

Replibit Agent configuration parameters

- [aristos.cfg](#)
 - [SERVER](#)
 - [PORT](#)
 - [GUID](#)
 - [LICENSE](#)
 - [BACKUP VOLUMES](#)
 - [LOG](#)
 - [FORCE FULL BKP](#)
 - [LOG FILENAMES](#)
 - [SITE LICENSE](#)
 - [NUM WORKERS](#)
 - [NUM CONNECTIONS](#)
 - [UEFI WRITE DUMPS](#)
 - [UEFI TRANSFER DUMPS](#)
 - [UEFI CUSTOM HEADER](#)
 - [UEFI CUSTOM TAIL](#)
 - [LEGACY LOGGING](#)
 - [IGNORE MOUNT](#)
 - [SOCKET TIMEOUT](#)
 - [SOCKET TIMEOUT TIME](#)
 - [BACKUP TYPE](#)
 - [USE FISSION](#)
 - [KEEP SNAPSHOTS](#)
 - [LIST IGNORED](#)
 - [LIST SKIPPED](#)
 - [LIST STAGED](#)
 - [LIST INTENDED](#)
 - [LIST TRANSMITTED](#)
 - [SNAPSHOT CREATION LEVEL](#)
 - [CALL FASTDELTA](#)
 - [COMPARE FASTDELTA](#)
 - [USE FASTDELTA](#)
 - [FILES TO KEEP](#)
 - [WRITERS EXCLUDE](#)
 - [SEND DUMPS NEXT](#)
 - [UPDATE URL](#)

- [Registry entries](#)
 - [AGENT_PATH](#)
 - [AGENT_VERSION](#)
 - [LICENSE](#)
 - [UPDATER_PATH](#)
 - [UPDATE_INTERVAL](#)
 - [AGENT_VERSION_STRING](#)
 - [InstallVersion](#)
- [writers_ignore.cfg](#)
 - [writers_ignore](#)
 - [writers_exclude](#)
- [aristos_ignore.cfg](#)
 - [files](#)
- [custom_ignore.cfg](#)
 - [files](#)
- [force_include.cfg](#)
- [A note on ignored files](#)

Configurations are case sensitive. Boolean should be *true* and *false* and nothing else. As a general rule, when several configurations are allowed they can be split by comma ","

Line comments are defined by #

[aristos.cfg](#)

SETTINGS	OPTIONS	AGENT VERSION	EFFECT
----------	---------	---------------	--------

<p><i>SERVER</i></p>	<p>An IP address or host that can be resolved.</p> <p>Required.</p> <p>Example: SERVER=10.0.0.2</p>	<p>Any</p>	<p>The address where there should be an appliance to register and run backups to.</p>
<p><i>PORT</i></p>	<p>An integer between 9090 and 10000.</p> <p>Required.</p> <p>Example: PORT=9090</p>	<p>Any</p>	<p>The port it attempts to connect to in the appliance for the BackupManager service. It is defaulted to 9090 and it requires a change in the appliance as well (manual)</p>
<p><i>GUID</i></p>	<p>A GUID without braces, dashes nor delimiters. Appears after the protected system has checked in for the first time.</p> <p>Example GUID=5a5e3f71808b1d12f04c75fa</p>	<p>Any</p>	<p>Identifies the protected system against the appliance. It is the same number that appears in the appliance's GUI in a protected system's properties pane. Changing it forces the appliance start a new protected system</p>
<p><i>LICENSE</i></p>	<p>A hash MD5. Defaults to d41d8cd98f00b204e9800998ecf8427e.</p> <p>Required.</p> <p>Example: LICENSE=f688ae26e9cfa3ba6235477831d5122e for "Hola"</p>	<p>Any Deprecated by 2.23</p>	<p>This is the hashed version of the text entered in "Lock password" or "Encryption password" during the installer. It is used to unlock contents for this protected system on the appliance.</p>

