GalaxyAerospace maintenance . repair . overhaul	Continuing Airworthiness Notice (CAN)	
	CAN No. / Rev No.	CAN 43 / R0
	Date	22-Mar-2022

To : GAM CAMO Planner

CC : GAM Accountable Manager, GAM Quality Assurance Manager

From : Continuing Airworthiness Management (CAM) Manager

Subject : Procedure for Backup of Aircraft Maintenance Planning System

1. REFERENCE

a. GAM/CAAM/CAME Issue 2 Revision 7 Date 14 February 2022 or later approved revision.

b. GAM/CAMO/CAMP Issue 2 Revision 0 Date 17 February 2022 or later approved revision.

2. APPLICABILITY

a. All aircraft managed by GAM CAMO

3. INTRODUCTION

a. GAM CAMO utilises AERONET system as the platform for monitoring and managing the aircraft continuing airworthiness within GAM CAMO fleet.

b. The current policy of backups of AERONET system are performed daily between 10pm and 6am by AERONET. The backup contains a copy of the current configurations, code, the database, data files and some additional files required to restore the production site elsewhere. All backups are sent to AERONET central Archive storage server located inside AERONET VPN and only accessible via a secure SFTP connection. Refer Appendix 1 – AERONET System & Security Policy.

c. Currently, GAM is still in the process to subscribe with AERONET on the access to the backup server. This notice is raised to introduce an interim procedure on the backup of the aircraft continuing management system to be performed by CAMO Planner until GAM STFP server is established and subscribed with AERONET for the access to the backup server.

d. The compliance to this procedure shall be effective immediately and shall be integrated into the upcoming revision of CAMP.

4. REQUIREMENT

a. CAMO Planner shall download the full aircraft maintenance status in both excel and pdf format from the AERONET system every last week of the month and kept in current GAM server for all aircraft under GAM CAMO. Refer Appendix 2 – AERONET Aircraft Module – Download button.

Kindly be informed and adhere to the requirement.

Zaty Nadhira Binti Mohamed Zuhari
Continuing Airworthiness Management Manager

APPENDIX 1


aeronet
SYSTEM & SECURITY POLICY

SYSTEM & SECURITY

BACKUPS
REDUNDANCY
ARCHIVING
SECURITY
DATA

BACKUPS:

The backup contains a copy of the current configurations, code, the database, data files and some additional files required to restore the production site elsewhere. Backups are about being able to restore data (limited to yesterday's data) within one working day.

REDUNDANCY:

Redundancy is the ability to reproduce the production environment on a different continent, with different infrastructure so that Backup can be restored on new hardware within one working day, if anything happened to the production environment.

ARCHIVING:

Keeping multiple copies of a back up is called an Archive. This enables us to restore last months version if any corrupted data makes it to the Backup. We include twelve backups in a rotating cycle. Six daily (Sunday - Friday) four weekly (Saturday) two monthly (First of each month).

SECURITY:

Security is about restricting unwanted physical and electronic intrusion to the hardware. Aeronet leverages AWS infrastructure. More information is available here http://aws.amazon.com/security/

DATA:

Data is both the records in the database and the attachments that make up the Aeronet install excluding code. The data is owned by the subscriber forever. The included Aeronet data package is one GB.

INFRASTRUCTURE:

Infrastructure is the underlying servers that the application runs on. Included Aeronet Infrastructure are AWS EC2 instances with RDS databases.

BACKUPS

Backups of all production Aeronet sites are performed daily between 10pm and 6am.

The Backup contains a copy of the current configurations, code, the database, data files and some additional files required to restore the production site elsewhere.

When the size of the Backup exceeds 1GB the data folder/data is only backed up on a Saturday unless an additional option is requested.

All backups are sent to our central Archive storage server located inside our VPN and only accessible via a secure SFTP connection.

Additional Options include (per month):

Twice daily Backups $50

Database replication $200

SFTP access to the Backup folder $50

Daily database Backups exceeding 1GB $50

Daily database Backups exceeding 5GB $100

REDUNDANCY

Daily backups are copied onto our failover server infrastructure on a daily basis between 3am and 11am.

Our redundant infrastructure is both geographically and supplier separated from both the production and archive environments.

Disaster recovery lead times can be greatly improved by the additional option of replication via an active redundant server.

Additional Options include:

Redundant server access $100

Database replication $200

Redundant server access exceeding 2GB $300

ARCHIVING

Keeping multiple copies of a Backup is called an archive this enables us to restore historical versions if production data is corrupted and makes it to the back up.

We retain twelve Backups in a rotating cycle.

Six daily (Sunday - Friday)
Four weekly (Saturday)
Two monthly (First of each month)

Additional options include (per month):

Monthly Backups for a year $100

Yearly Backups for seven years $100

Daily database Backups exceeding 1GB $50

Daily database Backups exceeding 5GB $100

SECURITY

PHYSICAL

All infrastructure will be housed on AWS.

