

# Guest Agent Protocol Reference Manual

QEMU version 2.10.50

This is the QEMU Guest Agent Protocol reference manual.

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## Table of Contents

1	API Reference	1
Co	ommands and Events Index	19
Da	ata Types Index	20

## **1** API Reference

General note concerning the use of guest agent interfaces:

"unsupported" is a higher-level error than the errors that individual commands might document. The caller should always be prepared to receive QERR\_UNSUPPORTED, even if the given command doesn't specify it, or doesn't document any failure mode at all.

#### guest-sync-delimited

Echo back a unique integer value, and prepend to response a leading sentinel byte (0xFF) the client can check scan for.

This is used by clients talking to the guest agent over the wire to ensure the stream is in sync and doesn't contain stale data from previous client. It must be issued upon initial connection, and after any client-side timeouts (including timeouts on receiving a response to this command).

After issuing this request, all guest agent responses should be ignored until the response containing the unique integer value the client passed in is returned. Receival of the 0xFF sentinel byte must be handled as an indication that the client's lexer/tokenizer/parser state should be flushed/reset in preparation for reliably receiving the subsequent response. As an optimization, clients may opt to ignore all data until a sentinel value is receiving to avoid unnecessary processing of stale data.

Similarly, clients should also precede this **request** with a 0xFF byte to make sure the guest agent flushes any partially read JSON data from a previous client connection.

## Arguments:

id: int randomly generated 64-bit integer

**Returns:** The unique integer id passed in by the client

**Since:** 1.1

#### guest-sync

Echo back a unique integer value

This is used by clients talking to the guest agent over the wire to ensure the stream is in sync and doesn't contain stale data from previous client. All guest agent responses should be ignored until the provided unique integer value is returned, and it is up to the client to handle stale whole or partially-delivered JSON text in such a way that this response can be obtained.

In cases where a partial stale response was previously received by the client, this cannot always be done reliably. One particular scenario being if qemu-ga responses are fed character-by-character into a JSON parser. In these situations, using guest-sync-delimited may be optimal.

For clients that fetch responses line by line and convert them to JSON objects, guestsync should be sufficient, but note that in cases where the channel is dirty some attempts at parsing the response may result in a parser error.

Such clients should also precede this command with a 0xFF byte to make sure the guest agent flushes any partially read JSON data from a previous session.

#### **Arguments:**

id: int randomly generated 64-bit integer

## [Command]

**Returns:** The unique integer id passed in by the client **Since:** 0.15.0

#### guest-ping

Ping the guest agent, a non-error return implies success **Since:** 0.15.0

#### guest-get-time

Get the information about guest's System Time relative to the Epoch of 1970-01-01 in UTC.

**Returns:** Time in nanoseconds.

**Since:** 1.5

#### guest-set-time

Set guest time.

When a guest is paused or migrated to a file then loaded from that file, the guest OS has no idea that there was a big gap in the time. Depending on how long the gap was, NTP might not be able to resynchronize the guest.

This command tries to set guest's System Time to the given value, then sets the Hardware Clock (RTC) to the current System Time. This will make it easier for a guest to resynchronize without waiting for NTP. If no time is specified, then the time to set is read from RTC. However, this may not be supported on all platforms (i.e. Windows). If that's the case users are advised to always pass a value.

#### **Arguments:**

time: int (optional) time of nanoseconds, relative to the Epoch of 1970-01-01 in UTC.

**Returns:** Nothing on success.

**Since:** 1.5

## GuestAgentCommandInfo

Information about guest agent commands.

## Members:

name: string

name of the command

enabled: boolean

whether command is currently enabled by guest admin

```
success-response: boolean
```

whether command returns a response on success (since 1.7)

**Since:** 1.1.0

#### GuestAgentInfo

Information about guest agent.

