I'm attempting to discretize the purely Neumann problem for the Poisson's equation on a region Ω

$$\triangle \phi = f \text{ on } \Omega \tag{1}$$

$$\frac{\partial \phi}{\partial n} = g \text{ on } \Gamma \tag{2}$$

where Γ is the boundary of Ω. The resulting matrix is singular and GetDP blow up (with a NaN error). This is to be expected because of not uniqueness of the solution to the weak problem (the solution is known up to an addtiotional constant). A unique solution to the system can be found by imposing an additional condition on ϕ such as specifying ϕ at one point or requiring $\int_\Omega \phi d\Omega = 0$.
Is it possible to use one of the above strategies in GetDP (the second would the better)?
I've tried to impose a Dirichlet boundary condition on one node: this works only if the node is on the boundary Γ but not if the node is on the computational domain Ω.
In which way can I impose the second condition defining a global quantity? Can you give me an example?
Do you think that the Green's function approach would be useful for my problem? If yes, in which way can I use it in GetDP?
Thanks in advance and best regards,

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