The oninit utility

The **oninit** utility starts the database server.

On UNIX™, Linux™, you must be logged in as user **root**, user **informix**, or the non-root database server owner to run the **oninit** utility. User **informix** should be the only member of the group **informix**. Run the **oninit** command from the command line. You can allow users who belong to the DBSA group to run the **oninit** command.

**Syntax**

>>-oninit--+-------------------------+-------------------------->

| (1) |

'-| -FILE option |-----'

>--+-------------------------------------------+---------------><

+-| Other options for starting the server |-+

+-| Initialize disk space |-----------------+

'- -PHY-------------------------------------'

Other options for starting the server

|--+-+-----+--+--------------------------+-+--+-------------+--->

| '- -j-' | .-600-------------. | | +- -SDS=alias-+

| '- -w--+-+-------------+-+-' | '- -D---------'

| '-max\_seconds-' |

'-+- -s-+-------------------------------'

'- -S-'

>--+-----------------------+--+-----+--+-----+--+-----+---------|

| .-,--------. | '- -p-' '- -y-' '- -v-'

| V | |

'- -U--+---username-+-+-'

'-" "----------'

Initialize disk space

|-- -i--+-----+--+-----+--+-----+------------------------------->

+- -j-+ '- -y-' '- -v-'

'- -s-'

>--+--------------------------+--+-----------------------+------|

| .-600-------------. | | .-,--------. |

'- -w--+-+-------------+-+-' | V | |

'-max\_seconds-' '- -U--+---username-+-+-'

'-" "----------'

| Table 1. **oninit**command elements | | |
| --- | --- | --- |
| **Element** | **Purpose** | **Key Considerations** |
| **-D** | Starts the database server with Enterprise Replication and high-availability cluster replication disabled. |  |
| **-i** | Initializes disk space for the root dbspace so that it can be used by the database server and starts the database server. | Disk space needs to be initialized only once to prepare data storage for the server.  By default, to prevent data loss, you cannot reinitialize disk space. To reinitialize disk space for an existing root dbspace, you must set the FULL\_DISK\_INIT configuration parameter to 1 and then run the **oninit -i** command. |
| **-j** | Starts the server in administration mode. |  |
| **-p** | Starts the database server without deleting temporary tables. | If you use this option, the database server starts more rapidly, but space used by temporary tables left on disk is not reclaimed. |
| **-PHY** | Starts the server as of most current checkpoint. The **-PHY** option is used to tell the server to do only physical recovery without logical recovery. | This option is normally used to start a secondary server. You must run one of the following commands to connect the secondary server to the primary server:  onmode -d secondary  onmode -d RSS  The connection of the secondary server to the primary server fails if the most recent checkpoint on the primary server was not performed on the secondary server. |
| **-s** | Starts the server in quiescent mode. | The database server must be shut down when you use this option.  When the database server is in quiescent mode, only the user **informix** can access the database server. |
| **-S** | Starts database server in quiescent mode as a standard server with high-availability data replication disabled. | When the database server is in quiescent mode, only the user **informix** can access the database server. |
| **-U** *username* | Specifies which users can access the server in administration mode for the current session. | The **informix** user and members of the DBSA group are always administration mode users. |
| **-v** | Displays verbose informational messages while the server is starting. |  |
| **-w** *max\_seconds* | Starts the database server and waits to indicate success or failure until the server is completely started in online mode or the number of seconds specified by *max\_seconds* elapses. | The default number of seconds to wait is 600.  This option is not valid on secondary servers in a high-availability cluster. |
| **-y** | Prevents verification prompts. | The **-y** option automatically answers yes to all the verification prompts. |

**Usage**

By default, the **oninit** utility shows verification prompts during server startup. You can suppress verification prompts by including the **-y** option. You can view verbose informational messages by including the **-v** option. On UNIX, Linux, **oninit** output is shown to standard output. On Windows, you can view **oninit** output by setting the **ONINIT\_STOUT** environment variable to save the output to a file.

