# **SESTUS**®

# VIRTUAL TOKEN® MULTIFACTOR AUTHENTICATION

An overview of the Virtual Token® Multifactor Authentication product. Author: Sestus, LLC

For general release. Published 01 Jan 2013



Copyright © 2013 Sestus, LLC. All rights reserved. The content of this document is protected by U.S. copyright and/or patent laws. Some elements, technologies, processes, and/or information contained in this communication may be considered confidential, proprietary, trade secret, or legally privileged information. No confidentiality or privilege is waived or lost by any mis-transmission of this information. You may not, directly or indirectly, use, disclose, distribute, print, or copy any part of this document, for commercial or non-commercial purposes, without written permission of Sestus, LLC. The terms Sestus® and Virtual Token® are trademarked or trademark pending. SestusData.com, Sestus.com, Sestus.org, Sestus.us, and all page headers, custom graphics and button icons of those websites are service marks, trademarks, or trade dress of Sestus, LLC. All other logos, trademarks, icons, or service marks are the property of their respective owner(s). This document may contain information summarized from third-party publications and websites. Sestus, LLC makes no claims of copyright, trademark, patent, or ownership for the content of any third-party publication, product, or website content referenced herein. Any assessment, analysis, or assertion concerning third-party products referenced within this document is opinion. Virtual Token® MFA is patent-pending.

Information contained within this document or on our websites are prepared for general circulation and are not intended to be used as a basis for any investment decision. While our publications and websites may contain forward-looking statements, prospective investors are advised not to rely on forward-looking statements as the basis for any investment decision. Prospective investors are advised to consult with a competent financial advisor, conduct their own research and due diligence, and carefully review any applicable prospectuses, press releases, reports, and other public filings before considering any investment opportunity. Our past performance is not a guarantee of future performance results. None of the information presented on our publications or websites should be construed as an offer to sell or buy any particular investment, equity, or product. Sestus, LLC is not a registered broker dealer or investment advisor. No information accessed through any Sestus website or publication constitutes a recommendation to buy, sell or hold any security, equity, or investment. All bullish or bearish sentiments contained within any Sestus website or publication are strictly the opinion of the writer(s) and should not be relied on when making investment decisions. As always, use your best judgment when considering any investment.

THIS DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

# Nothing to Carry

#### No hardware token required

Virtual Token® MFA uses the user's internet device as the "something the user has" factor of multifactor authentication, eliminating the need to deploy additional hardware to users. Users may enroll as many devices as they wish, including mobile devices such as phones and tablets. Multiple users may also share a common device.

#### The "key" concept

Traditional hardware tokens contain unique mathematic keys embedded within their memory chips. Instead of deploying a hardware token (with its embedded key) to each user, Virtual Token® MFA deploys just the key, turning the user's connected device into a "virtual" hardware token.

#### The authentication process

After verifying the user through a regulatory-approved "out-of-band" verification process, Virtual Token® MFA constructs a key that is unique to the device's "fingerprint" and the user's account details. This key is stored and maintained entirely by the user's web browser and no special software is required to deploy it to, or retrieve it from the user's browser. The key is mathematic in nature and cannot be reverse engineered or decrypted. It contains no user information and is cryptographically "tied" to the user's enrolled device and their account details, rendering it unusable if supplied from functionally different devices or by other users.

## Nothing to Install

#### Its security made simple

Users don't need to install any software to use Virtual Token® MFA. Users already have everything they need right now in their web browser.

The user's existing web browser receives and returns the Virtual Token® MFA key using normal browser functionality (cookies and bookmarks). All web browsers and all operating system environments are supported.

## Nothing else required

Virtual Token® MFA does not require Java, javascript, Active X controls, or other web "applets". Users can even block cookies and still authenticate using their "keyed bookmark".



## Complete privacy

## No "mother's maiden names"

Virtual Token® MFA never solicits personal information using "challenge questions" (or any other method). No "mother's maiden names" used here!

## The problem with challenge questions

Regulators have repeatedly rejected challenge questions as failing to meet their definition of "true multifactor authentication".

Subjecting users to challenge questions violates their privacy and conditions users to divulge non-public personal information to fraudsters (who easily replicate "challenge question" processes).



## No risk scores.

Virtual Token® MFA doesn't use "risk scoring" or similar profiling methods.

Risk scoring often produce "false positive" results, denying legitimate users access to their own accounts. Legitimate users routinely travel with their laptops, change their mobile device's IP address, and engage in a thousand other activities that confuse profiling systems.

Risk scoring also produce "false negative" results, allowing fraudsters to access user accounts. Fraudsters can query and a user's browser, operating system, and IP as easily as your website can. A fraudster who replicates this information to a risk scoring system will access the user's account.

Risk scoring products are notoriously difficult to configure and support, require constant "tweaking", and do not meet the regulatory definition of "true multifactor authentication".



## Lowest support costs. Highest user acceptance.

#### Best multifactor authentication method

In a 2007 study conducted by the Credit Union Journal, Virtual Token® MFA rated best among all multi-factor authentication methods, providing the lowest support costs and the highest user acceptance rates.

#### Easy administration

Virtual Token® MFA features an easy-to-use administration interface, providing administrators and support personnel with access to important product features. Access permission can be individually configured for call center personnel, management, and system administrators.



## Trusted. Secure. Respected.

Virtual Token® MFA protects some of the world's most important computer networks. It is used by federal and state government agencies, FFIEC-regulated financial institutions, CJIS-certified law enforcement providers, and HIPPA-compliant healthcare organizations.

Virtual Token® MFA users include...

The U.S. Department of the Treasury The State of North Carolina Fletcher Allen Healthcare RR Donnelley Banorte Bank

.. and many other well-respected organizations.

# **RR DONNELLEY**







# **#**BANORTE

## Learn more.

To learn more about Virtual Token® Multifactor Authentication, please visit our website at www.sestus.com. You can use our website to review technical information, download our publications, read the latest online security news, learn more about our company, and experience a live demo.

#### Licensing & Product Inquiries

For licensing and general product inquiries, you may use our online contact form.

If you prefer to speak with a product specialist by phone, please call (800) 788-1927 (Ext 1 for Sales), between 8:00 am and 5:00 PM, PST (Pacific Standard Time), Monday ~ Friday.

## **Contact Information**

Sestus, LLC 18521 E. Queen Creek Road Ste 104-527 Queen Creek, Arizona, 85142-5845

#### Contact Numbers:

Toll Free Tel	(800) 788-1927
California Tel	(415) 963-4124
New York Tel	(718) 841-7350
	(800) 741-9048 (415) 963-4046

