

HAMPEL SOFTWARE ENGINEERING

hse-db

HAMPEL SOFTWARE ENGINEERING

Version 1.0.1 (2021-06-28)

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Documentation generated automatically and programmatically from LabVIEW!

This document was created fully automatically from the actual LabVIEW Source Code of this project using the [Release Automation Tools](#) of [Hampel Software Engineering](#).

1. STATE MACHINES

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2. CALLING DEPENDENCY DIAGRAMS

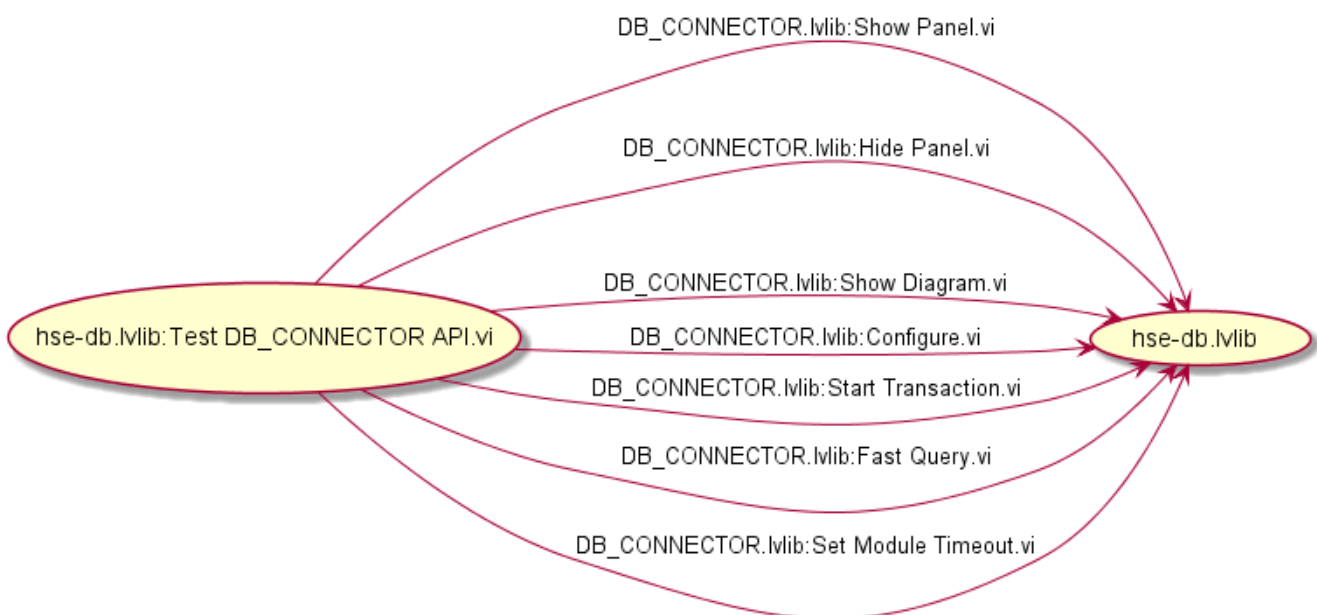
2.1. OVERVIEW

2.1.1. PROJECT

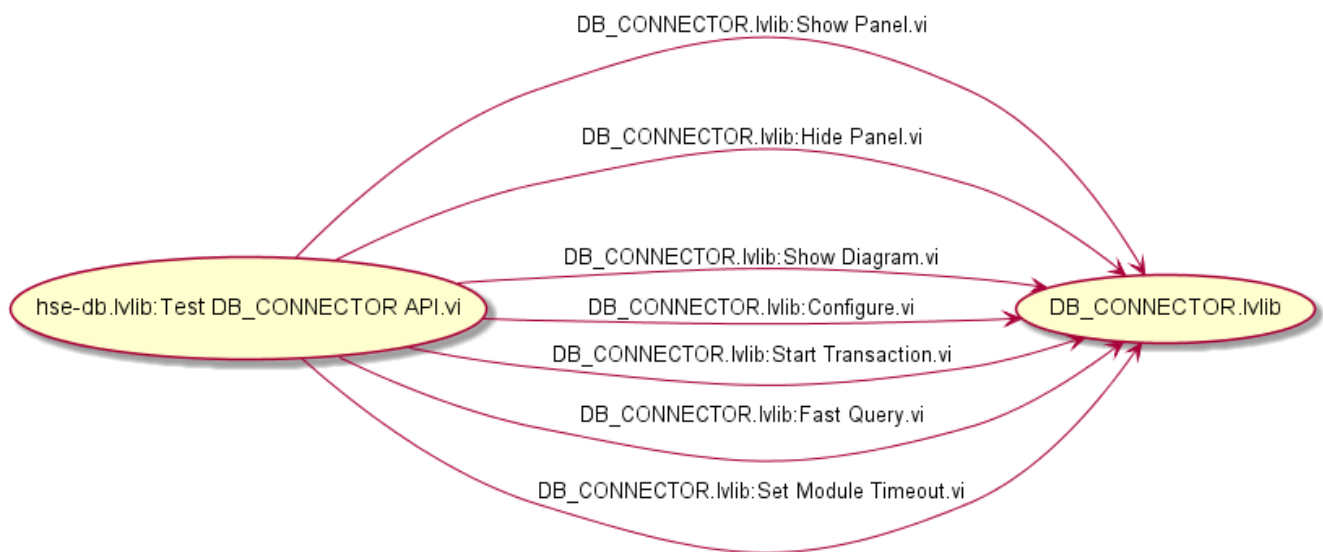


2.2. CALLERS

2.2.1. HSE-DB.LVLIB

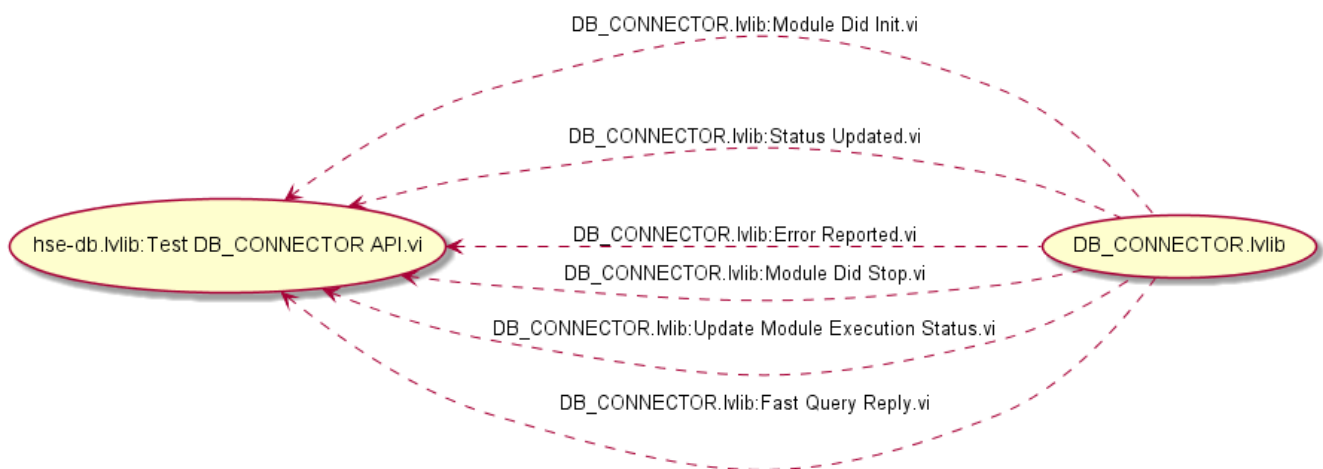


2.2.2. DB_CONNECTOR.LVLIB



2.3. LISTENERS

2.3.1. DB_CONNECTOR.LVLIB



APPENDIX A: DQMH

DQMH modules documentation

A.1. GENNET-CLIENT.LVLIB

Type: Cloneable

Responsibility: No description found (add content in DQMH module lvlib description)

A.1.1. MODULE START/STOP CALLS

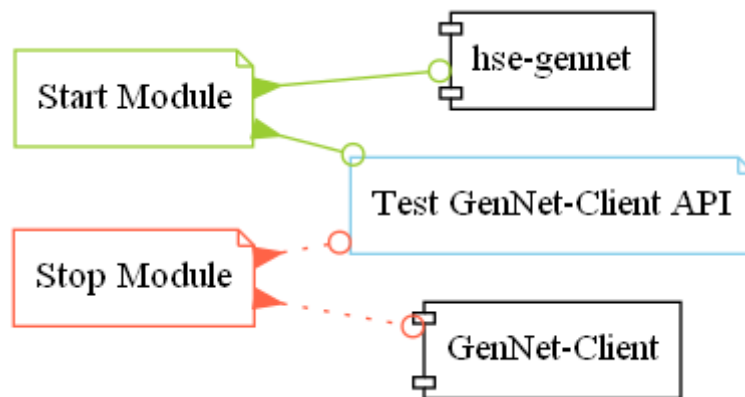


Table 1. Start and Stop module callers

Function	Callers
GenNet-Client.lvlib:Start Module.vi	Test GenNet-Client API.vi hse-gennet.lvlib:GenNet Init Client.vi
GenNet-Client.lvlib:Stop Module.vi	GenNet-Client.lvlib:Handle Exit.vi Test GenNet-Client API.vi

A.1.2. MODULE RELATIONSHIP



Table 2. Requests callers

Request Name	Callers
GenNet-Client.lvlib:Show Panel.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Hide Panel.vi	GenNet-Client.lvlib:Main.vi Test GenNet-Client API.vi
GenNet-Client.lvlib:Show Diagram.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Send via Network.vi	Test GenNet-Client API.vi

Request Name	Callers
GenNet-Client.lvlib:Listen for Network Broadcasts.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Connect.vi	Test GenNet-Client API.vi hse-gennet.lvlib:GenNet Init Client.vi

Table 3. Broadcasts Listeners

Broadcast Name	Listeners
GenNet-Client.lvlib:Module Did Init.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Status Updated.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib>Error Reported.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Module Did Stop.vi	Test GenNet-Client API.vi
GenNet-Client.lvlib:Update Module Execution Status.vi	Test GenNet-Client API.vi

Table 4. Used requests

Module	Requests
☒—☒	☒—☒

Table 5. Registered broadcast

Module	Broadcasts
☒—☒	☒—☒

A.1.3. MODULE CUSTOM ERRORS



Custom errors are added to the module via vi named `*--error.vi`.


