



멀티클라우드, 컴퓨팅 인프라에 제약없는 서비스 생태계

클라우드바리스타 커뮤니티 제7차 컨퍼런스

[클라우드바리스타 활용 사례]

디지털문화자원관리시스템 구축 지원 (무상원조 ODA 사업)

박 순 철

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코르타도(Cortado) 한잔 어떠세요 ?



멀티클라우드 서비스 공통 플랫폼

KGZ· CRMS + CB spider

코르타도(Cortado) 한잔 어떠세요 ?

KGZ· CRMS + CB spider

Kyrgyz National History Museum

Treasury of the historical and cultural heritage of the Kyrgyz people

- o Part of National History Museum
- o Mass cultural events: "Night at the Museum"
- o Kyrgyz silver jewelry of the XVIII - XIX centuries
- o Traditional embroidery, pile weaving, national clothes
- o 30 thematic, stationary and traveling exhibitions a year

Please enter a search keyword.



OUR MISSION

KCRMS empowers the cultural resource sector in its digital transformation. We develop expertise, tools and policies to embrace digital change and encourage partnerships that foster innovation.

FIND US ELSEWHERE



Contact Us

Kyrgyzstan Cultural Resource Management System
VJH3+3GC, Chuy Ave, Bishkek, Kyrgyzstan
shinwhahong@cics.center

• Русский

CUSTOMISE WEBSITE LANGUAGE

• Кыргызча

English



CICS 소개

2002 ~ Present

- Collected the Korean intangible culture heritages (~200,000 collections, ~70,000 digitization)
- Builded and Maintained ICHPEDIA as an ich data platform, Korea

2013 ~ 2016, 2017 ~ Present

- Been an Institute of Humanities and Social Studies supported by Korea Research Foundation

2016 ~ Present

- Approved as a UNESCO Accredited ICH NGO

2017, 2018

- Supported the World Forum for Intangible Cultural Heritage in Jeonju, Korea

2019년, 2020년, 2021년 ~

- Supported JIAPICH, Jeonju International Awards for Promoting Intangible Cultural Heritage

2018년 ~ Present

- Builded and Maintained UNESCO's ich accredited NGO forum Platform

KCRMS PROJECT 소개

■ Project

Creating a Cultural Resources Management System and Strengthening Capacity-building of Human Resources in Cultural Contents in the Kyrgyz Republic

■ Duration : 2022-2025(Four years)

■ Budget : 3 billion KRW(KRW3,000,000,000)

2022	2023	2024	2025	Total
400m	800m	800m	1bn	3bn

■ Working site : The Kyrgyz Republic (Bishkek, Osh & 7 Provinces)



GOALS & STRATEGIES



Goals

**For Sustainable Development in cultural sector
of the Kyrgyz Republic and the Growth of Culture-based Economy**

- Promoting public administration in the area of the cultural resources management and cultural contents industry in the Kyrgyz Republic
- Strengthening capacity-building of human resources in cultural contents

Strategies

- To establish and manage a Cultural Resources Management System
- To strengthen capacity-building of human resources through co-producing cultural contents using the cultural resources of the Kyrgyz Republic
- To educate and train public officials with the overall cultural contents by holding a workshop in the Kyrgyzstan and Korea (including virtual)

인구: 약700만, 국내총생산: 약 85억 USD, 농업, 1991년 독립

Kyrgiz 박물관 현황

1. 현황

- a. 세 곳(history museum, fine arts museum, nomad museum) 모두 관광 또는 행정 중심 지역에 위치해 있음
- b. 세 곳의 보관 자료 형식이 상이함 – 통합 필요.
- c. 소러스 펀드로 전산화가 일부 진행 중이었음: 전산화에 어느 정도 익숙함
- d. 그러나 여전히 수작업으로 유물/작품 등을 목록화하고 있어 불편(수정 등에)을 호소함
- e. 전기 사정이 좋지 않음, **it 인력의 인건비가 상대적으로 비쌈**

2. 제안

- a. 전산화를 위한 시설 제공: 데이터 입출력이 가능한 컴퓨터룸 (2-5인 사용) 필요
- b. 현지 전기사정을 고려해서 서버는 클라우드 서버로 제안: **클라우드 시스템 사용** (한국 G클라우드, AWS, 등)
- c. 현지 전산 기술자 토의 필요
- d. **안정적인 통합 one 시스템 필요 (Europeana model 제안)**