#### Members:

version: string guest agent version [Object]

[Command]

[Command]

[Command]

0 [Command] formation about the guest agent. hestAgentInfo 0 [Command] st-activated shutdown. Note: this is an asynchronous shutdown request, arantee of successful shutdown. ng (optional) "halt", "powerdown" (default), or "reboot" and does NOT return a response on success. Success condition is indicated exiting with a zero exit status or, when running with -no-shutdown, by query-status QMP command to confirm the VM status is "shutdown". 0	Information about guest agent commands		
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<ul> <li>n [Command]</li> <li>st-activated shutdown. Note: this is an asynchronous shutdown request, arantee of successful shutdown.</li> <li>ng (optional)</li> <li>"halt", "powerdown" (default), or "reboot"</li> <li>and does NOT return a response on success. Success condition is indicated exiting with a zero exit status or, when running with -no-shutdown, by query-status QMP command to confirm the VM status is "shutdown".</li> </ul>	formation about the guest agent.	[Comman	nd]
ng (optional) "halt", "powerdown" (default), or "reboot" and does NOT return a response on success. Success condition is indicated exiting with a zero exit status or, when running with –no-shutdown, by query-status QMP command to confirm the VM status is "shutdown". 0	0 n st-activated shutdown. Note: this is an asynchronous shutdo rrantee of successful shutdown.	[Comman own reque	nd] est,
and does NOT return a response on success. Success condition is indicated exiting with a zero exit status or, when running with –no-shutdown, by query-status QMP command to confirm the VM status is "shutdown". 0	ng (optional) "halt", "powerdown" (default), or "reboot"		
0	and does NOT return a response on success. Success condition exiting with a zero exit status or, when running with –no-sh query-status QMP command to confirm the VM status is "sh	is indicat utdown, utdown"	ted by
	0	L C	

Since: 0.15.0

supported\_commands: array of GuestAgentCommandInfo

## guest-info

Get some info

## Returns: Gue

Since: 0.15.0

#### guest-shutdown

Initiate guest uest, with no guara

#### **Arguments:**

mode: string п

This comman ated by the VM ex , by issuing the qu ". Since: 0.15.0

guest-file-open [Command] Open a file in the guest and retrieve a file handle for it **Arguments:** path: string Full path to the file in the guest to open. mode: string (optional) open mode, as per fopen(), "r" is the default. **Returns:** Guest file handle on success. Since: 0.15.0 [Command] guest-file-close Close an open file in the guest **Arguments:** 

handle: int

filehandle returned by guest-file-open

Returns: Nothing on success. **Since:** 0.15.0

#### GuestFileRead

Result of guest agent file-read operation

## Members:

count: int

number of bytes read (note: count is **before** base64-encoding is applied)

buf	-b64: string base64-encoded bytes read	
eof	: boolean whether EOF was encountered during read operation.	
Sin	<b>ce:</b> 0.15.0	
guest-f Rea	<b>ile-read</b> ad from an open file in the guest. Data will be base64-encoded	[Command]
Arg	guments:	
han	ndle: int filehandle returned by guest-file-open	
cou	maximum number of bytes to read (default is 4KB)	
Ret	turns: GuestFileRead on success.	
Sin	<b>ce:</b> 0.15.0	
GuestFi Res	leWrite sult of guest agent file-write operation	[Object]
Me	mbers:	
cou	<pre>mt: int     number of bytes written (note: count is actual bytes written,     decoding of provided buffer)</pre>	after base64-
eof	: boolean whether EOF was encountered during write operation.	
Sin	<b>ce:</b> 0.15.0	
guest-f Wri	ile-write ite to an open file in the guest.	[Command]
Arg	guments:	
han	ndle: int filehandle returned by guest-file-open	
buf	-b64: string base64-encoded string representing data to be written	
cou	<pre>mt: int (optional)     bytes to write (actual bytes, after base64-decode), default     in buf-b64 buffer after base64 decoding</pre>	is all content
Ret	turns: GuestFileWrite on success.	