<p><i>BACKUP_VOLUMES</i></p>	<p>Comma separated drive letters. Default is empty (all) and it can be set during install.</p> <p>Example: BACKUP_VOLUMES=C,D,E</p>	<p>Any</p>	<p>It will only back up those volumes. In BIOS systems the System Reserved or any other partition required for boot is inserted with the C drive. In UEFI systems the partition data and boot partitions are included in the dumps so the System Reserved is not required and somewhat redundant.</p>
<p><i>LOG</i></p>	<p>Not used. Not shown by default.</p>	<p>Deprecated</p>	<p>For some reason that is in Config.h. Maybe it has an effect on legacy versions of the agent but not in the eFolder era agents.</p>
<p><i>FORCE_FULL_BKP</i></p>	<p>true or false. Not shown by default.</p> <p>Example: FORCE_FULL_BKP=true</p>	<p>1.10+</p>	<p>Forces a full backup. The decision of full or incremental is made in the appliance but the agent will send all the data as if it were a full. In the appliance will look like an incremental or a full but it will have all the data again. This option is automatically disabled after this backup completes.</p>

<i>LOG_FILENAMES</i>	true or false. Not shown by default.	Deprecate d	In the legacy agent, it logs the names of the files that includes in the backup. The inclusion is at LSN level, so it is similar to our current LIST_STAGED option.
<i>SITE_LICENSE</i>	An IP address. Not used. Empty by default. Example: SITE_LICENSE=10.0.0.2	Deprecate d	In the code it looks like it prefers SITE_LICENSE over SERVER when this setting exists. It is discontinued anyway.
<i>NUM_WORKERS</i>	A positive integer bigger than 0. If not set, then it is 4 * number_of_processors. Example: NUM_WORKERS=4	Any	The number of threads that are going to process read requests from volume transmitters. These workers pick up data after they are read from a Completion Port, hash the data and decide if it needs to be sent.
<i>NUM_CONNECTIONS</i>	A positive integer bigger than 0. If not set it defaults to 4 * number_of_processors up to 32. Example: NUM_CONNECTIONS=4	Any	The number of Thrift clients that are connected against the BackupAgent service for this backup, basically, the number of connections.

<p><i>UEFI_WRITE_DUMPS</i></p>	<p>true or false. Required and defaults to true on any system, even BIOS.</p> <p>Required.</p> <p>Example: UEFI_WRITE_DUMPS=true</p>	<p>1.10+</p>	<p>If the system is GPT/EFI/UEFI then this setting enables writing dumps with partition information. This is used for virtualization later.</p>
<p><i>UEFI_TRANSFER_DUMPS</i></p>	<p>true or false. Required and defaults to true on any system, even BIOS.</p> <p>Required.</p> <p>Example: UEFI_WRITE_DUMPS=false</p>	<p>1.10+</p>	<p>If the dumps are kept in the Replibit install directory or if they are going to be sent straight to the appliance. Requires the feature enabled on the appliance (never merged to the appliance's code)</p>
<p><i>UEFI_CUSTOM_HEADER</i></p>	<p>An integer, positive, bigger than 0 number. It is an offset in a physical disk. Not shown by default.</p> <p>Example: UEFI_CUSTOM_HEADER=5934940 16</p>	<p>2.22+</p>	<p>By default, the GPTEFIDump.rbi file contains all the data from the beginning of the boot disk up to the C:\ drive. Some customer's systems have too much data or partition layouts that require some tailoring, so we decided to leave an option to set it manually. It makes the dump from the beginning of the boot disk up to this desired size, or 1 byte before what is set here.</p>

<p><i>UEFI_CUSTOM_TAIL</i></p>	<p>An integer, positive, bigger than 0 number. It is an offset in a physical disk. Not shown by default.</p> <p>Example: UEFI_CUSTOM_TAIL=86969942016</p>	<p>2.22+</p>	<p>By default, the GPTBKPDump.rbi file contains all the data from the end of the last data partition of the boot disk up to the end of the disk. This setting lets customize that size by establishing where to start copying data. This dump will have all data since the offset specified here up to the end of the drive.</p>
<p><i>LEGACY_LOGGING</i></p>	<p>true or false. Defaults to true. Shown by default.</p> <p>Not required.</p> <p>Example: LEGACY_LOGGING=true</p>	<p>2.22+</p>	<p>Logs to a text file, like aristos.log</p>

