

This document compiles the same graphics as used in the main thesis, except generated with only the high-confidence data (existence ≥ 0.95 , executive and property ≥ 0.9).

1 RQ1

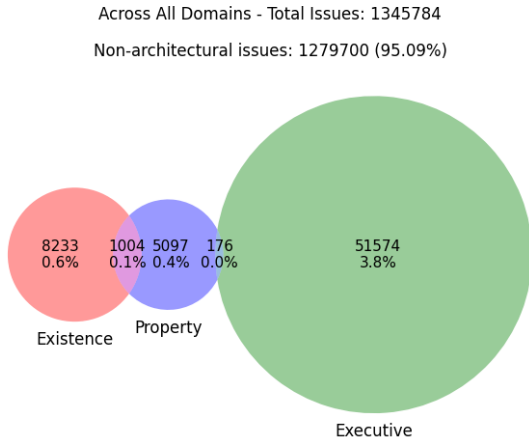


Figure 1: A Venn diagram of the amount of issues divided over the design decision types, across all domains. (RQ1)

Domain	Exis	Exec	Prop	Non-Arch
CM	0.66	0.44	0.69	1.03
DSP	1.57	0.79	1.79	
DC	0.91	1.89	0.72	0.97
SOAM		1.10	0.87	1.00
SDT	0.44	0.79	0.40	1.02
WD	0.70	1.33	0.53	0.99

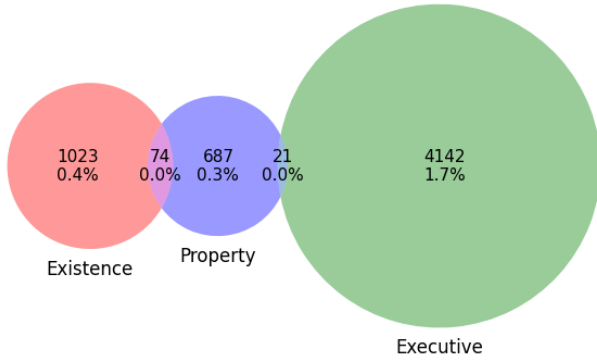
Table 2: Chi-squared test results on decision types per domain, with **simple** decision types. (RQ1) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domain	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
CM	0.69	0.44		0.74	0.41	0.66		1.03
DSP	1.49	0.79		1.73	2.23			1.00
DC	0.95	1.89		0.72	0.58	1.48		0.97
SOAM	1.08	1.10		0.90	0.68			1.00
SDT	0.46	0.78		0.41	0.27			1.02
WD	0.75	1.33		0.57	0.32			0.99

Table 1: Chi-squared test results on decision types per domain, with **intersected** decision types. (RQ1) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Content Management - Total Issues: 243860

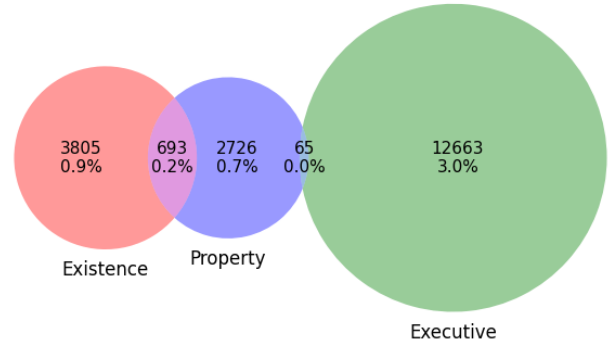
Non-architectural issues: 237913 (97.56%)



(a) Content Management

Data Storage & Processing - Total Issues: 416260

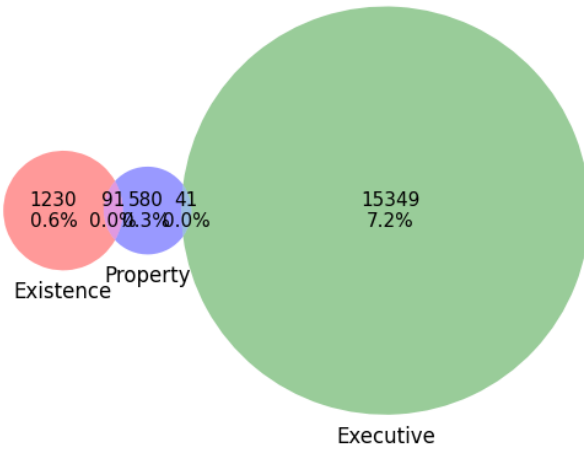
Non-architectural issues: 396308 (95.21%)



(b) Data Storage & Processing

DevOps And Cloud - Total Issues: 211759

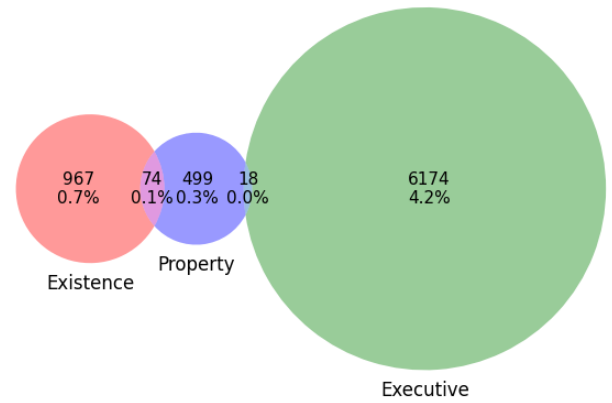
Non-architectural issues: 194468 (91.83%)



(c) DevOps and Cloud

Soa And Middlewares - Total Issues: 145933

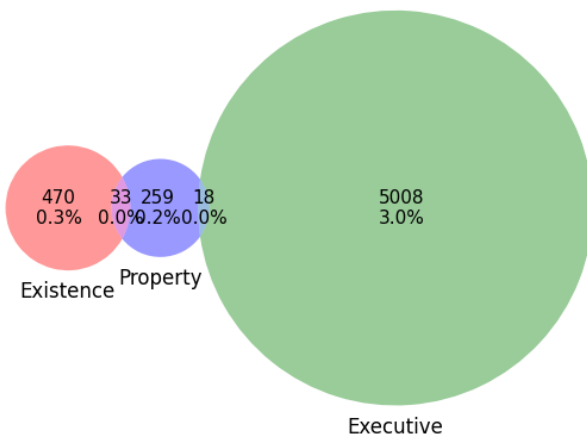
Non-architectural issues: 138201 (94.70%)



(d) SOA and Middlewares

Software Development Tools - Total Issues: 166588

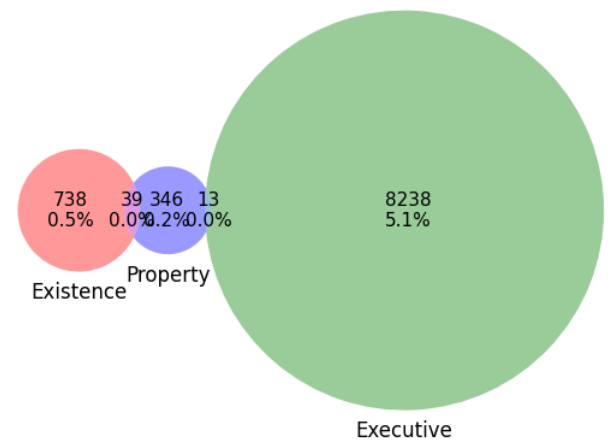
Non-architectural issues: 160800 (96.53%)



(e) Software Development Tools

Web Development - Total Issues: 161384

Non-architectural issues: 152010 (94.19%)



(f) Web Development

Figure 2: Venn diagrams of the amount of issues divided over the design decision types, per domain (RQ1).