**Since:** 0.15.0

Gues	tFileSeek		bject]
	Result of g	uest agent me-seek operation	
	Members:		
	position:	int current file position	
	eof: boole	ean whether EOF was encountered during file seek	
	<b>Since:</b> 0.15	.0	
QGAS	eek	I	Enum]
	Symbolic n Values:	names for use in guest-file-seek	1
	set	Set to the specified offset (same effect as 'whence':0)	
	cur	Add offset to the current location (same effect as 'whence':1)	
	end	Add offset to the end of the file (same effect as 'whence':2)	
	<b>Since:</b> 2.6		
Gues	tFileWhen Controls th	nce [Alte ne meaning of offset to guest-file-seek.	ernate]
	Members:		
	value: int	t Integral value (0 for set, 1 for cur, 2 for end), available for hist reasons, and might differ from the host's or guest's SEEK_* values ( 0.15)	torical (since:
	name: QGAS	Seek Symbolic name, and preferred interface	
	<b>Since:</b> 2.6		
gues <sup>.</sup>	t-file-se Seek to a j afterward.	eek [Composition in the file, as with fseek(), and return the current file po Also encapsulates ftell()'s functionality, with offset=0 and whence=	mand] osition =1.
	Arguments	:	
	handle: in	nt filehandle returned by guest-file-open	
	offset: in	bytes to skip over in the file stream	
	whence: Gu	uestFileWhence Symbolic or numeric code for interpreting offset	
	Returns: G	uestFileSeek on success.	
	<b>Since:</b> 0.15	.0	

guest	t-file-fl	ush	[Command]
	Write file cl	hanges bufferred in userspace to disk/kernel buffers	
	Arguments	:	
	handle: in	t flohandla returned by guast flo anon	
		menancie returned by guest-me-open	
	Returns: N	othing on success.	
	<b>Since:</b> 0.15.	0	
Guest	tFsfreeze	Status	[Enum]
An enumeration of filesystem freeze states			
	Values:		
	thawed	filesystems thawed/unfrozen	
	frozen	all non-network guest filesystems frozen	
	<b>Since:</b> 0.15.	.0	
guest	t-fsfreez	e-status	[Command]
	Get guest is	streeze state. error state indicates	
	Returns: G	uestFsfreezeStatus ("thawed", "frozen", etc., as defined belo	ow)

**Note:** This may fail to properly report the current state as a result of some other guest processes having issued an fs freeze/thaw.

Since: 0.15.0

#### guest-fsfreeze-freeze

Sync and freeze all freezable, local guest filesystems. If this command succeeded, you may call guest-fsfreeze-thaw later to unfreeze.

**Note:** On Windows, the command is implemented with the help of a Volume Shadowcopy Service DLL helper. The frozen state is limited for up to 10 seconds by VSS.

**Returns:** Number of file systems currently frozen. On error, all filesystems will be thawed.

**Since:** 0.15.0

#### guest-fsfreeze-freeze-list

Sync and freeze specified guest filesystems. See also guest-fsfreeze-freeze.

### **Arguments:**

mountpoints: array of string (optional)

an array of mountpoints of filesystems to be frozen. If omitted, every mounted filesystem is frozen. Invalid mount points are ignored.

**Returns:** Number of file systems currently frozen. On error, all filesystems will be thawed.

**Since:** 2.2

6

[Command]

guest-fsfreeze-thaw

	Unfreeze all frozen guest filesystems	
	<b>Returns:</b> Number of file systems thawed by this call	
	<b>Note:</b> if return value does not match the previous call to guest-fsfreeze- likely means some freezable filesystems were unfrozen before this call, an filesystem state may have changed before issuing this command.	freeze, this nd that the
	<b>Since:</b> 0.15.0	
Guest	tFilesystemTrimResult Members:	[Object]
	path: string path that was trimmed	
	error: string (optional) an error message when trim failed	
	trimmed: int (optional) bytes trimmed for this path	
	minimum: int (optional) reported effective minimum for this path	
	Since: 2.4	
Guest	tFilesystemTrimResponse Members:	[Object]
	<pre>paths: array of GuestFilesystemTrimResult     list of GuestFilesystemTrimResult per path that was trimm</pre>	ned
	Since: 2.4	
guest	t-fstrim Discard (or "trim") blocks which are not in use by the filesystem. Arguments:	[Command]
	minimum: int (optional) Minimum contiguous free range to discard in bytes. Free ran	oes smaller

Minimum contiguous free range to discard, in bytes. Free ranges smaller than this may be ignored (this is a hint and the guest may not respect it). By increasing this value, the fstrim operation will complete more quickly for filesystems with badly fragmented free space, although not all blocks will be discarded. The default value is zero, meaning "discard every free block".

**Returns:** A GuestFilesystemTrimResponse which contains the status of all trimmed paths. (since 2.4)

**Since:** 1.2

## guest-suspend-disk

Suspend guest to disk.