AWS has achieved ISO 27001 certification and has been validated as a Level 1 service provider under the Payment Card Industry (PCI) Data Security Standard (DSS). AWS undergo annual SOC 1 audits and have been successfully evaluated at the Moderate level for US Federal government systems as well as DIACAP Level 2 for DoD systems.

The following documents the physical security measure in place at AWS
https://media.amazonwebservices.com/pdf/AWS_Security_Whitepaper.pdf

Further information is available here...
http://aws.amazon.com/security/

ELECTRONIC

http://blogs.aws.amazon.com/security/post/Tx3PSPQSN8374D/How-to-Receive- Notifications-When-Your-AWS-Account-s-Root-Access-Keys-Are-Used

Common Measures:

Separate AWS Production Account

Production systems on AWS are managed on a separate Virtual Private Network.

This allows tighter security for deployed applications by complete separation of the production infrastructure that will be accessed externally. This allows removal of various additional access points required for development and testing.

Firewalls

Server Firewall policies are managed in AWS and separate role based policies are created and attached development and production servers.

SECURITY CONT.

SSH certificates

SSH Certificates are used to access all AWS server for the purpose of gaining

root access. These certificates are stored on a Google Drive folder. The folder is shared to key staff at module that perform system maintenance and individual keys are shared to the people that require access to them.

Aeronet (rxml):

Software Firewall

IP tables is implemented and managed via the command line system-config-firewall on the aeronet server. This is also used in conjunction with fail2ban explained below.

The inbound ports made available are 22 ssh, 80 aeronet application, 9998 aeronet management console, 9999 roxen web server console.

Selinux

https://en.wikipedia.org/wiki/Security-Enhanced_Linux

Selinux limits access to files and network resources by applications and users on the server to reduce or eliminate the ability to cause harm if software is faulty or the system becomes compromised.

Password Management

Root access

Root access to servers is limited to key staff and root access is restricted to logging in as a standard user with a certificate and switching the the root users once logged in.

fail2ban

Fail2ban checks multiple failed access requests via logs and bans ip addresses from accessing the server for a period of time using the iptable software firewall.

SYSTEM & SECURITY

DATA

Data is both the records in the database and the attachments that make up the Aeronet install excluding code. The data is owned by the subscriber forever. Included Aeronet data package is 2 GB.

Additional Options include:

2 to 5 GB Data package $50

5 to 10 GB Data package $100

5 to 10 GB Data package $200

SYSTEM & SECURITY

INFRASTRUCTURE

Infrastructure is the underlying servers that the application runs on. Included Aeronet Infrastructure are AWS EC2 instances with RDS databases.

Subject to non-functional requirements additional infrastructure options are availbable.

Additional Options include:

Additional producton server POA

Test server POA

Development server POA

Dedicated resource allocation POA

On-premise infrastructure POA

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APPENDIX 2

aeronet Admin Maintenance Operations Service Quality Cars Your Account Configuration

Aeronet Galaxy Aerospace / Maintenance / Aircraft

Version: 4.0.0 , User: Continuing Airworthiness Manager

Aircraft Registration: 9M-BOC Date of Values: 21/03/2022 | **Airframe**: 3324:01

Save to template Close Update Save & Close

General | Log Book | Inspections | Components | Airframe | Engine 1 | Engine 2 | Modifications | ADs | SBs | Flight History | Documents | SORs | Jobs | History | Notes | Rates | Users

Download button

Details History

Client	JABATAN BOMBA DAN PENYELAMAT MALAYSIA						
Type:	AW139	Fuel:		Engine Type:		Propeller Type:	
Fleet:	AGUSTA WESTLAND MALAYSIA	Fuel Burn:	0.00 Gallons/Hr	**Engine 1 -** Part No:	PT6C-67C	**Prop 1 -** Part No:	
Registration:	9M-BOC	Empty Weight:	0.00 kgs	Serial No:	PCE-KB0661	Serial No:	
Callsign:	9M-BOC	MAUW Weight:	0.00 kgs	**Engine 2 -** Part No:	PT6C-67C	**Prop 2 -** Part No:	
Serial No:	31289	Company:	GALAXY AEROSPACE (M) SDN. BHD.	Serial No:	PCE-KB0659	Serial No:	
Status	Active	Empty Moment Long:	0.00 cm/ kgs	Empty Moment Lateral:	0.00 cm/ kgs	Burn Rate (Hours):	0.95
Manufactured Date:	01 01 2010	Flight Manual Date:	27 05 2021	Flight Manual Rev:	AW139 ROTORCRAFT FLIGH	Burn Rate (Airframe Cycles):	0.00

Maintenance

Date of values:	21 03 2022					New Aircraft TTIS:	0.00		
Airframe:	3324:01	hours |	5836.00	landings |	85.00	hook cycles |	0.00	Hoist Hours |	595.00 hoist cycles
Engine 1:	3324:01	hours |	0.00	Np cycles |	0.00	Ng cycles |	2588.00	Cycle	
Engine 2:	3324:01	hours |	0.00	Np cycles |	0.00	Ng cycles |	2567.00	Cycle	