

BACKUP AND RECOVERY PROCEDURE			
Owner	: AGUNG SRIYONO	Issue Date	: 8 Jul 2019
Manager	: KAPIL SHARMA	Effective Date	: 18 Jul 2022

## 1. SCOPE (*RUANG LINGKUP*)

### 1.1 Scope

This procedure is limited to the backup and recovery of Bandung Servers.

*Prosedur ini terbatas pada pencadangan dan pemulihan server di site Bandung.*

## 2. PURPOSE (*TUJUAN*)

### 2.1 Purpose

To provide an overview of the backup and recovery process, to provide a management narrative and a definition of the specific control activities and responsibilities, within the organization, to support the backup and recovery process.

*Untuk memberikan gambaran proses pencadangan dan pemulihan, untuk menyediakan narasi manajemen, definisi kegiatan khusus dan tanggung jawab kontrol di dalam organisasi, untuk mendukung proses pencadangan dan pemulihan.*

## 3. REFERENCE & ASSOCIATED DOCUMENTS (*REFERENSI DAN DOKUMEN TERKAIT*)

3.1 IT-04-204-UTC-008A Backup Management

## 4. DEFINITION (*DEFINISI*)

### 4.1 Definition

Backup, or the process of backing up, refers to the copying and archiving of computer data so it may be used to restore the original after a data loss event.

*Pencadangan atau proses pencadangan, mengacu pada penyalinan dan pengarsipan data komputer sehingga dapat digunakan untuk memulihkan data yang asli setelah peristiwa kehilangan data.*

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## 6. PROCESS FLOWCHART (*DIAGRAM ALIR PROSES*)

N/A

## 7. RESPONSIBILITY (*TANGGUNG JAWAB*)

### 7.1 Responsibility

#### 7.1.1 BU IT Local:

- Conducting a restore test for one server on each backup system at least annually.
- Ensuring that the backup media does not exceed the manufacturer's recommended useful life.
- Ensuring appropriate offsite storage for backups is in compliance with UTC IT Procedure IT-04-403.



- Ensuring that appropriate business unit personnel review the backup logs or reports of the backup logs on a daily basis.
- Ensuring any unsuccessful backups are re-run to successful completion within 24 hours of the failure.
- *Melakukan uji pemulihan untuk satu server pada setiap sistem cadangan setidaknya setiap tahun.*
- *Memastikan bahwa media cadangan tidak melebihi masa manfaat yang direkomendasikan.*
- *Memastikan penyimpanan di luar kantor yang sesuai untuk cadangan telah sesuai dengan Prosedur IT UTC IT-04-403.*
- *Memastikan bahwa personel unit bisnis yang sesuai meninjau log cadangan atau laporan log cadangan setiap hari.*
- *Memastikan cadangan yang tidak berhasil, dijalankan kembali untuk penyelesaian sampai berhasil dalam waktu 24 jam sejak kegagalan.*

#### 7.1.2 Third Party Providers (DXC and MMI)

- All data and software stored by a Third Party Provider must be appropriately backed up and recoverable.
- *Semua data dan perangkat lunak yang disimpan oleh Penyedia Pihak Ketiga harus didukung dan dipulihkan dengan tepat.*

### 8. CRITICAL REQUIREMENTS (PERSYARATAN KRITIS)

8.1 -EHS Requirements-  
N/A

8.2 -Quality Requirements-  
N/A

### 9. REQUIREMENTS (PERSYARATAN)

#### 9.1 Daily backups

- 9.1.1 An incremental backup will be performed daily on Monday, Tuesday, Wednesday and Thursday. The backup is scheduled to begin at 7pm on each evening to ensure minimum disruption to the business.  
*Pencadangan secara bertahap akan dilakukan setiap hari pada hari Senin, Selasa, Rabu dan Kamis. Pencadangan dijadwalkan mulai pukul 7 malam untuk memastikan gangguan minimum pada bisnis.*
- 9.1.2 A backup log is produced that indicates the success status of the backups. DXC checks the log of the backup for the previous night, and if there is a backup failure will instigate another backup manually and immediately.