This command tries to execute the scripts provided by the pm-utils package. If it's not available, the suspend operation will be performed by manually writing to a sysfs file.

For the best results it's strongly recommended to have the pm-utils package installed in the guest.

This command does NOT return a response on success. There is a high chance the command succeeded if the VM exits with a zero exit status or, when running with – no-shutdown, by issuing the query-status QMP command to to confirm the VM status is "shutdown". However, the VM could also exit (or set its status to "shutdown") due to other reasons.

The following errors may be returned: If suspend to disk is not supported, Unsupported

**Notes:** It's strongly recommended to issue the guest-sync command before sending commands when the guest resumes

**Since:** 1.1

## guest-suspend-ram

Suspend guest to ram.

This command tries to execute the scripts provided by the pm-utils package. If it's not available, the suspend operation will be performed by manually writing to a sysfs file.

For the best results it's strongly recommended to have the pm-utils package installed in the guest.

IMPORTANT: guest-suspend-ram requires QEMU to support the 'system\_wakeup' command. Thus, it's **required** to query QEMU for the presence of the 'system\_wakeup' command before issuing guest-suspend-ram.

This command does NOT return a response on success. There are two options to check for success:

1. Wait for the SUSPEND QMP event from QEMU

2. Issue the query-status QMP command to confirm the VM status is "suspended"

The following errors may be returned: If suspend to ram is not supported, Unsupported

**Notes:** It's strongly recommended to issue the guest-sync command before sending commands when the guest resumes

**Since:** 1.1

#### guest-suspend-hybrid

Save guest state to disk and suspend to ram.

This command requires the pm-utils package to be installed in the guest.

IMPORTANT: guest-suspend-hybrid requires QEMU to support the 'system\_wakeup' command. Thus, it's **required** to query QEMU for the presence of the 'system\_wakeup' command before issuing guest-suspend-hybrid.

This command does NOT return a response on success. There are two options to check for success:

1. Wait for the SUSPEND QMP event from QEMU

[Command]

The following errors may be returned: If hybrid suspend is not supported, Unsupported Notes: It's strongly recommended to issue the guest-sync command before sending commands when the guest resumes **Since:** 1.1 GuestIpAddressType [Enum] An enumeration of supported IP address types Values: ipv4 IP version 4 ipv6 IP version 6 **Since:** 1.1 GuestIpAddress [Object] Members: ip-address: string IP address ip-address-type: GuestIpAddressType Type of ip-address (e.g. ipv4, ipv6) prefix: int Network prefix length of ip-address **Since:** 1.1 GuestNetworkInterface [Object] Members: name: string The name of interface for which info are being delivered hardware-address: string (optional) Hardware address of name ip-addresses: array of GuestIpAddress (optional) List of addresses assigned to name **Since:** 1.1 guest-network-get-interfaces [Command] Get list of guest IP addresses, MAC addresses and netmasks. **Returns:** List of GuestNetworkInfo on success. **Since:** 1.1 GuestLogicalProcessor [Object] Members: logical-id: int Arbitrary guest-specific unique identifier of the VCPU.

2. Issue the query-status QMP command to confirm the VM status is "suspended"

online: boolean

Whether the VCPU is enabled.

#### can-offline: boolean (optional)

Whether offlining the VCPU is possible. This member is always filled in by the guest agent when the structure is returned, and always ignored on input (hence it can be omitted then).

**Since:** 1.5

guest-get-vcpus

Retrieve the list of the guest's logical processors.

This is a read-only operation.

**Returns:** The list of all VCPUs the guest knows about. Each VCPU is put on the list exactly once, but their order is unspecified.

**Since:** 1.5

#### guest-set-vcpus

Attempt to reconfigure (currently: enable/disable) logical processors inside the guest.

The input list is processed node by node in order. In each node logical-id is used to look up the guest VCPU, for which online specifies the requested state. The set of distinct logical-id's is only required to be a subset of the guest-supported identifiers. There's no restriction on list length or on repeating the same logical-id (with possibly different online field). Preferably the input list should describe a modified subset of guest-get-vcpus' return value.

