Astronomical data are gathered through a very large number of heterogeneous techniques and stored in very diversified and often incompatible data repositories. Moreover in the e-science environment, it is needed to integrate services across distributed, heterogeneous, dynamic "virtual organizations" formed by different resources within a single enterprise and/or external resource sharing and service provider relationships. The DAME/VO-Neural project aims at creating a single, sustainable, distributed e-infrastructure for data mining and exploration in massive data sets, to be offered to the astronomical (but not only) community as a web application. The framework, able to make use of distributed computing environments (e.g. S.Co.P.E. Grid) and matching the international IVOA standards and requirements, is a service-oriented architecture, obtained by using appropriate standards and incorporating Grid paradigms and restful Web services frameworks, having as main target the integration of interdisciplinary distributed systems within and across organizational domains.