*Log cadangan dibuat yang menunjukkan status keberhasilan cadangan. DXC memeriksa log cadangan untuk malam sebelumnya, dan jika ada kegagalan cadangan akan memicu cadangan lain secara manual dan segera.*

- 9.1.3 Backup log will be sent to site Collins Bandung representative.  
*Log cadangan akan dikirim ke perwakilan di Collins Bandung.*

## **9.2 Weekly backups**

- 9.2.1 A full backup will be performed on Friday. The backup is scheduled to begin at 7pm on each evening to ensure minimum disruption to the business.  
*Cadangan lengkap akan dilakukan pada hari Jumat. Pencadangan dijadwalkan mulai pukul 7 malam setiap malam untuk mengurangi resiko gangguan pada bisnis.*

- 9.2.2 A backup log is produced that indicates the success status of the backups. DXC checks the log of the backup for the previous night, and if there is a backup failure will instigate another backup manually and immediately.  
*Log cadangan dibuat untuk menunjukkan status keberhasilan cadangan. DXC memeriksa log cadangan untuk malam sebelumnya, dan jika ada kegagalan cadangan akan memicu cadangan lain secara manual dan segera.*

- 9.2.3 Backup log will be sent to site Collins Bandung representative.  
*Log cadangan akan dikirim ke Collins Bandung Site representatif.*

## **9.3 Media on-site control**

- 9.3.1 There are 4 sets of tapes, one for each week. Daily tapes are loaded into the tape library for the next week's daily backups. Weekly tapes are kept in the local onsite fire box safe. There is one set of tapes onsite and three sets of tapes offsite. The tape sets are rotated weekly.  
*Ada 4 set tape, satu untuk setiap minggu. Tape harian dimuat ke tape library untuk cadangan harian minggu depan. Tape mingguan disimpan di brankas kotak penukaran lokal. Ada satu set tape di tempat dan tiga set tape di tempat. Tape berputar setiap minggu.*

## **9.4 Media off-site control**

- 9.4.1 The tapes of the week remain on-site in the locked fire box safe, Every Monday, the most recent set of tapes are sent out to an off-site storage location in a locked case. When the most recent set of tapes are sent off site then the oldest set of tapes are returned to the local onsite fire box safe. A box safe is available in the external location. Tapes are properly labelled and stored. A tape manifest exists which identifies the location of each tape and each set.  
*Tape minggu ini tetap berada di tempat dalam brankas kotak terkunci, Setiap Senin, set Tape terbaru dikirim ke lokasi penyimpanan di luar lokasi dalam brankas yang terkunci. Ketika set Tape terbaru dikirim keluar dari kantor maka set tape tertua dikembalikan ke kotak Brankas lokal yang aman. Brankas kotak tersedia di lokasi eksternal. Tape diberi label dan disimpan dengan benar. Manifes Tape ada yang mengidentifikasi lokasi setiap rekaman dan setiap set.*



- 9.4.2 A log is kept onsite that is signed and dated to confirm that a tape set is being sent off-site, the same log is kept at the off-site location to confirm receipt of a tape set.

*Log disimpan di tempat yang ditandatangani dan diberi tanggal untuk mengonfirmasi bahwa set rekaman dikirim ke luar lokasi, log yang sama disimpan di lokasi di luar lokasi untuk mengonfirmasi penerimaan set rekaman.*

- 9.4.3 Tapes will be returned on demand by the authorized person.

*Tape akan dikembalikan sesuai permintaan oleh orang yang berwenang.*

## **9.5 Security Storage vendor**

MMI - PT. Multifilling Mitra Indonesia Tbk

Kantor Operasional Bandung

Address : Kawasan Industri Mekar Mulya,

Jalan Mekar Raya No. 10

Gede Bage,

Bandung 40613

Tel : (022) 781 2464

Fax : (022) 781 2462

## **9.6 Data retrieval**

- 9.6.1 The data can be retrieved in 4 hour.

*Data dapat diambil dalam 4 jam.*

## **9.7 Backup method**

- 9.7.1 **Networker** is the software used for backup at Bandung.

*Networker adalah perangkat lunak yang digunakan untuk cadangan di Bandung.*

## **9.8 Backup summary table**

Server Name	Backup Strategy	Backup Start Time	Tape Label Sample	Backup Software	Operating System	Systems	Tape Media
GIDBNF02	Incremental	7:00 PM	Daily	Networker	Win 2016	File and Print	Ultrium LTO 6
GIDBNF02	Full	7:00 PM	Friday	Networker	Win 2016	File and Print	Ultrium LTO 6
GIDBND02	Incremental	7:00 PM	Daily	Networker	Win 2016	SQL DB	Ultrium LTO 7
GIDBND02	Full	7:00 PM	Friday	Networker	Win 2016	SQL DB	Ultrium LTO 7



<b>GIDBNF01 + GIDBND01</b>	Incremental	7:00 PM	Daily	Networker	Win 2012 R2	File and Print + SQL DB	Ultrium LTO 5
<b>GIDBNF01 + GIDBND01</b>	Full	7:00 PM	Friday	Networker	Win 2012 R2	File and Print + SQL DB	Ultrium LTO 5

**9.9 Bac  
kup Log**

- 9.9.1 The log of the previous night's backup from **Networker** must be checked by **DXC**.  
*Log cadangan malam sebelumnya dari **Networker** harus diperiksa oleh **DXC**.*