## **Arguments:**

vcpus: array of GuestLogicalProcessor Not documented

**Returns:** The length of the initial sublist that has been successfully processed. The guest agent maximizes this value. Possible cases:

- 0: if the vcpus list was empty on input. Guest state has not been changed. Otherwise,
- Error: processing the first node of vcpus failed for the reason returned. Guest state has not been changed. Otherwise,
- < length(vcpus): more than zero initial nodes have been processed, but not the entire vcpus list. Guest state has changed accordingly. To retrieve the error (assuming it persists), repeat the call with the successfully processed initial sublist removed. Otherwise,
- length(vcpus): call successful.

**Since:** 1.5

#### GuestDiskBusType

An enumeration of bus type of disks

Values:

ide IDE disks

[Command]

	fdc	floppy disks	
	scsi	SCSI disks	
	virtio	virtio disks	
	xen	Xen disks	
	usb	USB disks	
	uml	UML disks	
	sata	SATA disks	
	sd	SD cards	
	unknown	Unknown bus type	
	ieee1394	Win IEEE 1394 bus type	
	ssa	Win SSA bus type	
	fibre	Win fiber channel bus type	
	raid	Win RAID bus type	
	iscsi	Win iScsi bus type	
	sas	Win serial-attaches SCSI bus type	
	mmc	Win multimedia card (MMC) bus type	
	virtual	Win virtual bus type $\verb+file-backed$ virtual: Win file-backed bus	type
	file-back	ed-virtual Not documented	
	Since: 2.2;	'Unknown' and all entries below since 2.4	
Gues	tPCIAddre Members:	SS	[Object]
	domain: in	t	
		domain id	
	bus: int	bus id	
	<pre>slot: int</pre>	slot id	
	function:	int function id	
	<b>Since:</b> 2.2		
Gues	tDiskAddr Members:	ess	[Object]
	pci-contro	controller's PCI address	
	bus-type:	GuestDiskBusType bus type	

bus: int bus id

target: int

target id

unit: int unit id

**Since:** 2.2

## GuestFilesystemInfo

### Members:

name: string disk name

mountpoint: string mount point path

#### type: string

file system type string

#### disk: array of GuestDiskAddress

an array of disk hardware information that the volume lies on, which may be empty if the disk type is not supported

#### Since: 2.2

#### guest-get-fsinfo

**Returns:** The list of filesystems information mounted in the guest. The returned mountpoints may be specified to guest-fsfreeze-freeze-list. Network filesystems (such as CIFS and NFS) are not listed.

**Since:** 2.2

## guest-set-user-password

## **Arguments:**

username: string

the user account whose password to change

password: string

the new password entry string, base64 encoded

#### crypted: boolean

true if password is already crypt()d, false if raw

If the crypted flag is true, it is the caller's responsibility to ensure the correct crypt() encryption scheme is used. This command does not attempt to interpret or report on the encryption scheme. Refer to the documentation of the guest operating system in question to determine what is supported.

Not all guest operating systems will support use of the crypted flag, as they may require the clear-text password

The password parameter must always be base64 encoded before transmission, even if already crypt()d, to ensure it is 8-bit safe when passed as JSON.

**Returns:** Nothing on success.

**Since:** 2.3

[Object]

[Command]

GuestMemoryBlock

Members:

phys-index: int

		Arbitrary guest-specific unique identifier of the MEMORY BLOCK.	
	online: bo	Whether the MEMORY BLOCK is enabled in guest.	
	can-offlin	<b>ne: boolean</b> (optional) Whether offlining the MEMORY BLOCK is possible. This member always filled in by the guest agent when the structure is returned, ar always ignored on input (hence it can be omitted then).	is nd
	Since: 2.3		
guest	-get-mem Retrieve th	ory-blocks [Comman e list of the guest's memory blocks.	ıd]
	This is a re <b>Returns:</b> T is put on th <b>Since:</b> 2.3	ead-only operation. The list of all memory blocks the guest knows about. Each memory blocks he list exactly once, but their order is unspecified.	ck
Guest	MemoryBl An enumer Values:	ockResponseType [Enur ation of memory block operation result.	m]
	success	the operation of online/offline memory block is successful.	
	not-found	can't find the corresponding memoryXXX directory in sysfs.	
	operation	-not-supported for some old kernels, it does not support online or offline memory bloc	ek.
	operation	-failed the operation of online/offline memory block fails, because of some erro happen.	$\mathbf{rs}$
	<b>Since:</b> 2.3		
Guest	MemoryBl Members:	ockResponse [Object	ct]
	phys-inde:	x: int same with the 'phys-index' member of GuestMemoryBlock.	
	response:	GuestMemoryBlockResponseType the result of memory block operation.	
	error-cod	e: int (optional)	