You can start the server in different operating modes. By default, if you run the **oninit** command without options, the server starts in online mode. When the database server is in online mode, all authorized users can access the server.

If you run an **oninit** **-FILE** command, you do not need to set local environment variables before you start the database server. The database server automatically uses the environment variables that are set as values in the **onconfig** file.

**Start the server in administration mode**

Administration mode is an administrator-only mode you can use to perform maintenance operations including those that require running SQL or DDL commands. When in administration mode, the database server only accepts connection requests from the following users:

* The **informix** user
* Members of the DBSA group
* Users specified by the **oninit -U** command or the **onmode -j -U** command, for the current session. The **-U** option overrides any users listed by the ADMIN\_MODE\_USERS configuration parameter in the onconfig file.
* Users specified by the ADMIN\_MODE\_USERS configuration parameter

Use the **-U** option with a list of comma-separated user names to add administration mode users, such as: Karin,Sarah,Andrew.

Use the **-U " "** option to remove all administration mode users except the **informix** user and members of the DBSA group: **oninit -U " "**.

**Initialize disk space for the root dbspace**

The first time you install HCL OneDB on your system, disk space for the root dbspace for the database server needs to be initialized. The root dbspace is specified by the ROOTPATH configuration parameter.

If you performed a typical installation and chose to create a database server or you performed a customer installation, disk space was automatically initialized. Otherwise, you must initialize disk space by running the **oninit -i** command.

If the DISK\_ENCRYPTION configuration parameter is set when you initialize the root dbspace, the root dbspace is encrypted.

If necessary, you can reinitialize disk space. Reinitializing disk space destroys all existing data managed by the database server. The database server must be offline when you reinitialize.

By default, you cannot reinitialize a root dbspace that is being used by the database server. Disk initialization fails if a page zero exists at the root path location (at the first page of the first chunk location). You can allow disk reinitialization of an existing root dbspace by setting the FULL\_DISK\_INIT configuration parameter to 1.

**Start the server with a script**

You can use the **oninit -w** command in customized startup scripts and to automate startup. The **-w** option forces the server to wait until startup is completely successfully before indicating that the server is in online mode by returning to the shell prompt with a return code of 0. If the server is not in online mode within the timeout period, the server returns a return code of 1 to the shell prompt and writes a warning message in the online log.

The default timeout is 600 seconds (10 minutes), which you can modify to any integer value.

After running the following command, if the server fails to start within 60 seconds, a code of 1 is returned to the prompt:

oninit -w 60

To determine the reason for the server failing to start, check the online log. You might need to increase the timeout value. When you use the **oninit -w** command in a script, you can check whether the server is online with the **onstat -** (Print output header) command.

**Allow DBSA group users to run the oninit command (UNIX)**

To allow users who belong to the DBSA group, other than the user **informix**, to run the **oninit** command, log in as the user **root** and change the permissions on the **oninit** utility in the $ONEDB\_HOME/bin directory from 6754 to 6755.

# The -FILE option

On UNIX™, you can use the **-FILE** option to run certain HCL OneDB™ utilities with the local environment variables that you set in your onconfig file. You do not have to set local environment variables before you run the command to start the utilities.

You can use the **-FILE** option when you start the following utilities: **oninit**, **oncheck**, **onclean**, ,onlog, **onmode**, **onparams**, **onspaces**, **onstat**.

## Syntax

-FILE option

|--+---------+--+-----------+-----------------------------------|

'- -FILE=-' '-file\_name-'

| Table 1. **-FILE** option | | |
| --- | --- | --- |
| **Element** | **Purpose** | **Key Considerations** |
| **-FILE=**file\_name | Specifies the full path or relative path to the onconfig file that contains the environment information. | The **-FILE=**file\_name option must be the first argument in the command. |

## Usage

Before you run a command with the **-FILE** option, you must add directives to your onconfig file in the following format:

#$variable\_name value

Any environment variables that are set in the onconfig file take precedence over the same environment variables that are set in the system or shell.

