Company Overview & Product line

2022. 01.

CLOUD SYSTEMS Inc

CLOUD SYSTEMS

Company Profile ☑

- ◆ Summery

- ◆ Business expertise

- ◆ Company history

- ◆ Product summery

Company Profile / Summery

CLOUD SYSTEMS Inc, has total 13 employees and 10 of the employees are tech engineers. (11.2021)

Established	2016. 12.
Company Director	Sung Bae Lee
Total Employees	13
Website	www.cloudsystems.kr

Intellectual property rights

2020 UWS paten registered

2021 UWS SW paten registered

CLOUD SYSTEMS Inc

- Administrative
- NGC
- Research

Administrative
- General Administration
- Business plan & Mangement
- Sales & Marketing

NGC
- Engineering
- Solution

Research
- Solution R&D
- Solution Engineering

CLOUDSYSTEMS number of engineers	
Classification	**Number of people**
Specialist Engineer	3
Advanced Engineer	2
Intermediate Engineer	2
Novice Engineer	3
Total Number of Engineer	10

2

Company Profile / Expertise

CLOUD SYSTEMS specializes in developing infrastructure consulting service along with providing solution services for construction, management and out-sourcing business fields. CLOUD SYSTEMS continues to invest in R&D to provide and develop distinctive unique solution for future upcoming projects.

Infrastructure, Service Consulting

- Based on unique "Know-How" acquired by years of experience both domestically and overseas
- SMB, Enterprise infrastructure service consulting

R&D Consulting

- Investing in venture Start-Up R&D and development Consulting
- Discovering Start-Up firms which can create strategic partnerships to promote a business model that is mutually beneficial

Infrastructure Constructing

- Professional X86 system based physics and cloud infrastructure build service
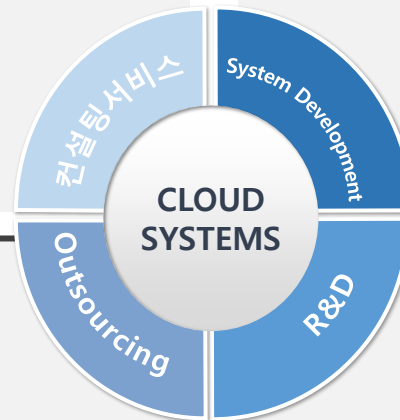
Solution Service

