



Gedae 5.4.1 Release Notes

March 2008

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1 Bugs Fixed

SCR	Title	Problem Description
002778	Gsim segfaults on graph termination while closing ports	
002780	Development environment timeout during subschedule causes incorrect dataflow behavior	
002787	Collecting trace information from attached application with different endian causes segfault	
002790	Add double conversion routines to dy4av2	
002791	Hierarchical parameters make subgraph parameters not reusable	If a subgraph saves hierarchical parameters, that parameter file cannot be used in another graph, and/or in another instantiation in the graph.
002807	Preprocessing scheduling phase takes long time for large graphs	Moving a group containing segmentation into the preprocessed state is of order $N*M$, where N is the number of boxes in the group and M is the number of boxes that are segmented. For large graphs with a high percentage of segmented boxes this makes this phase of processing slow.
002813	Development environment does not have correct memory map of target processes	The development environment's memory map of the target processor may not be correct if the target process communicates to the development environment through a command program. As a result when the development environment retrieves pointers from the target it may retrieve values from the wrong locations. This can cause numerous problems.
002814	Segfault while creating probe dictionary for when running an attached launch package	When the development environment attaches to a running launch package that contains probes and the user requests to dump the probes Gedae segfaults while creating the probe dictionary.
002815	Dynamic probe boxes do not save full amount of data	Probes for dynamic queues do not copy all of the data from the dynamic queue into the probe buffer.
002817	Enable Break Points on attached application.	
002819	Changing trace size after running application segfaults	If an application is run through a target command program and the user terminates the application and then tries to change the trace table size from the

		mapping table gedae segfaults.
002820	Cyclic box with Local that is not an int or a float segfaults during scheduling	
002828	Unmapped trace memory causes Playstation target processes to crash	If when running a Gedae application on the Playstation the trace memory is set to systemem or lp_systemem types (which are unmapped types) then the target spu processes will crash during schedule download as they will try to directly access this memory. This problem was fixed by not sending the trace buffer contents (which are all zero anyway) to the target processors.

2 Known Bugs

SCR	Title	Problem Description
002012	Running two VxWorks processes on the same processor.	This problem occurs when trying to run two separate Gedae generated VxWorks executables on the same processor; however, the entry point for each executable has the same name, VxWorks_main, making this impossible.
002015	Multiple exclusive sources with some of the sources not used by every mode.	If there are multiple exclusive sources to a family of modes and some of the sources are not used by every mode, then Gedae crashes during development time scheduling. For example, if two exclusive branches drive three downstream modes and one of the branches has one of its outputs unused by the third mode, then this causes a segfault during scheduling. The workaround is to add dummy inputs to the modes to allow all the sources to be used by every mode.
002019	Graphs with host to target control ports fail on Linux and Solaris	The problem is that the host is not performing mailbox services while it is waiting to establish a control port to the target processors. Unix processors require the host to perform these services in order to make connections.
002020	Check in all licenses on exit.	Gedae relies on FLEXlm to find checked out licenses that are no longer in use and check them back in. This works on most systems, but a BSP user reports that it does not work on their system. We should explicitly check in all licenses on Gedae exit.
002022	Inplace box scheduling problems.	Copy boxes occasionally need to be added to a graph by the user to avoid scheduling problems associated with primitive outputs marked as being inplace with an input.
002024	Connecting Graph Parameter to User Define Type Segfaults.	Gedae erroneously allows standard C parameter types to be connected to user defined parameter types. This type of connection causes Gedae to segfault.
002047	Allow Changing Length of Parameter String at Runtime.	Changing the value of a string parameter to a stream may cause Gedae to stop executing. Gedae stops executing if the length of the string is changed.
002054	Modifying a running graph segfaults.	Modifying a Gedae graph that is running can cause a segfault. This problem has been reported several times but has not been duplicated by the Gedae support group. Most edits are disabled during graph execution.
002062	Outlaw segmented static schedules controlled by nondet inputs with multiple boxes.	Segmented static schedules controlled exclusively by nondet inputs and that contain more than one box should be outlawed. These graphs are currently considered problematic and can produce unexpected results.
002064	Outlaw pointer streams followed by delays or overlap	Pointer streams followed by delay boxes or boxes with input overlap parameters do not work and should be outlawed.