the error number. When memory block operation fails, we assign the value of 'errno' to this member, it indicates what goes wrong. When the operation succeeds, it will be omitted.

**Since:** 2.3

[Object]

#### guest-set-memory-blocks

Attempt to reconfigure (currently: enable/disable) state of memory blocks inside the guest.

The input list is processed node by node in order. In each node phys-index is used to look up the guest MEMORY BLOCK, for which online specifies the requested state. The set of distinct phys-index's is only required to be a subset of the guest-supported identifiers. There's no restriction on list length or on repeating the same phys-index (with possibly different online field). Preferably the input list should describe a modified subset of guest-get-memory-blocks' return value.

## **Arguments:**

```
mem-blks: array of GuestMemoryBlock
Not documented
```

**Returns:** The operation results, it is a list of GuestMemoryBlockResponse, which is corresponding to the input list.

Note: it will return NULL if the mem-blks list was empty on input, or there is an error, and in this case, guest state will not be changed.

**Since:** 2.3

## GuestMemoryBlockInfo

## Members:

size: int the size (in bytes) of the guest memory blocks, which are the minimal units of memory block online/offline operations (also called Logical Memory Hotplug).

Since: 2.3

guest-get-mem Get inform	ory-block-info ation relating to guest memory blocks.	[Command]
Returns: G	uestMemoryBlockInfo	
<b>Since:</b> 2.3		
GuestExecStat Members:	us	[Object]
exited: bo	true if process has already terminated.	
exitcode:	<pre>int (optional) process exit code if it was normally terminated.</pre>	
signal: in	nt (optional) signal number (linux) or unhandled exception code (win cess was abnormally terminated.	dows) if the pro-
out-data:	string (optional)	

base64-encoded stdout of the process

14

[Command]

	err-data: s	<pre>string (optional) base64-encoded stderr of the process Note: out-data and err present only if 'capture-output' was specified for 'guest-exec'</pre>	-data are
	out-trunca	true if stdout was not fully captured due to size limitation.	
	err-trunca	true if stderr was not fully captured due to size limitation.	
1	<b>Since:</b> 2.5		
guest	c-exec-sta Check status and associat	atus [0] s of process associated with PID retrieved via guest-exec. Reap t ted metadata if it has exited.	Command] he process
-	Arguments:		
]	pid: int	pid returned from guest-exec	
]	Returns: Gu	uestExecStatus on success.	
:	<b>Since:</b> 2.5		
Guest	Exec Members:		[Object]
]	pid: int	pid of child process in guest OS	
:	<b>Since:</b> 2.5		
guest	<b>z-exec</b> Execute a co	ommand in the guest	Command]
	Arguments:		
]	path: strin	ng path or executable name to execute	
;	arg: array	of string (optional) argument list to pass to executable	
	env: array	of string (optional) environment variables to pass to executable	
:	input-data	a: string (optional) data to be passed to process stdin (base64 encoded)	
	capture-ou	tput: boolean (optional) bool flag to enable capture of stdout/stderr of running process to false.	s. defaults
	Returns: PI	ID on success.	

#### GuestHostName Members:

host-name: string

Fully qualified domain name of the guest OS

**Since:** 2.10

## guest-get-host-name

Return a name for the machine.

The returned name is not necessarily a fully-qualified domain name, or even present in DNS or some other name service at all. It need not even be unique on your local network or site, but usually it is.

Returns: the host name of the machine on success

**Since:** 2.10

## GuestUser

Members:

user: string

Username

domain: string (optional)

Logon domain (windows only)

login-time: number

Time of login of this user on the computer. If multiple instances of the user are logged in, the earliest login time is reported. The value is in fractional seconds since epoch time.

