Version	Approved By	Revision Date	Description of changes	Author
1		8/15/2022	Initial Draft	Jyoti Gavali, project analyst

FHDA backup policy, disaster recovery strategy & procedure

Contents

Introduction

This document describes the plan and procedures that ETS has established to recover from unplanned incidents such as natural disasters, power outages, hardware failure, human error cyber-attacks and any other disruptive events (including IT threats like ransomware) that affect IT operations/Business Continuity.

FHDA infrastructure, services and application

The planning, exercising and management of infrastructure backup by FHDA, for a disaster is described in this document. The backup of recovery data and critical services and applications is based on the:

Below described IT infrastructure at FHDA:

Table 1.0 Infrastructure

	Deployment: on-premises infrastructure/in cloud hosted infrastructure/ in a hybrid env.	Comments
1	FHDA on-prem data, critical services, and applications	
2	FHDA aws cloud data, critical services, and applications	
3	Ellucian aws cloud data and critical services and application	https://aws.amazon.com/disaster-recovery/
4	Hardware (networks, servers, desktop and laptop computers, wireless devices and peripherals, power supplies)	N/A

Table 2.0 Services and applications

	Vendor Cloud Applications	On-site/On-Prem Applications	FHDA aws cloud applications
1	Aruba (wifi)	BDM	Domain Managed Devices
2	Atlassian Jira, Confluence	Active Directory	Active Division, Active Roster
3	Azure AD	Clockworks Special Education	BSIS
4	Canvas	Domain Managed Devices	MyPortal
5	DUO MFA	KACE	
6	Ellucian Banner IRP, Ethos EIS	Linux host (virtual or physical)	
7	Maxient	Liquid Office	

8	Mobile Applications Modo Labs	Sunapsis	
9	Office 365	VMWare VDI	
10	Palo Alto Networks(VPN)	Windows host (virtual or physical)	
11	Pyramed		
12	RAVE		
13	Slate		
14	TouchNet		
15	Xlibris		
16	Zoom		

On-Prem application backup and disaster recovery plan

(FHDA on-prem data, critical services, and applications)

Table 3.0

	Backup Strategy		Type of Backup	Frequency

1	Naviko		forever incremental technique after the initial full backup of a VM	Nightly
2	Rsync	On-prem Linux/Unix server backups	differential backup & Full disk backup	Daily
3	Robocopy	On-prem Windows server backups	differential backup & Full disk backup	Daily

On-prem Restoration Strategy

Retention Settings

☑ Keep [10] last recovery points

☑ Keep one recovery point per day for [10] days

☑ Keep one recovery point per week for [4] weeks

☑ Keep one recovery point per month for [12] months

☑ Keep one recovery point per year for [3] years

AWS cloud application backup and disaster recovery plan

Table 4.0

	Backup Strategy		Type of Backup	Frequency
1	Nakivo	VMs in on-site L7 VMWare system to a local backup SAN	differential backup & Full disk backup	Daily, Monday to Friday
2	AWS S3 bucket	critical VMs (Web servers, some databases, AD, file systems)	incremental backups & Full disk backups	Daily Monday to Thursday and Full backups on Friday

3	MySql Aurora and Oracle snapshots	Amazon Aurora & Oracle databases	Daily snapshot backups for Aurora/Oracle in AWS cloud	Daily

Cloud Restoration Strategy

Note: No Backups are performed of any offsite including our AWS environment, Ellucian servers, or the Microsoft Office 365 system.

Periodic backup plan process results

Table 4.0

	Test Description	Test Logs/Test results	Ownership	Frequency
1	VMware vSphere backup job	_Windows_job_ Successful.eml		
2	Windows SQL Servers	_Windows SQL Servers_job_ Successful.eml		
3	Amazon Backup	_Amazon Backup_job_ Successful.eml		
4	Linux	_Linux_job_Successful.eml		
5	MySql Aurora and Oracle snapshots	MySql Aurora and Oracle snapshots.png		

Glossary

Term	Description
AWS	Amazon Web Services
EC2	Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud.
S3	AWS S3 ("Simple Storage Service") enables users to store and retrieve any amount of data at any time or place, giving developers access to highly scalable, reliable, fast, and inexpensive data storage
SaaS	Software as a service
SaaS Products	Vendor owned and managed SaaS products, hosted in the cloud and accessed by users through the web