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1. MANUAL ADMINISTRATION

# **RECORD OF REVISION**

| **No.** | **Description Of Changes** | **Issue No.** | **Rev. No.** | **Author** | **Effective Date** |
| --- | --- | --- | --- | --- | --- |
| 1 | Initial Revision | 1 | 0 | Prashanth Kabali | 26-Apr-2017 |
| 2 | Updated after CHG0010517 | 2 | 0 | Febin Tomy | 14-Sep-2017 |
| 3 | Updated server details, footer and change details | 2 | 1 | Anurag Nikhil Minz | 14-Aug-2018 |
| 4 | Updated version and AMS support team changes | 2 | 2 | Deepti Jain | 2-Oct-2019 |
| 5 | Updated Contract Details and some alignment changes | 2 | 3 | Krishnakant Bairagi | 24-July-2020 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

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| 1 | 1-1 | 1 | 0 | 04-26-17 |  |  | 4-17 | 1 | 0 | 04-26-17 |
|  | 1-2 | 1 | 0 | 04-26-17 |  |  | 4-18 | 1 | 0 | 04-26-17 |
|  | 1-3 | 1 | 0 | 04-26-17 |  |  | 4-19 | 1 | 1 | 07-27-2020-26-17 |
|  | 1-4 | 1 | 0 | 04-26-17 |  |  | 4-20 | 1 | 0 | 04-26-17 |
|  | 1-5 | 1 | 0 | 04-26-17 |  |  | 4-21 | 1 | 0 | 04-26-17 |
|  | 1-6 | 1 | 0 | 04-26-17 |  |  | 4-22 | 1 | 0 | 04-26-17 |
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|  | 2-2 | 1 | 0 | 04-26-17 |  |  | 4-24 | 2 | 0 | 08-14-17 |
|  | 2-3 | 1 | 0 | 04-26-17 |  |  | 4-25 | 2 | 0 | 08-14-17 |
| 3 | 3-1 | 1 | 0 | 04-26-17 |  |  | 4-26 | 2 | 0 | 08-14-17 |
|  | 3-2 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
| 4 | 4-1 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-2 | 2 | 0 | 08-14-17 |  |  |  |  |  |  |
|  | 4-3 | 2 | 0 | 08-14-17 |  |  |  |  |  |  |
|  | 4-4 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-5 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-6 | 1 | 3 | 07-27-2020 |  |  |  |  |  |  |
|  | 4-7 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-8 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-9 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-10 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |
|  | 4-11 | 2 | 1 | 14-08-18 |  |  |  |  |  |  |
|  | 4-12 | 2 | 1 | 14-08-18 |  |  |  |  |  |  |
|  | 4-13 | 2 | 1 | 14-08-18 |  |  |  |  |  |  |
|  | 4-14 | 2 | 0 | 08-14-17 |  |  |  |  |  |  |
|  | 4-15 | 2 | 0 | 08-14-17 |  |  |  |  |  |  |
|  | 4-16 | 1 | 0 | 04-26-17 |  |  |  |  |  |  |

# **DISTRIBUTION LIST**

|  |  |  |
| --- | --- | --- |
| **NAME** | **DEPT / AREA** | **DESIGNATION** |
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| Siti Hafsah Mohd Desa | IT Dept | Head IT |
| Wan Mohd Husni Wan Hussein | AMS | AMS SDM |

Table 1: Distribution list

# **LIST OF ABBREVIATIONS**

The following are the abbreviations used for the purpose of simplification.

|  |  |
| --- | --- |
| **Abbreviation** | **Denote** |
| GATS | Government Approval Tracking System |
| SOD | System Operation Document |
| SOW | Statement of Work |
| PAX | Passenger |

Table 2: List of Abbreviations

# **1.5. CONDITION OF USE**

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1. - MANUAL BACKGROUND

# **INTRODUCTION**

This is the GATS SOD, hereinafter referred to as “the Policy” provides comprehensive operating procedures within the scope and application herein defined in Part 2 Section 3.0 for Malaysia Airlines Berhad (MAB).

# **PURPOSE**

The objective of this document is to provide relevant information required to operate and support “GATS” application. The platform is ready for implementation and handover to IT Operations.

# **SCOPE AND APPLICATION**

This SOD covers relevant information required to operate and support the GATS to a certain extent and will be dependent on the product vendor, as MAB does not own the source codes of the GATS application.

