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**	