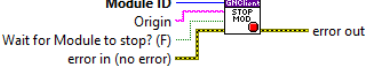
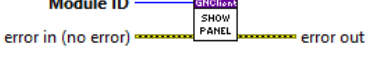

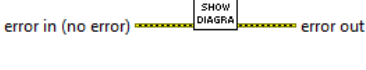


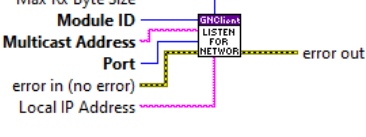

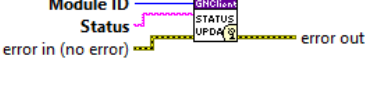
Module GenNet-Client.lvlib use the following custom errors:


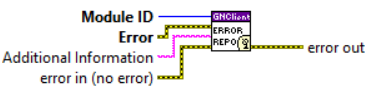

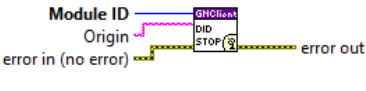

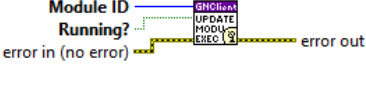
Table 6. Custom errors



Name	Code	Description
Module Running as Singleton	403680	The "%s" module is currently running as singleton, but the Start Module VI was called with 'Run as Singleton' specified as FALSE.
Module Not Stopped	403682	%s Module did not finish clean up on exit.
Module Not Synced	403683	%s Module was unable to synchronize events.
Module Not Running	403684	Not a single instance of "%s" Module running.
Module Running as Cloneable	403685	The "%s" module is currently running as cloneable, but the Start Module VI was called with 'Run as Singleton' specified as TRUE.
Request Timed Out	403686	The reply for the request "%s" of the "%s" Module timed out.
Request and Wait for Reply Timeout	403686	%s
Master Reference Not Closed	403687	The "%s" module cannot be run as singleton because the Master Reference is still open from a prior run as cloneable. If you plan on running this module as both singleton and cloneable, consider changing your Main VI to wire a value of TRUE to the 'Close Master Reference' input of Init Module.vi.

A.1.4. EVENT LIST

Table 7. Events

Name	Type	Connector pane	Description	S.	R.	I.
Start Module			Launches the Module Main.vi.			
Stop Module			<p>Send the Stop request to the Module's Main.vi. If Wait for Module to stop? is TRUE, then this VI will not complete execution until the Module Main VI has stopped running.</p> <p>Note: If the cloneable module is running as singleton, then the 'Wait for Module to stop?' input is ignored... this VI will always wait until a cloneable Main VI running as singleton has stopped running.</p> <p>Note: This VI was modified by the Validate DQMH Module tool to upgrade it to the DQMH 5.1 approach to poll the execution state of a cloneable module running as singleton to know when the module has gone idle.</p>			
Show Panel	→		Send the Show Panel request to the Module's Main.vi.			
Hide Panel	→		Send the Hide Panel request to the Module's Main.vi.			
Show Diagram	→		This VI tells the Module to show its block diagram to facilitate troubleshooting (add probes, breakpoints, highlight execution, etc).			
Send via Network	→		Forwards the message of a DQMH module via Network			
Connect	→		Open the TCP/IP connection to the listening module			
Listen for Network Broadcasts	→		Opens a port to listen for broadcasts sent by other modules via UDP			
Module Did Init	→		Send the Module Did Init event to any VI registered to listen to this module's broadcast events.			
Status Updated	→		Send the Status Updated event to any VI registered to listen to events from the owning module.			

Name	Type	Connector pane	Description	S.	R.	I.
Error Reported		 <p>Module ID Error Additional Information error in (no error)</p>	Send the Error Reported event to any VI registered to listen to events from the owning module.			
Module Did Stop		 <p>Module ID Origin error in (no error)</p>	Send the Module Did Stop event to any VI registered to listen to this module's broadcast events.			
Update Module Execution Status		 <p>Module ID Running? error in (no error)</p>	Fire the Get Module Execution Status request.			

Type:  → Request |  → Request and Wait for Reply |  → Broadcast

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

A.2. GENNET-SERVER.LVLIB

Type: Cloneable

Responsibility: No description found (add content in DQMH module lvlib description)

A.2.1. MODULE START/STOP CALLS

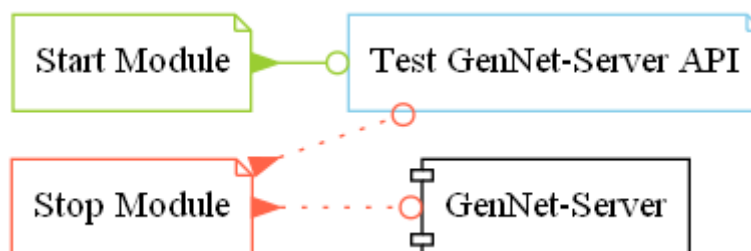


Table 8. Start and Stop module callers

Function	Callers
GenNet-Server.lvlib:Start Module.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Stop Module.vi	GenNet-Server.lvlib:Main.vi GenNet-Server.lvlib:Handle Exit.vi Test GenNet-Server API.vi

A.2.2. MODULE RELATIONSHIP



Table 9. Requests callers

Request Name	Callers
GenNet-Server.lvlib:Show Panel.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Hide Panel.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Show Diagram.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Forward Generic Broadcasts to Network.vi	Test GenNet-Server API.vi

Table 10. Broadcasts Listeners

Broadcast Name	Listeners
GenNet-Server.lvlib:Module Did Init.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Status Updated.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Error Reported.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Module Did Stop.vi	Test GenNet-Server API.vi
GenNet-Server.lvlib:Update Module Execution Status.vi	Test GenNet-Server API.vi

Table 11. Used requests

Module	Requests
☒—☒	☒—☒

Table 12. Registered broadcast

Module	Broadcasts
☒—☒	☒—☒

A.2.3. MODULE CUSTOM ERRORS



Custom errors are added to the module via vi named `*--error.vi`.

Module GenNet-Server.lvlib use the following custom errors:

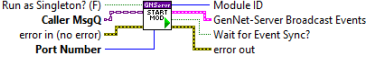
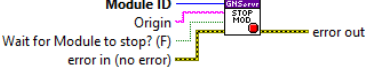
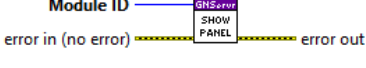


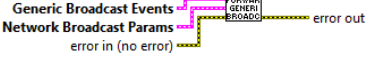
Table 13. Custom errors




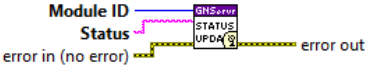

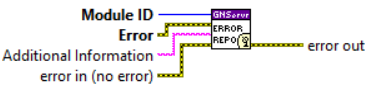



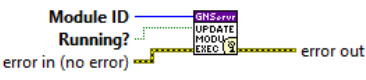
Name	Code	Description
Module Running as Singleton	403680	The "%s" module is currently running as singleton, but the Start Module VI was called with 'Run as Singleton' specified as FALSE.
Module Not Stopped	403682	%s Module did not finish clean up on exit.
Module Not Synced	403683	%s Module was unable to synchronize events.
Module Not Running	403684	Not a single instance of "%s" Module running.

Name	Code	Description
Module Running as Cloneable	403685	The "%s" module is currently running as cloneable, but the Start Module VI was called with 'Run as Singleton' specified as TRUE.
Request and Wait for Reply Timeout	403686	%s
Master Reference Not Closed	403687	The "%s" module cannot be run as singleton because the Master Reference is still open from a prior run as cloneable. If you plan on running this module as both singleton and cloneable, consider changing your Main VI to wire a value of TRUE to the 'Close Master Reference' input of Init Module.vi.