- Professional cloud solution consulting and service construction
- Cloud security solution UWS construction (In house strategy)
- Cloud automation solution vAP construction (In house solution)
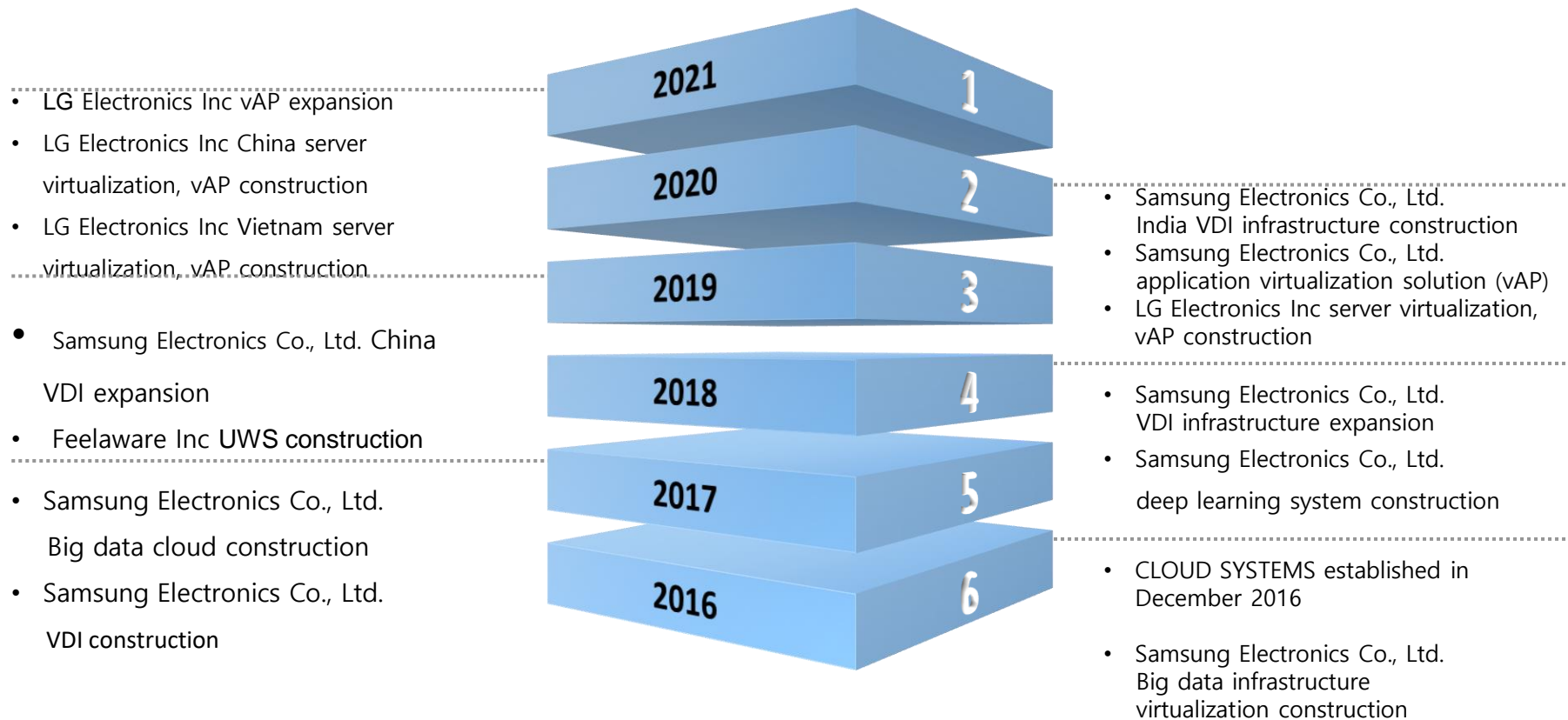
Outsourcing Service