<p><i>IGNORE_MOUNT</i></p>	<p>A mount point string like C:\myMountPointOfD\ D:\myMountOfC.</p> <p>Requires BACKUP_VOLUMES set as well to work.</p> <p>Example: IGNORE_MOUNT=^C:\Users\ * ignores all the volumes mounted in C:\Users</p>	<p>1.10+</p>	<p>Ignores volumes when they don't have a drive letter but a mount point name. Example: if you have a drive "C:\" and another drive "C:\something" then if you set BACKUP_VOLUMES=C it will back up both volumes. To exclude "C:\something" you use this setting. It accepts regex expressions, which means it would exclude all volumes following the rules. It is used by support to disable Microsoft's User Data Volume (mounts inside C:\Users for roaming users) since it fails to back up</p>
<p><i>SOCKET_TIMEOUT</i></p>	<p>true or false. Defaults to true. Always shown.</p> <p>Not required.</p> <p>Example: SOCKET_TIMEOUT=true</p>	<p>1.10+</p>	<p>Lets the agent drop a connection if it doesn't receive a response from the other end in a given amount of time (see SOCKET_TIMEOUT_TI ME) The time defaults to 30 seconds if it is not set.</p>

<p><i>SOCKET_TIMEOUT_TIME</i></p>	<p>An integer, positive, bigger than 0 number, in seconds.</p> <p>Example: SOCKET_TIMEOUT_TIME=300</p>	<p>1.10+</p>	<p>Time that the agent waits before considering an RPC call as dead. This avoids hanging sometimes but could cause issues in customers with tricky networks. This defaults to 30 seconds.</p>
<p><i>BACKUP_TYPE</i></p>	<p>A string with the VSS_BACKUP_TYPE enumeration. Defaults to VSS_BT_FULL. Not shown by default.</p> <p>Not required.</p> <p>Example: BACKUP_TYPE=VSS_BT_COPY</p>	<p>1.10+</p>	<p>This setting was requested by certain customers that wanted to control how Replibit affects the log truncation in their SQL Servers. VSS_BT_FULL truncates the logs sometimes and is preferred if there isn't other backup application leveraging SQL Server backups. VSS_BT_COPY leaves logs intact so customers manage them with other application.</p>
<p><i>USE_FISSION</i></p>	<p>true or false. Always shown since version 2.20.11. Defaults to false in new setups and some upgrades. Defaults to true if upgrading from 2.x to 2.20.10.</p> <p>Example: USE_FISSION=true</p>	<p>Only 2.20-beta (2.20.11, 2.20.14) Deprecated</p>	<p>Enables fast algorithm. The slow can't be toggled and will always run.</p>

<p><i>KEEP_SNAPSHOTS</i></p>	<p>true or false. Defaults to false. Not shown by default.</p> <p>Not required.</p> <p>Example: KEEP_SNAPSHOTS=true</p>	<p>2.22+</p>	<p>Doesn't release snapshots. They will keep piling up.</p>
<p><i>LIST_IGNORED</i></p>	<p>true or false. Defaults to false. Not shown by default.</p> <p>Not required.</p> <p>Example: LIST_IGNORED=true</p>	<p>2.22+</p>	<p>Creates a file <code>_ignored.csv</code> file. Lists file names and certain properties for files that the agent decided to ignore and the reason for it, for example, it found it in a rule saying that it shouldn't be backed up. Created by the slow algorithm.</p>
<p><i>LIST_SKIPPED</i></p>	<p>true or false. Defaults to false. Not shown by default. Not required.</p> <p>Example: LIST_SKIPPED=true</p>	<p>2.22+</p>	<p>Creates a file <code>_skipped.csv</code> file. Lists file names and certain properties for files that the agent decided to skip, for example, the LSN number didn't change for that file. Created by the slow algorithm.</p>