When you start a utility with the **-FILE** option, specify the full path or the relative path to the onconfig file. For example, both of the following examples start the database server with the environment information in the onconfig.serv1 file:

**Full path**

oninit -FILE=/opt/HCL/inf/etc/onconfig.serv1

**Relative path**

oninit -FILE=etc/onconfig.serv1

If the ONEDB\_HOME environment variable is not set in the user system, the shell, or in the onconfig file, the value of ONEDB\_HOME is set to the PATH of the executable program, with the assumption that the executable program is in a subdirectory of ONEDB\_HOME. For example, you can run the **oninit -FILE=etc/onconfig.myserv** command when the **oninit** utility is in the /opt/HCL/onedb/bin directory. If the ONEDB\_HOME environment variable is not set in the shell or in the onconfig.myserv file, the value of ONEDB\_HOME is set to /opt/HCL/onedb.

If you use a form of remote execution, such as ssh, use the **-FILE** option to specify the path to the onconfig file on the remote computer.

## Example

Suppose that you specified values for the ONEDB\_SERVER, DBDATE, and SERVER\_LOCALE environment variables in the onconfig file for the js\_3 instance:

#onconfig.js\_3

#

# \*\*\* Start environment settings for js\_3

#

#$ONEDB\_SERVER server3

#$DBDATE MDY4/

#$SERVER\_LOCALE en\_us.utf8

#

# \*\*\* End environment settings for js\_3

The other important environment variables (ONEDB\_HOME, ONEDB\_ SQLHOSTS, ONCONFIG) for running the utility are specified in the user environment. The path to the **oninit** executable program is part of the user environment and the onconfig file is in the current directory.

You can run the oninit -FILE=onconfig.js\_3 command from the current directory to start the database server, and automatically set the values for the ONEDB\_SERVER, DBDATE, and SERVER\_LOCALE environment variables.

# Return codes for the oninit utility

If a **oninit** command encounters an error, the database server returns an error message and a return code value.

The following table contains the return codes, message text, and user actions for the **oninit** utility.