3. 기대효과 및 성공 가능성

- a. **지역적인 관점에서 본 사업이 성공적으로 완수된다면 파급효과가 매우 클 것임**
- b. **직원들 중 일부가 전산화에 어느정도 익숙함: 체계적으로 지원한다면, 성공가능성이 매우 높음**

Development Philosophy

1. Simple and easy access. (for example, auto generative Primary No., not many attributes, no input no shows, Using Intuitively even without user's Manual)
2. Adapting the NHM format for Title and Description. (Kyrgyz, English, Russian)
3. Only those who have signed up can upload and access data now.



Kyrgyz National History Museum

Treasury of the historical and cultural heritage of the Kyrgyz people

- o Pride of National History Museum
- o Masterpieces of the ancient art of Kyrgyzstan
- o Kyrgyz silver jewelry of the XVIII - XX centuries
- o Traditional embroidery, pile weaving, national clothes
- o 30 thematic, stationary and traveling exhibitions a year
- o Mass cultural events: "Night at the Museum"

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English



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Select types of object

TYPE OF MEDIA


Select types of media



Chepken

Chepken - women's outerwear made of green tukaba with karakul attached to the collar.


National Commission Center • 2022-10-20T03:09:13



Pendant fragment

Pendant fragment


National history Museum • 2022-10-20T03:04:48



Metal box

Round metal box with a hole on the wall and a lid.


National history Museum • 2022-10-20T03:20:39



Mask

The mask is made of goldfoal.


National history Museum • 2022-10-20T03:08:06



Key "Riga"

Key "Riga" on the other side of the inscription 1201. Gift from Latvia.


National history Museum • 2022-10-20T03:08:59



Wall carpet

Tuuh kyiz - wall carpet. Felt embroidery.


National history Museum • 2022-10-20T03:07:01



Mask

The mask is made of goldfoal.


National history Museum • 2022-10-20T03:02:29



Souvenir map of Kyrgyzstan

Souvenir map of Kyrgyzstan with 4 cards. On the plate there is an inscription: "To the 20th anniversary of the Academy of Sciences of the Kirghiz SSR from..."


National history Museum • 2022-10-20T03:02:02



The plaque is round with the image of a deer.

The plaque is round with the image of a deer.


National history Museum • 2022-10-20T03:04:16



Vessel

The vessel is round-bottomed, thin-walled.


National history Museum • 2022-10-20T03:03:25



Plaque with a portrait of Lenin

Plaque with a portrait of Lenin in a gray case. From the Vilnius Revolution Museum.


National history Museum • 2022-10-20T03:03:09



Wall carpet

Tuuh kyiz - wall carpet. Embroidered on black cotton fabric. Kapkaldyryk is one triangle.


National history Museum • 2022-10-20T03:02:21



Swan-drawing

Swan-drawing, scorched on plywood. From students of secondary school MP46 to the 50th anniversary of the museum.


National history Museum • 2022-10-20T03:02:17



Medallion

Oval medallion

National history Museum • 2022-10-20T03:02:41



Ceramic vase

Ceramic vase with a blue-brown ornament on a yellow background. From the General Committee of the Komsomol of the Kazakh SSR October 1968.

National history Museum • 2022-10-20T03:01:02

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Select whether you can use this

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Select types of object

TYPE OF MEDIA


Select types of media



Bust of Sukhe Bator

Bust of Sukhe Bator (porcelain). A gift from Mongolian friends to the..


2022-10-20T06:07:50



Tray

The tray is rectangular. There is an oblique cut on the rim.


2022-10-20T05:42:05



Teapot

Tall teapot with movable double handle, blue enamel, with drawings.


2022-10-20T04:54:02



Spear tip.

The tip of the spear is bushied, with a protruding bushing, bay leaf shape.


2022-10-20T04:42:00



Cone-shaped teapot

The teapot is cone-shaped with a loop handle, covered with bluish-greenish...


2022-10-20T04:31:04



stone artifact

Stone depicting two spoked wheels. (fragment)


2022-10-20T04:25:07



stone artifact

Камень, изображением бика (части), выполненного в битроугольном стиле.