<p><i>LIST_STAGED</i></p>	<p>true or false. Defaults to false. Not shown by default. Not required. Example: LIST_STAGED=true</p>	<p>2.22+</p>	<p>Creates a file <code>_staged.csv</code> file. Lists file names and certain properties for files that the agent decided to back up, it could be by different LSN number or because they are forced into the backup like database files from writers. Created by the slow algorithm.</p>
<p><i>LIST_INTENDED</i></p>	<p>true or false. Defaults to false. Not shown by default. Not required. Example: LIST_INTENDED=true</p>	<p>2.22+</p>	<p>Creates a file <code>_intended.csv</code> file. Because the transfer granularity is different from a volume's granularity (cluster) some clusters fall into transfer blocks even if we didn't want to back them up. This lists the files that were marked for transfer because they belong to a potentially changed block.</p>

<p><i>LIST_TRANSMITTED</i></p>	<p>true or false. Defaults to false. Not shown by default. Not required. Example: LIST_TRANSMITTED=true</p>	<p>2.22+</p>	<p>Creates a file <code>_transmitted.csv</code> file. Lists file names and certain properties for files that actually made it to the appliance. The difference with the “intended” list is that the block could have changed or not. If it changed then it belongs to this file but not the former.</p>
--------------------------------	---	--------------	---

<p><i>SNAPSHOT_CREATION_LEVEL</i></p>	<p>1, 2 or 3. Defaults to 1 for older agent versions. Defaults to 3 (RA-196) for agents \geq 2.22. Not shown by default.</p> <p>Not required.</p> <p>Example: SNAPSHOT_CREATION_LEVEL=1</p>	<p>2.22+</p>	<p>Snapshot creation level 1 calls efsvss*.exe to create a snapshot with writer's participation. If it is set to 1 and the process fails, the overall backup fails. If it is set to 2, instead of failing, it will try to create a snapshot without certain writers chosen by the user. If it is set to 2 and the process fails, the overall backup fails. If it is set to 3 then it will try to create a snapshot without writers. That's the last level and if that fails then all attempts to take a snapshot failed and the overall backup fails. No matter what the level is, it will try gradually from level 1 up to 3 if it is configured. This is a workaround for certain writers stuck in failed state where customers don't want to fix what's wrong with them. This makes crash-consistent snapshots for some or all applications and should be considered carefully.</p>
---------------------------------------	--	--------------	--

<p><i>CALL_FASTDELTA</i></p>	<p>true or false. Not shown by default.</p> <p>Example: CALL_FASTDELTA=true.</p> <p>Requires USE_FISSION=true. Requires FastDelta.exe and FastDelta_Test.exe to be available in the agent's directory.</p>	<p>Deprecate d</p>	<p>Will call FastDelta.exe to generate a cluster bitmap for changes between the last snapshot and the current snapshot, if the fast algorithm is usable. It outputs a _delta.bin file. FastDelta.exe logs in FastDelta__log.txt</p>
------------------------------	--	------------------------	---

<p><i>COMPARE_FASTDELTA</i></p>	<p>true or false. Not shown by default.</p> <p>Example: COMPARE_FASTDELTA=true.</p> <p>Requires CALL_FASTDELTA=true, and all its prerequisites.</p>	<p>Deprecate d</p>	<p>If not set, or set to false (default), once FastDelta.exe finishes, it will create a _scan.bin file with all the mismatches found between the fast algorithm and _delta.bin. If set to true, no scan bitmap will be provided, so FastDelta_Test.exe will generate it on its own, trying to find errors on all the volume by any of the two algorithms. It requires time and heavy I/O since it compares the contents of two snapshots. FastDelta_Test.exe will create a list of files that are missing on either algorithm and are named _affected_fastdelta.0.txt and _affected_fission.0.txt (see FILES_TO_KEEP). FastDelta_Test.exe logs in FastDelta_Test__log.txt.</p>
---------------------------------	---	------------------------	--

