API Changes

Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
Added Arguments							
ESMF_FieldRegridStore	N/A	srcFracField	Yes	22.6.58	23.6.59	Output additional Regrid information	No impact
ESMF_FieldRegridStore	N/A	dstFracField	Yes	22.6.58	23.6.59	Output additional regrid information	No impact
ESMF_FieldRegridStore	N/A	srcMergeFracField	Yes	22.6.58	23.6.59	Output additional regrid information	No impact
ESMF_FieldRegridStore	N/A	dstMergeFracField	Yes	22.6.58	23.6.59	Output additional regrid information	No impact
ESMF_MeshAddElements	N/A	elementMask	No	29.4.4	30.4.4	Allow user to specify masking to be used in conservative regridding.	If a keyword is not used for the 'rc' argument, it must now be introduced.
	N/A	elementArea	No	29.4.4	30.4.4	Allow user to specify areas to be used in conservative regridding.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MeshCreate	N/A	elementMask	No	29..4.7	30.4.7	Allow user to specify masking to be used in conservative regridding.	If a keyword is not used for the 'rc' argument, it must now be introduced.
	N/A	elementArea	No	29.4.7	30.4.7	Allow user to specify areas to be used in conservative regridding.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MeshCreate	N/A	addUserArea	No	29.4.8	30.4.8	Allow user to read areas from file to be used in conservative regridding.	If a keyword is not used for the 'rc' argument, it must now be introduced.

API Changes							
Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
	N/A	meshname	No	29.4.8	30.4.8	Allow user to specify the name of the variable that defines the topology of the Mesh being read form a file in UGrid format.	If a keyword is not used for the 'rc' argument, it must now be introduced.
	N/A	addMask	No	29.4.8	30.4.8	Allow user to indicate whether masking information should be generated from the variable specified by the "varname" argument.	If a keyword is not used for the 'rc' argument, it must now be introduced.
	N/A	varname	No	29.4.8	30.4.8	Variable name to be read from UGrid file to provide missing values to generate masking if masking is turned on.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_StateReplace	N/A	relaxedflag	Yes	17.7.15	18.7.15	Consistency with other container class API	No impact
ESMF_MethodStateAdd	N/A	index	No	18.4.1	19.4.1	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodStateAddShObj	N/A	index	No	18.4.2	19.4.2	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodStateExecute	N/A	index	No	18.4.3	19.4.3	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.

API Changes							
Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
ESMF_MethodStateRemove	N/A	index	No	18.4.4	19.4.4	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodGridCompAdd	N/A	index	No	18.4.5	19.4.5	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodGridCompAddShObj	N/A	index	No	18.4.6	19.4.6	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodCplCompAdd	N/A	index	No	18.4.7	19.4.7	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodCplCompAddShObj	N/A	index	No	18.4.8	19.4.8	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodGridCompExecute	N/A	index	No	18.4.9	19.4.9	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodCplCompExecute	N/A	index	No	18.4.10	19.4.10	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodGridCompRemove	N/A	index	No	18.4.11	19.4.11	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_MethodCplCompRemove	N/A	index	No	18.4.12	19.4.12	Additional means to distinguish attachable methods.	If a keyword is not used for the 'rc' argument, it must now be introduced.
ESMF_GridCompDestroy	N/A	timeout	Yes	15.4.5	15.4.5	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.5	15.4.5	User specified fault-tolerance parameter.	No impact

API Changes							
Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
ESMF_GridCompFinalize	N/A	timeout	Yes	15.4.6	15.4.6	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.6	15.4.6	User specified fault-tolerance parameter.	No impact
ESMF_GridCompInitialize	N/A	timeout	Yes	15.4.9	15.4.9	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.9	15.4.9	User specified fault-tolerance parameter.	No impact
ESMF_GridCompReadRestart	N/A	timeout	Yes	15.4.12	15.4.12	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.12	15.4.12	User specified fault-tolerance parameter.	No impact
ESMF_GridCompRun	N/A	timeout	Yes	15.4.13	15.4.13	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.13	15.4.13	User specified fault-tolerance parameter.	No impact
ESMF_GridCompWait	N/A	timeout	Yes	15.4.24	15.4.28	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.4.24	15.4.28	User specified fault-tolerance parameter.	No impact
ESMF_GridCompWriteRestart	N/A	timeout	Yes	15.5.25	15.5.29	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	15.5.25	15.5.29	User specified fault-tolerance parameter.	No impact
ESMF_CplCompDestroy	N/A	timeout	Yes	16.4.5	16.4.5	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.5	16.4.5	User specified fault-tolerance parameter.	No impact