A.2.4. EVENT LIST



Table 14. Events

Name	Type	Connector pane	Description	S.	R.	I.
Start Module		 <p>Run as Singleton? (F) Caller MsgQ error in (no error) Port Number</p> <p>Module ID GenNet-Server Broadcast Events Wait for Event Sync? error out</p>	Launches the Module Main.vi.			
Stop Module		 <p>Module ID Origin Wait for Module to stop? (F) error in (no error)</p> <p>error out</p>	<p>Send the Stop request to the Module's Main.vi. If Wait for Module to stop? is TRUE, then this VI will not complete execution until the Module Main VI has stopped running.</p> <p>Note: If the cloneable module is running as singleton, then the 'Wait for Module to stop?' input is ignored... this VI will always wait until a cloneable Main VI running as singleton has stopped running.</p> <p>Note: This VI was modified by the Validate DQMH Module tool to upgrade it to the DQMH 5.1 approach to poll the execution state of a cloneable module running as singleton to know when the module has gone idle.</p>			
Show Panel	➡	 <p>Module ID</p> <p>error in (no error)</p> <p>error out</p>	Send the Show Panel request to the Module's Main.vi.			
Hide Panel	➡	 <p>Module ID</p> <p>error in (no error)</p> <p>error out</p>	Send the Hide Panel request to the Module's Main.vi.			
Show Diagram	➡	 <p>Module ID</p> <p>error in (no error)</p> <p>error out</p>	This VI tells the Module to show its block diagram to facilitate troubleshooting (add probes, breakpoints, highlight execution, etc).			
Forward Generic Broadcasts to Network	➡	 <p>Module ID</p> <p>Generic Broadcast Events Network Broadcast Params error in (no error)</p> <p>error out</p>	Enables forwarding of the callers Generic Broadcast Events to the network via UDP as set in the Network Broadcast Params .			

Name	Type	Connector pane	Description	S.	R.	I.
Module Did Init		 <p>Module ID Origin Initialized? error in (no error)</p>	Send the Module Did Init event to any VI registered to listen to this module's broadcast events.			
Status Updated		 <p>Module ID Status error in (no error)</p>	Send the Status Updated event to any VI registered to listen to events from the owning module.			
Error Reported		 <p>Module ID Error Additional Information error in (no error)</p>	Send the Error Reported event to any VI registered to listen to events from the owning module.			
Module Did Stop		 <p>Module ID Origin error in (no error)</p>	Send the Module Did Stop event to any VI registered to listen to this module's broadcast events.			
Update Module Execution Status		 <p>Module ID Running? error in (no error)</p>	Fire the Get Module Execution Status request.			

Type:  → Request |  → Request and Wait for Reply |  → Broadcast

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

A.3. HSE-DB.LVLIB

Type: Cloneable

Responsibility: No description found (add content in DQMH module lvlib description)

A.3.1. MODULE START/STOP CALLS

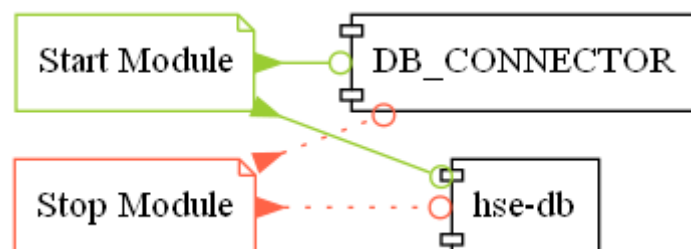


Table 15. Start and Stop module callers

Function	Callers
hse-db.lvlib:Start Module.vi	DB_CONNECTOR.lvlib:Load Module.vi hse-db.lvlib:Test DB_CONNECTOR API.vi

Function	Callers
hse-db.lvlib:Stop Module.vi	DB_CONNECTOR.lvlib:Handle Exit.vi hse-db.lvlib:Test DB_CONNECTOR API.vi

A.3.2. MODULE RELATIONSHIP

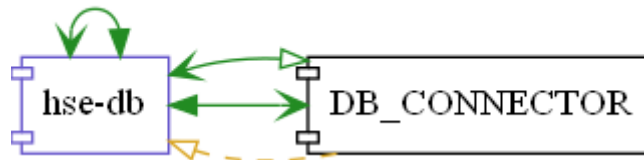


Table 16. Requests callers

Request Name	Callers
hse-db.lvlib:DB_CONNECTOR.lvlib:Show Panel.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Hide Panel.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Show Diagram.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Configure.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Connect.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Close Connection.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Start Transaction.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Fast Query.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Set Module Timeout.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Get DB-Type.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Query.vi	DB_CONNECTOR.lvlib:Query - String - 2D.vi DB_CONNECTOR.lvlib:Query - String - 1D.vi DB_CONNECTOR.lvlib:Query - String - Scalar.vi DB_CONNECTOR.lvlib:Query - Int64 - 2D.vi DB_CONNECTOR.lvlib:Query - Int64 - 1D.vi DB_CONNECTOR.lvlib:Query - Int64 - Scalar.vi DB_CONNECTOR.lvlib:Query - DBL - 2D.vi DB_CONNECTOR.lvlib:Query - DBL - 1D.vi DB_CONNECTOR.lvlib:Query - DBL - Scalar.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Commit Transaction.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi

Table 17. Broadcasts Listeners

Broadcast Name	Listeners
hse-db.lvlib:DB_CONNECTOR.lvlib:Module Did Init.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib>Status Updated.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib>Error Reported.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Module Did Stop.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Update Module Execution Status.vi	

Broadcast Name	Listeners
hse-db.lvlib:DB_CONNECTOR.lvlib:Fast Query Reply.vi	

Table 18. Used requests

Module	Requests
DB_CONNECTOR.lvlib	hse-db.lvlib:DB_CONNECTOR.lvlib:Show Panel.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Hide Panel.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Show Diagram.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Configure.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Start Transaction.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Fast Query.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Set Module Timeout.vi
DB_CONNECTOR.lvlib	hse-db.lvlib:DB_CONNECTOR.lvlib:Get DB-Type.vi hse-db.lvlib:DB_CONNECTOR.lvlib:Commit Transaction.vi

Table 19. Registered broadcast

Module	Broadcasts
DB_CONNECTOR.lvlib	Error Reported.vi Fast Query Reply.vi Module Did Init.vi Module Did Stop.vi Status Updated.vi

A.3.3. MODULE CUSTOM ERRORS



Custom errors are added to the module via vi named `*--error.vi`.


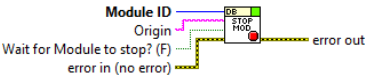
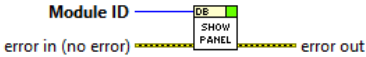

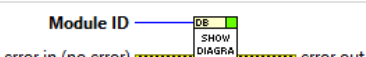

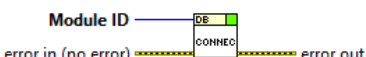

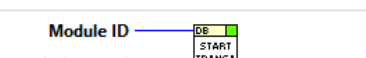
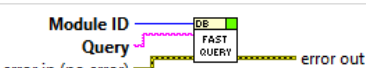
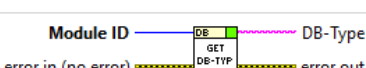
Module hse-db.lvlib use the following custom errors:


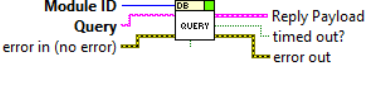

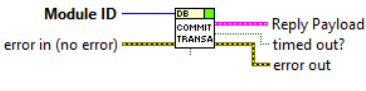

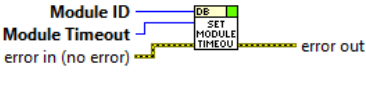

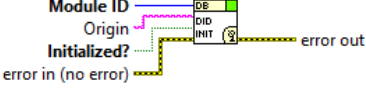

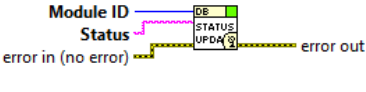

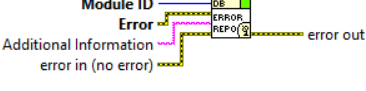

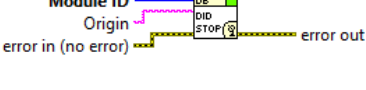

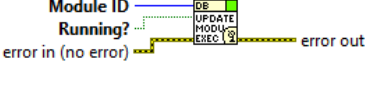


Table 20. Custom errors

Name	Code	Description
Module Running as Singleton	403680	The "%s" module is currently running as singleton, but the Start Module VI was called with 'Run as Singleton' specified as FALSE.
Module Not Stopped	403682	%s Module did not finish clean up on exit.
Module Not Synced	403683	%s Module was unable to synchronize events.
Module Not Running	403684	Not a single instance of "%s" Module running.
Module Running as Cloneable	403685	The "%s" module is currently running as cloneable, but the Start Module VI was called with 'Run as Singleton' specified as TRUE.
Request Timed Out	403686	The reply for the request "%s" of the "%s" Module timed out.
Request and Wait for Reply Timeout	403686	%s
Master Reference Not Closed	403687	The "%s" module cannot be run as singleton because the Master Reference is still open from a prior run as cloneable. If you plan on running this module as both singleton and cloneable, consider changing your Main VI to wire a value of TRUE to the 'Close Master Reference' input of Init Module.vi.