| Table 1. Return codes for the oninit utility | | |
| --- | --- | --- |
| **Return Code** | **Message Text** | **User Action** |
| 0 | The database server was initialized successfully. | The database server started. |
| 1 | Server initialized has failed. Look at any error messages written to stderr or the online message log. | Take the appropriate action based on the error messages written to stderr or the online message log. |
| 87 | The database server has detected security violations or certain prerequisites are missing or incorrect. | (UNIX™ and Mac OS only) Check if user and group **informix** exists. Check if the server configuration file (onconfig) and sqlhosts file exists and has the correct permissions. Check if the environment variables **ONEDB\_HOME**, **ONCONFIG**, and **SQLHOSTS** have a valid value and their length does not exceed 255 characters. Check if the environment variable **ONEDB\_HOME** specifies an absolute path and does not have any spaces, tab, new lines, or other incorrect characters. Check if role separation-related subdirectories under the $ONEDB\_HOME directory, such as aaodir and dbssodir, have the correct ownership. Run the **onsecurity** utility to diagnose and fix any issues. |
| 170 | The database server failed to initialize the dataskip structure. | Free some physical memory on the system and try to start the database server again. |
| 172 | The database server failed to initialize the listener threads. | Free some system resources, check the configuration parameter values for the number of listener threads to start when the database server starts up, and try to start the database server again. |
| 173 | The database server failed to initialize data replication. | Free some physical memory in the system and try to start the database server again. |
| 174 | The database server failed to start fast recovery threads. | Free some physical memory in the system and try to start the database server again. |
| 175 | The database server failed to initialize the root dbspace. | Check the root dbspace related parameters in server configuration file (onconfig) to make sure that the path for the root dbspace is valid. |
| 176 | Shared disk secondary server initialization failed. | Check the entries in sqlhosts file (UNIX) or SQLHOSTS registry key (Windows™) to make sure that you are using the value of the DBSERVERNAME configuration for the primary server correctly. Check if the value for the SDS\_PAGING configuration parameter in the server configuration file (onconfig) is correct. Free some system resources and try to start the database server again. |
| 177 | The database server failed to start the main\_loop thread. | Free some physical memory on the system and try to start the database server again. |
| 178 | The database server failed to initialize the memory required for page conversion. | Free some physical memory on the system and try to start the database server again. |
| 179 | The database server was unable to start CPU VPs. | Free some physical memory on the system and try to start the database server again. |
| 180 | The database server was unable to start the ADM VP. | Free some physical memory on the system and try to start the database server again. |
| 181 | The database server failed to initialize kernel AIO. | Free some physical memory on the system and try to start the database server again. |
| 182 | The database server was unable to start IO VPs. | Free some physical memory on the system and try to start the database server again. |
| 183 | The database server failed to initialize the memory required for asynchronous I/O operations. | Free some physical memory on the system and try to start the database server again. |
| 184 | The database server failed to initialize memory required for parallel database queries. (PDQ) | Free some physical memory on the system and try to start the database server again. |
| 185 | The database server failed to initialize various SQL caches. | Free some physical memory on the system and try to start the database server again. |
| 186 | The database server failed to initialize the Global Language Support (GLS) component. | Free some physical memory on the system and try to start the database server again. |
| 187 | The database server failed to initialize the Associated Service Facility (ASF) components. | Check the entries in sqlhosts file. |
| 188 | The database server was unable to start the CRYPTO VP. | Free some physical memory on the system and try to start the database server again. |
| 189 | The database server was unable to initialize the alarm program. | Free some physical memory on the system and try to start the database server again. |
| 190 | The database server failed to initialize the auditing component. | Free some physical memory on the system and try to start the database server again. |
| 192 | The database server failed to restore the Window station and desktop. | (Windows only) Try to shut down the database server after freeing some system resources. |
| 193 | The database server failed to create daemon processes. | (UNIX and Mac OS only) Free some system resources and try to startup the database server once again. |
| 194 | The database server failed to redirect the file descriptors properly. | (UNIX and Mac OS only) Check the availability of the /dev/null device and try to start the database server again. |
| 195 | The database server failed to initialize the current directory for use. | Check the validity of the current working directory from where the database server is being initialized. |
| 196 | The database server failed to initialize the /dev/null device. | (AIX® only) Check the validity of the /dev/null device. |
| 197 | The database server failed to find the password information for the user trying to initialize the database server. | Verify that the user password is valid. |
| 198 | The database server failed to set the resource limits. | (UNIX and Mac OS only) Verify, and if required, increase the resource limits for processes on the host computer. |
| 200 | The database server did not have enough memory to allocate structures during initialization. | Free some physical memory on the system and try to start the database server again. |
