android Enterprise, or similar, would increase the robustness to attack at the least possible cost, without the need for highly qualified IT or programming staff, making it potentially feasible for SMEs

# **Increasing Challenges Faced by SMEs**

**Thank you for your attention**

**We are happy to answer any questions**