- Providing system management, maintenance and outsourcing services for companies utilizing x86 based cloud system that are located locally and internationally
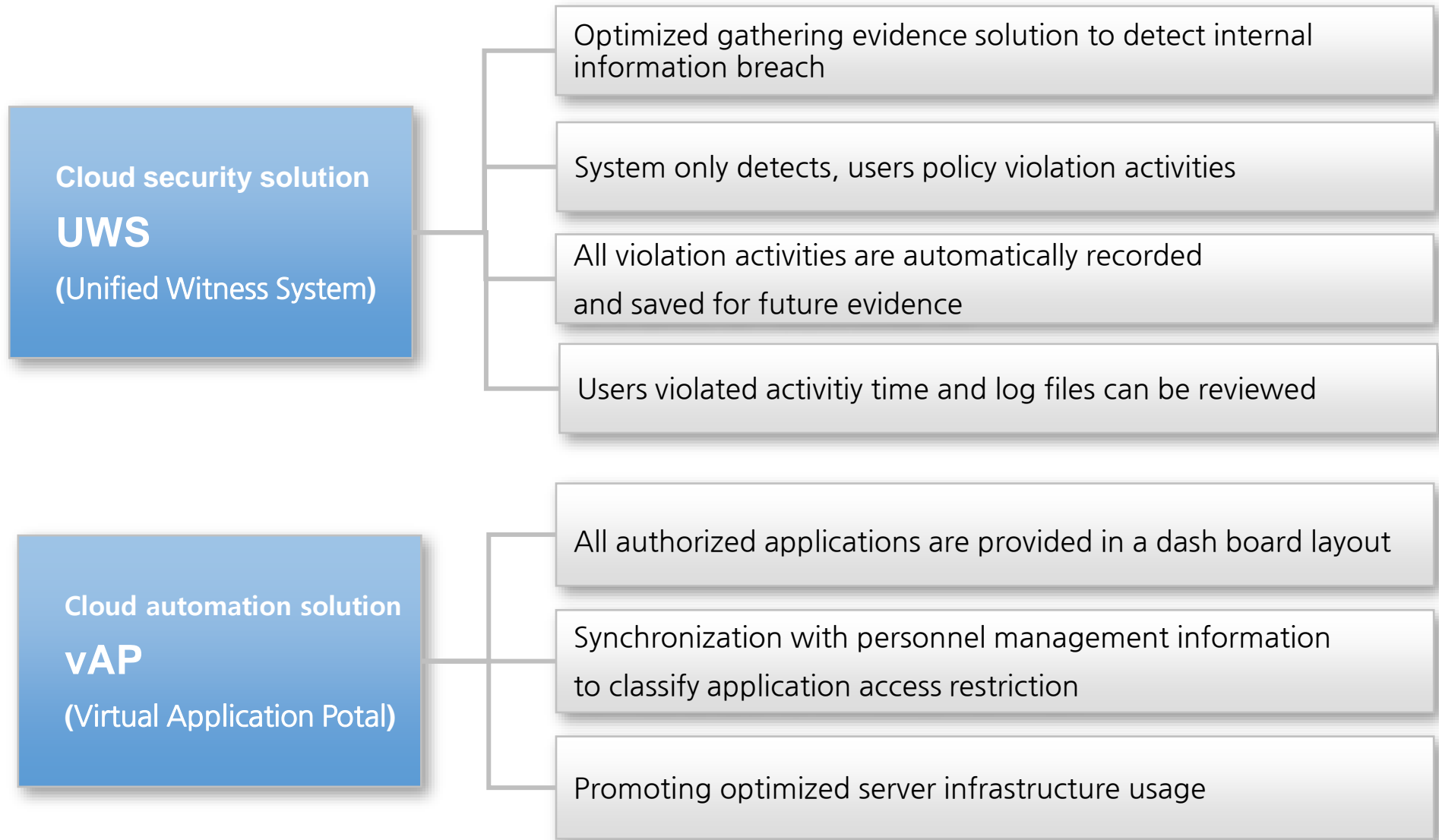- Cloud Solution Architect, Technical Architect Outsourcing

R&D

- Research and development for new cloud infrastructure environment.
- Research and development for system synchronization and cloud external service
- Preparation for new industry trend and securing research staff for strategic product development

CLOUD SYSTEMS

컨설팅서비스 · System Development · R&D · Outsourcing

CLOUD SYSTEMS Inc continues to expand its market presence in virtualization and cloud service system construction projects with years of experience gained through manufacturing, financial and public utility projects.

- LG Electronics Inc vAP expansion
- LG Electronics Inc China server virtualization, vAP construction
- LG Electronics Inc Vietnam server virtualization, vAP construction

- Samsung Electronics Co., Ltd. China VDI expansion
- Feelaware Inc UWS construction

- Samsung Electronics Co., Ltd. Big data cloud construction
- Samsung Electronics Co., Ltd. VDI construction

2021 **1**
2020 **2**
2019 **3**
2018 **4**
2017 **5**
2016 **6**

- Samsung Electronics Co., Ltd. India VDI infrastructure construction
- Samsung Electronics Co., Ltd. application virtualization solution (vAP)
- LG Electronics Inc server virtualization, vAP construction

- Samsung Electronics Co., Ltd. VDI infrastructure expansion
- Samsung Electronics Co., Ltd. deep learning system construction

- CLOUD SYSTEMS established in December 2016

- Samsung Electronics Co., Ltd. Big data infrastructure virtualization construction

Company Profile / Solution Summery

Our solution aims to provide cloud automation and security for future clients.