A.3.4. EVENT LIST

Table 21. Events

Name	Type	Connector pane	Description	S.	R.	I.
Start Module			Launches the Module Main.vi.			
Stop Module			<p>Send the Stop request to the Module's Main.vi. If Wait for Module to stop? is TRUE, then this VI will not complete execution until the Module Main VI has stopped running.</p> <p>Note: If the cloneable module is running as singleton, then the 'Wait for Module to stop?' input is ignored... this VI will always wait until a cloneable Main VI running as singleton has stopped running.</p> <p>Note: This VI was modified by the Validate DQMH Module tool to upgrade it to the DQMH 5.1 approach to poll the execution state of a cloneable module running as singleton to know when the module has gone idle.</p>			
Show Panel	→		Send the Show Panel request to the Module's Main.vi.			
Hide Panel	→		Send the Hide Panel request to the Module's Main.vi.			
Show Diagram	→		This VI tells the Module to show its block diagram to facilitate troubleshooting (add probes, breakpoints, highlight execution, etc).			
Configure	→		Triggers the auto-configuration of the module			
Connect	→		Connect to database.			
Close Connection	→		Close connection to the database.			
Start Transaction	→		Start a transaction to get sure all following SQL commands get executed or none.			
Fast Query	→		An asynchronous query to the DB. This request does not block and has no reply. To receive the db response register to the corresponding broadcast.			
Get DB-Type	→		Returns the type of the database in DB-Type			

Name	Type	Connector pane	Description	S.	R.	I.
Query		 Module ID Query error in (no error) Reply Payload timed out? error out	Send a SQL-Query to the database.			
Commit Transaction		 Module ID error in (no error) Reply Payload timed out? error out	Commit a transaction. Either all SQL-commands get committed or, in case of an error, all get rejected.			
Set Module Timeout		 Module ID Module Timeout error in (no error) error out	Overrides the DQMH internal Module Timeout with the specified value (must be greater than 0)			
Module Did Init		 Module ID Origin Initialized? error in (no error) error out	Send the Module Did Init event to any VI registered to listen to this module's broadcast events.			
Status Updated		 Module ID Status error in (no error) error out	Send the Status Updated event to any VI registered to listen to events from the owning module.			
Error Reported		 Module ID Error Additional Information error in (no error) error out	Send the Error Reported event to any VI registered to listen to events from the owning module.			
Module Did Stop		 Module ID Origin error in (no error) error out	Send the Module Did Stop event to any VI registered to listen to this module's broadcast events.			
Update Module Execution Status		 Module ID Running? error in (no error) error out	Fire the Get Module Execution Status request.			
Fast Query Reply		 Module ID Return Data Meta Data Field Names error in (no error) error out	The database reply from a (asynchronous) "Fast Query".			

Type:  → Request |  → Request and Wait for Reply |  → Broadcast

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

A.4. DB_CONNECTOR.LVLIB

Type: Cloneable

Responsibility: No description found (add content in DQMH module lvlb description)

A.4.1. MODULE START/STOP CALLS

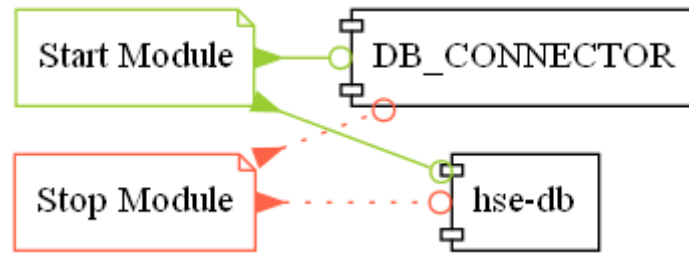


Table 22. Start and Stop module callers

Function	Callers
DB_CONNECTOR.lvlib:Start Module.vi	DB_CONNECTOR.lvlib:Load Module.vi hse-db.lvlib:Test DB_CONNECTOR API.vi
DB_CONNECTOR.lvlib:Stop Module.vi	DB_CONNECTOR.lvlib:Handle Exit.vi hse-db.lvlib:Test DB_CONNECTOR API.vi

A.4.2. MODULE RELATIONSHIP

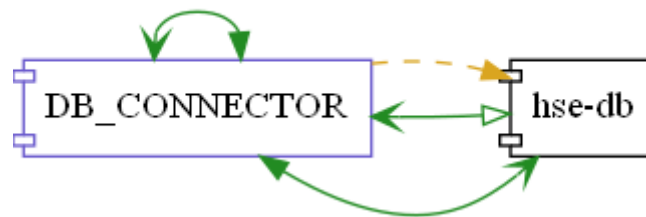


Table 23. Requests callers

Request Name	Callers
hse-db.lvlib:DB_CONNECTOR.lvlib:Show Panel.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Hide Panel.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Show Diagram.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Configure.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Connect.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Close Connection.vi	
hse-db.lvlib:DB_CONNECTOR.lvlib:Start Transaction.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Fast Query.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Set Module Timeout.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Get DB-Type.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi

Request Name	Callers
hse-db.lvlib:DB_CONNECTOR.lvlib:Query.vi	DB_CONNECTOR.lvlib:Query - String - 2D.vi DB_CONNECTOR.lvlib:Query - String - 1D.vi DB_CONNECTOR.lvlib:Query - String - Scalar.vi DB_CONNECTOR.lvlib:Query - Int64 - 2D.vi DB_CONNECTOR.lvlib:Query - Int64 - 1D.vi DB_CONNECTOR.lvlib:Query - Int64 - Scalar.vi DB_CONNECTOR.lvlib:Query - DBL - 2D.vi DB_CONNECTOR.lvlib:Query - DBL - 1D.vi DB_CONNECTOR.lvlib:Query - DBL - Scalar.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Commit Transaction.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi

Table 24. Broadcasts Listeners

Broadcast Name	Listeners
hse-db.lvlib:DB_CONNECTOR.lvlib:Module Did Init.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib>Status Updated.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib>Error Reported.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Module Did Stop.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Update Module Execution Status.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi
hse-db.lvlib:DB_CONNECTOR.lvlib:Fast Query Reply.vi	hse-db.lvlib:Test DB_CONNECTOR API.vi

Table 25. Used requests

Module	Requests
hse-db.lvlib	hse-db.lvlib:DB_CONNECTOR.lvlib:Query.vi

Table 26. Registered broadcast

Module	Broadcasts
☒—☒	☒—☒

A.4.3. MODULE CUSTOM ERRORS



Custom errors are added to the module via vi named `*--error.vi`.

Module DB_CONNECTOR.lvlib use the following custom errors:

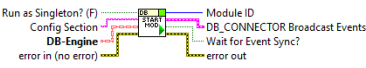
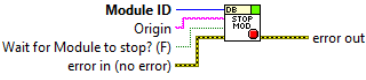
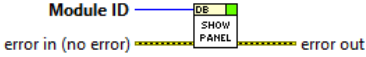
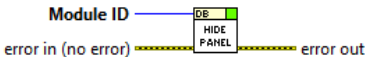
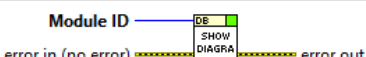

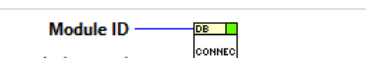
Table 27. Custom errors

Name	Code	Description
Module Running as Singleton	403680	The "%s" module is currently running as singleton, but the Start Module VI was called with 'Run as Singleton' specified as FALSE.
Module Not Stopped	403682	%s Module did not finish clean up on exit.
Module Not Synced	403683	%s Module was unable to synchronize events.
Module Not Running	403684	Not a single instance of "%s" Module running.
Module Running as Cloneable	403685	The "%s" module is currently running as cloneable, but the Start Module VI was called with 'Run as Singleton' specified as TRUE.


Name	Code	Description
Request Timed Out	403686	The reply for the request "%s" of the "%s" Module timed out.
Request and Wait for Reply Timeout	403686	%s
Master Reference Not Closed	403687	The "%s" module cannot be run as singleton because the Master Reference is still open from a prior run as cloneable. If you plan on running this module as both singleton and cloneable, consider changing your Main VI to wire a value of TRUE to the 'Close Master Reference' input of Init Module.vi.

A.4.4. EVENT LIST



Table 28. Events

Name	Type	Connector pane	Description	S.	R.	I.
Start Module		 <p>Run as Singleton? (F) — DB-Engine — DB_CONNECTOR Broadcast Events — Wait for Event Sync? — error in (no error) — error out</p>	Launches the Module Main.vi.			
Stop Module		 <p>Module ID — Origin — Wait for Module to stop? (F) — error in (no error) — error out</p>	<p>Send the Stop request to the Module's Main.vi. If Wait for Module to stop? is TRUE, then this VI will not complete execution until the Module Main VI has stopped running.</p> <p>Note: If the cloneable module is running as singleton, then the 'Wait for Module to stop?' input is ignored... this VI will always wait until a cloneable Main VI running as singleton has stopped running.</p> <p>Note: This VI was modified by the Validate DQMH Module tool to upgrade it to the DQMH 5.1 approach to poll the execution state of a cloneable module running as singleton to know when the module has gone idle.</p>			
Show Panel	→	 <p>Module ID — DB SHOW PANEL — error in (no error) — error out</p>	Send the Show Panel request to the Module's Main.vi.			
Hide Panel	→	 <p>Module ID — DB HIDE PANEL — error in (no error) — error out</p>	Send the Hide Panel request to the Module's Main.vi.			
Show Diagram	→	 <p>Module ID — DB SHOW DIAGRAM — error in (no error) — error out</p>	This VI tells the Module to show its block diagram to facilitate troubleshooting (add probes, breakpoints, highlight execution, etc).			
Configure	→	 <p>Module ID — DB CONFIG — Module ID (dub) — error in (no error) — error out</p>	Triggers the auto-configuration of the module			
Connect	→	 <p>Module ID — DB CONNEX — error in (no error) — error out</p>	Connect to database.			