## 9.10 Backup Log Checks and Configuration

- 9.10.1 Backup verification is configured for all daily backups and by **DXC** Team.  
*Verifikasi cadangan dikonfigurasi untuk semua cadangan harian dan Tim **DXC**.*

## 9.11 Data Retrieval

- 9.11.1 If a file must be restored from tape, and the on-site tapes do not contain this file, then an off-site tape must be retrieved from the external fire box safe.  
*Jika file harus dipulihkan dari tape, dan tape di tempat tidak ada file tersebut, maka tape off-site harus diambil dari brankas eksternal.*
- 9.11.2 If a tape is returned onsite then the tape manifest is updated to record the new location of the tape. The returned tape should be on site for as little time as possible and returned to the external location immediately that the data is retrieved.  
*Jika tape dikembalikan ke tempat semula maka Label tape diperbarui untuk merekam lokasi baru tape. Rekaman yang dikembalikan harus berada di lokasi sesedikit mungkin dan segera dikembalikan ke lokasi eksternal agar data tersebut diambil.*



## 9.12 INCREMENT AN FULL BACKUP SETTING

**DELL EMC NetWorker Monitoring Protection Recover Devices**

File Edit View Monitoring Window Help

**Policies**

Name	Status	Group	Start Time	Duration	N
Gold					
Platinum					
Server Protection	✓		7/2/19 2:00:00 PM		
GIDBND02_Full_Friday	✓	GIDBND02_Full_Friday	7/1/19 7:00:01 PM	00:00:00	7/
GIDBND02_Incremental_Monday	✓	GIDBND02_Incremental_Monday	7/1/19 7:00:01 PM	00:04:36	7/
GIDBND02_Incremental_Thursday	✓	GIDBND02_Incremental_Thursday	7/1/19 7:00:01 PM	00:00:00	7/
GIDBND02_Incremental_Tuesday	✓	GIDBND02_Incremental_Tuesday	7/1/19 7:00:01 PM	00:00:00	7/
GIDBND02_Incremental_Wednesday	✓	GIDBND02_Incremental_Wednesday	7/1/19 7:00:01 PM	00:00:00	7/

Policies Actions

**All Sessions (0)**

Type	Client Name	Save Set	Policy	Group	Start Time	Duration	Device	Size	Rate	Pr
------	-------------	----------	--------	-------	------------	----------	--------	------	------	----

All Sessions Save Sessions Recover Sessions Clone Sessions Synthetic Sessions

**Devices**

Status	Device	Storage No...	Library	Volume	Pool	Message
	\\Tape0	gidbnd02.u...	IBM@0.7.1		GIDBND02_InCre...	ejected

**Log**

Priority	Time	Source	Category	Message
!	Tuesday 5:06:54 PM	event	cleanin...	Unable to find a cleaning slot in jukebox 'IBM@0.7.1' for device '\\Tape0'.
!	Tuesday 5:11:55 PM	event	cleanin...	Unable to find a cleaning slot in jukebox 'IBM@0.7.1' for device '\\Tape0'.
!	Tuesday 5:16:56 PM	event	cleanin...	Unable to find a cleaning slot in jukebox 'IBM@0.7.1' for device '\\Tape0'.
!	Tuesday 5:21:57 PM	event	cleanin...	Unable to find a cleaning slot in jukebox 'IBM@0.7.1' for device '\\Tape0'.
!	Tuesday 5:26:58 PM	event	cleanin...	Unable to find a cleaning slot in jukebox 'IBM@0.7.1' for device '\\Tape0'.





Action Start Time: ☒ 7/1/19 7:00:01 PM

Duration: 00:04:35

Action Type: Backup

100%

Status: Succeeded

Total Amount: 6539 MB

Percentage Complete

Action Messages:

Show Action L

suppressed 10533 bytes of output.

7/1/2019 7:02:13 PM The save job for the save set 'Z:\' on the host 'gidbnd02.utcain.com' has been completed.

7/1/2019 7:02:13 PM gidbnd02.utcain.com:Z:\ succeeded.

7/1/2019 7:02:18 PM Group GIDBND02\_InCremental\_Monday waiting for 2 jobs (0 awaiting restart) to complete.

7/1/2019 7:04:28 PM The save job for the save set 'C:\' on the host 'gidbnd02.utcain.com' has been completed.