2 RQ2

Domains	Independent	Child	Parent
CM	1.06	0.45	0.48
DSP	0.89	1.97	2.06
DC	1.08	0.18	0.33
SOAM			
SDT	1.05	0.50	0.60
WD	1.01	1.08	0.63

Table 3: Chi-squared test results on the *hierarchy* characteristic per domain, high-confidence architectural issues only. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Sub-Task	Bug	Improvement	New Feature	Wish	Task
CM	0.32	1.23		0.88	1.69	1.12
DSP	1.36	0.95	1.14	1.08		0.69
DC	0.67	1.45	0.86	1.16	0.60	
SOAM	0.79	0.75	0.82	1.08		1.39
SDT	0.54	1.27	0.80	0.62		1.44
WD		0.87	0.89	0.85	0.46	1.29

Table 4: Chi-squared test results on the *issue_type* characteristic per domain, high-confidence architectural issues only. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Won'T Fix	Duplicate	Not A Bug	Fixed	Done	Obsolete
CM	2.48	1.39	1.84	1.16	0.07	3.16
DSP	1.37	1.31	0.62	1.10	0.56	0.16
DC	0.38	1.25		1.24	0.38	0.65
SOAM	0.74	0.44		0.95	1.33	
SDT	1.29	0.75	1.94	0.67	1.92	2.11
WD	0.72	0.31		0.45	2.80	1.52

Table 5: Chi-squared test results on the *resolution* characteristic per domain, high-confidence architectural issues only. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Domains	Closed	Open	Resolved	Reopened	In Progress
CM	1.14		0.67		0.60
DSP	0.63	1.98	1.52	1.90	1.73
DC	1.29	0.32	0.56	0.21	
SOAM	0.81	0.75	1.55	0.32	0.66
SDT	1.35	0.63	0.31		0.58
WD	1.15	0.54	0.81		0.43

Table 6: Chi-squared test results on the *status* characteristic per domain, high-confidence architectural issues only. (RQ2) (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

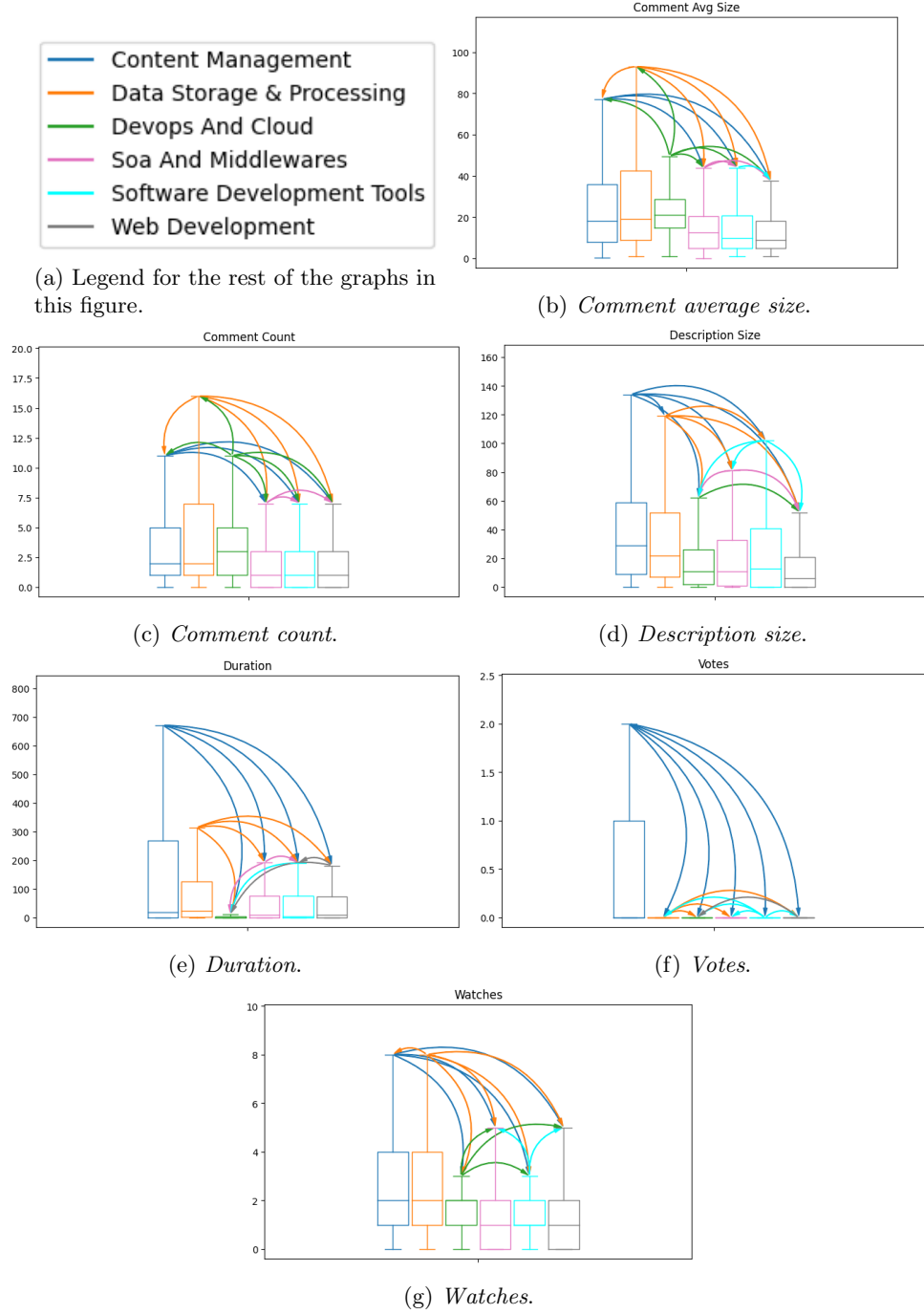


Figure 3: Box plots of the continuous data issue characteristics. Arrows indicate significantly larger means according to the Mann-Whitney test. (RQ2)

3 RQ3

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.87			0.94	0.84			1.00
Child	1.96	0.84		1.11	1.90	0.35		
Parent	5.90	1.92		5.11	8.62	5.52		0.91
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.94	0.99		0.97	0.90			1.00
Child	3.05	1.48		1.69	3.31			0.98
Parent	7.83	3.01		6.48	20.05			0.91
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.79	0.98		0.93	0.83	0.89		1.00
Child	1.83	0.86			1.39			1.00
Parent	5.41	2.76		4.74	6.77	9.68		0.86
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.96	1.04						1.00
Parent	5.61	0.72		2.08				
Child		0.20		0.40				1.07
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.96	0.96		1.03				1.00
Parent	3.55	1.80			3.79			0.94
Child		1.41		0.30				0.98
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Parent	4.28	1.58		5.31	6.41			0.96
Independent		1.01						
Child		0.69		0.40				1.01
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Independent	0.95	0.96						1.00
Child		1.59		0.49				0.97
Parent	4.51	1.67		5.72				0.93

Table 7: Chi-squared test results for the relation between the *hierarchy* issue characteristic and **inter-sected** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Independent	0.87		0.93	1.00
Child	1.95	0.83	1.21	
Parent	6.16	1.92	5.65	0.90
CM	Exis	Exec	Prop	Non-Arch
Independent	0.94	0.99	0.96	1.00
Child	3.07	1.47	1.80	0.98
Parent	8.60	2.98	7.54	0.91
DSP	Exis	Exec	Prop	Non-Arch
Independent	0.80	0.98	0.91	1.00
Child	1.76	0.86		1.00
Parent	5.56	2.76	5.18	0.85
DC	Exis	Exec	Prop	Non-Arch
Independent	0.97	1.04	1.02	1.00
Parent	5.46	0.72	2.15	
Child		0.20	0.36	1.07
SOAM	Exis	Exec	Prop	Non-Arch
Independent	0.96	0.96	1.03	1.00
Parent	3.56	1.80	1.78	0.94
Child		1.41	0.28	0.99
SDT	Exis	Exec	Prop	Non-Arch
Parent	4.41	1.58	5.11	0.96
Independent	0.98	1.01		
Child		0.69	0.41	1.01
WD	Exis	Exec	Prop	Non-Arch
Independent	0.95	0.96		1.00
Child		1.59	0.48	0.97
Parent	4.55	1.66	5.49	0.93