Name	Type	Connector pane	Description	S.	R.	I.
Close Connection		 <p>Module ID</p> <p>error in (no error)</p> <p>error out</p>	Close connection to the database.			
Start Transaction		 <p>Module ID</p> <p>error in (no error)</p> <p>error out</p>	Start a transaction to get sure all following SQL commands get executed or none.			
Fast Query		 <p>Module ID</p> <p>Query</p> <p>error in (no error)</p> <p>error out</p>	An asynchronous query to the DB. This request does not block and has no reply. To receive the db response register to the corresponding broadcast.			
Get DB-Type		 <p>Module ID</p> <p>error in (no error)</p> <p>DB-Type</p> <p>error out</p>	Returns the type of the database in DB-Type			
Query		 <p>Module ID</p> <p>Query</p> <p>error in (no error)</p> <p>Reply Payload</p> <p>timed out?</p> <p>error out</p>	Send a SQL-Query to the database.			
Commit Transaction		 <p>Module ID</p> <p>error in (no error)</p> <p>Reply Payload</p> <p>timed out?</p> <p>error out</p>	Commit a transaction. Either all SQL-commands get committed or, in case of an error, all get rejected.			
Set Module Timeout		 <p>Module ID</p> <p>Module Timeout</p> <p>error in (no error)</p> <p>error out</p>	Overrides the DQMh internal Module Timeout with the specified value (must be greater than 0)			
Module Did Init		 <p>Module ID</p> <p>Origin</p> <p>Initialized?</p> <p>error in (no error)</p> <p>error out</p>	Send the Module Did Init event to any VI registered to listen to this module's broadcast events.			
Status Updated		 <p>Module ID</p> <p>Status</p> <p>error in (no error)</p> <p>error out</p>	Send the Status Updated event to any VI registered to listen to events from the owning module.			
Error Reported		 <p>Module ID</p> <p>Error</p> <p>Additional Information</p> <p>error in (no error)</p> <p>error out</p>	Send the Error Reported event to any VI registered to listen to events from the owning module.			
Module Did Stop		 <p>Module ID</p> <p>Origin</p> <p>error in (no error)</p> <p>error out</p>	Send the Module Did Stop event to any VI registered to listen to this module's broadcast events.			
Update Module Execution Status		 <p>Module ID</p> <p>Running?</p> <p>error in (no error)</p> <p>error out</p>	Fire the Get Module Execution Status request.			
Fast Query Reply		 <p>Module ID</p> <p>Return Data</p> <p>Meta Data</p> <p>Field Names</p> <p>error in (no error)</p> <p>error out</p>	The database reply from a (asynchronous) "Fast Query".			

Type:  → Request |  → Request and Wait for Reply |  → Broadcast

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

APPENDIX B: LIBRARIES

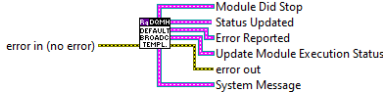
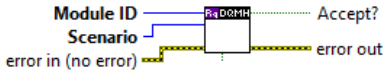
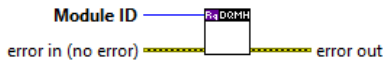

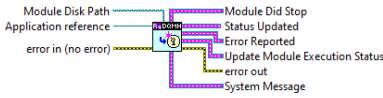
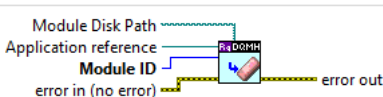
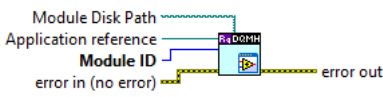
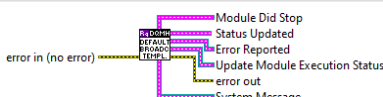
Misc. reuse libraries

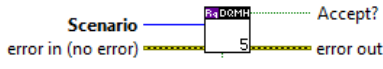
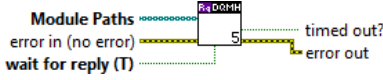
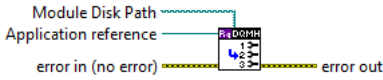
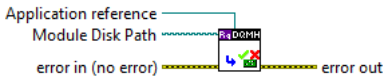
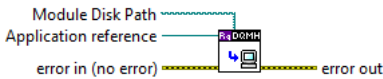
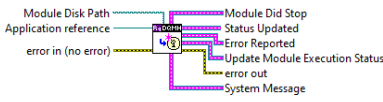
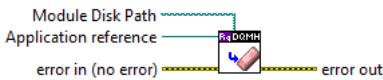
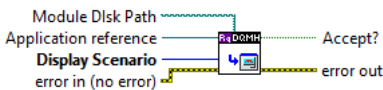
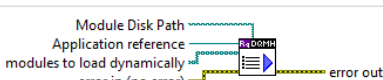

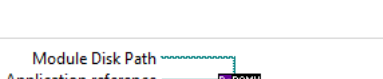
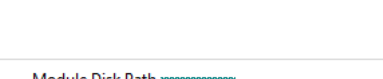
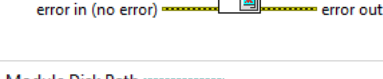
B.1. HSE-DQMH-DYNAMICREQUESTERS.LVLIB

Responsibility: No description found (add content in lvlib description)

Version: 1.0.0.0

Table 29. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
Default Broadcast (Cloneable)--template					
Request UI Display (Cloneable)--template		No description found (add content in vi description)			
Show Diagram (Cloneable)--template		No description found (add content in vi description)			
DQMH Configure (Cloneable)		Calls the "Configure" request VI of the module in path			
DQMH Obtain Default Broadcast Events (Cloneable)		Calls the "Obtain Default Broadcast Events" request VI of the module in path			
DQMH Prepare (Cloneable)		Calls the "Prepare" request VI of the module in path			
DQMH Request UI Display (Cloneable)		Calls the "Request UI Display" request VI of the module in Path to module directory. Hands over the Module ID and the Display Scenario.			
DQMH Show Diagram (Cloneable)		Calls the "Request UI Display" request VI of the module in Path to module directory. Hands over the Module ID and the Display Scenario.			
Default Broadcast—template					

Name	Connector pane	Description	S.	R.	I.
Request UI Display—template		No description found (add content in vi description)			
Set Modules—template		No description found (add content in vi description)			
DQMH Configure		Calls the "Configure" request VI of the module in path			
DQMH Load API Tester		Calls the "Load Module" request VI of the module in path			
DQMH Load Module		Calls the "Load Module" request VI of the module in path			
DQMH Obtain Default Broadcast Events		Calls the "Obtain Default Broadcast Events" request VI of the module in path			
DQMH Prepare		Calls the "Prepare" request VI of the module in path			
DQMH Request UI Display		Calls the "Request UI Display" request VI of the module in Path to module directory. Hands over the Module Name and the Display Scenario.			
DQMH Set Modules		Calls the "Set Modules" request VI of the module in Path to module directory. Hands over paths to all dynamically loaded modules in modules to load dynamically.			
DQMH Set Runtime Menu		Calls the "Set Runtime Menu" request VI of the module in Path to module directory. Hands over the Path to .rtm file.			
DQMH Show Diagram		Calls the "Request UI Display" request VI of the module in Path to module directory. Hands over the Module Name and the Display Scenario.			
DQMH Show Panel		Calls the "Show Panel" request VI of the module in Path to module directory			
DQMH Stop Module		Calls the "Stop Module" request VI of the module in Path to module directory			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

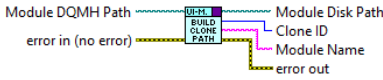
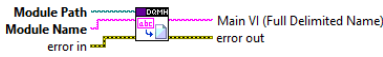







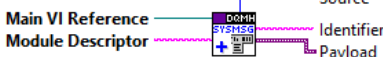

Inlining:  → Inlined

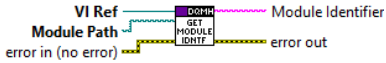

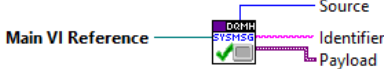

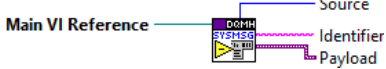





B.2. HSE-DQMH.LVLIB

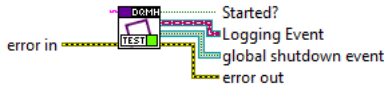
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Version: 1.0.0.0

Table 30. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
DQMH Build Module Disk Path From DQMH Path		Parses the Instance Name for the Clone ID and returns the full path to the module's directory, the Clone ID and the module's name			
DQMH Get Fully Delimited Instance Name from Module Name		Parses the fully delimited VI name from the module path and the module name. For cloneables, the clone ID is appended to the VI name.			
DQMH Get Module Type		Returns the type (singleton or cloneable) of the module in Module Path			
DQMH Load Main VI Reference		<p>Loads the VI reference to a Singleton DQMH module's main.vi. On Linux RT in Runtime Environment, the main.vi is loaded reentrant in order to circumvent a bug in LabVIEW.</p> <p>Details: On Linux RT with Embedded UI enabled running a startup.exe, a VI server invoke method (Control Value.set) doesn't work. This is possibly related to / covered by CAR 514879 (see https://forums.ni.com/t5/Delacor-Toolkits-Discussions/Deploy-and-run-at-Startup-for-RT-systems/m-p/3620339/highlight/true#M256).</p> <p>In order for this VI to work, you need to: 1. set the DQMH module's main.vi execution setting to "preallocated clone reentrant execution" 2. set the DQMH module's main.vi scope to "community" 3. add the hse-dqmh.lvlib as a friend in the DQMH module's .lvlib Friends properties</p>			
DQMH Request Reply Timed Out—error		No description found (add content in vi description)			
DQMH System Message - Add to Run-Time Menu		Sends the modul's Path and Module Descriptor via the "Add to Run-Time Menu" System Message broadcast. The UI Manager inserts the module into the relevant locations in the run-time menu.			