# **TERMINOLOGY**

|  |  |  |
| --- | --- | --- |
| **S.No** | **Term** | **Description** |
| 1. | EAI | Enterprise Application Integration |
| 2. | DR | Disaster Recovery |
| 3. | DB | Database |
| 4. | GATS | Government Approval Tracking System |
| 5. | SOD | System Operational Document |
| 6. | SOW | Statement of Work |

Table 3: Terminology

# **REFERENCES**

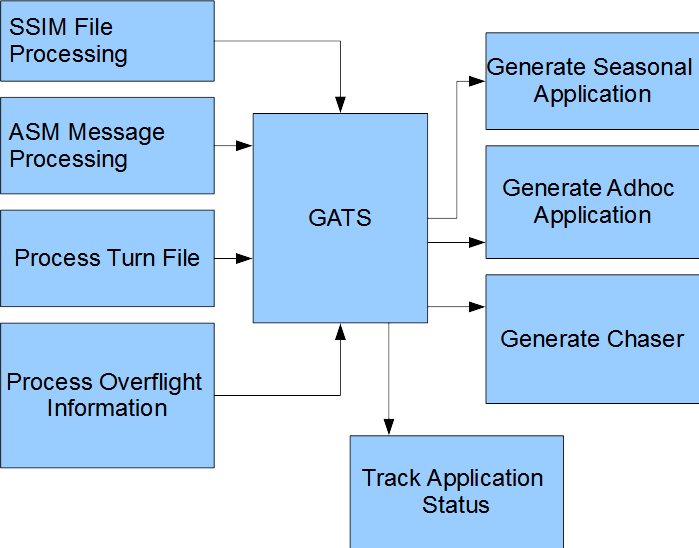
| **No** | **Document** | **Description** |
| --- | --- | --- |
| 1 | User Guide | User Guide |
| 2 | SOW | Statement of Work as supplied as agreed upon between TCS and MAB |
| 3 | Technical Design Document | Document highlighting the Technical Design & architecture of the collaboration platform. This is supplied by TCS |
| 4 | Test Plan Document | Document highlighting the Test plan for the collaboration platform. This is supplied by TCS |
| 5 | Functional Document | Document highlighting all the functional requirements of the system. This is supplied by TCS |
| 6 | DB Design Document | Data base model and its specifications. |

Table 4: References

1. - OVERVIEW OF BUSINESS PROCESS

# **OVERVIEW OF BUSINESS PROCESS**

Below diagram represents the business process overview.



1. - MANUAL CONTENT TITLE

# **4.1 Systems overview**

The primary purpose of GATS (Government Approval and Tracking System) is to provide a tool for Operations Planning Department users to:

1. Prepare seasonal landing and over flight applications [Application is referred as Government Approval document for landing flight or over flight (fly over any country space) in a particular country]
2. Be forewarned on schedule changes
3. Monitor the status of each application made
4. Monitor the status of chasers

The secondary purpose of GATS is to be able to

1. Generate Ad Hoc landing and Over flight applications
2. Retrieve approval status prior dispatch of aircraft

**Government Approval Tracking System (GATS)** is developed with the below features.

1. Low Maintenance Functions

Functions categorized under Low Maintenance will be as mentioned below

* User Master
* Role Master
* Parameter Master
* Country Master
* Station Master
* Airline Master
* Aircraft Master
* Over Flight Detail Master
* Repetitive Flight Plan
* R Form Master
* Import Country Codes
* Import Station Details
* Import Aircraft Details
* Import Over Flight Details
* Export Over Flight Details
* UTC Variance Master

1. High Maintenance Functions

Functions categorized under High Maintenance will be as mentioned below

* Season Periods
* Remarks Master
* DST Variance
* Code Share Details
* Traffic Rights
* Select Adhoc Flights
* Adhoc Flights Entry
* Delete Itinerary Details
* Import Itinerary Details
* Import Turn Details
* View ASM Messages
* Key In Seasonal Reference
* Key In Adhoc Reference
* Key In Chaser Status
* Import RPL Details

1. Reports Functions

Functions categorized under Reports will be as mentioned below

* Generate Seasonal Application
* Generate Adhoc Application
* ASM/SSM Message Status
* Application Status By Country
* Application Status By Flight
* Application No’s Verification
* Generate Chaser

Adhoc Flight Message Processing –Back end feature to process incoming adhoc Type B ASM messages from FlightTime and FMCS, parse the data and load the data into GATS database.