Cloud security solution

UWS

(Unified Witness System**)**

- Optimized gathering evidence solution to detect internal information breach
- System only detects, users policy violation activities
- All violation activities are automatically recorded and saved for future evidence
- Users violated activitiy time and log files can be reviewed

Cloud automation solution

vAP

(Virtual Application Potal**)**

- All authorized applications are provided in a dash board layout
- Synchronization with personnel management information to classify application access restriction
- Promoting optimized server infrastructure usage

Product Introduction-UWS ☑

◆ Product supply case

◆ Product introduction

◆ Product distinctiveness to our competitors

Product Introduction- Client case

Large scale cloud solution was installed to our clients and initiated PoC with no collision with other brands security system. A successful PoC installation and delivery case.

UWS Client with PoC installation case

Client : S	Client : P	Client : L	Client : M
Virtualization : on	Virtualization : on	Virtualization : on	Virtualization : on
Applied User : 100	Applied User : 50	Applied User : 200	Applied User : 100
OS : Windows10	OS : Windows10	OS : Windows10	OS : Windows10
PoC period: 2 month	PoC period: 1 month	PoC period: 1 month	PoC period: 3 month

System linked : on	System linked : on	System linked : on	System linked : off (Test environment)
Contracts : Due in 2022	Contracts : Completed in 2019	Contracts : Due in 2022	Contracts : Due in 2022