Since: 2	2.10
----------	------

guest-get-users	
Retrieves a list of currently active users on the VM.	

**Returns:** A unique list of users.

**Since:** 2.10

## GuestTimezone

## Members:

zone: string (optional)

Timezone name. These values may differ depending on guest/OS and should only be used for informational purposes.

#### offset: int

Offset to UTC in seconds, negative numbers for time zones west of GMT, positive numbers for east

**Since:** 2.10

#### guest-get-timezone

Retrieves the timezone information from the guest.

**Returns:** A GuestTimezone dictionary.

**Since:** 2.10

[Object]

[Command]

[Object]

[Command]

[Object]

GuestOSInfo	
Members:	

#### kernel-release: string (optional)

- POSIX: release field returned by uname(2)
- Windows: version number of the OS

#### kernel-version: string (optional)

- POSIX: version field returned by uname(2)
- Windows: build number of the OS

#### machine: string (optional)

- POSIX: machine field returned by uname(2)
- Windows: one of x86, x86\_64, arm, ia64

#### id: string (optional)

- POSIX: as defined by os-release(5)
- Windows: contains string "mswindows"

name: string (optional)

- POSIX: as defined by os-release(5)
- Windows: contains string "Microsoft Windows"

## pretty-name: string (optional)

- POSIX: as defined by os-release(5)
- Windows: product name, e.g. "Microsoft Windows 10 Enterprise"

## version: string (optional)

- POSIX: as defined by os-release(5)
- Windows: long version string, e.g. "Microsoft Windows Server 2008"
- version-id: string (optional)
  - POSIX: as defined by os-release(5)
  - Windows: short version identifier, e.g. "7" or "20012r2"

#### variant: string (optional)

- POSIX: as defined by os-release(5)
- Windows: contains string "server" or "client"

#### variant-id: string (optional)

- POSIX: as defined by os-release(5)
- Windows: contains string "server" or "client"

Notes: On POSIX systems the fields id, name, pretty-name, version, version-id, variant and variant-id follow the definition specified in os-release(5). Refer to the manual page for exact description of the fields. Their values are taken from the os-release file. If the file is not present in the system, or the values are not present in the file, the fields are not included.

On Windows the values are filled from information gathered from the system.

**Since:** 2.10

[Command]

guest-get-osinfo
 Retrieve guest operating system information
 Returns: GuestOSInfo
 Since: 2.10

## Commands and Events Index

guest-exec
guest-exec-status
guest-file-close 3
guest-file-flush
guest-file-open 3
guest-file-read 4
guest-file-seek 5
guest-file-write 4
guest-fsfreeze-freeze 6
guest-fsfreeze-freeze-list
guest-fsfreeze-status 6
guest-fsfreeze-thaw7
guest-fstrim7
guest-get-fsinfo 12
guest-get-host-name16
guest-get-memory-block-info 14
guest-get-memory-blocks13
guest-get-osinfo

guest-get-time 2
guest-get-timezone16
guest-get-users 16
guest-get-vcpus 10
guest-info
guest-network-get-interfaces
guest-ping
guest-set-memory-blocks14
guest-set-time 2
guest-set-user-password12
guest-set-vcpus 10
guest-shutdown 3
guest-suspend-disk7
guest-suspend-hybrid8
guest-suspend-ram
guest-sync1
guest-sync-delimited1

# Data Types Index

## G

GuestAgentCommandInfo 2
GuestAgentInfo 2
$\texttt{GuestDiskAddress} \dots 11$
GuestDiskBusType10
GuestExec
GuestExecStatus 14
GuestFileRead3
GuestFileSeek5
GuestFilesystemInfo12
GuestFilesystemTrimResponse7
GuestFilesystemTrimResult7
GuestFileWhence
GuestFileWrite 4
GuestFsfreezeStatus
GuestHostName 16

GuestIpAddress
GuestIpAddressType9
GuestLogicalProcessor
GuestMemoryBlock13
GuestMemoryBlockInfo 14
GuestMemoryBlockResponse13
GuestMemoryBlockResponseType
GuestNetworkInterface
GuestOSInfo
GuestPCIAddress 11
GuestTimezone 16
GuestUser

## $\mathbf{Q}$

QGASeek				5
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