Table 8: Chi-squared test results for the relation between the *hierarchy* issue characteristic and **simple** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Sub-Task	2.16	1.11		1.11	1.83			0.99
Bug	0.14	0.29		0.24	0.09			1.03
Improvement	1.99	1.57		2.91	2.37			0.97
New Feature	6.35	2.03		3.82	6.63	2.72		0.92
Wish	1.59	2.73		2.31	4.22	7.62		0.94
Task		3.83		0.69	0.57			0.92
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Sub-Task	4.70			1.92				0.98
Bug	0.11	0.27		0.22	0.03			1.02
Improvement	3.23	1.98		4.35	3.20			0.96
New Feature	11.61	2.62		5.07	13.55			0.92
Wish	2.66	3.61		3.01	8.35			0.93
Task		10.87						0.81
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Task		3.38		0.60	0.52			0.93
Improvement	1.49	1.42		2.32	1.89			0.97
New Feature	5.16	2.01		3.37	5.45	2.86		0.91
Bug	0.15	0.34		0.23	0.10			1.03
Sub-Task	1.90	0.91			1.45			0.99
Wish		3.30		1.66	3.90	7.88		0.92
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Task	1.32	2.45						0.96
Sub-Task		0.65		0.43				1.01
New Feature	6.53	2.33		4.41	8.88			0.93
Improvement	2.34	1.85		3.41	2.81			0.97
Bug	0.13	0.43		0.30	0.05			1.02
Wish		4.46						0.90
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
New Feature	6.36	1.86		3.70	8.25			0.92
Improvement	2.10	1.40		2.77	1.72			0.97
Bug	0.19	0.20		0.32	0.20			1.04
Task	0.67	2.69		0.70				0.94
Sub-Task		1.62		0.37				0.98
Wish	2.20	1.68		3.36	6.58			0.96
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Bug	0.13	0.28		0.34	0.17			1.02
Task	2.20	4.84						0.90
Improvement	3.11	2.39		3.77	4.61			0.96
New Feature	8.30	1.68		4.97	6.34			0.97
Sub-Task								
Wish		2.45				19.56		0.96
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
New Feature	6.99	1.62		4.01	8.69			0.95
Improvement	2.20	1.35		2.49	2.17			0.98
Task		4.11						0.91
Sub-Task	1.52	2.20						0.97
Bug	0.14	0.22		0.28	0.06			1.03
Wish								

Table 9: Chi-squared test results for the relation between the *issue_type* issue characteristic and **inter-
sected** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Sub-Task	2.12	1.11	1.20	0.99
Bug	0.13	0.29	0.23	1.03
Improvement	2.04	1.56	2.77	0.97
New Feature	6.35	2.02	4.24	0.92
Wish	1.90	2.74	2.75	0.94
Task	0.90	3.82	0.67	0.92
CM	Exis	Exec	Prop	Non-Arch
Sub-Task	4.53		1.96	0.98
Bug	0.10	0.27	0.22	1.02
Improvement	3.22	1.97	4.14	0.96
New Feature	11.75	2.61	5.80	0.92
Wish	3.20	3.64	3.77	0.93
Task		10.82		0.81
DSP	Exis	Exec	Prop	Non-Arch
Task	0.87	3.36	0.57	0.93
Improvement	1.55	1.42	2.21	0.97
New Feature	5.16	2.00	3.74	0.90
Bug	0.15	0.35	0.22	1.04
Sub-Task	1.83	0.91		0.99
Wish	1.74	3.31	2.21	0.91
DC	Exis	Exec	Prop	Non-Arch
Task	1.30	2.45		0.96
Sub-Task		0.64	0.40	1.01
New Feature	6.69	2.31	4.69	0.93
Improvement	2.37	1.84	3.20	0.96
Bug	0.13	0.44	0.31	1.02
Wish		4.44		0.90
SOAM	Exis	Exec	Prop	Non-Arch
New Feature	6.47	1.86	4.23	0.92
Improvement	2.08	1.40	2.56	0.97
Bug	0.19	0.21	0.34	1.04
Task	0.67	2.68	0.68	0.94
Sub-Task		1.61	0.31	0.98
Wish	2.50	1.67	3.63	0.95
SDT	Exis	Exec	Prop	Non-Arch
Bug	0.13	0.29	0.39	1.02
Task	2.13	4.82		0.90
Improvement	3.22	2.38	3.57	0.96
New Feature	8.15	1.67	4.74	0.97
Sub-Task				
Wish		2.51	4.42	0.96
WD	Exis	Exec	Prop	Non-Arch
New Feature	7.05	1.63	4.43	0.95
Improvement	2.20	1.35	2.41	0.98
Task		4.10		0.91
Sub-Task	1.48	2.20		0.97
Bug	0.14	0.23	0.29	1.03
Wish				

Table 10: Chi-squared test results for the relation between the *issue_type* issue characteristic and **simple** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Won'T Fix	1.42	0.43		1.21	1.43	0.31		1.02
Duplicate		0.75		1.22				1.01
Not A Bug	0.18	0.22		0.26				1.04
Fixed		1.03		1.06	1.08	1.25		1.00
Done	0.93	1.30		0.69	0.54	0.37		0.99
Obsolete	0.35	0.32		0.25				1.04
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Won'T Fix	1.48	0.35		0.80				1.01
Duplicate		0.54						1.01
Not A Bug		0.16		0.14				1.02
Fixed	0.85	1.38		1.19		1.56		0.99
Done		2.60						0.96
Obsolete	0.14	0.40		0.12				1.02
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed	0.91	0.93		0.90	0.91			1.00
Won'T Fix	1.99	1.19		2.02	2.20			0.98
Duplicate				1.58	1.55	3.18		0.99
Done	1.22	1.47						0.98
Obsolete								
Not A Bug	0.12	0.33						1.03
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Done	1.40	0.47						1.05
Duplicate		0.85						1.02
Fixed	0.92	1.22				1.33		0.98
Won'T Fix		0.40						1.06
Obsolete		0.14						1.09
Not A Bug	0.25	0.11						1.09
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed		1.05						1.00
Won'T Fix	1.46	0.64						1.01
Duplicate					3.93			
Done	0.83	0.96						1.00
Obsolete								
Not A Bug		0.35						1.04
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Done	1.27	1.37		0.62				0.99
Fixed	0.68					2.05		
Won'T Fix	1.44	0.53		1.51				1.02
Duplicate		0.46						1.02
Obsolete		0.27						1.03
Not A Bug		0.43						1.02
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Fixed		0.58		1.17				1.03
Won'T Fix	2.22	0.31			3.59			1.03
Done	0.75	1.61		0.69				0.96
Duplicate		0.56						1.03
Obsolete		2.22						0.92
Not A Bug						76.95		