Name	Connector pane	Description	S.	R.	I.
DQMH System Message - Get Module Identifier		No description found (add content in vi description)			
DQMH System Message - Ready for Display		No description found (add content in vi description)			
DQMH System Message - Remove from Run-Time Menu		No description found (add content in vi description)			
DQMH System Message - Removed from Subpanel		No description found (add content in vi description)			
DQMH Tester Cleanup hse-appl		If the hse-application object was instantiated and the hse-logger was initialized when starting the Tester, this VI cleans up both objects.			
DQMH Tester Prepare hse-appl - Get Name and Path		<p>Returns APP-NAME as Project Name and /APP-NAME_Source as Project Path</p> <p>HSE projects follow this folder structure: /APP-NAME_Config Configuration Files /APP-NAME_Data Measured and Other Data /APP-NAME_Source LabVIEW Sources /APP-NAME Compiled Application</p> <p>REAL-TIME: As the configuration directory on real-time systems always needs to reside at "C:\<Project Name>_Config\", and as it tedious (embedded UI) or impossible (no embedded UI) to enter the path, it can be supplied via the optional Real-Time App Name string input.</p>			

Name	Connector pane	Description	S.	R.	I.
DQMH Tester Prepare hse-appl		<p>If the hse-application class is not running, queries the user for the path of the containing application and instantiates the hse-appl class. Returns if it did load the class.</p> <p>HSE projects follow this folder structure: /APP-NAME_Config Configuration Files /APP-NAME_Data Measured and Other Data /APP-NAME_Source LabVIEW Sources /APP-NAME Compiled Application</p> <p>The hse-application:ApplicationInit.VI expects the "APP-NAME_Source" folder and the "application name", and processes these to automatically find the "_Config" and "_Data" directories.</p> <p>REAL-TIME: As the configuration directory on real-time systems always needs to reside at "C:\<Project Name>_Config\", and as it tedious (embedded UI) or impossible (no embedded UI) to enter the path, it can be supplied via the optional Real-Time App Name string input.</p>			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

B.3. HSE-GENNET.LVLIB

Responsibility: The DQMH-GenNet library contains all support files necessary to use the HSE Generic Networking Singleton Module provided by HAMPEL SOFTWARE ENGINEERING.

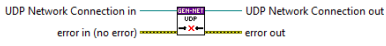


The Delacor Queued Message Handler (DQMH) reference design is provided by Delacor, an NI Alliance Partner. The DQMH is available for download from the LabVIEW Tools Network. You can find more information on the Delacor Queued Message Handler (DQMH) at <http://delacor.com/products/dqmh/>.

Version: 1.0.0.0


Table 31. Nested libraries

Name	Type
[DQMH-GenNet Message Queue.lvclass]	LVClass


Table 32. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
GenNet Close UDP Connection		Closes a TCP/IP connection.			

Name	Connector pane	Description	S.	R.	I.
GenNet Send UDP Message	 <p>Multicast IP Address Receiver Port UDP Network Connection in Message Data error in (no error) timeout [ms]</p>	<p>Sends a message via TCP/IP to a GenNet-Server module.</p> <p>The message is flattened to a string, and the length of the string is prepended before sending it over the network.</p>			 
GenNet Receive UDP Message	 <p>UDP Network Connection in Max Byte Size error in (no error) timeout [ms]</p>	<p>Receives a message sent by a GenNet-Client module. The first 4 bytes of the message contain the length of the actual data sent. The received message is converted to a variant.</p>			 
GenNet Get Broadcast Name From Variant	 <p>Broadcast Data IN error in Broadcast Name Broadcast Data Out error out</p>	No description found (add content in vi description)			 
GenNet Add Broadcast Name To Variant	 <p>Broadcast Data IN Broadcast Name Variant OUT</p>	No description found (add content in vi description)			 
DQMH-GenNet Add Notifier To Variant	 <p>Event Data IN Wait Notifier Variant OUT</p>	HSE: If a notifier reference is given, stores it as an attribute inside the Message Data variant. The notification data type is variant.			 
DQMH-GenNet Get Notifier From Variant	 <p>Message Data Variant error in Wait Notifier error out</p>	HSE: Gets the Wait Notifier Refnum (datatype variant) from the Message Data variant			 
GenNet Check Connection	 <p>ip address remote port error in (no error) timeout [ms] local port (0)</p>	<p>Checks for a valid TCP/IP connection. Reestablishes the connection if no valid connection found. Creates a new connection if none was given.</p>			 
GenNet Close Connection	 <p>TCP Network Connection in error in (no error)</p>	Closes a TCP/IP connection.			 
GenNet Format System Message for MsgQ	 <p>Identifier Sys. Msg. Origin Payload System Message constant System Message Argument</p>	Formats the contents of a System Message			
GenNet Init Client	 <p>GenNet-Client ID DQMH-GenNet Message Queue in IP Address Port Number error in (no error) System Message Module Timeout</p>	Initializes a GenNet Client if ClientID == -1 and automatically connects to it. See usage example inside for how to use this VI.			
GenNet Receive Message	 <p>TCP Network Connection in error in (no error) timeout [ms]</p>	<p>Receives a message sent by a GenNet-Client module. The first 4 bytes of the message contain the length of the actual data sent. The received message is converted to a variant.</p>			 
GenNet Send Message	 <p>TCP Network Connection in Message Data error in (no error) timeout [ms]</p>	<p>Sends a message via TCP/IP to a GenNet-Server module.</p> <p>The message is flattened to a string, and the length of the string is prepended before sending it over the network.</p>			 

Name	Connector pane	Description	S.	R.	I.
GenNet Version-Safe Unflatten Variant		Unflattens a variant from a string. Automatically prepends the correct header if the variant was flattened in another LabVIEW version.			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

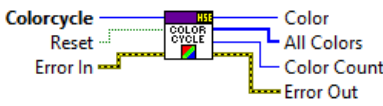


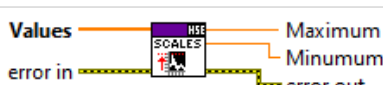

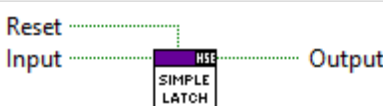
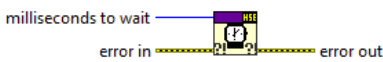
Inlining:  → Inlined

B.4. HSE-MISC.LVLIB

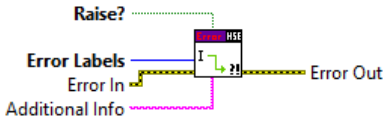

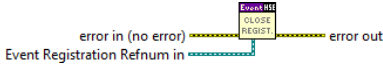




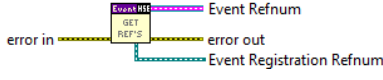




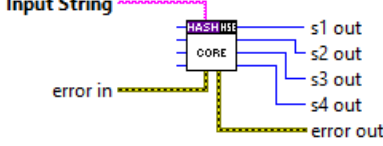





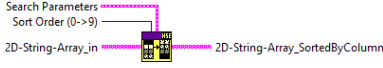




Responsibility: source code password: bowman-tyro-kickback-besides

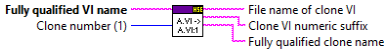




Version: 1.0.0.0


Table 33. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
ColorCycle		<p>With every call, this VI returns a color from a color pallet. If the last color from a pallet is reached, the VI continues with the first color.</p> <p>This Vi is useful to give plots and graphs better looking colors.</p> <p>The color sets are inspired by a subset of the colormaps from the Python plotting library Matplotlib.</p>			
Get Enum Details from Type String		No description found (add content in vi description)			
Get Multiple Attributes from Variant		No description found (add content in vi description)			
Graph Scale Axis		Calculates usefull values for the Graph scaling (Minimum, Maximum) that go 10% over the min/max-values and include zero.			
Set Multiple Attributes to Variant		Set multiple attributes (key-values-pairs) to a variant.			
Simple Latch		A simple boolean latch with reset functionality.			
Wait_ErrorClus ter		Simple wrapper for the Wait function that allows for data flow.			

