Enabling Replication

The following information illustrates the steps required to enable a High Availability Replicant Server.

It is assumed that you already have a functional installation of TapeTrack Server running.

All steps must be performed in the order presented to create a successful connection between the Master and Replicant Server.

IP addresses included in the instructions are for demonstration only, these must be replaced with your correct values.

You have made a **complete backup of the master database** before attempting any of these instructions to maintain the database information should you not complete the process successfully.

Steps On Remote Server

Install the TapeTrack Framework Server software on your Replicant machine.

Stop the service on the Replicant machine.

S	TapeTrack Server He	lper						
1.1								
	Service							
	Name		TMSS10SVC					
	Status		Running					
	Process ID	15	20584					
	Binary		C:\Program Files\TapeTr	ack\TapeTrac	k Framework Server\T	MSS10Server.exe		
Ξ	Options							
	Home Directory							
	Port		5000					
	Syslogd Server							
	Enable Replication		True					
	Log File Name Type		0					
Ŀ	Save Se	ervice Setting	IS					
C	ontrol Service			Update Soft	ware		Edit/View Files	
1	Stop		Start	*	Download and Up	odate	Ţ.	DB_CONFIG

Navigate Windows File Explorer to the TapeTrack Framework Server installation directory (TapeTrack\TapeTrack Framework Server) to the var\db folder.

Delete all database files on the Replicant machine (all files in the TapeTrack\TapeTrack Framework Server\var\db directory) **EXCEPT** the DB_CONFIG file).

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← → × ↑ 📙 « Ta	apeTrack > TapeTrack Framework Server > var	o v db∢	, Search db			
V A Quick Sccess	Name	Date modified	Туре	Size ^		
Desktop 🖈	SDB_Err.txt	3/11/2021 9:37 AM	Text Document			
- Downloads	DB_Msg.txt	3/11/2021 9:37 AM	Text Document			
Downloads *		3/10/2021 12:38 PM	File			
Documents 🚿	TMSS10.attribute-history	3/8/2021 3:11 PM	ATTRIBUTE-HISTO			
Pictures 🖈	TMSS10.attribute-history.dump	3/8/2021 3:11 PM	DUMP File			
📊 TapeTrack 🛛 🖈	TMSS10.attribute-history.save	3/8/2021 2:31 PM	SAVE File			
> 🔿 OneDrive	TMSS10.attributes	3/8/2021 3:10 PM	ATTRIBUTES File			
, Chebine	TMSS10.attributes.dump	3/8/2021 3:10 PM	DUMP File			
🗸 🛄 This PC	TMSS10.attributes.save	3/8/2021 2:31 PM	SAVE File			
> 🧊 3D Objects	TMSS10.attributetype	3/8/2021 3:10 PM	ATTRIBUTETYPE File			
> 📃 Desktop	TMSS10.attributetype.dump	3/8/2021 3:10 PM	DUMP File			
> 🛱 Documents	TMSS10.attributetype.save	3/8/2021 2:31 PM	SAVE File			
	TMSS10.barcode	3/8/2021 3:03 PM	BARCODE File			
Downloads	TMSS10.barcode.dump	3/8/2021 3:02 PM	DUMP File			
> J) Music	TMSS10.barcode.save	3/8/2021 2:31 PM	SAVE File			
> E Pictures	TMSS10.catalog	3/8/2021 3:15 PM	CATALOG File			
> 📑 Videos	TMSS10.catalog.dump	3/8/2021 3:14 PM	DUMP File			
> 🏥 Local Disk (C:)	TMSS10.catalog.save	3/8/2021 2:31 PM	SAVE File			
Naturali	TMSS10.catalog-extent	3/8/2021 3:16 PM	CATALOG-EXTENT			
> PINELWORK	TMSS10.catalog-extent.dump	3/8/2021 3:16 PM	DUMP File			
	TMSS10.catalog-extent.save	3/8/2021 2:31 PM	SAVE File			
	TMSS10.catalog-extent-time	3/11/2021 9:37 AM	CATALOG-EXTENT			
	TMSS10.catalog-extent-time.dump	3/8/2021 3:16 PM	DUMP File			
	TMSS10.catalog-extent-time.save	3/8/2021 2:36 PM	SAVE File			
	TMSS10.catalog-file	3/8/2021 3:17 PM	CATALOG-FILE File			
	TMSS10.catalog-file.dump	3/8/2021 3:17 PM	DUMP File	~		
	<			>.		
218 items 1 item selecte	218 items 1 item selected 81 bytes					

Open the DB_CONFIG file in Notepad, or equivalent text editor.

Edit the TapeTrack\TapeTrack Framework Server\DB_CONFIG file to remove the comments (#'s) starting from the line **rep-set-priority 0** to make the machine a Replicant.