# **4.2 SYSTEM CONCEPT DIAGRAM**

## **4.2.1 PRODUCTION SYSTEM CONCEPT DIAGRAM**

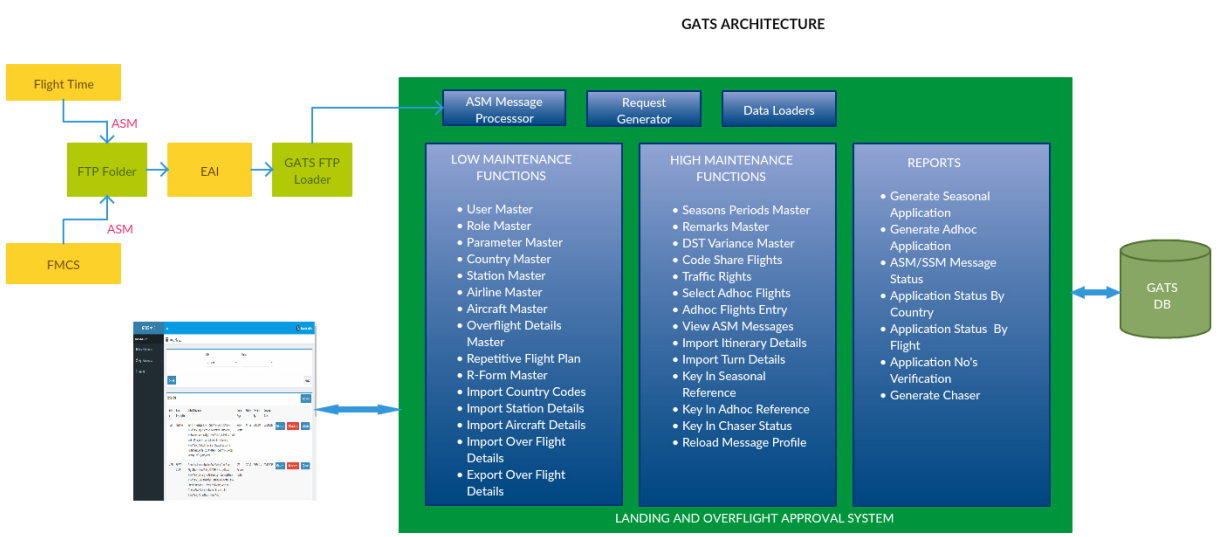
**

Figure 1: system concept diagram

## **4.2.2 Apps Server Component**

# **4.3 INTERFACES**

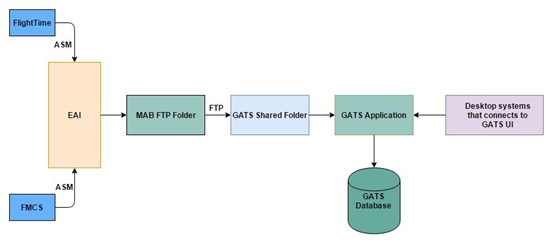
## **4.3.1 User Interfaces**

|  |  |  |
| --- | --- | --- |
| **No** | **Interfaced system** | **Description** |
| 1. | Web Browser | User can launch the application via http://gats.mas.net:8080/gats |

Table 5: User Interfaces

## **4.3.2 System Interfaces**

The following diagram shows the GATS application system interfaces

C:\Users\870743\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\A3770E02.tmp

Following is the list of the message interfaces to GATS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Source (Sender)** | **Interfaced system** | **Destination (Receiver)** | **Description** |
| 1. | FMCS | EAI | GATS | Standard Type B |
| 2. | FlightTime | EAI | GATS | Standard Type B |

Table 6: Message Interface

# **4.4 WARRANTY AND MAINTENANCE PERIOD**

|  |  |  |
| --- | --- | --- |
|  | **Start Date** | **End date** |
| Warranty Period | 20-Mar-17 | 9-May-17 |
| Maintenance and Support period | 1-May-19 | 30-Apr-2024 |

Table 7: Warranty and Maintenance period

# **4.5 ROLES AND RESPONSIBILITIES**

|  |  |
| --- | --- |
| **Activity** | **Responsible Party** |
| Maintenance and support of GATS application during the warranty period. | TCS |
| Maintenance and support of GATS application after end of the warranty period. | ATOS |
| System Owner and Business owner | Mohd Fadli Md. Yusuf |