Name	Connector pane	Description	S.	R.	I.
ConvertStringToFloat_Array-1D		converts array of string values to floating point values			
ConvertStringToFloat_Array-2D		converts array of string values to floating point values			
ConvertStringToFloat_Scalar		converts single string value to floating point value			
Find Data Type		No description found (add content in vi description)			
LV Timestamp to Unix Epoch		Convert a LabView Timestamp (UTC Timezone) to a Unix Epoch Timestamp (C time_t).			
U8-Array to U64		Convert an array of Bytes (U8) to an array of U64.			
U64-Array to U8		Convert an array of U64 to an array of Bytes (U8).			
Unix Epoch to LV Timestamp		Convert a Unix Epoch Timestamp (C time_t) to a LabView Timestamp (UTC Timezone).			
Seconds to Time		Convert a time range (in seconds) to a time string in the format "hh:mm:ss". E.g. 3680s -> "01:01:20".			
Error_AddAdditionalInformation		Adds Additional Info to the source of Error In			
Error_AppendErrorsToSource		Takes the first element of errors in and concatenates all other elements' code and source into the source of the first error.			
Error_Clear		Clears the error in error in			
Error_Helper_BuildCluster		Builds an error cluster from Code and Additional Info			
Error_Helper_OverwriteCluster		If Error In is true, overwrites the error cluster information with Code and Additional Info .			
Error_Helper_RaiseError		If Raise? is true, puts the error in Error To Raise on the error output and adds Additional Info to the source of the error.			

Name	Connector pane	Description	S.	R.	I.
Error_Helper_RaiseErrorFromLabel		If Raise? is true, sets an error with code set by Error Labels and source by Additional Info			
Error_LogToFile		If error in is true, writes the error to the file identified by path and clears the error.			
Event_CloseRegistrationRef		Unregisters the given event registration from the HSE-Event			
Event_Generate		Generates an HSE-Event and sends Name , Parameter and Data as event data.			
Event_GetRefAndReg		Gets the HSE-Event refnum and a new event registration refnum for it.			
Event_LoadOrCreateRefs		Returns the refnum of the HSE-Event			
Hash Core					
Hash					
Delete Duplicates From 1D-Array (String)		(v0.2.1b; 2017-08-14 16:44)			
Sort 2D-Array		Sorts a 2D string array by the column declared in Search parameters and by Sort Order .			
String_PadWithCharacters		Adds char (ASCII) characters to str in until it is length characters long. Common ASCII characters: 0x09 ... tab 0x20 ... space 0x2E ... dot (.)			
String_StripNullValues		Removes all NULL values from a string			

Name	Connector pane	Description	S.	R.	I.
Generate Clone Name	 <p>Fully qualified VI name Clone number (1)</p> <p>File name of clone VI Clone VI numeric suffix Fully qualified clone name</p>	<p>Given the fully qualified name of a VI (meaning the name includes any library namespace prefixes), this VI returns the name of a clone of the VI. By default, it returns the name of the first clone that gets created, but you can request the Nth clone by supplying the "Clone number" input.</p> <p>USE WITH CAUTION. The name returned by this VI can be used with the "Open VI Reference" function to open a VI reference to a clone VI. This is an unsupported feature of LabVIEW (i.e. opening an additional reference to a clone VI was never intended to work but someone forgot to disable it when clones were added to LabVIEW). Opening extra references beyond the one used to create the clone (i.e. the clone's "this VI" reference) is known to cause instabilities, including crashes, in some situations. However, such refnums are critical for writing certain debugging tools. Be careful.</p>			
ShowRunningVIs		Returns a list of VIs in memory			
StringLogger	 <p>String to log Label Function Error In Path Data</p> <p>LOG STRINGS Fehler (Ausgang)</p>	<p>Simple helper VI for writing data to a log file. Path Data and Label form the folder structure, and Function is part of the file name.</p>			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

B.5. HSE-NETWORK.LVLIB

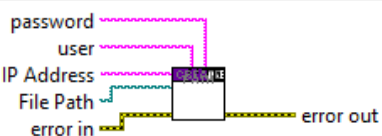
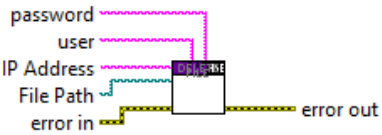
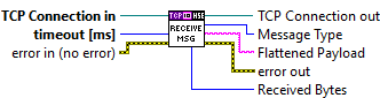
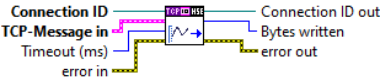

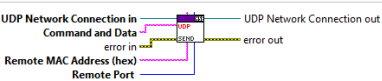
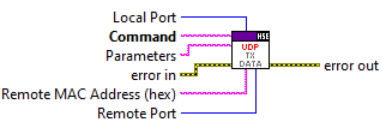
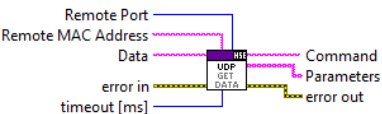
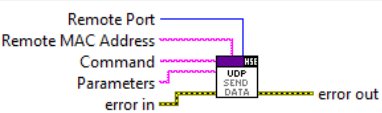


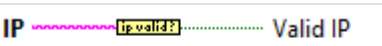
Responsibility: No description found (add content in lvlib description)








Version: 1.0.0.0


Table 34. Nested libraries



Name	Type
[NetStream.lvclass]	LVClass

Table 35. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
FTP_CreateRemotePath	 <p>password user IP Address File Path error in error out</p>				
FTP_RemoveRemoteFile	 <p>password user IP Address File Path error in error out</p>				
TCP Receive Message	 <p>TCP Connection in timeout [ms] error in (no error) TCP Connection out MESSAGE Message Type Flattened Payload error out Received Bytes</p>				
TCP Send Message	 <p>Connection ID TCP-Message in Timeout (ms) error in Connection ID out Bytes written error out</p>	Send a message (measurement data, command, ...) via TCP. The message must be flattened to a string and the message typ is determined by the "Message Type Enum".			
UDP__ReceiveDataViaSystemEvent	 <p>error in Event Registration Ref IN Command Parameters error out Event Registration Ref OUT</p>				
UDP__Send	 <p>UDP Network Connection in Command and Data error in Remote MAC Address (hex) Remote Port UDP Network Connection out error out</p>				
UDP__TransmitData	 <p>Local Port Command Parameters error in Remote MAC Address (hex) Remote Port error out</p>				
UDP_GetDataFromDevice	 <p>Remote Port Remote MAC Address Data error in timeout [ms] Command Parameters error out</p>				
UDP_SendData	 <p>Remote Port Remote MAC Address Command Parameters error in error out</p>				
COM_ParseCommand	 <p>Message in error in Command Parameters error out</p>	(v0.2.1b; 2017-08-14 16:44)			
GetNetworkInfo	 <p>error in IP Address MAC Address error out</p>	(v0.2.1b; 2017-08-14 16:44)			
IP_ValidateIfValid	 <p>IP Valid IP</p>	Check if the string input is a valid IP address			

Name	Connector pane	Description	S.	R.	I.
IP_ToDecimalString	hex string  string	(v0.2.1b; 2017-08-14 16:44)			
IP_ToHexString	string  hex string	(v0.2.1b; 2017-08-14 16:44)			
MAC_ColonToHex	MAC Address (colon notation)  MAC Address (hex string)	(v0.2.1b; 2017-08-14 16:44)			
MAC_HexToColon	MAC Address (hex string)  MAC Address (colon notation)	(v0.2.1b; 2017-08-14 16:44)			
MAC_ToHexString	string  hex string	(v0.2.1b; 2017-08-14 16:44)			
SystemConfigSession	 error in  Refnum out error out	(v0.2.1b; 2017-08-14 16:44)			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy









Inlining:  → Inlined

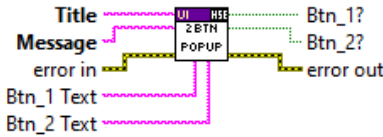
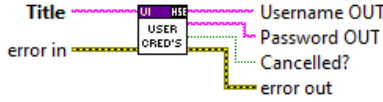
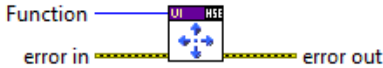
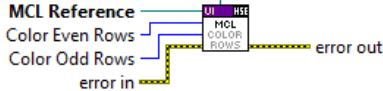
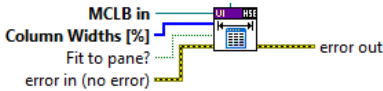
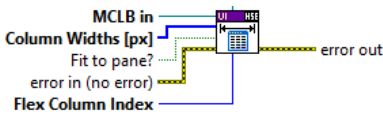
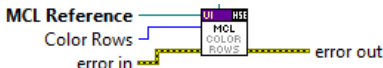
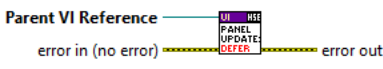


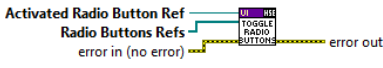
B.6. HSE-UI.LVLIB

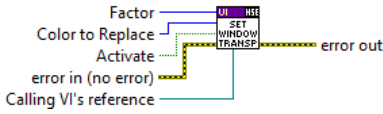

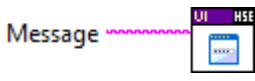



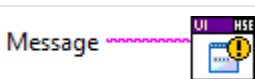

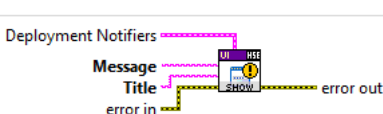

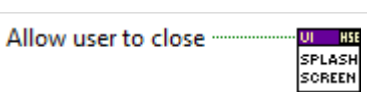

Responsibility: No description found (add content in lplib description)

Version: 1.0.0.0

Table 36. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
Dialogue_Error	 error in  error out	Shows a dialog window for displaying an error message.			
Dialogue_OneButton	 Title Message error in  Btn_1 Text error out	Shows a dialog window with a message and an OK button			
Dialogue_Password	 Title error in  Password OUT Cancelled? error out	Shows a dialog window for entering a password.			
Dialogue_String	 Empty String allowed? Title error in  Input Cancelled? error out	Shows a dialog window for entering a string value.			