Waiting to Run (0):

Client Name

Save Set

Command

Level

Currently Running (0):

Client Name

Save Set

Level

Type

Start Time

Duration

Device

Completed successfully (7):

Client Name	Save Set	Level	Save Set ID	Type	Start Time	Duration	Size	File Co...	Mess
gidbnd02.utc...	I\	incr	3189372475		7/1/19 7:00:59 PM	00:01:09	14 MB		Exter
gidbnd02.utc...	E\	incr	3172595259		7/1/19 7:00:59 PM	00:01:09	22 KB		Exter
gidbnd02.utc...	F\	incr	3256481339		7/1/19 7:00:59 PM	00:01:09	22 KB		Exter
gidbnd02.utc...	D\	incr	3206149891		7/1/19 7:00:59 PM	00:01:09	2 KB		Exter
gidbnd02.utc...	Z\	incr	3239704123		7/1/19 7:00:59 PM	00:01:09	22 KB		Exter
gidbnd02.utc...	G\	incr	3155818043		7/1/19 7:00:59 PM	00:01:09	22 KB		Exter
gidbnd02.utc...	C\	incr	3222926907		7/1/19 7:00:59 PM	00:03:29	6524 MB		Exter

Failed (0):

Client Name

Save Set

Level

Type

Start Time

Duration

Messages



**10. LIST OF FORM (DAFTAR FORMULIR)**

10.1 N/A

**11. LIST OF APPENDIX (DAFTAR APENDIKS)**

- 11.1 Appendix A TAPE BACKUP SCHEDULE FLOW  
11.2 Appendix B NON-DISCLOSURE AGREEMENT MMI  
11.3 Appendix C RETRIEVAL TRANSACTION TAPE

**12. REVISION RECORDS (CATATAN REVISI)**

Rev. No.	Description
0	New format of document and superseded procedure of BD-80-09-01
1	Change : <ul style="list-style-type: none"><li>• Backup Application from Veritas to Networker § 9.9</li><li>• Backup Table § 9.8, Picture Setting § 9.12</li><li>• CSC to DXC § 7.1.2, 9.1.2, 9.2.2, 9.10</li><li>• Schedule from Friday to Monday § 9.4.1</li></ul>

Appendix A  
TAPE BACKUP SCHEDULE FLOW

MMI STORAGE

BOX	Description	Quantity
F1	Weekly Tapes	6
F2	Weekly Tapes	6
F3	Weekly Tapes	6
F4	Weekly Tapes	6
S1	Daily Tapes	4
S2	Daily Tapes	4

TAPE FLOW

Week	UTAS	MMI Storage
1	F1,S1	F2,F3,F4,S2
2	F2,S2	F1,F3,F4,S1
3	F3,S1	F4,F1,F2,S2
4	F4,S2	F1,F2,F3,S1



**Appendix B**  
**NON-DISCLOSURE AGREEMENT MMI**

PT. MULTIFILING MITRA INDONESIA Tbk





*Non-Disclosure Agreement*

This document serves as the Non-Disclosure Agreement between PT CSC Indonesia (Herein referred to as "CSC") as referred as "PT Multifiling Mitra Indonesia Tbk", Who desire to investigate the possible of a business agreement related to backup media for CSC.

PT Multifiling Mitra Indonesia Tbk hearby agreed to the following terms as they relate to the disclosure of information considered proprietary by CSC. At no time from the data of the agreement shall PT Multifiling Mitra Indonesia Tbk directly or indirectly disclose, sell or give any information it receives from CSC to any person, firm, or corporation, or use the information for its own benefit, except for the purpose described above, without the express written consent of CSC. All CSC data is subjected to the terms of this agreement unless otherwise documented.

Signature :

  
  
ROBBY ARELAN

On behalf of PT Multifiling Mitra Indonesia Tbk.



Appendix C  
RETRIEVAL TRANSACTION TAPE

PT. MULTIFUNG MITRA INDONESIA  
Kawasan Industri Mekar Mula  
Jl. Mekar Raya No. 10 Gede Bage  
Bandung 40613  
Phone : (6222) 7812464  
Fax : (6222) 7812462



Transaction No : 022  
Transaction Date : 19/06/2015 08:00:00

RETRIEVAL TRANSACTION TAPE

Customer Number : BD00FP02		Service : CHARGE	
Customer Name : PT CSC		Delivery : NORMAL REVIEW	
Name	Contain Tape	Total	Check
1 Set 1	BD00FP02 - MON (1)	1	<input type="checkbox"/>
	BD00FP02 - TUE (1)	1	<input type="checkbox"/>
	BD00FP02 - WEN (1)	1	<input type="checkbox"/>
	BD00FP02 - THU (1)	1	<input type="checkbox"/>
2 Set F2	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
	BD00FP02 - FRI (2)	1	<input type="checkbox"/>
TOTAL :		16	Tape
		2	Set
Authorized Person		Delivery By.	Retrieve By.
		Page 1 of 1	