Table 8: Roles and Responsibilities

# **4.6 Technical specifications**

|  |  |  |
| --- | --- | --- |
| **No** | **Specification** | **Purpose** |
| 1. | Project goals | Defined in the scope |
| 2 | Architecture/infrastructure | Defined in the TDD document. |
| 3 | User dialogs and the control flow | Defined in the User Interface System |
| 4 | Database model | Defined in the DB design attachment |
| 5 | Interfaces to other systems | Defined in the System interface section |

Table 9: Technical Specifications

*.*

## **4.6.1 Hardware specifications**

## 

|  |  |  |
| --- | --- | --- |
| **NO** | **Category** | **Configuration** |
| 1. | Production Server  (Azure Public Cloud - Singapore) | Web Server  Name: MASG-1GATSAP  IP: 10.221.4.53  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.39 GHz  CPU – 2 Core  Memory – 4 GB  Storage – C Drive - 127 GB  Database Server  Name: MASG-1GATSDB  IP: 10.221.6.28  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.39 GHz  CPU – 4 Core  Memory – 8 GB  Storage:-  C Drive - 127GB  D Drive - 300GB  E Drive - 300GB |
| 2. | Disaster Recovery Server  (Azure Public Cloud – Hong Kong) | Web Server  Name: MAHK-2GATSAP  IP: 10.222.4.19  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.39 GHz  CPU – 2 Core  Memory – 4 GB  Storage - C Drive - 127GB  Database Server  Name: MAHK-2GATSDB  IP: 10.222.6.14  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.39 GHz  CPU – 2 Core  Memory – 4 GB  Storage :-  C Drive - 127GB  D Drive - 300GB  E Drive - 300GB |
| 3. | Test Server  (Azure Public Cloud - Singapore) | Web Server  Name: MASG-3GATSAP1  IP: 10.221.12.44  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.39 GHz  Memory – 3.5GB  Storage - C Drive - 127GB  Database Server  Name: MASG-3GATSDB1  IP: 10.221.14.41  Intel(R) Xeon(R) CPU E5-2673 v3 @ 2.40GHz 2.40 GHz  Memory – 7GB  Storage :-  C Drive - 127GB  D Drive - 128GB  E Drive - 128GB |

Table 10: Hardware Specifications

## **4.6.2 Software specifications**

**Server software**

|  |  |  |
| --- | --- | --- |
| **Server Name** | **Environment** | **System Software Implemented** |
| Application Server: MASG-1GATSAP | Production | App Server: Windows Server 2012 R2, Apache Tomcat 7, JDK 8 |
| Database Server:  MASG-1GATSDB | DB Server : Microsoft SQL Server 2014 |
| Application Server:  MAHK-2GATSAP | Disaster Recovery | App Server: Windows Server 2012 R2, Apache Tomcat 7, JDK 8 |
| Database Server:  MAHK-2GATSDB | DB Server : Microsoft SQL Server 2014 |
| Application Server:  MASG-3GATSAP1 | Test | App Server: Windows Server 2012 R2, Apache Tomcat 7, JDK 8 |
| Database Server:  MASG-3GATSDB1 | DB Server : Microsoft SQL Server 2014 |

Table 11: Server software

## **4.6.3 Communication / Network Specification**

|  |  |  |
| --- | --- | --- |
| **No** | **Category** | **Configuration** |
| **1** | **Protocol** | **Server: TCPIP**  **Client: TCPIP** |

Table 12: Network specifications

## **4.6.4 User and Equipment Locations**

Users are located in KLIA Admin Building, SSZ

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Equipment** | **Equipment Model** | **Location** |
| 1. | Production Web | Azure Public Cloud | Singapore |
| 2. | Production Database | Azure Public Cloud | Singapore |
| 3. | Disaster Recovery Web | Azure Public Cloud | Hong Kong |

Table 13: Equipment locations

## **4.6.5 File Management**

### **4.6.5.1 Libraries and files**

GATS files are stored at client in following directory:

* ASM Input Folder : C:/GATS/ASM/ASM\_MESSAGE\_INPUT
* Application File Location: C:/GATS/ApplFilePath
* Chaser File Path: C:/GATS/ChaserFilePath