002078	Gedae can go to sleep if processes are polling.	A Gedae process can go to sleep if a process is polling. The sleeping is only seen on the NT BSP, which is currently the only BSP that implements the sleep capability. Gedae should only sleep when all schedules are in the paused state.
002104	Handling of null segments in distributed graphs	If a segmenter controls a segmented subgraph that is distributed and if the segmenter produces null segments, then parts of the distributed graph that are not directly controlled by queues will not see the end-of-segment.
002158	Trace Table send/recv webs do not work from attached launch package	When the Gedae Development Environment attaches to a launch package, the Trace Table send/recv webs do not work. No send/recv webs are displayed.
002221	Search on type does not follow route boxes.	If you search on the type of the input to a scope1, it does not recognize the type because there is a route box between the input and the next primitive.
002244	Using f6 to disconnect a constant can cause a segfault.	Disconnecting a constant source from a constant destination using the f6 button causes a segfault. This occurs because a stub is now connected to the constant destination and the evaluation of the constant fails.
002245	Gedae does not prompt the user to save a graph.	If a graph has been modified using the f6 cursor and that was the only modification, then Gedae does not prompt the user to save the graph when exiting Gedae.
002261	embTerminateError called from Reset does not stop the primitive.	If embTerminateNormal or embTerminateError are called from a Reset method of a graph that has more than one static schedule, then the static schedule containing the primitive is not terminated, as it should be. The schedule Apply methods will be called even though one of the schedule s Reset failed.
002267	Nonfamily output connected to family input causes graph to crash.	If a nonfamily stream source is connected to a family stream input, then Gedae segfaults when the user runs the graph. This type of graph should be detected as an error, and Gedae should not be allowed to run.
002282	Limitations on the use of typedef primitives	Typedef primitives will not work if connected to variable vectors or matrices. Typedef primitives will not work if connected to route boxes.
002312	The Gedae dy4av2 BSP function e_zvrcip can kill process	Calling the Gedae Dy4av2 BSP function e_zvrcip can cause the process to exit with an arithmetic exception. The problem is that even if the argument to e_zvrcip has only its real or imaginary part set to zero (but not both), then a divide by zero error still occurs.
002360	Trigger boxes with Reset method but no input parameters don't get fired	A trigger box that has a Reset method but no other inputs does not get fired when the user selects Control->Run.
002361	Eval boxes with no inputs are not included in the launch package	This feature can be confusing as when the Eval box calls getcwd. In this case the launch package will use the wd from which it was created - not the one it is run from.
002378	Create Subgraph does not support multidimensional families	Create Subgraph cannot handle boxes and data that use multidimensional families.