2022-10-20T04:13:20



Tray

Rectangular tray with rounded corners, painted in gold on red lacquer.

2022-10-20T04:05:14



Stone with a pattern.

A stone depicting a hunting scene with bows for goats.

2022-10-20T03:55:47

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V3H3-SGC, Chuy Ave, Bishkek, Kyrgyzstan
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DETAIL PAGE

Tray

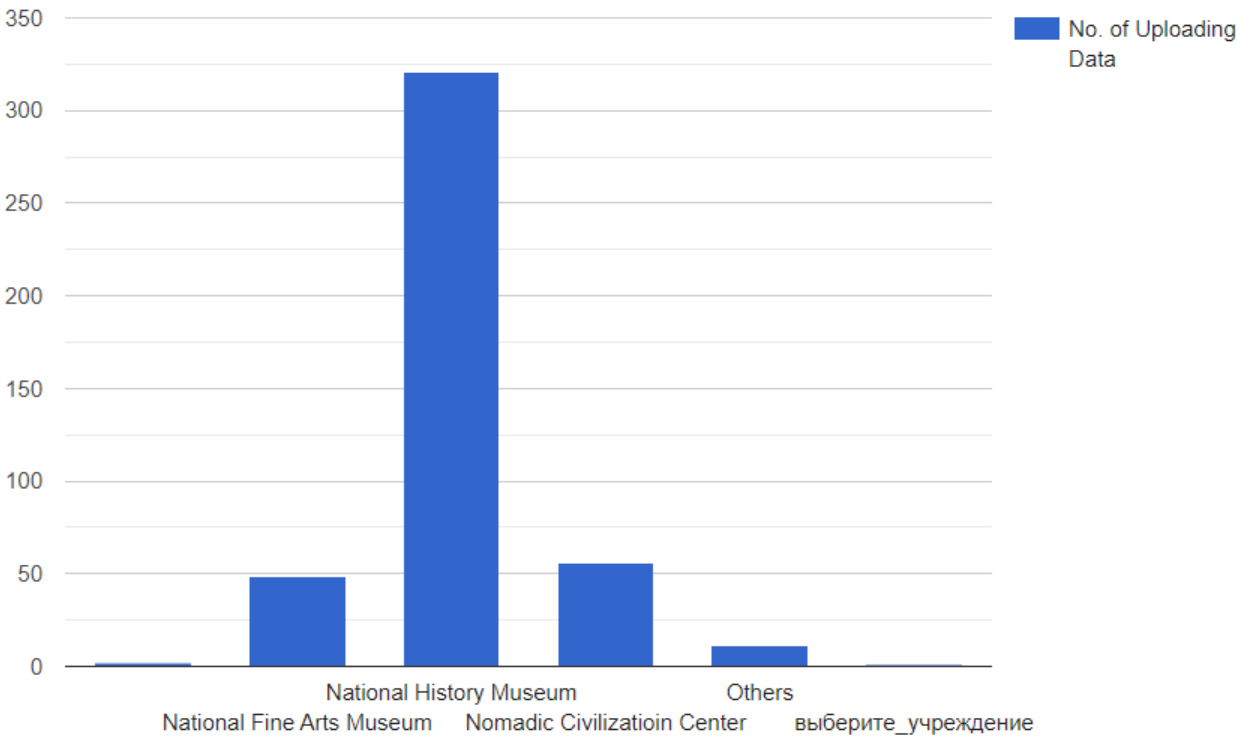


Rectangular tray with rounded corners, painted in gold on red lacquer.