<p><i>USE_FASTDELTA</i></p>	<p>true or false. Not shown by default.</p> <p>Example: USE_FASTDELTA=true.</p> <p>Requires COMPARE_FASTDELTA=true and all their prerequisites.</p>	<p>2.22+</p>	<p>If the result of the comparison in FastDelta_Test.exe is favorable for FastDelta's output (that is, FastDelta didn't make any mistake and the affected file list is empty), it will use FastDelta instead of the fast algorithm in the agent.</p>
<p><i>FILES_TO_KEEP</i></p>	<p>An integer, positive, bigger than 0 number. Defaults to 5. Example: FILES_TO_KEEP=10. Only applicable to output files from FastDelta_Test.exe</p>	<p>2.22+</p>	<p>The number of _affected_* files we keep for each volume and each algorithm. The most recent one is 0 and the oldest is FILES_TO_KEEP-1.</p>
<p><i>WRITERS_EXCLUDE</i></p>	<p>VSS Writer GUIDs to exclude when capturing a snapshot for backup</p>	<p>1.10+</p>	<p>Excludes the specified VSS Writers from use when capturing backups. Can be used to exclude problematic third-party writers not necessary for or preventing a successful backup</p>
<p><i>SEND_DUMPS_NEXT</i></p>	<p>True or false. Not shown by default</p> <p>Set automatically when the Agent detects that it needs to send dump files to the Appliance. Cleared once dumps have been sent to the appliance</p>	<p>1.10+</p>	<p>Instructs the Agent to collect dumps of system partition data. Used for UEFI.</p> <p>See also UEFI_CUSTOM_HEADER, UEFI_CUSTOM_TAIL</p>

<i>UPDATE_URL</i>	Web URL Not used	Deprecate d	Location to poll to look for updated agent version. Legacy out of band update mechanism, never used.
ENABLE_CSV	True or false. Not shown by default Requires Appliance 8.4.0+	2.24+	Enabled backup of Microsoft Failover Cluster server and Cluster Shared Volumes

Registry entries

The entries are in HKEY_LOCAL_MACHINE\SOFTWARE\Replibit\Agent in 32-bit computers and in HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Replibit\Agent in 64-bit computers.

They are all multi-string values to keep it simple, even if the configurations sometimes are numbers or paths.

SETTING	OPTIONS	AGENT VERSION	EFFECT
---------	---------	---------------	--------

<p><i>AGENT_PATH</i></p>	<p>A full path that ends with a backslash. Example: C:\Program Files (x86)\Replibit\</p>		<p>It is the working directory for the agent. It is created when the agent is installed.</p>
<p><i>AGENT_VERSION</i></p>	<p>Contains a 64-bit value. For example: 131619826391150000.</p>	<p>Any</p>	<p>It is created when the agent runs for the first time. It represents the number of 100-nanosecond intervals since January 1, 1601 (UTC). This value is assigned at the moment the agent is built using the build system's time</p>
<p><i>LICENSE</i></p>	<p>A hash MD5. Defaults to d41d8cd98f00b204e9800998ecf8427e. Required. Example: f688ae26e9cfa3ba6235477831d5122e for "Hola"</p>	<p>Any Deprecated</p>	<p>A copy of the license field in aristos.cfg. Both are created during installation. Stored here in case the customer loses it. See LICENSE field for aristos.cfg</p>
<p><i>UPDATER_PATH</i></p>	<p>A full path that ends with a backslash. Example: C:\Program Files (x86)\Replibit\</p>	<p>Deprecated</p>	<p>It is the working directory for the updater. It is created when the agent is installed.</p>

<i>UPDATE_INTERVAL</i>	Starting from version 2.20.14. An integer, positive, bigger than 0 number, in minutes.	2.22+	The number of minutes between update checks (on average). It defaults to 60 minutes if the key doesn't exist.
<i>AGENT_VERSION_STRING</i>		2.22+	
<i>InstallVersion</i>		2.22	

writers_ignore.cfg (Not Used)