002399	Gedae built-in function names should be ignored if used in nonfunction context.	Gedae built-in functions like "time" should be ignored if not used as a function. That is time(x) should be converted by the Gedae parser but x.time (or even x.time(x)) should not.
002400	Family of array parameters to a trigger box does not codegen correctly.	An input parameter like float [N]in[Max] does not codegen correctly for trigger boxes. The data values are not correct. If only one family member is set, then the box still executes; however, the array dimensions are invalid.
002406	Primitive with EndOfSegment but no Apply does not work.	If a primitive has an EndOfSegment method but no Apply method, the primitive is not included in the running application and the EndOfSegment method is never called.
002419	FGTable edit box does not recognize termination	Gedae does not accept some FGTable entry while the graph is running. If you are trying to edit an FGTable entry, then terminate the graph so that you can change the value, the FGTables do not automatically recognize the graph has terminated. The user must unselect the entry area then reselect it to enter the data.
002420	Microphones sporadically stop collecting data on AFG for Linux	AFG would sometimes stop getting data from the microphones. Users were successfully running the graph for several tries, but at the next execution, it would stop working. AFG recognizes the microphone but just does not produce any data.
002423	Dy4Av2 Installation Requirement	We needed to remove the files rsh.exe and cygwin1.dll from %gedae%\nt\bin because delivering these files and placing %gedae%\nt\bin in the users PATH variable caused many users to have conflicting versions of cygwin1.dll in their path. It is now necessary to copy cygwin1.dll and rsh.exe from the cygwin bin directory into %gedae%\nt\bin. For example, these files can be copied as: copy c:\cygwin\bin\cygwin1.dll %gedae%\nt\bin copy c:\cygwin\bin\rsh.exe %gedae%\nt\bin
002431	Local dcomplex variable is treated like a complex variable.	If you create a dcomplex local Local: { dcomplex temp[N]; } and then look at the Memory Map, the Memory Info dialog states Type: complex ... Elem Size: 8 ... The correct Elem Size is 16. Running with a local dcomplex causes a segfault because this buffer is not big enough.
002432	Connection from float on canvas to double input parameter does not cast correctly.	If there is a double parameter input to a primitive and a float on the canvas, the user can connect the float to the double, however the cast is not performed correctly. The value inside the primitive is 0. Either cast floats to doubles correctly or disallow the connection.
002447	Entering Launch Package Directory in launch info dialog does not cause recompile.	Entering a directory name in the launch package creation dialog does not cause a group that is in the compiled state to move down to the allocated state. As a result, hitting the Make button on the launch package dialog has no effect.

002450	Loading group settings when the target host is set can fail.	If group settings are already loaded in which the Target Host is set to something other than default and if a new group setting is loaded in which a partition is mapped to a target logical number that appears in the Target Host configuration file but not the default configuration file then Gedae complains that "Logical processor 100 is not in embedded config file" and fails to set the "Run on Target" toggle on.
002451	Undefined symbols of form I0023_recv in target executables.	The error message: "Warning: lookupDirectorySerialNumber: directory name %s not in database and database is locked\n" can occur when compiling a distributed graph mapped to a target processor. This error may cause the undefined symbols of the form I0023_recv when linking the target executables.
002467	Symbol "herror" multiply defined in Exceed and Visual C++	Including both <X11/X.h> and <stdlib.h> introduces a compiler warning for some mixtures of versions of Exceed XDK and Visual C++. The problem was noticed when building with .NET 2003, and an evaluation version the eval version of XDK 2007. This problem is not noticed with the same Visual C++ and the full release version of XDK 2007. A workaround is to add a line like #define herror herror2 in front of the include for the 2nd of these 2 files.
002472	The build in size function does not work for dynamic inputs	If a primitive input is declared as dynamic stream in; then the build in function size does not work correctly. The value of size(in) will be zero instead of the number of data elements in the queue. The primitive should use granularity instead. If the declaration is dynamic stream in[N][M](D), then the Apply method should replace size(in) with granularity*N*M*D. This problem should either be detected or fixed.
002473	Gsim exits if group is set to run on target model and there is no target model.	Should not allow graph to run in such a situation.
002478	Memory Map Dialog "View->Changes" does not work for dev env talking to target command program.	In the situation where the development environment is talking to a target processor through a target command program, selecting the View->Changes option on the Memory Map Dialog for the target causes Gedae to segfault.
002479	If a compile is not necessary do not say complete and successful - say up to date.	If a compile is not necessary do not say complete and successful - say up to date.
002498	Partition not set correctly when adding new box to partitioned subgraph	When adding a box to a subgraph that has its partition set in the Partition Table, the new box should have its partition set to the subgraph partition. This does not happen. A workaround is to save the group settings (if needed) before adding the box and then reload the group settings after the box is added.