### **4.6.5.2 DBMS setup**

The following table describes the DBMS setup of the GATS application

|  |  |  |
| --- | --- | --- |
| GATS Database | | |
| DB Path | **Production/DR** | |
| Production | D:\Data\GATS.mdf |
| DR | D:\Data\GATS.mdf |
| **Test** | |
| Test | D:\Data\GATS.mdf |
| DB Log Path | **Production/DR** | |
| Production | E:\Log\GATS\_log.ldf |
| DR | E:\Log\GATS\_log.ldf |
| **Test** | |
| Test | E:\Log\GATS\_log.ldf |

Table 14: Database

Total initial space allocated for the both databases is 445.56 MB

Database Description

|  |  |  |
| --- | --- | --- |
| **Instance Name** | **Port No** | **Database Name** |
| (Production) | 1433 | gatsdb.mas.net (10.221.6.28) |
| (Test) | 1433 | gatstestdb.mas.net (10.221.14.41) |

Table 15: Database description

# **4.7 Technical operations guide**

Technical operations on the system is limited to the following the cut-over.

* Monitoring the email alerts of failures
* Disk and Memory usage.

## **4.7.1 Installation Procedures**

Refer to the product installation guide in appendix.

## **4.7.2 Monthly Server Reboot**

Not Applicable

## **4.7.3 Backup and Recovery**

Azure recovery services vault used for Azure VM Backup. Recovery Services vault is an entity that stores all the backups and recovery points that have been created over time. The vault also contains the backup policies that will be applied to the virtual machines being backed up

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Server Name / Hostname** | **Environment** | **Backup Component** | **Backup Type (Full / Incremental)** | **Frequency** | **Schedule Time (MYT)** | **Retention / No. of Versions** |
| MASG-1GATSAP | Production | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 6 Weeks |
| Production | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 3 Months |
| MASG-1GATSDB | Production | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 6 Weeks |
| Production | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 3 Months |
| MAHK-2GATSAP | DR | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 5 Weeks |
| DR | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 2 Months |
| MAHK-2GATSDB | DR | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 5 Weeks |
| DR | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 2 Months |
| MASG-3GATSAP1 | UAT | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 4 Weeks |
| UAT | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 2 Months |
| MASG-3GATSDB1 | UAT | Image Backup | Full | Weekly | Saturday 8:00:00 PM | 4 Weeks |
| UAT | Image Backup | Full | Monthly | First Saturday 8:00:00 PM | 2 Months |

Table 16

**DB Backup:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Server Name / Hostname** | **Environment** | **Backup Component** | **Backup Type (Full / Incremental)** | **Frequency** | **Schedule Time (MYT)** | **Retention / No. of Versions** |
| MASG-1GATSDB | Production | Database | Full | Daily | 18:00 | 90 Days |
| MASG-1GATSDB | Production | Database | Log | Daily | Every hour | 90 Days |
| MASG-1GATSDB | Production | Database | Differential | Daily | 14:00 | 90 Days |
| MASG-3GATSDB1 | UAT | Database | Full | Daily | 22:00 | 15 Days |
| MASG-3GATSDB1 | UAT | Database | Log | Daily | Every hour | 15 Days |
|
|

Table 17: Backup and recovery

Backup and restore validation will be performed on every half yearly basis following the change management process.

## **4.7.4 System Startup and Restart**

There will be a system startup activity due to following reasons:-

* Power Failure
* System startup after it is successfully shutdown to clear the system hang-up problem.

Below is the procedure to startup the system.

|  |  |  |
| --- | --- | --- |
| **No** | **Procedure** | **Description** |
| 1. | Bring up the GATS Application Server | Wintel Team will be performing this activity. |
| 2. | Bring up the GATS database. | Wintel team & Database Team will be performing this activity. |

Table 18: Procedure

Note: Application services has to be taken care by AMS team, also issue related to application related services has to be addressed by AMS team

### **4.7.4.1 Production Server**

GATS Database and Application services are to be started/stopped manually.

### 

### **4.7.4.2 DR Server**

GATS Database and Application services are to be started/stopped manually.

## **4.7.5 System Shutdown**

Below is a list of procedure to bring down the system:

|  |  |  |
| --- | --- | --- |
| **No** | **Procedure** | **Description** |
| 1. | Bring down the GATS Database | DBA Team will be perf`orming this activity. |
| 2. | Bring down the GATS Application Server | Wintel Team will be performing this activity. |

Table 19: Shutdown procedure

Note: Application services has to be taken care by AMS team, also issue related to application related services has to be addressed by AMS team

## **4.7.6 Monitoring Tools**

GATS servers will be monitoring by SCOM Monitoring System.