Table 11: Chi-squared test results for the relation between the *resolution* issue characteristic and **inter-sected** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.42	0.43	1.21	1.02
Duplicate		0.76	1.23	1.01
Not A Bug	0.19	0.22	0.28	1.05
Fixed		1.04	1.07	1.00
Done	0.89	1.30	0.66	0.99
Obsolete	0.34	0.32	0.24	1.04
CM	Exis	Exec	Prop	Non-Arch
Won'T Fix	1.47	0.35		1.01
Duplicate		0.53	0.73	1.01
Not A Bug	0.31	0.16	0.12	1.03
Fixed	0.87	1.38	1.20	0.99
Done		2.59		0.96
Obsolete	0.17	0.40	0.16	1.02
DSP	Exis	Exec	Prop	Non-Arch
Fixed	0.91	0.93	0.90	1.00
Won'T Fix	2.02	1.18	2.03	0.98
Duplicate			1.60	0.99
Done	1.17	1.47		0.98
Obsolete				
Not A Bug	0.10	0.33		1.04
DC	Exis	Exec	Prop	Non-Arch
Done	1.37	0.47		1.05
Duplicate		0.85		1.02
Fixed	0.93	1.22		0.98
Won'T Fix		0.40		1.06
Obsolete	0.35	0.14		1.09
Not A Bug	0.23	0.11		1.09
SOAM	Exis	Exec	Prop	Non-Arch
Fixed		1.05		1.00
Won'T Fix	1.51	0.64	1.52	1.01
Duplicate				0.99
Done	0.81	0.96	0.83	1.00
Obsolete				
Not A Bug		0.34		1.04
SDT	Exis	Exec	Prop	Non-Arch
Done	1.25	1.36	0.58	0.99
Fixed	0.71		1.22	
Won'T Fix	1.41	0.53		1.02
Duplicate		0.46		1.02
Obsolete		0.27		1.03
Not A Bug		0.43		1.02
WD	Exis	Exec	Prop	Non-Arch
Fixed		0.58	1.14	1.03
Won'T Fix	2.29	0.31	1.65	1.03
Done	0.75	1.61	0.70	0.96
Duplicate		0.56		1.03
Obsolete		2.22		0.92
Not A Bug				

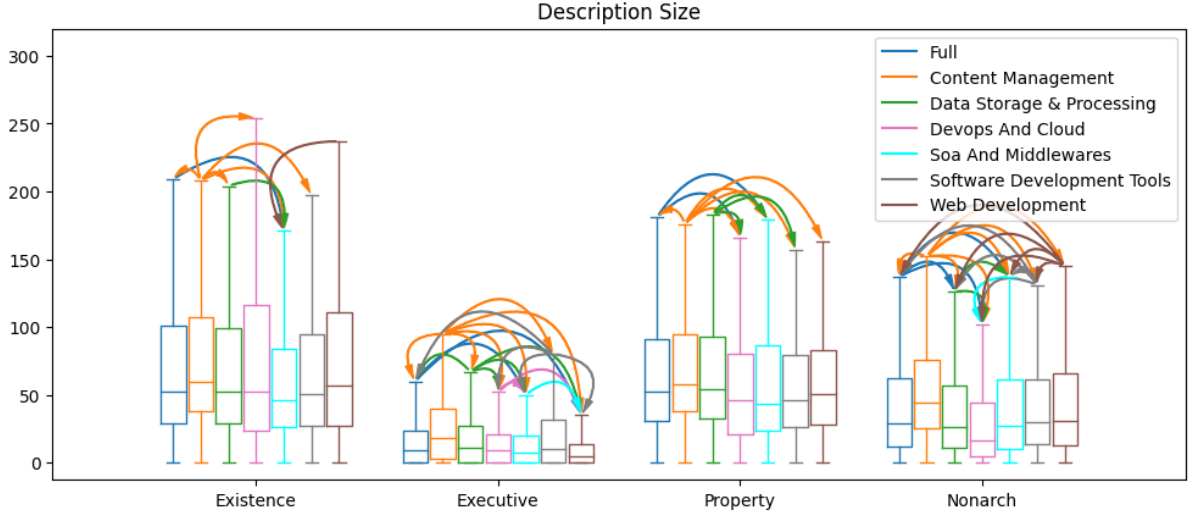
Table 12: Chi-squared test results for the relation between the *resolution* issue characteristic and **simple** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.75	1.04		0.72	0.59			1.00
Open	1.96	0.59		2.21	2.57			1.00
Resolved	1.23	1.07		1.24	1.39			0.99
Reopened	2.00	0.61		1.65				
In Progress	4.13			2.10	6.18			0.97
CM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.83	0.87		0.75	0.72			1.00
Open	2.89	1.15		2.98	3.89			0.98
Resolved	1.41	2.17		2.10				0.97
Reopened		1.95						0.97
In Progress								0.98
DSP	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Resolved	0.95			0.89				1.00
Open	1.50	0.79		1.62	1.66			1.00
In Progress	2.79	1.51			3.77			0.96
Closed	0.83	1.09		0.85	0.78	0.61		
Reopened								
DC	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.82	0.99		0.80	0.73			1.00
In Progress	8.29	0.23		2.63	15.17			1.02
Resolved	1.52	1.61		1.30				0.94
Open	1.87	0.28		3.00	2.89			1.05
Reopened								
SOAM	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Resolved		1.29						0.99
Closed	0.92	0.87		0.90	0.69			1.01
Open	1.63	0.68		1.78	2.79			1.01
In Progress		2.38						0.93
Reopened								1.03
SDT	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.81	1.04		0.93				1.00
Reopened	5.88							
Open	2.25	0.60		1.55	2.74			1.01
Resolved	1.71							
In Progress								
WD	Exis	Exec	Exis-Exec	Prop	Exis-Prop	Exec-Prop	All	Non-Arch
Closed	0.94	1.09		0.91				1.00
Resolved	0.82	0.90						1.01
Open	2.04	0.48		1.96	2.53			1.02
Reopened	2.85	0.18						1.04
In Progress		2.24				77.03		0.92

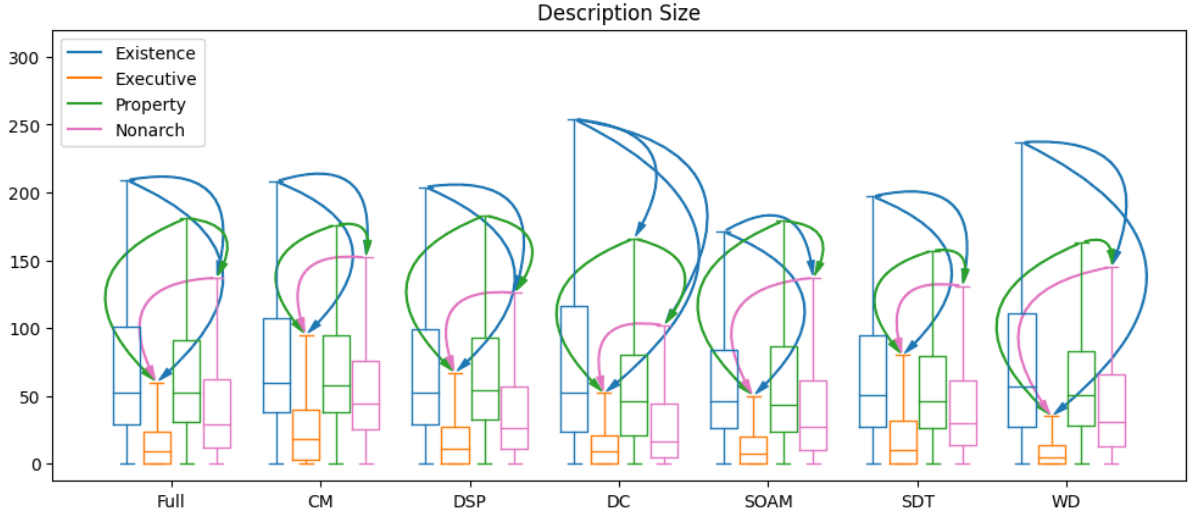
Table 13: Chi-squared test results for the relation between the *status* issue characteristic and **intersected** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