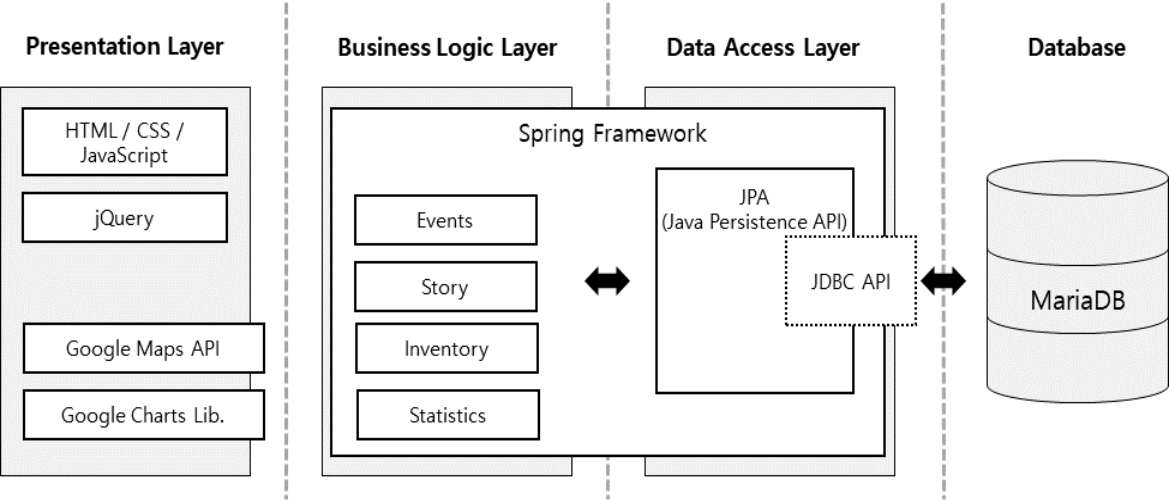
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Description	<div>English Rectangular tray with rounded corners, painted in gold on red lacquer.</div> <div>Russian Поднос: прямоугольный с закругленными углами, с золотистой росписью по красному лаку.</div> <div>Kyrgyz Буритары тегеректеген тик бурчтуу поднос, кызыл лактын үстүнө алтын т үс менен бойлогон.</div>	
Subject	Подарки	
Institute_Identifier	КТ 4152/2-IV кв 4/а	
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Object_Size	23.5x24.8 см	
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File_Extension	JPG	
Providing_Institution	National History Museum	
Provider_Country	Кыргызстан	
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Longitude	74.6039	
Collection_Name	Подарки	
IsPartOf	Фонд подарков	
Rights_Statement_Media	http://rightsstatements.org/vocab/InC/1.0/	

UPLOADING STATISTICS

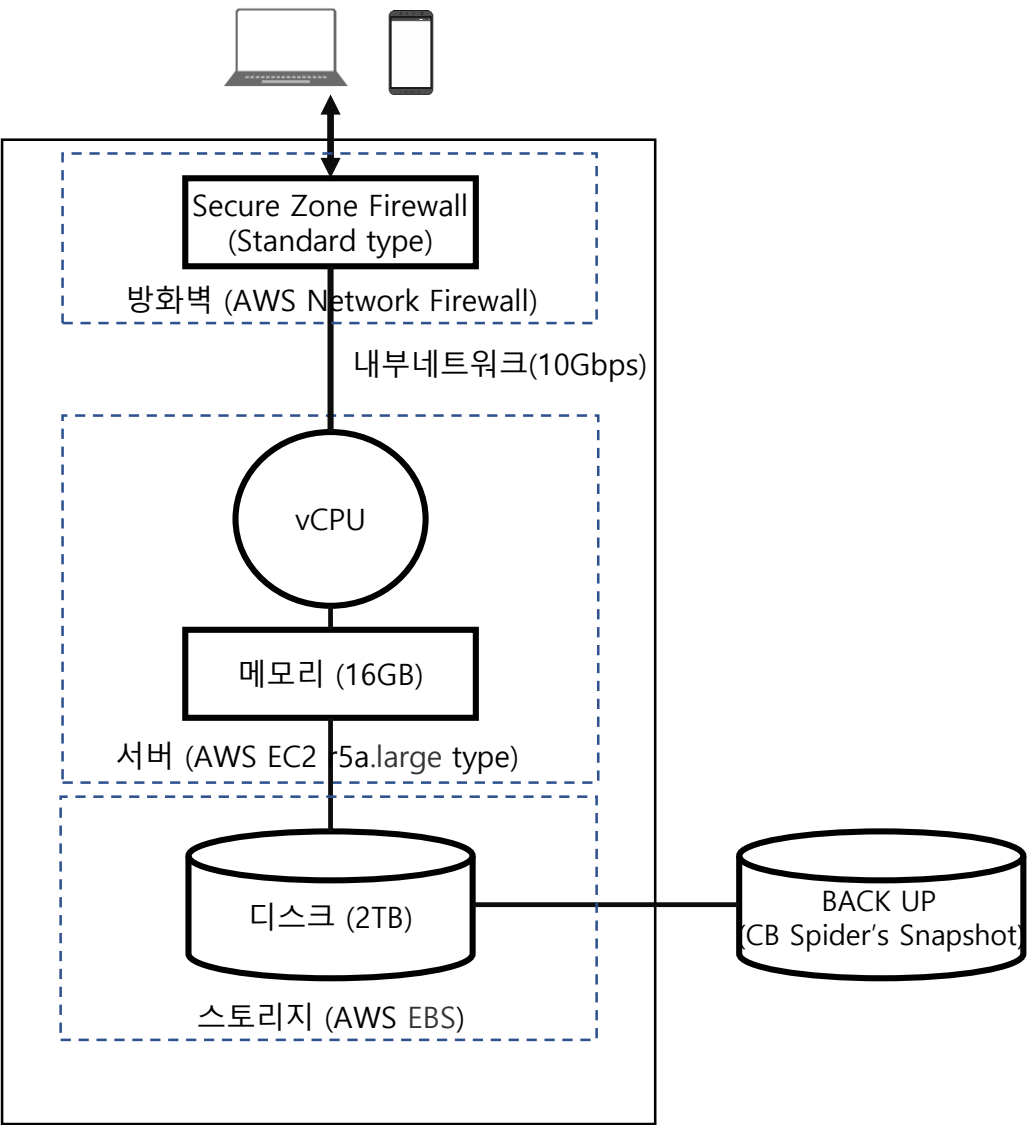
Statistical Info of Providing Institution