System Center Operations Manager (SCOM) is a cross-platform data center monitoring system for operating systems, applications and hypervisors. It uses a single interface that shows state, health and performance information of computer systems.

WAU Operator should contact relevant person(s) from Infra or AMS team whenever an alert message is flagged on the console.

1. Disk Space
2. Memory
3. Log Files
4. Threads Usage
5. Database Statistics

## **4.7.7 Source Code Version Control**

## **GATS Binaries**

|  |  |  |
| --- | --- | --- |
| **S.NO** | **Binaries** | **Description** |
| 1 | gats.war | Location: http://10.221.4.5/svn/SRAS/SRAS/GATS/Binaries |
| 2 | Trunk | http://10.221.4.5/svn/SRAS/SRAS/GATS/Source\_Code/trunk |
| 3 | Branch | http://10.221.4.5/svn/SRAS/SRAS/GATS/Source\_Code/branches/B3-CHG0010517 |

Table 20: Binaries

Executable are store in the following path :

* *Phase-1* [*http://10.221.4.5/svn/SRAS/SRAS/GATS/Binaries/BUG\_FIX\_RELEASE\_17APR2017/gats.war*](http://10.221.4.5/svn/SRAS/SRAS/GATS/Binaries/BUG_FIX_RELEASE_17APR2017/gats.war)
* *Phase-2 http://10.221.4.5/svn/SRAS/SRAS/GATS/Binaries <Exact URL will be updated later>.*

## **4.7.8 Preparation of Production Environment**

### **4.7.8.1 Program / Macro**

None

### **4.7.8.2 Network Definitions**

None

### **4.7.8.3 Desktop Configuration**

None

## **4.7.9 Batch Jobs**

None

## **4.7.10 Report Management**

None

## **4.7.11 Baseline Performance Information**

Expected GATS response time are as following with respect to the listed activities:

|  |  |
| --- | --- |
| **Activity** | **Expected Response Time** |
| Loading each screens | < 5 seconds |
| Loading each module | < 5 seconds |

Table 21: Baseline performance information

# **4.8 Maintenance and support**

## **4.8.1 Problem Logging**

Users will log any problem pertaining Apps to Helpdesk by telephone call or by sending mail to HELPDESK.

Helpdesk will be equipped with guidelines on how to perform 1st level troubleshooting and log problem accordingly

## **4.8.2 Problem Categorization and Escalation**

Helpdesk will analyze the problem and assign a ticket number and a severity level which is mutually agreed by the user. However, the severity will be revised downward based on business assessment and impact as shown below

|  |  |  |
| --- | --- | --- |
| **Severity** | **Code** | **Definition of Severity Level** |
| Critical | S1 | Total Biz Operation Disruption |
| High (Urgent) | S2 | Partial Biz Operation Disruption |
| Moderate (Minor) | S3 | No critical impact to Biz operations, Workaround is available |
| Low (Monitor) | S4 | Problem that cause inconvenience |

Table 22: Problem categorization

Any issues with GATS application, users will escalate to MAB IT HELPDESK.A problem ticket will be created by the Level 1 MAB Helpdesk and route to the MAB second level support for application related problem to AMS team, system related problem to Wintel team and database related problem to DBA team.

BCD for this application is 2.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Business Unit** | **Business Unit** | **1st Level Support** | **2nd Level Support** | **3rd Level Support - Vendor Warranty Support** |
| Business Users | Business Support (GATS Team) | MABIT Helpdesk | IT operations   * AMS | NA |
| IT operations   * Infra | Vendor  Hardware maintenance |

Table 23: Escalation Matrix

## **4.8.3 Application / Technical Support**

The following is the Problem Resolution Structure:

|  |  |  |
| --- | --- | --- |
| **2nd Level Support** | **Name** | e-Mail |
| Application Support | APP – GATS | GD\_AMS\_GATS@malaysiaairlines.com |
| System Support | TCS\_Wintel | [GD\_TCSWintel@malaysiaairlines.com](mailto:Gd_tcswintel@malaysiaairlines.com) |
| Database Support | TCS\_DB | [GD\_TCSDatabase@malaysiaairlines.com](mailto:Gd_tcswintel@malaysiaairlines.com) |
| Storage Management | TCS\_Storage | [GD\_TCSDatabase@malaysiaairlines.com](mailto:Gd_tcswintel@malaysiaairlines.com) |
| Network Support | TCS\_Network | [GD\_TCSNetwork@malaysiaairlines.com](mailto:GD_TCSNetwork@malaysiaairlines.com) |

Table 24: Application/Technical support

Level 2 Application supports are as listed below:

Perform On-Going Application Support;

* Application Monitoring.
* Data Maintenance.
* Attend to BU Queries and Requests.
* Application housekeeping.
* Manage Test, Staging, UAT & DR application environment.