All Domains	Exis	Exec	Prop	Non-Arch
Closed	0.73	1.04	0.70	1.00
Open	2.03	0.60	2.24	1.00
Resolved	1.25	1.07	1.26	0.99
Reopened	1.98	0.62	1.70	
In Progress	4.35		2.74	0.97
CM	Exis	Exec	Prop	Non-Arch
Closed	0.82	0.87	0.75	1.00
Open	2.96	1.15	3.04	0.98
Resolved	1.43	2.16	2.05	0.97
Reopened	3.34	1.94		0.97
In Progress				0.98
DSP	Exis	Exec	Prop	Non-Arch
Resolved	0.94		0.90	1.00
Open	1.52	0.79	1.62	1.00
In Progress	2.93	1.50	1.91	0.95
Closed	0.82	1.09	0.83	
Reopened				
DC	Exis	Exec	Prop	Non-Arch
Closed	0.81	0.99	0.82	1.00
In Progress	8.73	0.22	3.93	
Resolved	1.50	1.60		0.94
Open	1.94	0.28	2.80	1.05
Reopened				
SOAM	Exis	Exec	Prop	Non-Arch
Resolved		1.29		0.99
Closed	0.90	0.87	0.88	1.01
Open	1.71	0.68	1.89	1.00
In Progress		2.38		0.93
Reopened				1.04
SDT	Exis	Exec	Prop	Non-Arch
Closed	0.81	1.04	0.93	1.00
Reopened	5.52			
Open	2.28	0.61	1.63	1.01
Resolved	1.67			
In Progress			4.94	
WD	Exis	Exec	Prop	Non-Arch
Closed	0.94	1.09	0.90	1.00
Resolved	0.83	0.90		1.01
Open	2.07	0.48	2.05	1.02
Reopened	2.70	0.18		1.04
In Progress		2.35		0.91

Table 14: Chi-squared test results for the relation between the *status* issue characteristic and **simple** decision type contained in the issue. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

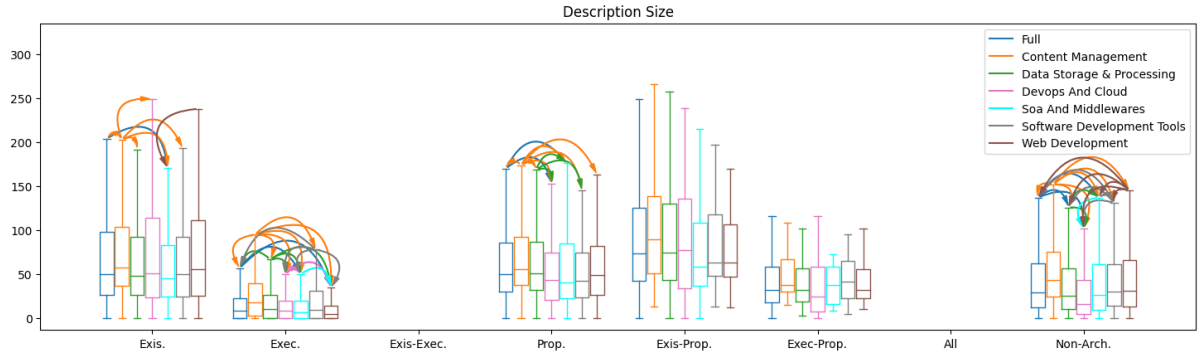


(a) Grouped by decision type first and subgrouped by domain.

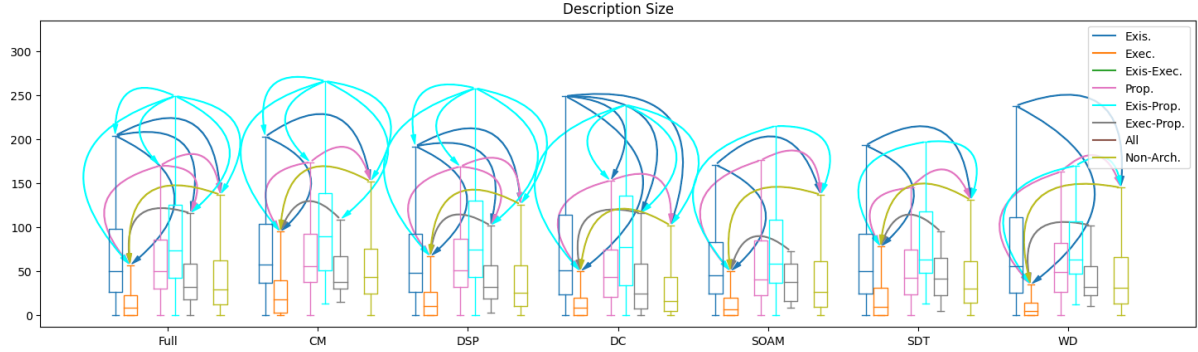


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 4: Mann-Whitney test on the relations between *description size*, domain, and **simple** decision type contained in the issue. High-confidence labels only.

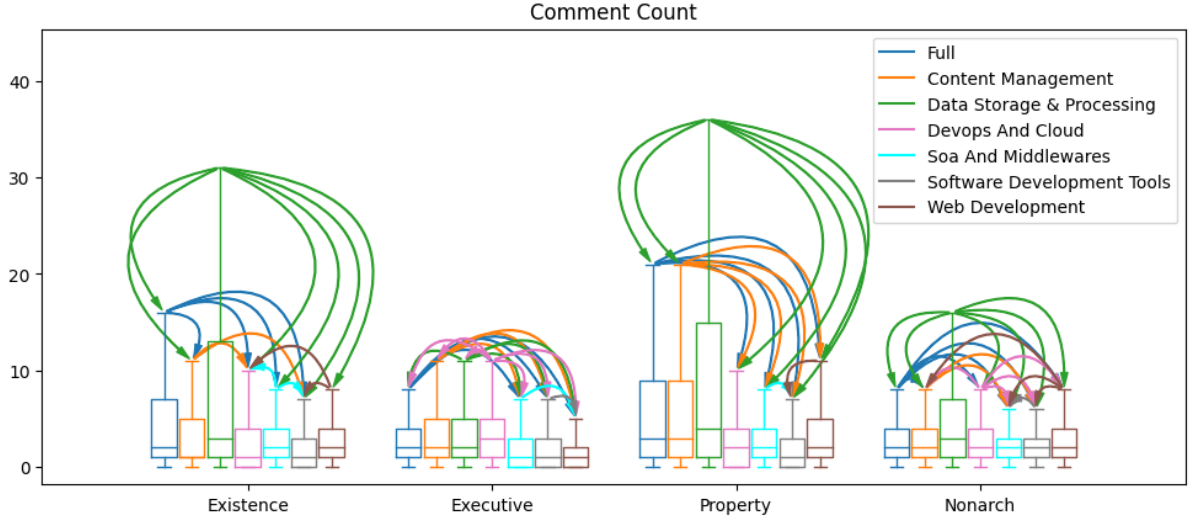


(a) Grouped by decision type first and subgrouped by domain.

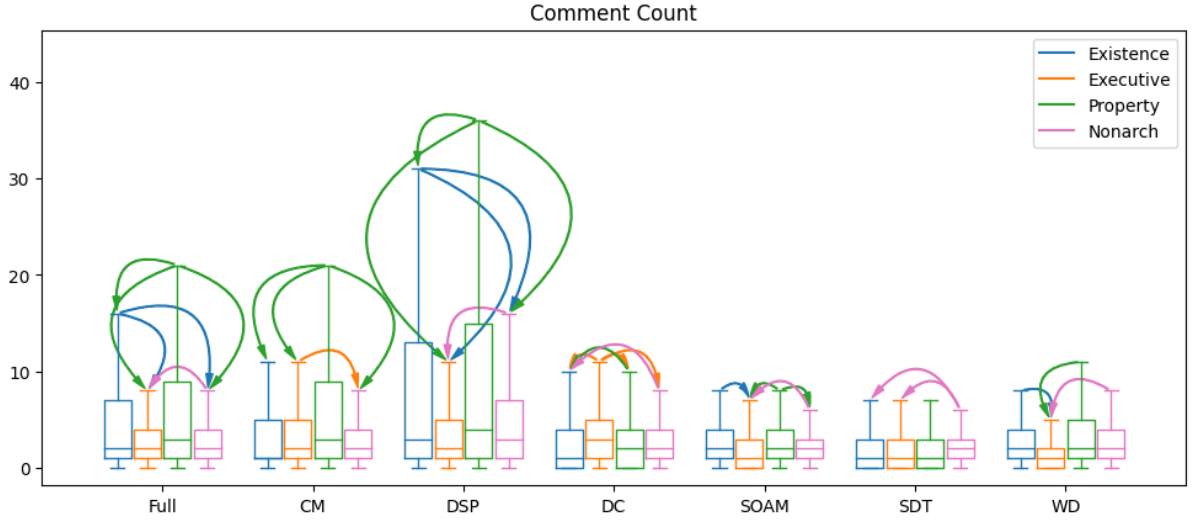


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 5: Mann-Whitney test on the relations between *description size*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.