Edit the Replicant Server and Master Server host names in the DB_CONFIG file.

- Replace **replicant-1.tapetrack.com** with the IP address of **your** Replicant Server (your_replicant_IP_address used as Replicant IP example).
- Replace **master.tapetrack.com** with the IP address of **your** Master Server (your_master_IP_address used as Master IP example).



Ensure you use the IP4 address for the Master and Replicant Server as using the domain name can cause issues with the IP6 address replacing the IP4 address, stopping the Master and Replicant communication.

UTF-8

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```
DB_CONFIG - Notepad
                                                                         \times
File Edit Format View Help
set flags DB LOG AUTOREMOVE
                                                                                1
#
# Set the log directory to an alternate directory
#
set lg dir ..\dblogs
#
   Ι
#
# Set Verbose Output
#
set verbose DB VERB DEADLOCK
set_verbose_DB_VERB_RECOVERY
set verbose DB VERB REPLICATION
set verbose DB VERB WAITSFOR
#
#rep set priority 1
#repmgr site replicant-1.tapetrack.com 5010
#repmgr site master.tapetrack.com 5010 db local site on db group creator on
#
# Optional settings
#
#rep set config DB REP CONF BULK on
#rep set config DB_REP_CONF_AUTOINIT off
#
#
#rep set priority 0
#repmgr site replicant-1.tapetrack.com 5010 db local site on
#repmgr site master.tapetrack.com 5010 db bootstrap helper on
```

#rep_set_config DB_REP_CONF_BULK on

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Ensure that the replication TCP/IP ports specified in the DB_CONFIG file are open for inbound connections.

Steps On Master Server

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Stop the TapeTrack service on the master TapeTrack server.

Edit the TapeTrack\TapeTrack Framework Server\DB_CONFIG file and remove the comments (#'s) starting from the line **rep-set-priority 1** to make the machine a master server.

Edit the DB_CONFIG file to define the local and remote server. Edit the Replicant Server and Master Server host names in the DB_CONFIG file.

• Replace **replicant-1.tapetrack.com** with the domain name (or IP address) of **your** Replicant Server (your_replicant_IP_address used as Replicant IP example).

 Replace master.tapetrack.com with the domain name (or IP address) of your Master Server (your_master_IP_address used as Master IP example).