Perform Application Management;

* Raise the Service Now request for corrective maintenance and obtain the necessary approvals.
* Consolidate information for Change / Release Management and obtain the necessary approvals for corrective maintenance.
* Perform/Coordinate impact assessment for new changes.
* Consolidate updated technical inputs from respective parties into the SOD to maintain currency.
* Liaise with respective parties to review & report on Application Health Check
* Update Application Inventory to maintain currency.
* Provide audit support ((MAB Internal/External Audits).
* Provide support for Disaster Recovery (DR) exercise.

Liaise with Infra, Network Team and BU;

* Work with the respective parties to ensure UAT for fixes and patches are performed until completion.
* Support on Infra related changes e.g. OS patches and upgrade.
* Perform the Installation of fixes and patches in test environment
* Work with the respective parties to ensure production implementation and verification is done successfully.
* Participate in application operation reviews with the respective parties.

# **4.10 Contract management**

Contractor / Vendor relationship will be managed via the following contracts.

|  |  |  |
| --- | --- | --- |
| **No** | **Contract** | **Parties** |
| 1 | Service contract for AMS support | Signed between MAB and ATOS |

Table 25: Contract Management

# **4.11 Handover items**

The following documents / items is handover to Operations together with this System Operation Document during the Handover session.

1. Project cutover plan
2. UAT signoff by Business Owner
3. Training materials
4. System GATS User Guide
5. System GATS Technical Manuals and Installation Guides
6. Softcopy of GATS System Operations Document

# **4.12 Information security**

**4.12.1 AUDIT AND COMPLIANCE REQUIREMENTS**

|  |  |  |
| --- | --- | --- |
| **Activity** | **Frequency** | **Responsible Party** |
| Perform ID review every quarter and submit result to IRS  [Req: ISO 27001, PCI-DSS] | Quarterly | ID Admin |
| Update user access matrix and submit to IRS  [Req: ISO 27001, PCI-DSS] | Yearly | System Owner |
| Install Critical Security Patches for the application and submit report to IRS  [Req: ISO 27001, PCI-DSS] | Quarterly | System Owner |
| Performed Backup restoration  [Req: ISO 27001, PCI-DSS] | Yearly | System Owner |
| Review & update security documentation and submit to IRS:   * Super/privilege IDs and access * Security Controls Setting * Audit Logs setting * System bypass * List of connections and integration * List of used ports * Data encryption setting * Application/system schematic diagram   [Req: ISO 27001] | Yearly | System Owner |

Table 26: Audit and compliance requirements

**4.12.2 PASSWORD POLICY COMPLIANCE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Password Policy Requirements** | **Yes** | **No** | **Remarks** |
|  | Password length at least 8 characters (minimum) |  | No |  |
|  | Alphanumeric | Yes |  |  |
|  | Change temporary password at first logon | Yes |  |  |
|  | Password expiry = 90 days (maximum) | Yes |  |  |
|  | Password reuse generation = 5 (minimum) | Yes |  |  |
|  | Account lock out after 5 failed login attempts | Yes |  |  |
|  | Application shall disconnect or suspend inactive sessions= 15 Minutes |  | No |  |
|  | Wrong password shall be recorded in an audit log | Yes |  |  |

Table 27: Password policy

**4.12.3 USER ACCESS MATRIX**

There are three general user role categories:

* ADMIN
* USER
* SUPPORT ADMIN

Below Table describes the features and access rights for each system user type.

