Kapustin and Witten associate a Hecke modification of a holomorphic bundle over a Riemann surface to a singular monopole on a Riemannian surface times an interval satisfying prescribed boundary conditions. I will describe this, and prove existence and uniqueness of such monopoles for given Hecke modification data when $G=\text{SU}(2)$ and $\text{PSU}(2)$ confirming the underlying geometric invariant theory principle.