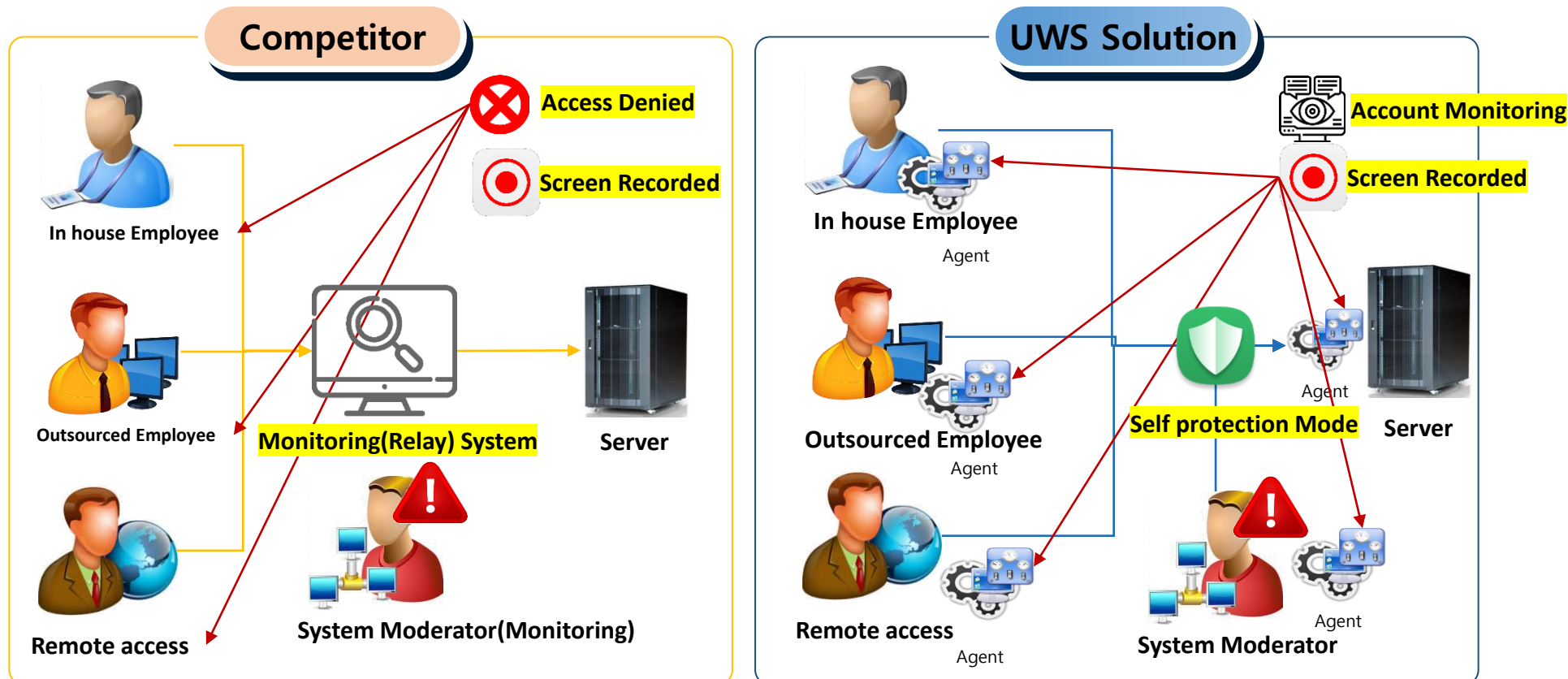## UWS Client with PoC completion case

UWS solution monitors entire logged users activity and initiates recording automatically when the system detects a process that violates the policy. These recordings are automatically saved and used for evidence in the future when needed. These saved data can provide system vulnerability and can be used for recurrence prevention measures.

Employee
Agent

User Application Recoding

Partner
Agent

Text Logging

External Remote
Agent

Agent & Policy Communication

Load Balancer

System Admin
Agent

System del. recognition

Self Protection System

Management Server

Active Directory Authentication

Synchronization

HR System

Violation Enoding & Save

Storage Server

Storage (SAN/NAS)

KEY FEATURES

Users policy Violation recording	Porhibited log activity saved	Personal / Department Catagorized management
Movie files Protection features	Optimization for CPU usage	System Self protection mode

Unlike our competitors, UWS solution does not require monitoring system which limits regulating higher classified accounts. UWS solution monitors all accounts process based on the system policy. Any violations are automatically recorded and saved for system vulnerability analysis and future evidence use.

Competitor

- Access Denied
- Screen Recorded

In house Employee
Outsourced Employee
Monitoring(Relay) System
Server
Remote access
System Moderator(Monitoring)

UWS Solution

- Account Monitoring
- Screen Recorded

In house Employee
Agent
Outsourced Employee
Agent
Self protection Mode
Server
Agent
Remote access
Agent
System Moderator
Agent

Key Feature

- Limited monitoring only to server access
- Unable to monitor Higher classified accounts
- When Unauthorized access is detected from an account, log data is recorded and server access is denied

Key Feature

- Observing entire accounts within the system without the need of system monitoring stage
- When violation is detected, subjected accounts log data and activities are being recorded
- Program based system management

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Product introduction − Product distinctiveness 2

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UWS solution is an application based process which does not require system moderators involvement to record violated activities. Solution also utilizes self protection mode to restore the system when any prohibited attempts to stop, tampering or deleting is detected.

	Competitors evidence storage solution	_UWS Evidence storage solution_
System Moderator Involvement	• Prohibited activities are verified by system moderator and requires manual operation at the start and end of the recording. • During system malfunction, it requires manual inspection.	• Any prohibited activities are automatically recorded with UWS policy based monitoring system. Thus requires no human involvement from start to finish. • UWS is equipped with self recovery mode.
Movie(recorded evidence)file **management**	• Standard file format for encoding movie files. • High risk of recorded file temperament. • Movie(recorded evidence) file requires heavy network usage when transmitted.	• Utilizes in house developed encoding format and file viewer. • Only "Super Admin" account can access recorded files. • Customized file transmission date to reduce clients network load. • File management function for easy storage management. Include scheduled delete and backup. • Customizable file size to increase storage efficiency.
Self protection mode	• Unknown	• File name change unavailable function. • UWS system error detection and self recovery function. • UWS file deletion alert and self recovery function.

Product introduction -UWS key features

UWS acquires its competitiveness through continuously updating system that reflects clients key demands within shortest time possible via Agile development.

1	Domestic large system PoC installation experience provided key clients need and overall system stability know-how.
2	Based on movie file analysis, requires no experts involvement compared to log file analysis.
3	Due to self protection mode, normal user cannot stop or delete UWS solution.
4	Any account that is logged on to the system is subject to monitoring. (Zero trust policy)

UWS solution provides reoccurrence prevention support and case study support for any possible unwanted information breach that can occur within the system. More comprehensive solution compare to simple 'system access denial' method.