002499	Changing connection does not mark graph as dirty	Linux PPC
002507	Hitting return in blank Launch Package Dialog directory field.	If a return is hit in the Launch Package Dialog's directory field and the field is blank it does not "unset" the directory value as it should, but rather sets the directory value to an empty string.
002521	Don't allow setting Firing Table Granularity if Gran Mult > 1	When using the Firing Table, if the Gran Mult field on a schedule is > 1, then the user should not be allowed to set the Granularity field of any primitive in the schedule. Additionally, setting the Gran Mult should clear all the schedule Granularities.
002549	Memory leak when increasing the queue size of a shared queue.	When increasing the queue size of a shared queue. Gedae does not free the original memory. This results in a memory leak. If the queue size is increased a second time, it would be possible to free the memory allocated the first time. Gedae does not keep track of this.
002550	FGU of hierarchical typedef boxes	FGU does not transfer hierarchical typedef boxes correctly. The typedef used to define the input of the box is set to the old directory rather than the new.
002551	Graph Stalls	A rare condition can cause a graph to stall (or segfault) when the controlled static schedule is partitioned to two processors in the following form: A->B->A. The problem scenario is that the schedule is partitioned into three parts, with the first and last parts mapped to the same processor. Usually Gedae puts the parts mapped to processor A in the same static schedule; however, to allow efficient pipelining, Gedae splits the two parts mapped to processor A into two different static schedules. They are numbered n.1 and n.2 (for example 2.1 and 2.2). To see if any schedules have been broken into two parts, the user can pop up the Schedule Info Dialog and see if any of the schedule names contain a decimal point. The decimal point in the schedule name does not necessarily indicate a problem. The problem only occurs when the data source driving the processing is faster than the graph, causing the control message queue to back up and overflow. The condition is rare because the problem only happens when the graph is not keeping up with the input data rates.
002553	Embedded build can require a makeGEDAE CLEAN	If an application is repartitioned, then the target executables do not get relinked. The problem is that all the .o files are older than the targets, and the fact that there is a new link line does not force the target library and target executables to rebuild.
002554	Unterminated comments	Unterminated comments cause the Gedae parser to segfault.
002555	Parser problem	The Gedae parser does not handle an odd number of quotes well.

002556	Arrays of strings not allowed	Gedae currently allows string array graph parameters to be declared as: <code>const string X[] = { hello , world }</code> or <code>string X[i] = [i]Y</code> where Y is a family of strings. In either case, the values so declared are not correctly set, and therefore, should be considered illegal.
002557	Function <code>appFree</code> memory leak	A command program running on VxWorks does not free all the resources allocated (memory, sockets, etc). The <code>appFree</code> function must release everything allocated. Gedae should automatically generate a call to <code>appFree</code> for the standard <code>exec-host</code> command program.
002558	External Code does not recompile	<code>Make</code> is not called after a successful run, so changes to code listed in the <code>Personal_Emb_Obj_List</code> do not get recompiled. To force the recompile, it is currently necessary to change something from the Gedae GUI. For example, saving a primitive or toggling the Group "Run on Embedded" toggle off and on will force a recompile.
002559	Large Graphs fail to display on flattened graph.	If a graph is too large, then it cannot be displayed on the flattened graph. This occurs when the flattened width or height exceeds the allowable pixmap width or height of 32768.
002560	Primitive cannot recompile	If a primitive Input, Output or Local section is modified at runtime, then Gedae segfaults when the primitive is recompiled, and the graph is rerun. Currently, the user must exit Gedae after a primitive Input, Output or Local section has been modified.
002561	DSA with fan-out does not work for some BSPs.	If a box output fans-out to several boxes mapped to several different processors, then the DSA communication mechanism does not work correctly for Mercury and Sky BSPs.
002562	FFT primitives only work with power of 2 sized vectors.	The FFT boxes do not support non-power-of-2 lengths; however, the comments make no mention of this fact. If these boxes only support a power-of-2, then it would be useful to have a separate set of boxes that support a non-power-of-2.
002563	Constants propagated through typedef boxes	Constants propagated through typedef boxes cannot be used for instantiation.
002564	Stream box with push in hostless launch package	If a stream box contains a call to push and it is made part of a hostless launch package, then the launch package will fail to compile, as the code for the push is not included in the standalone library.
002583	Math.h symbol <code>floor</code> undefined in Windows build with VC6.0	When using the function <code>e_vfloor</code> on a Windows system linking with the Visual C++ 6.0 libraries, it has been reported that the <code>math.h</code> symbol <code>floor</code> is undefined. Newer versions of Visual C++ do not report this error.
002589	Saving a primitive to a directory that does not exist	When saving a primitive to a directory that does not exist, Gedae should create the directory.