API Changes

Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
ESMF_CplCompFinalize	N/A	timeout	Yes	16.4.6	16.4.6	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.6	16.4.6	User specified fault-tolerance parameter.	No impact
ESMF_CplCompInitialize	N/A	timeout	Yes	16.4.9	16.4.9	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.9	16.4.9	User specified fault-tolerance parameter.	No impact
ESMF_CplCompReadRestart	N/A	timeout	Yes	16.4.12	16.4.12	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.12	16.4.12	User specified fault-tolerance parameter.	No impact
ESMF_CplCompRun	N/A	timeout	Yes	16.4.13	16.4.13	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.13	16.4.13	User specified fault-tolerance parameter.	No impact
ESMF_CplCompWait	N/A	timeout	Yes	16.4.24	16.4.28	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.4.24	16.4.28	User specified fault-tolerance parameter.	No impact
ESMF_CplCompWriteRestart	N/A	timeout	Yes	16.5.25	16.5.29	User specified fault-tolerance parameter.	No impact
	N/A	timoutFlag	Yes	16.5.25	16.5.29	User specified fault-tolerance parameter.	No impact
Removed Arguments							
ESMF_XGridCreate	N/A	sideAToXGridScher	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface

API Changes							
Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
	N/A	sideBToXGridScher	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	offline	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	sparseMatA2X	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	sparseMatX2A	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	sparseMatB2X	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	sparseMatX2B	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	area	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
	N/A	centroid	No	30.6.4	31.6.4	Arguments moved to a new interface	Migrate to new interface
Added Interfaces							
ESMF_VMAllToAll	N/A	N/A	N/A	N/A	46.5.8	Complete the set of collective communication calls	No impact
ESMF_FieldCopy	N/A	N/A	N/A	N/A	23.6.4	Provide a convenient method to copy data between objects	No impact
ESMF_ArrayCopy	N/A	N/A	N/A	N/A	25.5.4	Provide a convenient method to copy data between objects	No impact
ESMF_FieldRegridGetArea	N/A	N/A	N/A	N/A	23.6.60	Provide a method to obtain cell areas used during conservative regridding	No impact
ESMF_GridCreate	N/A	N/A	N/A	N/A	28.6.14	Consolidate two Grid creates from file under one name.	No impact
ESMF_GridCompServiceLoop	N/A	N/A	N/A	N/A	15.4.14	Fault tolerance implementation	No impact

API Changes							
Method name	Old value (520rp2)	New value (530)	Marked backward compatible in 520rp2	Interfaces affected (520rp2)	Interface (530)	Rationale for change	Impact
ESMF_GridCompSetServices	N/A	N/A	N/A	N/A	15.4.20	Fault tolerance implementation	No impact
ESMF_GridCompSetServices	N/A	N/A	N/A	N/A	15.4.21	Fault tolerance implementation	
ESMF_CplCompServiceLoop	N/A	N/A	N/A	N/A	16.4.14	Fault tolerance implementation	No impact
ESMF_CplCompSetServices	N/A	N/A	N/A	N/A	16.4.20	Fault tolerance implementation	No impact
ESMF_CplCompSetServices	N/A	N/A	N/A	N/A	16.4.21	Fault tolerance implementation	No impact
ESMF_WebServicesCplCompLoop	N/A	N/A	N/A	N/A	20.4.2	Web service method for the coupler component	No impact
ESMF_XGridCreateFromSparseMat	N/A	N/A	N/A	N/A	31.6.5	Big interface for ESMF_XGridCreate split into two	No impact
Removed Interfaces							
ESMF_GridCreate	N/A	N/A	No	27.6.14	N/A	Consolidate grid creates from Netcdf file under one name.	No impact
ESMF_GridCreate	N/A	N/A	No	27.6.15	N/A	Consolidate grid creates from Netcdf file under one name.	No impact