# PassLogic has been adopted as an authentication option for Fujitsu's managed infrastructure virtual desktop service, *VCC*.

Fujitsu's ***VCC*** is a comprehensive cloud-based desktop service that utilizes Citrix client virtualization software ***Citrix Virtual Apps and Desktops***. The virtual client cloud (***VCC***) features compatibility with Microsoft products (including support for ***Windows 10*** version updates) and a high-performance graphics option (***vGPU***). The ***VCC*** focuses on high performance and reliability and provides a convenient and secure Virtual Desktop Infrastructure (VDI) platform to users. The ***VCC*** service is hosted in a highly secure Fujitsu datacenter.

***PassLogic*** has been adopted as one of the authentication options for the ***VCC*** service. Users can secure access to their VDI environments with ***PassLogic's*** tokenless one-time password authentication method.

We spoke to Ume-san from the ***VCC*** Business Department of Fujitsu's Digital Service Business Unit. He is in charge of the basic design and operation of the ***VCC*** and the business negotiations relating to it.

FUJITSU LIMITED

Established ：June 20, 1935
Employees ：132,000 worldwide (as of March 2019)
URL ：https://www.fujitsu.com/global/


## Background Issues and Reasons for Introduction

- ☐ A desire to strengthen the type of user authentication that is required for connecting to a virtual desktop via the Internet.
- ☐ A desire to provide an authentication system that is comprised of a range of options that does not depend on any specialized authentication devices, unlike existing authentication systems which require specialized devices such as hardware tokens or smartphones with software tokens.

## Benefits of Introduction

- ☑ The introduction of ***PassLogic's*** tokenless one-time password authentication method strengthened authentication and improved convenience for users.

### Working Style Reform with Virtual Desktops

In recent years, *Telework* is one of the work styles which companieshave introduced in response to the government's *Work Style Reform* program. *Telework* utilizes information and communications technology (ICT) to provide flexible working conditions that are not restricted by time or location; VDI is a key technology in this regard. The *VCC* utilizes *Citrix Virtual Apps and Desktops* to provide a one-stop VDI service that covers everything from deployment to monitoring and operational support of the VDI platform.

The *VCC* VDI service is hosted on servers located in a Fujitsu datacenter. The service facilitates both connections on a dedicated line from the company's intranet and connections made via the Internet, which allow employees to access the service from home or when working remotely.

When a connection is made via the Internet an appropriate level of authentication is required in order to prevent unauthorised access. It is for this reason that a security policy will typically disallow user authentication that requires only a basic password. The *VCC* provides optional forms of authentication in addition to password authentication in order to enhancesecurity and facilitate connections to the VDI service via the Internet. *PassLogic* is one of these options.

### Reasons for Adopting ***PassLogic***

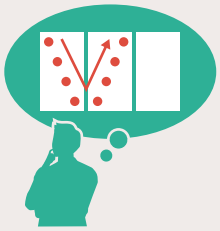
*PassLogic* had been adopted as an authentication option for the *FENICS II Universal Connect* remote access service before it was adopted for the *VCC* virtual desktop service. *PassLogic* demonstrated its effectiveness and reliability to us on the *FENICS* service.

*PassLogic's* distinguishing feature is that it is a one-time password authentication method which does not require the use of tokens. The user is only required to remember a pattern in order to use the one-time passwords - that is the reason why the *PassLogic* method is sometimes called "Pattern Authentication". Typically, one-time passwords require the user to carry a hardware token or a software token installed on a smartphone, but *PassLogic* does not require such tokens. There are other forms of authentication like IC card authentication and biometric authentication, but these require a reader or scanner.

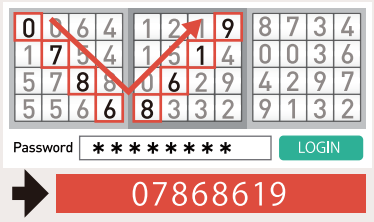
*PassLogic's* tokenless one-time password method eliminates the need for specialized authentication devices such as tokens and readers, reducing device installation costs and operational management costs. We evaluated that this feature would be particularly beneficial to companies that have introduced telework.

For these reasons, we adopted *PassLogic* for the *VCC* service.