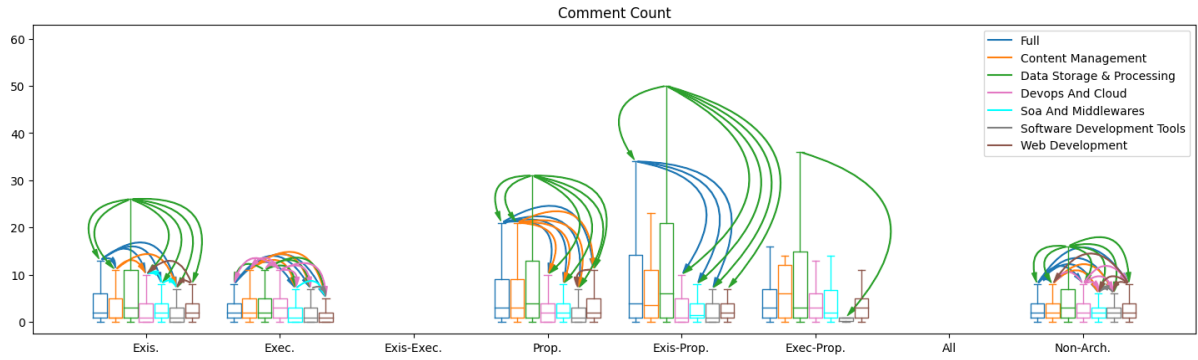


(a) Grouped by decision type first and subgrouped by domain.

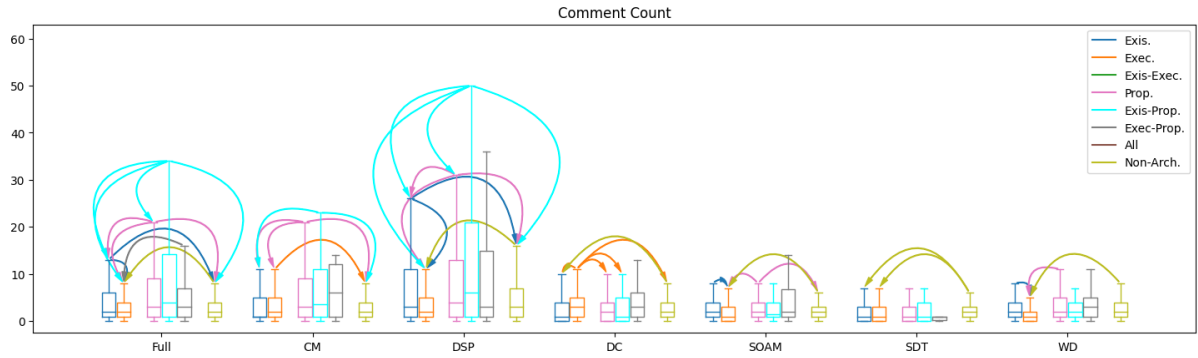


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 6: Mann-Whitney test on the relations between *comment count*, domain, and **simple** decision type contained in the issue. High-confidence labels only.

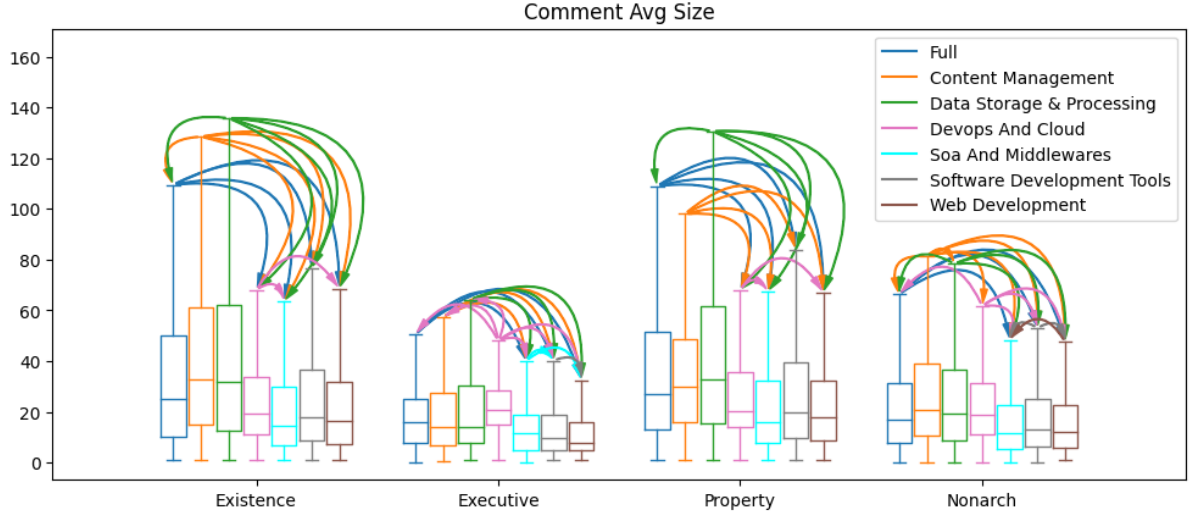


(a) Grouped by decision type first and subgrouped by domain.

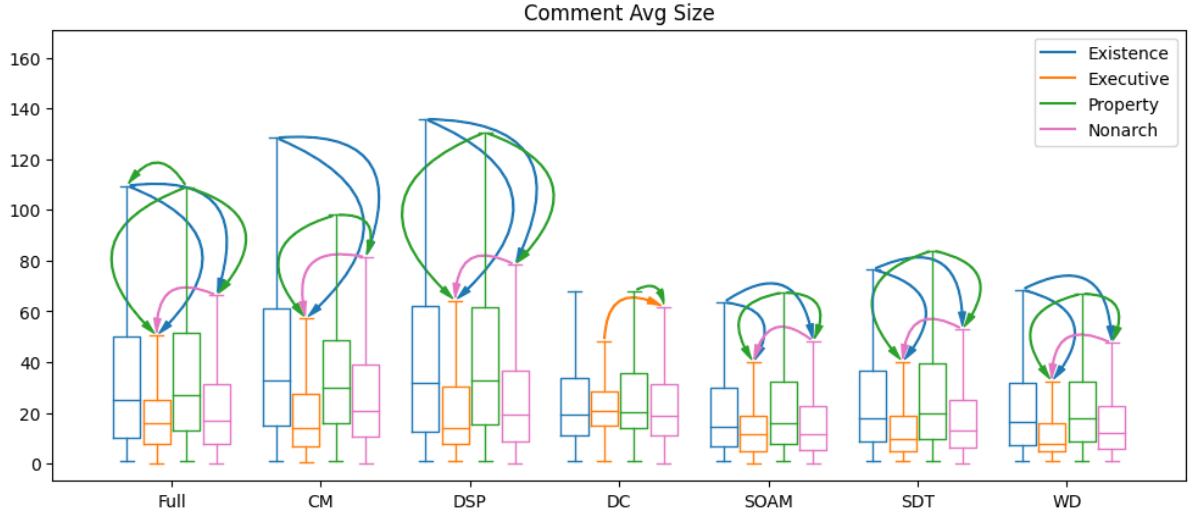


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 7: Mann-Whitney test on the relations between *comment count*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.