Contents

Product Introduction-vAP ☑

- ◆ vAP features

- ◆ vAP function

- ◆ Expected effects

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What is application virtualization?

Application Virtualization technology involves local PC running application that is installed in the server.

Application Virtualization Benefits

Optimized performance

- Local PC's low performance and other security software can interfere with application performance and can lead to reduced efficiency.

- Application performance is guaranteed due to server performance

Virus and malware protection

- Application is stored at the server and is protected from local PCs possible virus and malware attacks risks.

Data Isolation

- Application is installed in the server and important data is also saved in the server.

- Application handling sensitive information is protected from any possible data infringement.

Low Operation costs

- All applications are operated from the server which guarantees consistency and resulting in low operation costs. Whereas local PCs are subject to variety of tasks.

- Server operated system does not limit location and time, therefor via internet access It provides unlimited access and easy project management.

Business Productivity increase, Better Security, Reduced operation costs

Product Introduction – vAP key features

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Why Application Portal Service is needed?

Lack of automated account management

Conventional process lacks automated admin account creation and deactivation for application access.

Lack of application admin account management plan

An automated account management plan for new account creation and Account deletion for retired employee is omitted
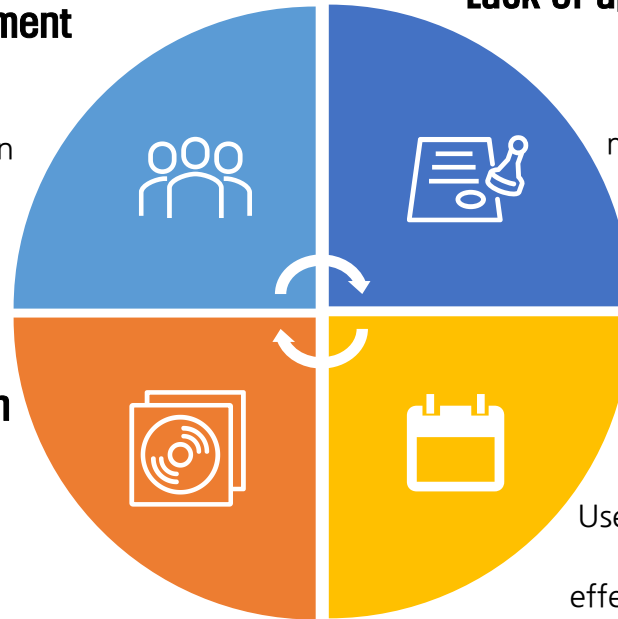
Lack of access program distribution plan

Lack of application access program installation guide plan.

Easy user interface for users

Users are subjected to wide variety of work environment and therefor effective simplified training procedure is needed.
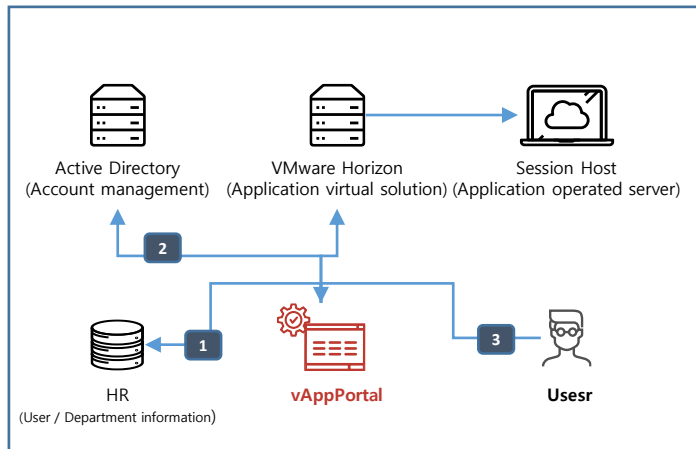
Manual process increases work load and lead to increased operation costs