```
*DB_CONFIG - Notepad
                                                                         ×
File Edit Format View Help
set flags DB LOG AUTOREMOVE
#
# Set the log directory to an alternate directory
#
    Τ
set lg dir ..\dblogs
#
#
# Set Verbose Output
#
set verbose DB VERB DEADLOCK
set verbose DB VERB RECOVERY
set verbose DB VERB REPLICATION
set verbose DB VERB WAITSFOR
#
#rep set priority 1
#repmgr site replicant-1.tapetrack.com 5010
#repmgr site master.tapetrack.com 5010 db local site on db group creator on
#
# Optional settings
#
#rep set config DB REP CONF BULK on
#rep set config DB REP CONF AUTOINIT off
#
#
#rep set priority 0
#repmgr site replicant-1.tapetrack.com 5010 db local site on
#repmgr site master.tapetrack.com 5010 db bootstrap helper on
#rep set config DB REP CONF BULK on
<
                                                        Windows (CRLF)
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                                                                     UTF-8
```

Delete all, and only, the files starting with _db. and db.rep.. This step is made easier if you sort the files in ascending order of file names to group them all together.

These files will be rebuilt when the server is restarted using the information of the new master and replicant details.

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File Home Share	View			× 🕐	
🗲 🔿 👻 🛧 📘 « TapeTr	rack → TapeTrack Framework Server → var →	db ∨ db	, Search db		
Y 🕈 Quick access	Name	Date modified	Туре	Size ^	
Deckton	SDB_Err.txt	3/11/2021 9:37 AM	Text Document		
	SDB_Msg.txt	3/11/2021 9:37 AM	Text Document		
Downloads #	db.001	3/11/2021 9:37 AM	001 File		
🗄 Documents 🖈	db.002	3/11/2021 9:37 AM	002 File		
📰 Pictures 🛛 🖈	db.003	3/11/2021 9:37 AM	003 File		
📑 TapeTrack 🛛 🖈 🛛	db.004	3/11/2021 9:37 AM	004 File		
> OneDrive	db.rep.diag00	3/11/2021 9:37 AM	DIAG00 File		
	db.rep.diag01	3/11/2021 9:37 AM	DIAG01 File		
🗸 💻 This PC	🚽db.rep.egen	3/11/2021 9:37 AM	EGEN File		
> 🧊 3D Objects	db.rep.gen	3/11/2021 9:37 AM	GEN File		
> Desktop	DB_CONFIG	3/10/2021 12:38 PM	File		
	TMSS10.attribute-history	3/8/2021 3:11 PM	ATTRIBUTE-HISTO		
Deventende	TMSS10.attribute-history.dump	3/8/2021 3:11 PM	DUMP File		
> Uownloads	TMSS10.attribute-history.save	3/8/2021 2:31 PM	SAVE File		
> 👌 Music	TMSS10.attributes	3/8/2021 3:10 PM	ATTRIBUTES File		
> 📰 Pictures	TMSS10.attributes.dump	3/8/2021 3:10 PM	DUMP File		
> Videos	TMSS10.attributes.save	3/8/2021 2:31 PM	SAVE File		
> 🏥 Local Disk (C:)	TMSS10.attributetype	3/8/2021 3:10 PM	ATTRIBUTETYPE File		
	TMSS10.attributetype.dump	3/8/2021 3:10 PM	DUMP File		
> Vetwork	TMSS10.attributetype.save	3/8/2021 2:31 PM	SAVE File		
	TMSS10.barcode	3/8/2021 3:03 PM	BARCODE File		
	TMSS10.barcode.dump	3/8/2021 3:02 PM	DUMP File		
1	TMSS10.barcode,save	3/8/2021 2:31 PM	SAVE File		
1	TMSS10.catalog	3/8/2021 3:15 PM	CATALOG File		
	TMSS10.catalog.dump	3/8/2021 3:14 PM	DUMP File		
	TMSS10.catalog.save	3/8/2021 2:31 PM	SAVE File	¥	
226 items) ==	

Ensure that the replication TCP/IP ports are open for inbound/outbound connections.

Start The Servers

Start the master TapeTrack Server.

Once the master server is running, start the TapeTrack service on the remote machine.

The replicant server will prepare the database for connection to the master server and move into Start Pending mode while waiting for the master server to respond.

S TapeTrack Server Helper				
⊡	Service			
	Name	TMSS10SVC		
	Status	Start Pending		
	Process ID	4472		
	Binary	C:\Program Files\TapeTrack\TapeTrack Framework Server\TMSS10Server.exe		
	Options			
	Home Directory			
	Port	5000		
	Syslogd Server			
	Enable Replication	True		
	Log File Name Type	0		
Save Service Settings				
_C	ontrol Service	Update Software Edit/View Files		
	Stop	Start Download and Update DB_CONFIG		

The master server will now connect to the replicant server and load the database information across the connection. This may take time depending on the database size.

Once the database is fully replicated the replicant server will now display running.

Confirming Functionality Of Primary And Replicant Servers

Open \$DB_Msg.txt file (in the var/db directory) on both the primary and replicant server to ensure that replication is functional.

Ensure that all firewall ports are open to allow the replication traffic to pass between the replicants.

Master \$DB_Msg.txt file showing connection between master and replicant and the process of sending database information.

IIII SDB_Msg.txt - Notepad	-		×
File Edit Format View Help			
2021-03-11 11:52:55 BDB1519 Maximum transaction ID 0 recovery checkpoint [1][2209496]			^
2021-03-11 11:52:55 [77781:703000][16880/18164] REP_UNDEF: set membership for 192.168.120.96:	5010	4 (wa
2021-03-11 11:54:48 [77894:671000][9420/14500] REP_UNDEF: EID 0 is assigned for site 192.168.	0.197	7:50)10
2021-03-11 11:54:48 [77894:671000][9420/14500] REP_UNDEF: EID 1 is assigned for site 192.168.	0.96	:501	10
2021-03-11 11:54:48 BDB2526 Finding last valid log LSN: file: 1 offset 2232154			