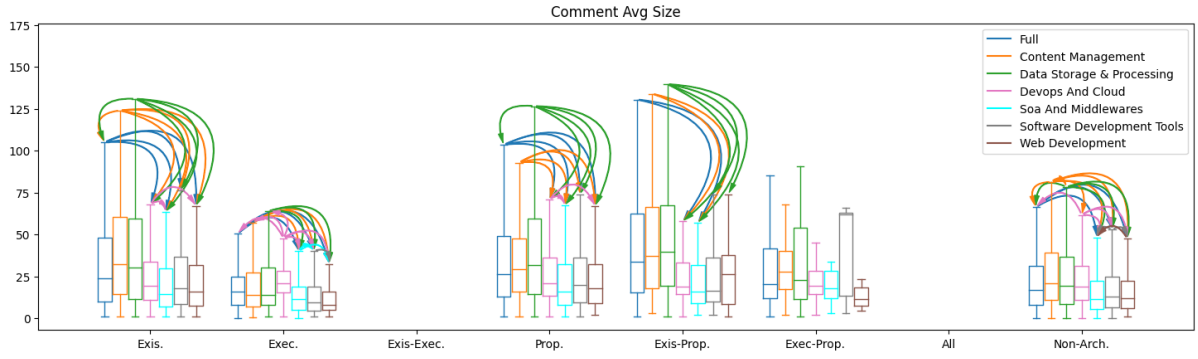


(a) Grouped by decision type first and subgrouped by domain.

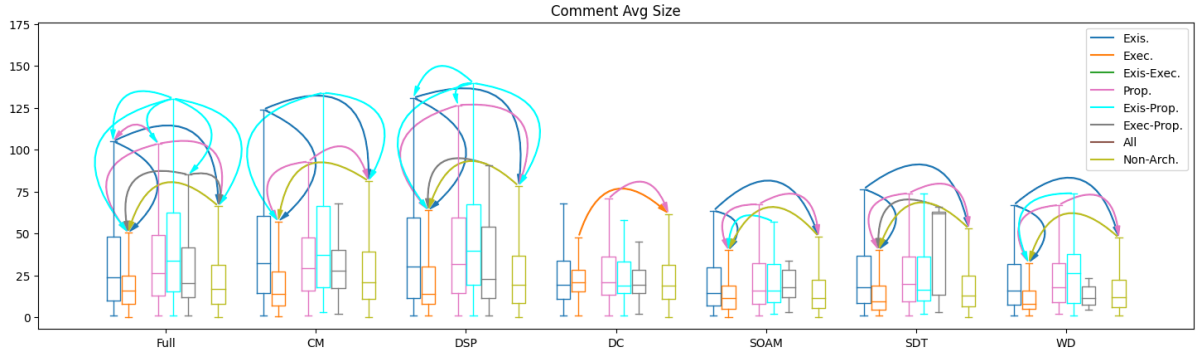


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 8: Mann-Whitney test on the relations between *average comment size*, domain, and **simple** decision type contained in the issue. High-confidence labels only.

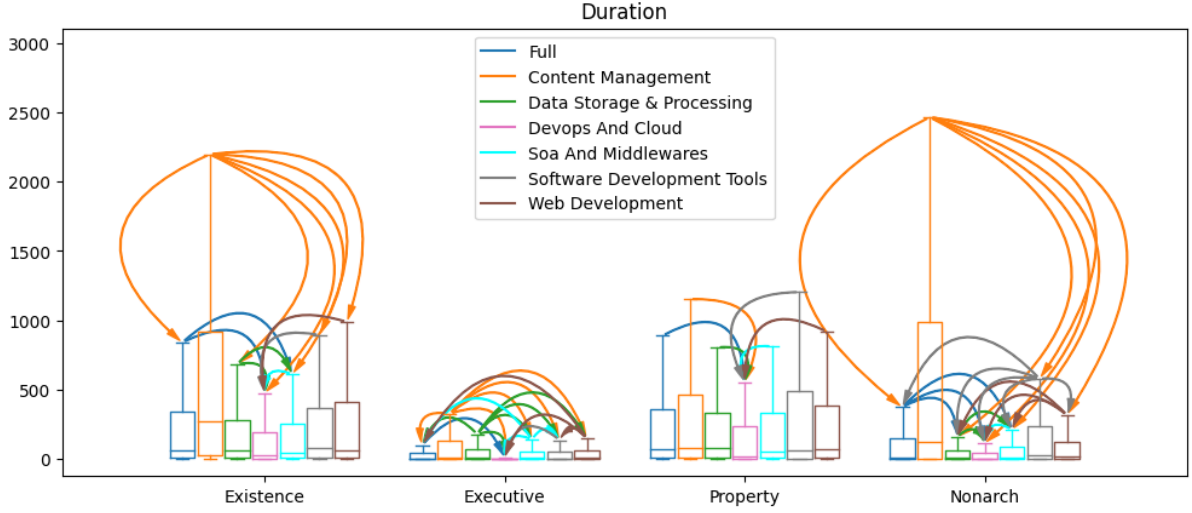


(a) Grouped by decision type first and subgrouped by domain.

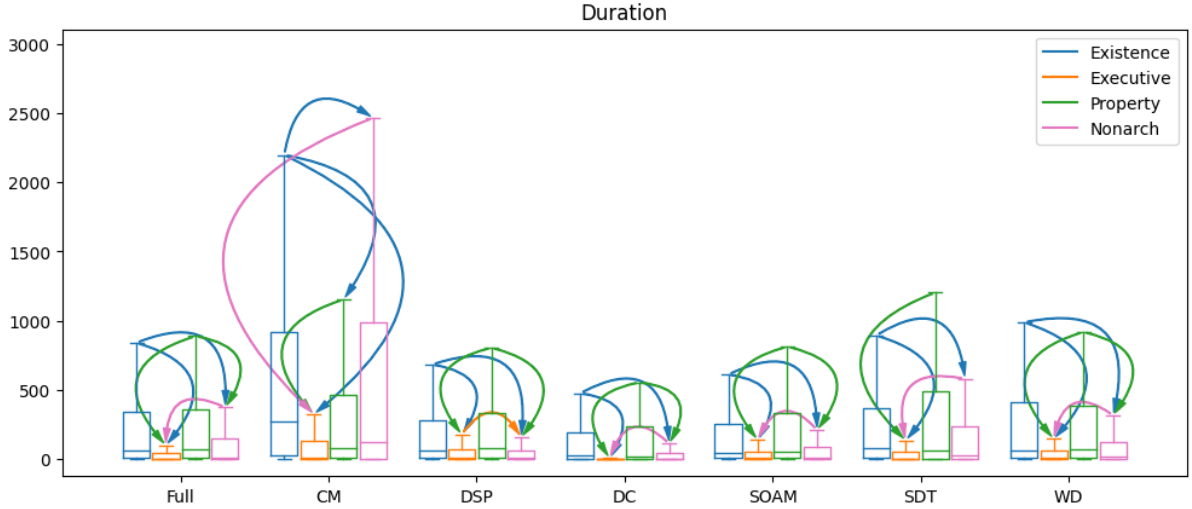


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 9: Mann-Whitney test on the relations between *average comment size*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.

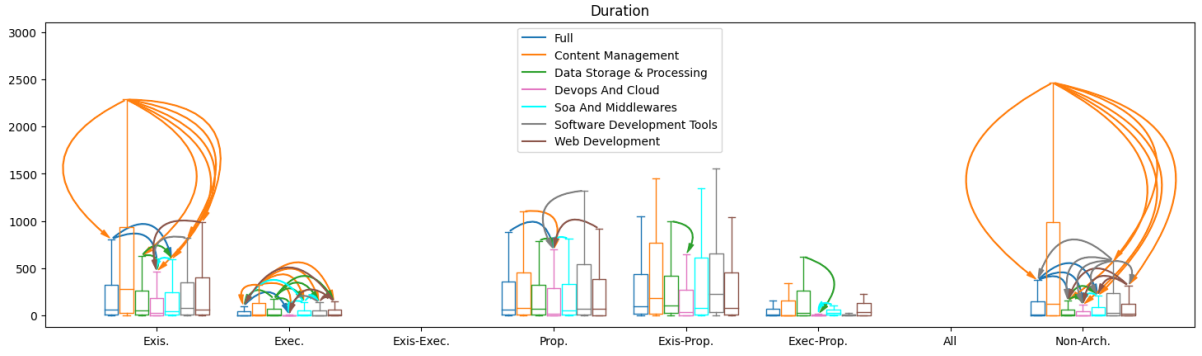


(a) Grouped by decision type first and subgrouped by domain.