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What is vAppPortal?

vAppPortal is a virtualized application environment that provides easy UI for users to access account management

The function of vAppPortal

Active Directory
(Account management)

VMware Horizon
(Application virtual solution)

Session Host
(Application operated server)

HR
(User / Department information)

vAppPortal

Usesr

[vApp Portals application virtualization layout]

1 Human resources data synchronization

- Human resources data that is provided are automatically synchronized.
- Newly registered employees are granted access automatically,

2 Active Directory account create / inactivation

- With synchronized HR data users 'Active Directory' can be managed.
- New employee Active Directory user account creation.
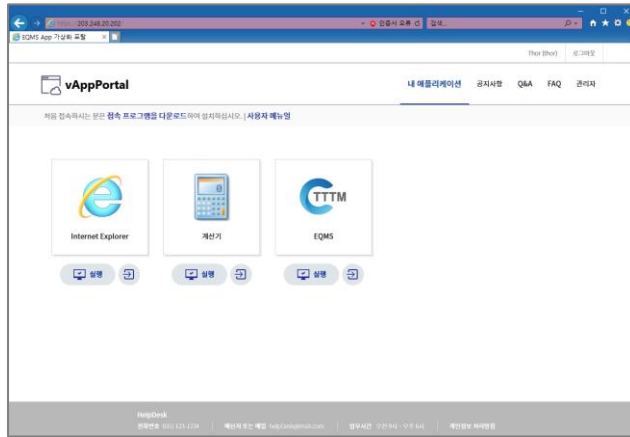- Retired employee Active Directory user account inactivation

**3** Easy UI for application access

- When user is logged in possible application lists are provided.
- To access VMware Horizon Client installation package is provided.
- Frequently used application icon is provided for shortcuts.
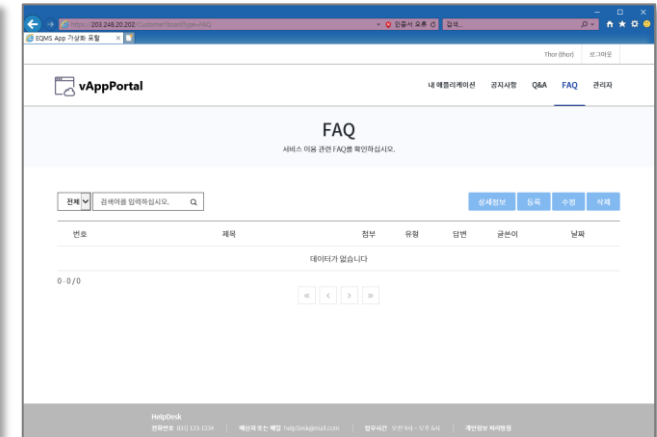
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vAppPortal screen shots and expected effectiveness

[List of allowed application lists and access program Installation icon is provided.]
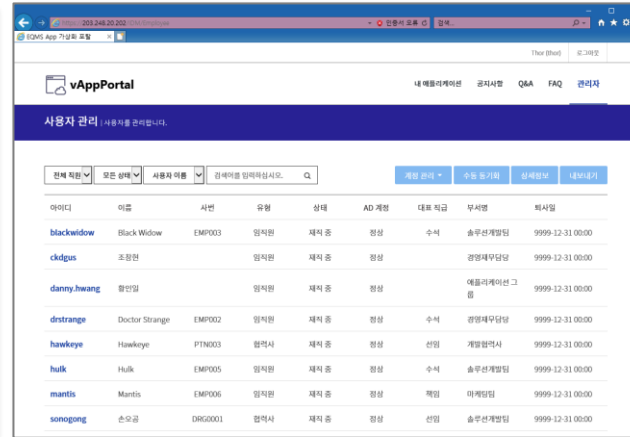
[Synchronizsed HR data for account management And access level control]

[Help Desk (Bulletins board, FAQ, Q&A) provided]

Application virtualization Reduced operation costs

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THE END

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