| 206 | The database server could not allocate the first resident segment. | Check the values of the BUFFERPOOL and LOCKS configuration parameters in the server configuration file (onconfig) to make sure that they can be accommodated with the available memory on the host computer. |
| 207 | The database server failed to initialize shared memory and disk space. | Free some physical memory in the system, check the validity of all the chunks in the database server, and try to start the database server again. |
| 208 | The database server failed to allocate structures from shared memory. | Free some system resources and try to start the database server again. |
| 209 | The database server encountered a fatal error during the creation of shared memory. | Free some physical memory in the system and try to start the database server again. |
| 210 | The database server requested memory for the resident segment that exceeded the maximum allowed. | Reduce the size of the resident segment by lowering the values of the BUFFERPOOL and LOCKS configuration parameters. |
| 220 | The database server failed to read the audit configuration file. | Check that the audit configuration file (adtcfg) exists and is valid. |
| 221 | The database server could not detect the default directory for DUMPDIR. Usually it is the $ONEDB\_HOME/tmp directory. | Create the $ONEDB\_HOME/tmp directory if it is not present. |
| 222 | The database server detected an error in the value of the DBSERVERALIASES configuration parameter in the server's configuration file. | Verify that the values for the DBSERVERALIASES configuration parameter are valid and they have corresponding entries in the sqlhosts file (UNIX) or SQLHOSTS registry key (Windows). |
| 223 | The database server detected an error with the value of the DBSERVERNAME configuration parameter in the server's configuration file. | Verify that the value of the DBSERVERNAME configuration parameter is valid and it has a corresponding entry in the sqlhosts file (UNIX) or SQLHOSTS registry key (Windows). |
| 224 | The database server detected an error with the value of the HA\_ALIAS configuration parameter in the server's configuration file. | Correct the value of the HA\_ALIAS configuration parameter in the server configuration file (onconfig). |
| 225 | The database server detected too many entries for the NETTYPE configuration parameter or the DBSERVERALIASES configuration parameter in the server's configuration file. | Reduce the number of instances of the NETTYPE or DBSERVERALIASES configuration parameters in server configuration file (onconfig) and try to start the database server again. |
| 226 | The database server could not find an entry for the DBSERVERNAME configuration parameter in the sqlhosts file or the contents of the sqlhosts file are not valid. | Check the entries in the sqlhosts file. |
| 227 | Incorrect serial number. | Reinstall the database server. |
| 228 | The user does not have the necessary DBSA privileges to invoke the executable. | The user must have DBSA privileges or be a part of the HCL OneDB™-Admin group (Windows). |
| 229 | The database server could not initialize the security sub-system. | (Windows only) The user does not the necessary user rights on the host or is not part of the HCL OneDB-Admin group. |
| 230 | The database server, if started as a process on Windows platform , timed out while trying to build the required system databases during initialization. (Windows only) | Check the event log on the host to determine why the service could not be opened or could not be started. The database server might have timed out while trying to build the system databases. Free some system resources and try to start the database server again. |
| 231 | HCL OneDB service startup failed when the oninit -w command was run as a process on the command line. | (Windows only) Check the event log on the host to determine why the service start has failed. |
| 233 | The database server failed to initialize the Pluggable Authentication Module (PAM). | Check the configuration for the PAM library on the system. |
| 235 | The database server detected errors for certain configuration parameter values in the server's configuration file. | Inspect the server configuration file (onconfig) for any errors. |
| 236 | The database server detected an error while trying to restrict the allowable values for the HCL OneDB edition in use. | Check if the SDS\_ENABLE configuration parameter is set to 1 in the server configuration file (onconfig). Check if the server name specified with the **oninit -SDS** command matches the value of the HA\_ALIAS or DBSERVERNAME configuration parameter. Check if the shared disk used is part of an existing shared disk cluster. |
| 237 | The database server could not find the server configuration file. | Ensure that the server configuration file exists and is valid. |
| 238 | The database server detected an incorrect value for the ONEDB\_SERVER environment variable or the value did not match the value of the DBSERVERNAME configuration parameter in the server's configuration file. | (Windows only) Check the value of the **ONEDB\_SERVER** environment variable and the corresponding entry in the registry. |
| 239 | The database server detected an incorrect or non-existent value for the ONEDB\_HOME environment variable. | (Windows only) Check the value of the **ONEDB\_HOME** environment variable. |
| 240 | Incorrect command-line options were issued to the database server. | Correct the command-line options issued to the database server at startup. |
| 248 | The database server failed to create the HCL OneDB loader domain file. | (AIX only) Check if the /var/adm/ifx\_loader\_domain file is present. |
| 249 | The database server failed to dynamically load the PAM library. | The PAM library is not available for the database server. Install the PAM libraries. |
| 250 | The database server failed to dynamically load the ELF library. | The ELF library is not available to the database server. Install the **libelf** packages. |
| 255 | There was an internal error during server initialization. Look at any error messages written to stderr or to the online message log. | Take the appropriate action based on the error messages written to stderr or the online message log. |