

# Customizing Event Handling - Overview

PDRE will allow you to modify some details of its behavior, and receive various kinds of event notifications, by writing and registering a customized shared library file with the replication engine. The file (a DLL file under Windows or a SO file under Unix), which you register with PDRE using [DINST](#) or the [DREGEVNT](#) utility, includes names for the functions you wish to incorporate into your replication session. A complete list of functions is provided below, along with links to examples of content. Make sure you use the exact function name, or PDRE will ignore it.

PDRE events which you can modify, or request notification about, include:

## Replication Monitoring

You can specify an action to be taken when certain replication events occur, such as sending an email event notification whenever a replication fails, or taking action when records are about to be (or have been) inserted, updated, or deleted.

## Custom Conflict Resolution

You can now configure conflict resolution however you wish. In previous versions of PDRE, the last change made to the database was the one that 'won'. Now, you can implement any number of resolution scenarios, such as updates from a particular site that always 'wins'. You will need to call the APIs described below in order to provide fragment update information in a readable format.

## Enhanced Logging

Includes the ability to perform an operation when a particular message is logged (such as sending an email notification to the administrator when a specific error occurs).

## Writing and registering your custom shared library file

You must write the functions and shared library file necessary to customize event handling. While PeerDirect provides you with sample syntax, we do not provide the actual code.

Create a custom shared library file that incorporates the precise names of functions you wish to use, as shown in the table below. You can implement any combination of the functions. Sample code for the shared library file is included with the PDRE in the \SAMPLES\EVNTCLBK folder of the PeerDirect installation directory. See `evntclbk.c` and the sample linker module definition file `evntclbk.def`. PDRE has a set of standard entry points for your shared library file. While you must use the exact function names provided with PDRE, you can name the shared library file according to your organization's naming standards.

Register your shared library file with the PeerDirect-enabled database through `DINST` (using the `-LIBPATH` parameter) or the `DREGEVNT` utility. If your shared library file is available before you activate your database using `DINST`, use the `-LIBPATH` parameter to register your event-handler immediately. (Note for Unix users: do NOT specify the `.SO` file extension when using this parameter.) If you want to register your event-handler after your database has been activated, use the `DREGEVNT` utility. You can also use `DREGEVNT` to register a different event-handler shared library file (which replaces the old one), or to remove a registered event-handler.

After you have registered an event-handling shared library file, load it by shutting down and restarting the Replication Engine.

## Support for Unicode data types

PDRE supports both ANSI and Unicode data types. Signatures for both is provided in the functions described in this section.

Category	Function
<b>Initialization Events</b>	<a href="#">PDEOnInit</a> <a href="#">PDEOnTerm</a>
<b>Session Events</b>	<a href="#">PDEOnReplicationRequest</a> <a href="#">PDEPreSessionStart</a> <a href="#">PDEPostSessionStart</a> <a href="#">PDEOnSessionEnd</a>
<b>Database Events</b>	<a href="#">PDEPreUnlock</a>

	<a href="#">PDEPostUnlock</a>
	<a href="#">PDEPreLock</a>
	<a href="#">PDEPostLock</a>
<b>Record Change Events</b>	<a href="#">PDEPreSessionInsert</a>
	<a href="#">PDEPostSessionInsert</a>
	<a href="#">PDEPreSessionUpdate</a>
	<a href="#">PDEPostSessionUpdate</a>
	<a href="#">PDEPreSessionDelete</a>
	<a href="#">PDEPostSessionDelete</a>
<b>Screen Message Events</b>	<a href="#">PDEOnSessionMessage</a>
	<a href="#">PDEOnSessionMessageW</a>
<b>Log Message Events</b>	<a href="#">PDEOnSessionLogMessage</a>
	<a href="#">PDEOnSessionLogMessageW</a>
<b>Conflict Events</b>	<a href="#">PDEOnSessionConflict</a>

## APIs to help customize conflict resolution

Use these PeerDirect APIs if you are configuring conflict resolution. They allow you to determine the last time a fragment was changed.

### [DSECBeginStampInfo](#)

Used to create an empty stamp structure. A stamp is used to determine information about a [fragment](#).

### [DSECEndStampInfo](#)

Used to delete a new stamp structure from memory.

### [DSECGetStampInfo](#)

Used to determine the structure of an existing stamp.