| **Features** | **Roles** | | |
| --- | --- | --- | --- |
| **ADMIN** | **USER** | **SUPPORT ADMIN** |
| User Master | Read and Write | No Access | Read and Write |
| Role Master | Read and Write | No Access | Read and Write |
| Parameter Master | Read and Write | Read Only | Read and Write |
| Country Master | Read and Write | Read and Write | Read and Write |
| Station Master | Read and Write | Read and Write | Read and Write |
| Airline Master | Read and Write | Read and Write | Read and Write |
| Aircraft Master | Read and Write | Read and Write | Read and Write |
| Over Flight Details Master | Read and Write | Read and Write | Read and Write |
| Repetitive Flight Plan | Read and Write | Read and Write | Read and Write |
| R-Form Master | Read and Write | Read and Write | Read and Write |
| Import Country Codes | Read and Write | Read and Write | Read and Write |
| Import Station Details | Read and Write | Read and Write | Read and Write |
| Import Aircraft Details | Read and Write | Read and Write | Read and Write |
| Import Over Flight Details | Read and Write | Read and Write | Read and Write |
| Export Over Flight Details | Read and Write | Read and Write | Read and Write |
| Seasons Periods Master | Read and Write | Read and Write | Read and Write |
| Remarks Master | Read and Write | Read and Write | Read and Write |
| DST Variance Master | Read and Write | Read and Write | Read and Write |
| Code Share Flights | Read and Write | Read and Write | Read and Write |
| Traffic Rights | Read and Write | Read and Write | Read and Write |
| Select Adhoc Flights | Read and Write | Read and Write | Read and Write |
| Adhoc Flights Entry | Read and Write | Read and Write | Read and Write |
| View ASM Messages | Read and Write | Read and Write | Read and Write |
| Import Itinerary Details | Read and Write | Read and Write | Read and Write |
| Import Turn Details | Read and Write | Read and Write | Read and Write |
| Key In Seasonal Reference | Read and Write | Read and Write | Read and Write |
| Key In Adhoc Reference | Read and Write | Read and Write | Read and Write |
| Key In Chaser Status | Read and Write | Read and Write | Read and Write |
| Generate Seasonal Application | Read and Write | Read and Write | Read and Write |
| Generate Adhoc Application | Read and Write | Read and Write | Read and Write |
| ASM/SSM Message Status | Read and Write | Read and Write | Read and Write |
| Application Status By Country | Read and Write | Read and Write | Read and Write |
| Application Status By Flight | Read and Write | Read and Write | Read and Write |
| Application No's Verification | Read and Write | Read and Write | Read and Write |
| Generate Chaser | Read and Write | Read and Write | Read and Write |
| Reload Message Profile | No Access | No Access | Read and Write |
| UTC Variance Master | Read and Write | Read and Write | Read and Write |
| Import RPL | Read and Write | Read and Write | Read and Write |

Table 28: User access matrix

# **4.13 Documentation and references**

| **No** | **Document** | **Location and reference** |
| --- | --- | --- |
| 1. | User Guide | Please refer Appendix |
| 2. | Administrator Guide | Not Applicable |
| 3. | GATS Technical Design Document | Please refer Appendix |
| 4. | GATS User Manual | Please refer Appendix |
| 5. | GATS Database Design Document | Please refer Appendix |

Table 29: Document and references

# **AppendiX**



**Change requests**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Change request** | **Date** | **Description** | **MH fix Included?** | **Impacted version** |
| CHG0010517 | 07-06-2017 | Enhancement | No | 2.0 |
| CHG0012285 | 12-02-2018 | AO Vietnam Report Discrepancy | No | 2.0 |
| CHG0015806 | 11-11-2019 | To fix missing data when generating Seasonal overflight application using SO GENERAL Format (INC0143996 ) | No | 2.0 |
| CHG0016919 | 02-01-2020 | Increase GATS Server Memory | No | 2.0 |

Table 30: Change request

**PATCH MANAGEMENT REPORT**

Application : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner **: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Date** | **Patch / Service Pack Applied** |
|  |  |
|  |  |
|  |  |
|  |  |

**Prepared By: Approved By:**

**.................................................... ..................................................**

**System Admin System Owner**

**BACKUP RESTORATION REPORT**

Application : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner **: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Date** | **Status of Restoration** |
|  |  |
|  |  |
|  |  |
|  |  |

**Prepared By: Approved By:**

**.................................................... ……………………………………**

**Backup Admin System Owner**

**NON COMPLIANCE REPORT**

Application : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner **: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Date** | **Reference Number** | **Description** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Prepared By: Approved By:**

**.................................................... ....................................................**

**System Admin System Owner**

**END OF DOCUMENT**