**Backup, Storage and Recovery**

**Purpose**

The object of this document is to provide an information about how Golden India Database security, backup, storage and recovery plan can be secured against loss or failure. How data can be configured for back and recovery, how database can be set up for regular maintenance scheduled.

**Scope**

The Golden India security, backup, storage and recovery plan describes and data handling protocol that will be implemented to secure and protect data confidentiality.

**Introduction**

Backup refers to making copies of data so that copies can restore the original data after a data loss event. Backups are extremely important for computer management. To ensure the database backup and security how data can be maintained and managed, a strategy that creates regular back-up of data has been developed for Golden India database. Microsoft SQL server and Tableau Server reporting are the two systems are being used to manage the database. SQL server is a Microsoft product is a relational database management system that used to manage and store information. Tableau Data management is being used to manage the reporting with tableau from data preparation to cataloging, and from governance to self-service analytics. This system helps in better management, and also enable the team to build analytics on the right data and it provide the data visibility and control needed to drive trust in the data environment. It also allows everyone to be confident the right data is being used for analysis.

**Data Backup**

Any backup strategy starts with a concept of data repository. The backup data needs to be stored and organized. The Golden India project data will be backed up and written to tape each evening. The backup tapes will be stored offsite in a secure concrete and steel reinforced media vault. The storage facility will be monitored 24 hours a day by an independent security firm.

**Methods**

**Full backup-** It captures all files for backup and require a large storage capacity and time to record information. It’s kind of incremental backup system that simply written a list of all backups on a sheet of paper. Every time it take another backup that only include the changes since the previous full back up or previous incremental backup. When it restore the system we must load the full backup then each incremental backup since that full backup.

**Differential backup**- A differential system works by first taking a full backup. Then, every time it takes another backup as we include all the changes since that full backup. In this system we may have the same files backed up over multiple different backups rather than just one backup.

**Media**- The external hard drives are most commonly storage media for home uses. The External hard drives can easily be connected via USB or FireWire or networked hard drives are connected through Ethernet. Networked hard drives are easy ways for multiple computers on a network to back up to one centralized location. Another popular media for home use in small portions are optical discs (CDs, DVDs).

**Data Recovery**

Every organization has a set of procedures for data recovery, and these recovery procedures works in concert with the contingency plan. Like equipment repaired and reconfigured, retrieve back up media, software and plan from storage.

In Tableau server, an administrator performs regular database maintenance, including monitor disk usage on the server, clean up unnecessary files to free up space on the server, and back up Tableau server and its data.

In SQL database backups of up to 5 days are stored on the existing database server if implementing nightly backups. Backups are implemented automatically using scripts after normal business hours so as not to affect performance during business hours. Server disk image backups occur generally around 12 a.m.

**Data Transfer**

Abstracted data will be transferred to the secure network and deleted from the laptop as quickly as possible, and no more than 48 hours from the time the data were entered. Electronic data transfer will be protected with 128-bit SSL encryption.

**Data File Preparation and Delivery**

Golden India project staff will separate and store separately all personally identifying information. These data will be linked to other abstracted data via a random link identifier. Final data files will be written to encrypted stand-alone data storage devices that will be hand-delivered to the Golden India Project Manager.

**Data Archiving and Disposal**

Golden India project staff will be established the data archive that ensure the safe transport and storage of archived materials. They will also implement standard data disposal procedures for secure disposal of survey materials.

**Audit and Accountability**

Golden India project personnel will create, protect, and retain information system audit records for the monitoring, analysis, investigation, and reporting of unlawful, unauthorized, or inappropriate information system activity.

Finally, it is all up to the database administrator whether he is confident that the recovery plan is works. A successful recovery plan is that when the DBA is confidence with its procedures and practices. And he also is comfortable with performing a restore on a database in their control.

**Roles and Responsibilities**

**Data Manage:**

* Design, develop, and modify data management infrastructure to expedite data analysis and reporting**.**
* Develop standard operating procedures for data handling and archiving.
* Provide guidance in identifying and defining data requirements.

**Database administrators (DBAs):**

* Software installation and Maintenance
* Data Extraction, Transformation, and Loading
* Specialized Data Handling

**Tableau Developer:**

* Preparing data for use by Tableau.
* Establishing connections to Data Sources.
* Adding or Creating Dimensions, Measures and Calculations.
* Monitoring Usage Report of their Workbooks and Data Sources.