002603	Box names are not updated correctly in an FGTable	The box names in FGtables sometimes do not match up with the ones on the canvas. If a subgraph is saved under a new name using Save As, then the tables such as Hierarchy and Fire Table do not update. Closing and reopening also does not update the name - the name stays stale, set to the old name. Exiting and reentering Gedae is the only way to see the new name.
002606	Error occurs when partition mapped to host and launch package is set to run with no host	If a partition is mapped to the host and the launch package is set to run with the option "Create schedules in Target Executables (No Host)", then Gedae does not flag this as an error until the user tries to build the application. The error message states: "Cannot create a target command program for the host BSP because the BSP does not have the createPortName function set". Instead Gedae should pop up an error message stating that the launch package is set to the no-host option but indicate that some partition is mapped to the host. In addition, it should pop up an error message when the launch package is already set to no-host and when you try to map a partition to the host.
002612	Linux BSP does not set nbsize of socket transfers correctly	Setting the nbsize of Linux (eredhat) stream transfer methods over 250000 does not work. For example, if the nbsize is set to 500000 and the sender tries to send 500000 bytes, then the sender will block until the receiver executes. Because the Gedae static scheduler counts on the sender being able to send the nbsize amount without blocking, the failure to send the nbsize amount of data can cause the application to deadlock.
002623	Dynamic data flow params: implement iterate constraint	The new iterate data flow parameter will not work if it is being controlled by a segmented parameter.
002696	Problem with subscheduling.	If a connected subschedule has a data path that exits and then reenters the subschedule, then the subschedule cannot fire. This situation should be detected and reported to the user. Currently the problem is reported as an error in setting dynamic dependencies - even if there are not dynamic queues in the graph.
002699	Trace data is not portable from LinuxPPC to Windows	Trace events saved on a PS3 (LinuxPPC) cannot be viewed on a Windows installation.
002710	FGTable entries that override equations don't always apply	If a family is first partitioned by equation, and then one member of the family is partitioned to a fixed value, then the fixed partition value does not show up in the Mapping Table. Similar behavior occurs for other FGTables as well.
002722	Subschedule feeding overlap input does not work	
002723	Dynamic dependency algorithm does not work with subschedules	

002737	Overlapping exclusion sets do not work	Suppose two exclusive outputs each have a family member that controls different sets of subgraphs. If these sets overlap but one set does not contain the other, then the exclusive set creation algorithm will not work correctly.
002742	Common recv port inplace with common send port does not work	
002743	Pointer forwarding does not work correctly with DSA or common	
002769	Exclusive subgraphs that output results to static input primitive do not work.	An exclusive branch that goes to a set of exclusive subgraphs typically ends in a merge box controlled by the same control input that controlled the exclusive branch. However, if one of the exclusive subgraph outputs goes to a static box input, then the static box input does not correctly propagate higher level segment information.
002782	Adding probe point to unmapped memory stream does not work	
002783	Adding probe point to primitive without Apply method does not work	
002816	Partitions do not respond to stop command when break point occurs in attached command program	
002821	Stream primitive output parameters cannot be sent to primitive inputs in a different group.	If you send primitive output parameters to a primitive in a different group and the destination group is processed first then the parameters for that group are not set and gedae fails to complete scheduling.
002823	Inplace dynamic segmented exclusive output	Inplace dynamic segmented exclusive outputs do not work. Pointer forwarding should go down only the exclusive branch on which data is forwarded.