SETTING	OPTIONS	AGENT VERSION	EFFECT
---------	---------	---------------	--------

<p><i>writers_ignore</i></p>	<p>A semi colon-split one-liner with dashed GUIDs. Shown by default. Not required. Not case sensitive. Last entry doesn't require semi colon. Shipped with the installer with some known values.</p> <p>Example: writers_ignore=e8132975-6f93-4464-a53e1050253ae220;D61D61C8-D73A-4EEE-8CDDF6F9786B7124</p>	<p>Deprecated</p>	<p>One problem with the slow algorithm was that it skipped databases. Since database path names (and any other relevant file) are specified by writers we use that information not to skip databases. Basically, we force the database file in the backup. Since not all writers are relevant for this operation, we decided to exclude some system writers and other irrelevant entries. This list specifies which writers are ignored when asking "What are the relevant files?"</p>
<p><i>writers_exclude</i></p>	<p>A semi colon-split one-liner with writer's names, short names or GUIDs. Not shown by default. Not required. Case sensitive. Last entry doesn't require semi colon.</p> <p>Example: writers_exclude="ASR Writer";"Task Scheduler Writer"</p>	<p>Deprecated</p>	<p>This is the list of writers that are going to be excluded from the snapshot creation process if the first SNAPSHOT_CREATION_LEVEL fails. See "without certain writers chosen by the user" in SNAPSHOT_CREATION_LEVEL in aristos.cfg section.</p>

aristos_ignore.cfg

SETTINGS	OPTIONS	AGENT VERSION	EFFECT
----------	---------	---------------	--------

<i>files</i>	<p>A semi colon-split one-liner with regex rules for file names. Shown by default. Not required. Last entry doesn't require semi colon. Shipped with the installer with some known values. Accepts regular expressions.</p> <p>Example: files=pagefile.sys;swapfile.sys</p>	Any	<p>Files that are ignored by default. Some of them include pagination files, hibernation files, the agent's own changetracking files and other system logs. This also exclude shadow storage areas; the files in "System Volume Information". The exclusion works at a file name level, so if you have a file that happens to be named pagefile.sys it will not only exclude THE pagefile.sys, but any other it finds anywhere else in the system. The same applies to regex rules. Doesn't work with paths (for example if you want to ignore everything inside a directory)</p>
--------------	---	-----	---

custom_ignore.cfg (Not present by default)

SETTINGS	OPTIONS	AGENT VERSION	EFFECT
<i>files</i>	<p>A semi colon-split one-liner with regex rules for file names. Shown by default but empty. Not required. Last entry doesn't require semi colon. Accepts regular expressions.</p> <p>Example: files=IDontWantThisFile.iso</p>	Any	<p>The exclusion works at a file name level, so if you have a file that happens to be named IDontWantThisFile.iso it will exclude any file named like that in any directory in any volume. The same applies to regex rules. Doesn't work with paths (for example if you want to ignore everything inside a directory)</p>

force_include.cfg

Each line in this file represents the full path to a file that you would like to force into the backup. This will mark all its clusters as potentially changed and will be subjected to the hash comparison to see if it is going to be transferred or not.

Forces the file into the "staged" list of files. Example of a force_include.cfg file:

```
C:\MyFolder\MyFile.exe
D:\OtherFolder\AnotherFolder\SomeFile.exe
```

A note on ignored files

Ignoring a file doesn't delete it from the snapshot or the filesystem in the snapshot. Files have their metadata in the MFT and if the file is big enough, its contents are scattered throughout the drive in clusters. When we ignore a file in Replibit we skip copying the clusters but the metadata is going into the snapshot as part of the MFT itself. If the file is small enough (roughly less than 700 bytes) its whole contents could be in the MFT so the file will be copied anyway. Also, as we copy in blocks of 64 KiB and clusters are (in general) 4 KiB in size, a block may contain both: data that we want to include and data we want to ignore. Since the block has to be copied because it contains relevant data, part of the ignored file will be copied as well. Because of this, it's recommended to customers using the registry entry [FilesNotToSnapshot](#) that uses a specific writer in the snapshot creation process that deletes these files from the filesystem's perspective. However, this deletion is provided as a "best effort" by a writer provided by Microsoft, and as Microsoft explains, some files could still be there after being added to this list since the writer wasn't able to delete them.