2021-03-11 11:54:48 BDB1518 Recovery complete at Thu Mar 11 11:54:48 2021			
2021-03-11 11:54:48 BDB1519 Maximum transaction ID 0 recovery checkpoint [1][2232098]			
2021-03-11 11:54:48 [77894:703000][9420/14500] REP_UNDEF: set membership for 192.168.0.96:501	04	(was	s Ø
2021-03-11 11:54:48 [77894:718000][9420/14500] REP_UNDEF: New master gen 1, egen 2			
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: rep_start: Old log version was 19			
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: restore_prep: No prepares. Skip.			
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19 (gen	= 1
2021-03-11 11:54:48 [77894:718000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= "
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= 1
2021-03-11 11:54:48 [77894:734000][9420/14500] MASTER: var/db rep_send_message: msgv = 7 logv	19	gen	= '
	10		>
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7/9

Replicant \$DB_Msg.txt file showing connection between master and replicant, validation of connection and receiving database information.

DB_Msg.txt - Notepad -	I X
File Edit Format View Help	
2021-03-11 11:56:54 [850:968000][636/12292] REP_UNDEF: Read in gen 0	-
2021-03-11 11:56:54 [850:968000][636/12292] REP_UNDEF: Read in egen 1	
2021-03-11 11:56:54 [850:968000][636/12292] REP_UNDEF: EID 0 is assigned for site 192.168.0.197:501	0
2021-03-11 11:56:54 [850:968000][636/12292] REP_UNDEF: EID 1 is assigned for site 192.168.0.96:5010)
2021-03-11 11:56:54 BDB2525 No log files found	
2021-03-11 11:56:54 [850:984000][636/12292] REP_UNDEF: try join request to site site 192.168.0.96:5	010
2021-03-11 11:56:54 [850:984000][636/12292] REP_UNDEF: connection established	
2021-03-11 11:56:54 [851:15000][636/12292] REP_UNDEF: set membership for 192.168.0.197:5010 4 (was	0)
2021-03-11 11:56:54 [851:15000][636/12292] REP_UNDEF: set membership for 192.168.0.96:5010 4 (was @))
2021-03-11 11:56:54 [851:15000][636/12292] REP_UNDEF: rep_start: Found old version log 19	
2021-03-11 11:56:54 [851:15000][636/12292] CLIENT: var/db rep_send_message: msgv = 7 logv 19 gen =	0 ei
2021-03-11 11:56:54 [851:15000][636/15880] CLIENT: starting election thread	
2021-03-11 11:56:54 [851:15000][636/12696] CLIENT: starting connector thread, eid 1	
2021-03-11 11:56:54 [851:15000][636/11468] CLIENT: accepted a new connection	
2021-03-11 11:56:54 [851:15000][636/12696] CLIENT: connecting to site 192.168.0.96:5010	
2021-03-11 11:56:54 [851:15000][636/15880] CLIENT: var/db rep_send_message: msgv = 7 logv 19 gen =	0 ei
2021-03-11 11:56:54 [851:31000][636/12696] CLIENT: connection established	
2021-03-11 11:56:54 [851:31000][636/11468] CLIENT: handshake from connecting site 192.168.0.96:5010) EID
2021-03-11 11:56:54 [851:31000][636/11468] CLIENT: handshake with no known master to wake election	thre
2021-03-11 11:56:54 [851:31000][636/12696] CLIENT: connector thread is exiting	- 1
2021-03-11 11:56:56 [853:15000][636/15880] CLIENT: var/db rep_send_message: msgv = 7 logv 19 gen =	0 ei
2021-03-11 11:56:56 [853:15000][636/15896] CLIENT: var/db rep_process_message: msgv = 7 logv 19 ger	1 = 1
2021-03-11 11:56:56 [853:15000][636/15896] CLIENT: var/db rep_send_message: msgv = 7 logv 19 gen =	0 ei
2021-03-11 11:56:56 [853:15000][636/16096] CLIENT: var/db rep_process_message: msgv = 7 logv 19 ger	1 = 1
2021-03-11 11:56:56 [853:31000][636/16096] CLIENT: Election done; egen 1	
2021-03-11 11:56:56 [853:31000][636/16096] CLIENT: Updating gen from 0 to 1 from master 1	
2021-03-11 11:56:57 [853:31000][636/16096] CLIENT: egen: 2. rep version 7	
2021-03-11 11:56:57 [853:31000][636/16096] CLIENT: No commit or ckp found. Truncate log.	
	>
Ln 40, Col 1 100% Windows (CRLF) UTF-8	

Another way of testing the replication is correct and functioning is to create a connection to the replicant database through Tapemaster using the replicants IP address. Remember to use the replicants connection port (usually 5000) and not the replication data port (5010).

Server Information X				
Server Name	Replicant			
Server Address	your_replicant_IP_address			
Server Port	5000			
Use HTTP Proxy	False			
Use Single Sign-On	False			
OK Cancel				

As this database is a replication of the master server, all user-ID's from the master are functional in the replicant server for login purposes.

When you connect to the replicant database you will receive a popup reminding you the server is Read Only. While you can view Customer, Media and Volume information, any attempted updates will be blocked by security protocols.



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The replication communications are not encrypted so if replication is enabled you should ensure that all machines that are replicated are in a trusted network or connected via a secure VPN connection.

Server replication troubleshooting

See Also

Restoring replicant server to master server status

From:

https://rtfm.tapetrack.com/ - TapeTrack Documentation

Permanent link: https://rtfm.tapetrack.com/server/replication?rev=1615510170

Last update: 2025/01/21 22:07



9/9