

Data-centric Graphical User Interface of the ATLAS Event Index Service

Julius Hrivnac(1), Evgeny Alexandrov(2), Igor Alexandrov(2), Zbigniew Baranowski(3), Dario Barberis(4), Gancho Dimitrov(3), Alvaro Fernandez Casani(5), Elizabeth Gallas(6), Carlos Garcia Montoro(5), Santiago Gonzalez De La Hoz(5), Andrei Kazymov(2), Mikhail Mineev(2), Fedor Prokoshin(2), Grigori Rybkin(1), Javier Sanchez(5), Jose Salt(5), Miguel Villaplana(7) on behalf of the ATLAS Collaboration
 (1) Laboratoire de l'Accelérateur Lineaire Orsay, (2) Joint Institute for Nuclear Research Dubna, (3) CERN, (4) Università e INFN Genova, (5) Instituto de Física Corpuscular Valencia, (6) University of Oxford, (7) Department of Physics, University of Alberta, Edmonton

ATLAS Event Index Service keeps references to all real and simulated ATLAS events. Hadoop Map files and HBase tables are used to store the Event Index data, a subset of data is also stored in the Oracle database. Several user interfaces are currently used to access and search the data. From the simple command line interface, through programmatical API to sophisticated Graphical Web Services.



- The original implementation was organized by service type (event lookup, dataset overlaps, trigger statistics,...)
 - Each service gives access to all relevant data
- Following user requests, the User Interface has evolved into a system organized by data entity (events, datasets, collections, runs,...)
 - Each entity gives access to all available services
 - While the underlying implementation was still organized by service type
- New implementation (under development for Run 3) is organized by data entity
 - Two prototypes were implemented, the **Prototype 2** has been selected for the final implementation
- Navigation is provided via dynamic hierarchical graph-like overview of all available data and data collections
- Data are shown together with their relations, ownership, containment or overlaps
- Some actions are provided directly by the Event Index system, others are interfaces to various external ATLAS services
- In many cases, specialised views are offered for detailed data inspection
 - Trigger histograms
 - Dataset overlaps
 - Trigger overlaps
 - ...

Event Index
 Problems or Questions? - Ask service manager!
 Detailed Help

Available runs

ET15

00263962	00263964	00263965	00264034	00265532	00265545	00265573	00266211
00266503	00266534	00266698	00266919	00267073	00267148	00267157	00267162
00267167	00267358	00267359	00267360	00267367	00267385	00267599	00267638
00267639	00270441	00270448	00270588	00270806	00270816	00270949	00270953
00271048	00271298	00271370	00271388	00271421	00271516	00271595	00271649

ET17_100330079: live Help
 Cluster by AMI Tag Cluster by group size Expand all clusters
 overlap thresholds: 0% 50%
 tag level: 99 target: null filter: null

Original Implementation
 Graph GUI on top of non-Graph implementation

Prototype 2

selected for 'Run 3' Event Index implementation

- Select period, run, ami tag, stream, dataset or event
 - Or any other Hub (virtual collection)
- Get it, together with all related entities and information stored in EI
- Each entity has a set of possible actions to perform (EI or external)
- Each entity can be annotated
- Detailed search is possible too
 - Could expose also Phoenix SQL part

ATLAS Event Index
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 Detailed Help

ATLAS

dataset_TAG: A=357424908 B=20844400 A+B=462268908 A-A=B=124990908 (21.6%) A-A*B=308444900 (66.36%) B-A*B=179399412 (42.19%)

AMI TAG: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 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