

Kubernetes FM

The Kubernetes variability model synthesized from the API Reference documentation.
Tags: Kubernetes, containerization, deployment, manifest files, orchestration platform
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Domain: Deployment software

| | | |
|--|-------------------|--------------|
| Features | 738 | |
| Abstract features | 13 | (2%) |
| Abstract leaf features | 0 | (0%) |
| Abstract compound features | 13 | (100%) |
| Concrete features | 725 | (98%) |
| Concrete leaf features | 550 | (76%) |
| Concrete compound features | 175 | (24%) |
| Compound features | 188 | (25%) |
| Leaf features | 550 | (75%) |
| Root feature | 1 | (0%) |
| Top features | 11 | (1%) |
| Solitary features | 532 | (72%) |
| Grouped features | 206 | (28%) |
| Typed features | 319 | (43%) |
| Numerical features | 57 | (8%) |
| Integer features | 57 | (8%) |
| Real features | 0 | (0%) |
| String features | 262 | (36%) |
| Multi-features | 61 | (8%) |
| Tree relationships | 569 | |
| Mandatory features | 194 | (36%) |
| Optional features | 337 | (63%) |
| Feature groups | 38 | (7%) |
| Alternative groups | 34 | (89%) |
| Or groups | 4 | (11%) |
| Mutex groups | 0 | (0%) |
| Cardinality groups | 0 | (0%) |
| Depth of tree | 8 | |
| Mean depth of tree | 4.83 | |
| Branching factor | 3.92 | |
| Min children per feature | 1 | |
| Max children per feature | 28 | |
| Avg children per feature | 1 | |
| Cross-tree constraints | 93 | |
| Logical constraints | 59 | (63%) |
| Single feature constraints | 0 | (0%) |
| Simple constraints | 34 | (58%) |
| Requires constraints | 28 | (82%) |
| Excludes constraints | 6 | (18%) |
| Complex constraints | 25 | (42%) |
| Pseudo-complex constraints | 14 | (56%) |
| Strict-complex constraints | 11 | (44%) |
| Arithmetic constraints | 34 | (37%) |
| Aggregation constraints | 0 | (0%) |
| Features in constraints | 172 | (23%) |
| Min features per constraint | 1 | |
| Max features per constraint | 19 | |
| Avg features per constraint | 2.61 | |
| Avg constraints per feature | 1.41 | |
| Min constraints per feature | 1 | |
| Max constraints per feature | 7 | |
| Attributes | 5 | |
| Features with attributes | 538 | (73%) |
| Min attributes per feature | 0 | |
| Max attributes per feature | 2 | |
| Avg attributes per feature | 0.85 | |
| Avg attributes per feature w. attributes | 1.17 | |
| Satisfiable (valid) | Yes | |
| Core features | 27 | (4%) |
| False-optional features | 14 | (2%) |
| Dead features | 207 | (28%) |
| Variant features | 504 | (68%) |
| Unique features | 0 | (0%) |
| Pure optional features | 79 | (11%) |
| Configurations | 5.73e77 | |
| Total variability | 3.97e-143% | |
| Partial variability | 1.10e-72% | |
| Homogeneity | 43.29% | |
| Configuration distribution | | |
| Mean | 319 | |
| Standard deviation | 10.06 | |
| Median | 320 | |
| Median absolute deviation | 0 | |
| Mode | 9 | |
| Min | 9 | |
| Max | 484 | |
| Range | 475 | |