SYSTEM STRUCTURE



소프트웨어 구조



하드웨어 구조

Next Steps

1. Developing the STORY upload system(?)
2. Mobile Version
3. System Management Part: Massive uploading system
4. Active with Online communication system
5. More convenient & Better visualization system, Safe & Secure system
6. Documentation: user's manual, Screen Definition doc., error handing history, etc.



멀티클라우드 서비스 공통 플랫폼

무형문화연구원과 클라우드바리스타의 협력 배경

코르타도(Cortado) 한잔 어떠세요 ?

무형문화연구원의 요구사항 및 이슈



제안 사항 및 고도화 방안

• 클라우드바리스타의 Pick-Up 포인트 및 제안사항

- 다른 제3의 국가 지원 시, AWS뿐만 아니라 **선택된 국가에 가장 최적인 클라우드를 제약없이 선택 가능한 환경**
- 어떠한 CSP를 선택하든, 문화자원관리 시스템을 위한 클라우드 자원을 할당하고, 시스템을 설치하고 구동하는 것을 원클릭으로 처리 → **최적의(최근거리, 저비용 등) CSP를 결정하고 OneClick으로 진행**
 - 현재, 문화자원관리시스템이 요구하는 VCPU, Memory, Disk, 방화벽 등의 사양은 고정되어 있음
 - 시스템 설치 스크립트는 무형문화연구원에서 활용하는 것을 통합
 - CB-Spider는 이종 클라우드의 API를 추상화하여 동일한 API를 제공하기 때문에 가능한 시나리오임
 - [개선] 현재는 스크립트 기반의 방식을 제공하고 있으나, 추후 단순한 GUI를 활용하면 직관성 개선이 가능
- **어떠한 CSP(AWS, MS, Google, 또는 현지 CSP 등)의 클라우드 자원을 활용하더라도 OneClick으로 데이터 백업 제공**
 - CB-Spider의 Disk 추상화-Snapshot 기능을 활용하여 지원 (CB-Spider 공통 API 임)
 - [개선1] 현재는 “가상머신 + 데이터”를 모두 백업하고 있으나, 추후 데이터만 백업하면 저장 용량의 최적화 가능
 - 주기적인 자동 백업을 활용 가능한 부분임(linux 기능)

• 추후 고도화 이슈 - 장애 관리

- 두 개 이상의 사업자간에 시스템 HA 체계(Running-Standby)를 마련 - Global Load Balancer 등 필요
- 데이터는 두 개 이상의 사업자간에 백업 체계(클라우드간 3-copy)를 유지 - 글로벌스케일 데이터 관리