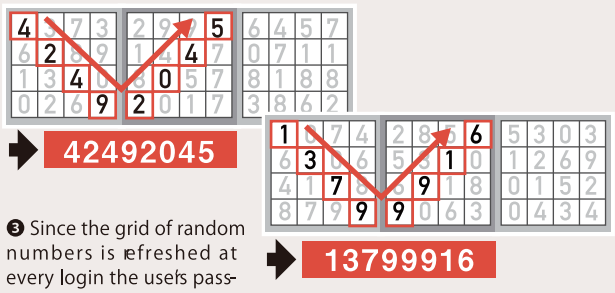
## Tokenless One-Time Password Methoc



❶ The user creates a pattern by selecting a sequence of cells from a grid. In the example above the user has selected a V-shaped pattern.




❷ For every login, the grid is displayed on the login page and each cell of the grid is filled with a random number. The user extracts the sequence of random numbers which corresponds to his or her pattern and inputs it into the password field.




❸ Since the grid of random numbers is refreshed at every login the user's password will change for each login.

## Login Procedure to the *VCC* Virtual Desktop Service Using *PassLogic*

❶ Open the *PassLogic* login screen in a Web browser.
Enter your user ID and click 'Next' .

❷ Extract the sequence of numbers that corresponds to your secret pattern from the grid of random numbers and input it into the password field.

❸ If the login is successful, a menu of available applications will be displayed. Select *NetScaler*.*

❹ The *Citrix Storefront* portal screen will then be displayed. Select the desktop that you would like to use from the available desktops displayed and begin using it.

＊The applications menu can be omitted and the user can be taken directly to the *Citrix StoreFront* portal screen from the login page.

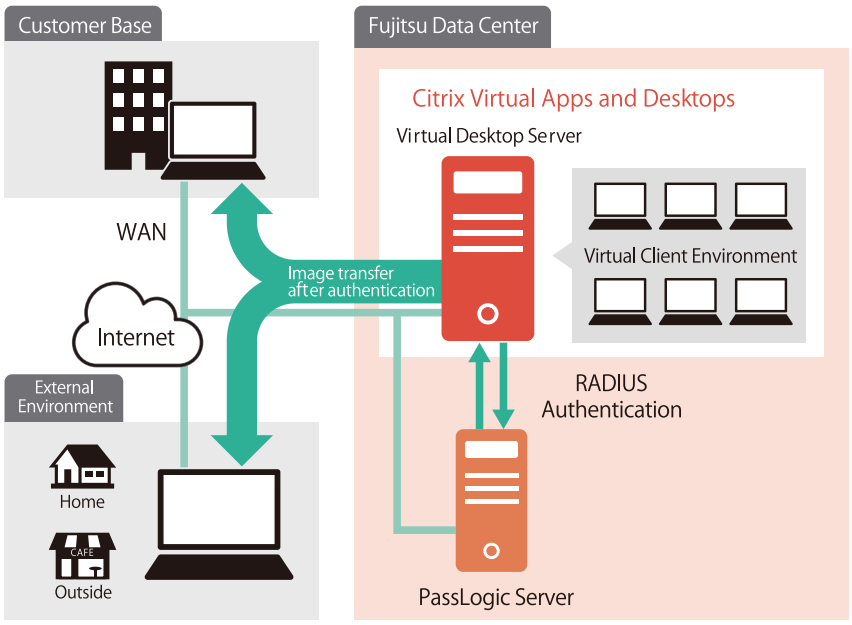
### Cooperation and Operation of *PassLogic* and *Citrix Virtual Apps and Desktops*

If *PassLogic* authentication is selected, the *PassLogic* server will be hosted in the same datacenter as the *Citrix Virtual Apps and Desktops* server. *PassLogic* acts as a RADIUS server against which RADIUS authentication can be carried out on connection requests to the *Citrix Virtual Apps and Desktops* server.

The operations management of *PassLogic* can be fully managed by Fujitsu or it can be controlled on the customer side with a management screen supported by Fujitsu. In addition to the tokenless one-time password authentication method, *PassLogic* also supports the use of hardware or software tokens and it is possible to change the authentication method depending on the user's job title or department. It is also possible to restrict access based on the device by adding client certificate authentication.

Fujitsu ***VCC*** virtual desktop service introduction page:
https://www.fujitsu.com/jp/services/infrastructure/virtualdesktop/vcc/

■ PASSLOGIC AUTHENTICATION FOR THE VCC VIRTUAL DESKTOP SERVICE

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