Name	Connector pane	Description	S.	R.	I.
Dialogue_Two Button		Shows a dialog window with a message and two buttons (default: "Ok" and "Cancel")			
Dialogue_User Credentials		Shows a dialog window for entering user credentials (username and password).			
FPControl					
MultiColumnListbox_ColorRows		Colors the rows of a MCLB in alternate colors. If Parent VI Reference is supplied, panel updates are deferred.			
MultiColumnListbox_Resize		Resizes the columns of a MCLB according to the widths given in Column Widths [%] . If Parent VI Reference is supplied, panel updates are deferred.			
MultiColumnListbox_Resize_Absolute		Resizes the columns of a MCLB according to the widths given in Column Widths [px] . The column with the index in Flex Column Index uses the remaining space. If Parent VI Reference is supplied, panel updates are deferred.			
MultiColumnListbox_UnColorRows		Colors the rows of a MCLB in alternate colors. If Parent VI Reference is supplied, panel updates are deferred.			
PanelUpdates_Defer					
PanelUpdates_Enable					
Subpanel - Load VI		<p>Opens the VI reference to Full Delimited Name and inserts it into SubPanel in. The reference of the inserted VI is returned in Subpanel VI Ref OUT.</p> <p>If Subpanel VI Ref IN is a valid reference, the front panel of the referenced VI is opened hidden before removing it from the subpanel in order to avoid losing the VI from memory.</p>			
Toggle Radio Buttons		No description found (add content in vi description)			

Name	Connector pane	Description	S.	R.	I.
Window Color to Transparent					
Window Handle		This VI will use the FindWindow API function to retrieve a window refnum for the window identified by window name. 'window name' is the text appearing in the title bar of a window. If the window cannot be found, the window refnum out will be 'Not a Window Refnum', and an error will occur.			
ProgressPopup					
ProgressPopup_Close		Closes the modal progress window.			
ProgressPopup_Show		Shows a modal window with an animated progress bar, indicating that some (background) process is running. The Title of the window and the Message being displayed can be specified.			
ProgressPopup_Update		Closes the modal progress window.			
ProgressPopup_WithStatus					
ProgressPopup_WithStatus_Close		Closes the modal progress window.			
ProgressPopup_WithStatus_Show		Shows a modal window with an animated progress bar, indicating that some (background) process is running. The Title of the window and the Message being displayed can be specified.			
HSE_AboutScreen					
PROJECT_SplashScreen_Template		No description found (add content in vi description)			
Screen_ShowHseAbout					

Name	Connector pane	Description	S.	R.	I.
Screen_ShowProjectAbout					

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

B.7. HSE-DB-ADO.LVLIB

Responsibility: No description found (add content in lvlib description)

Version: 1.0.0.0

Table 37. Nested libraries

Name	Type
[DB-ADO.lvclass]	LVClass
ADO-DB-Driver.lvlib	Library


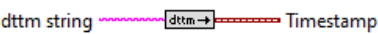


This library has no functions set to non private scope.

B.8. ADO-DB-DRIVER.LVLIB

Responsibility: ADO-DB driver.

Version: 1.0.0.0

Table 38. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
convert " to NULL		No description found (add content in vi description)			
Convert from date-first Timestamp		No description found (add content in vi description)			
Convert to date-first Timestamp		No description found (add content in vi description)			
format floats for database		No description found (add content in vi description)			

Name	Connector pane	Description	S.	R.	I.
format floats[] for database	[hse db ado.lvlib ADO DB Driver]_for_database.vi_.png[hse-db-ado.lvlib:ADO-DB-Driver.lvlib:format floats[] for database.vi]	No description found (add content in vi description)			
Close Recordset+	 Recordset error in Close error out	No description found (add content in vi description)			
Create New Record in Recordset	 Field Values Recordset error in (no error) Field Names New Recordset Out error out	No description found (add content in vi description)			
Open Recordset+	 Connection Source Recordset Parameters error in (no error) Open Recordset error out	No description found (add content in vi description)			
parse field names from SELECT statement	 Select String Parse Fields variant(field names)	No description found (add content in vi description)			
Read Recordset (DBVIEW)	 Recordset In No. of rows error in Read? Recordset Out tabular data graphical data error out Rows Returned	No description found (add content in vi description)			
Read Recordset (DOUBLE)	 Recordset In Max Rows to Fetch (-1 = all) error in (no error) Read? Recordset Out Data out Rows Returned error out Field Names	No description found (add content in vi description)			
Read Recordset (STRING)	 Recordset In Max Rows to Fetch (-1 = all) error in (no error) Read? Recordset Out Data out Rows Returned error out Field Names	No description found (add content in vi description)			
Read Recordset (VARIANT)	 Recordset In Max Rows to Fetch (-1 = all) error in (no error) Read? Recordset Out data out Rows Returned error out Field Names	No description found (add content in vi description)			
SQLSTATE Lookup	 SQLSTATE Value SQLSTATE SQLSTATE Description	No description found (add content in vi description)			
_Database Driver Catalog		No description found (add content in vi description)			
Close Connection+	 Connection error in Close error out	No description found (add content in vi description)			
Create and Read Recordset	 Connection In Source Recordset Parameters error in (no error) Max Rows to Fetch (-1 = all) Create and Read Recordset Connection Out Selection Data Rows Returned error out Field Names Fetched	No description found (add content in vi description)			

Name	Connector pane	Description	S.	R.	I.
Execute SQL Command (no data returned)		No description found (add content in vi description)			
Get Database Errors		No description found (add content in vi description)			
Get Table Info		No description found (add content in vi description)			
Insert BLOB data		No description found (add content in vi description)			
Open Connection+		No description found (add content in vi description)			
Rollback Transaction on Error		No description found (add content in vi description)			
Set Command Timeout		No description found (add content in vi description)			
Start Transaction		No description found (add content in vi description)			

Scope: → Protected | → Community

Reentrancy: → Preallocated reentrancy | → Shared reentrancy

Inlining: → Inlined

B.9. HSE-DB-MYSQL.LVLIB

Responsibility: No description found (add content in lvlib description)

Version: 1.0.0.0

Table 39. Nested libraries

Name	Type
[DB-MYSQL.lvclass]	LVClass
MySQL (TCP).lvlib	Library

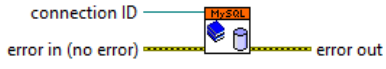

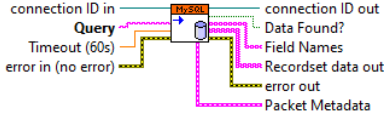

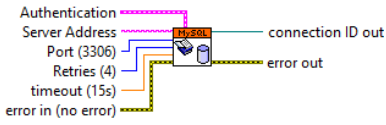

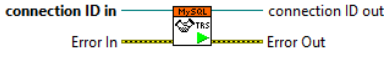

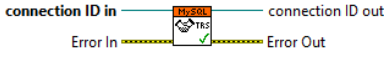

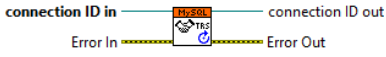

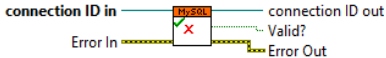

This library has no functions set to non private scope.

B.10. MYSQL (TCP).LVLIB


Responsibility: No description found (add content in lvlib description)

Version: 1.0.0.0

Table 40. Functions (non private scope only)

Name	Connector pane	Description	S.	R.	I.
Close Connection	 <p>connection ID in error in (no error) error out</p>	No description found (add content in vi description)			
Execute	 <p>connection ID in Query Timeout (60s) error in (no error) connection ID out Data Found? Field Names Recordset data out error out Packet Metadata</p>	No description found (add content in vi description)			
Open Connection	 <p>Authentication Server Address Port (3306) Retries (4) timeout (15s) error in (no error) connection ID out error out</p>	No description found (add content in vi description)			
Begin Transaction	 <p>connection ID in Error In connection ID out Error Out</p>	No description found (add content in vi description)			
Commit Transaction	 <p>connection ID in Error In connection ID out Error Out</p>	No description found (add content in vi description)			
Rollback Transaction	 <p>connection ID in Error In connection ID out Error Out</p>	No description found (add content in vi description)			
Validate Connection	 <p>connection ID in Error In connection ID out Valid? Error Out</p>	No description found (add content in vi description)			

Scope:  → Protected |  → Community

Reentrancy:  → Preallocated reentrancy |  → Shared reentrancy

Inlining:  → Inlined

B.11. HSE-DB-SQLITE.LVLIB

Responsibility: No description found (add content in lvlib description)

Version: 1.0.0.0

Table 41. Nested libraries

Name	Type
[DB-SQLite.lvclass]	LVClass

This library has no functions set to non private scope.