Firethorn User interface **VO** services Client applications HTML ADQL Web browser **TAP Service** TAP Service **SAMP TOPCAT** Local catalogues Database Database TAP-V1.0 AstroGrid V1.0 services TAP 1:1 mapping Aladin one service per catalog Temp store Database

Firethorn User interface **VO** services Client applications HTML **ADQL** Web browser **TAP Service** TAP Service **SAMP TOPCAT** Local catalogues Flexible mapping between services Database Database and catalogs **TAP-V2.1 TAP** Aladin User data Compute resources for end user Database Database <mark>data</mark> analysis