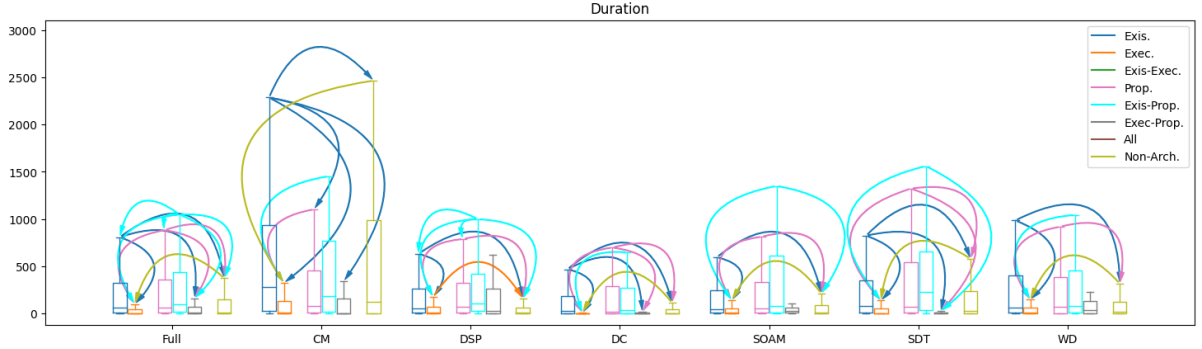


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 10: Mann-Whitney test on the relations between *duration*, domain, and **simple** decision type contained in the issue. High-confidence labels only.

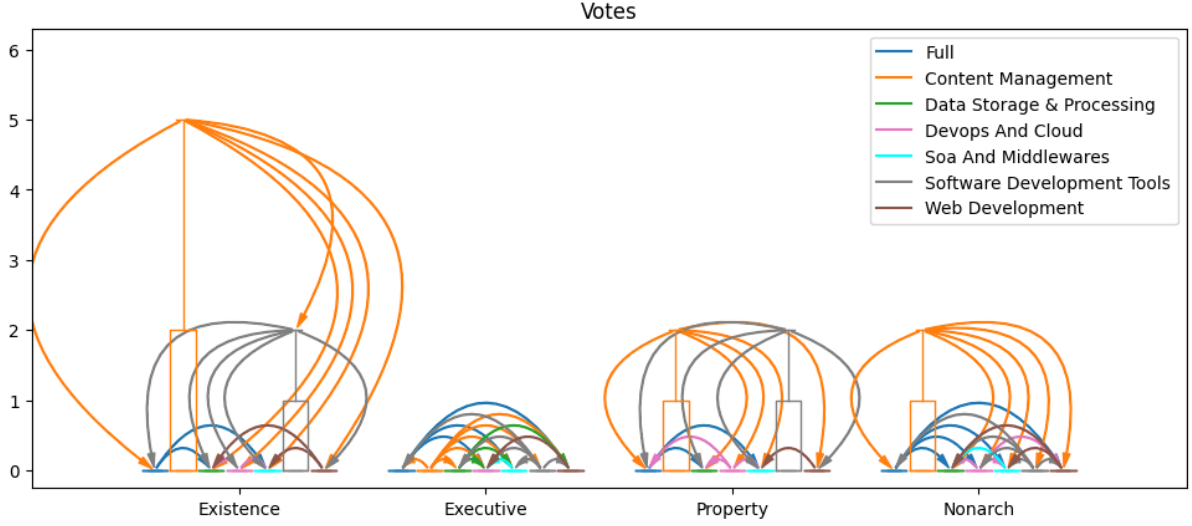


(a) Grouped by decision type first and subgrouped by domain.

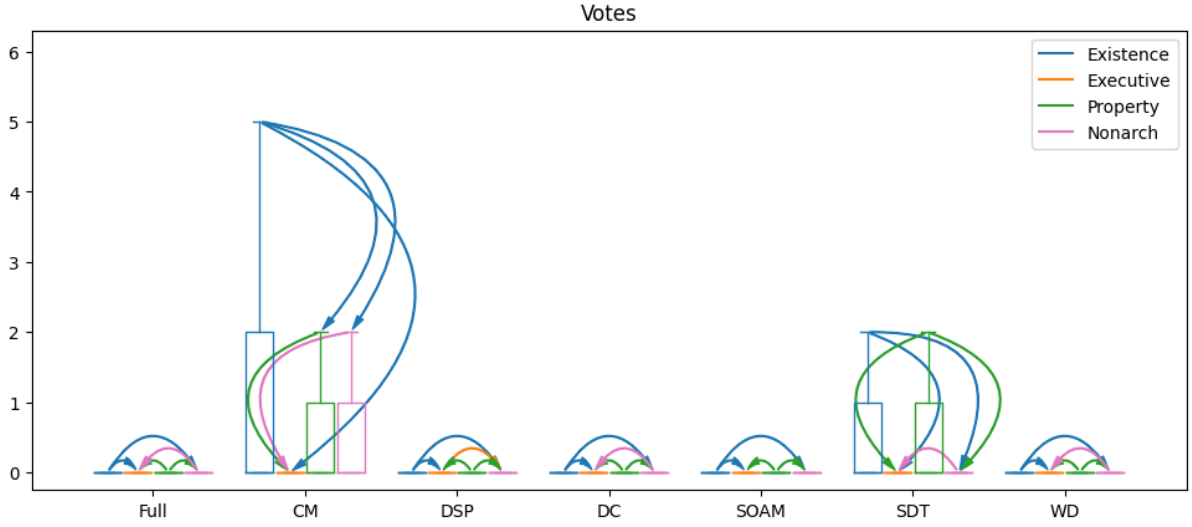


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 11: Mann-Whitney test on the relations between *duration*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.

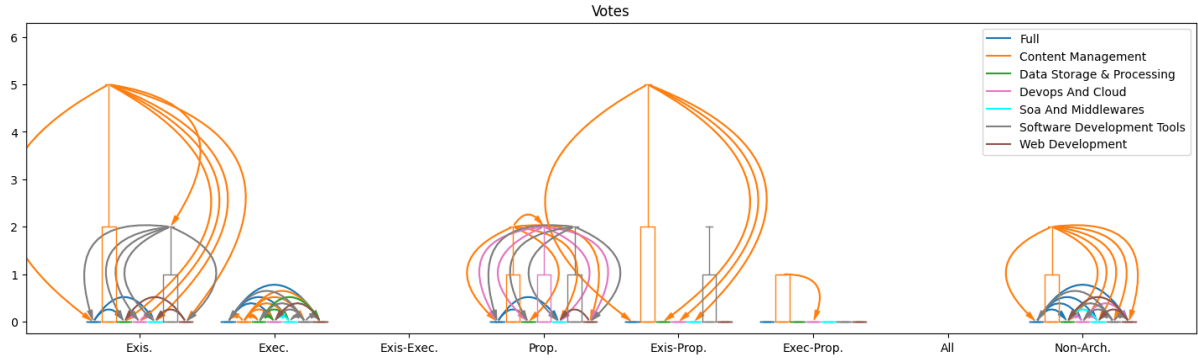


(a) Grouped by decision type first and subgrouped by domain.

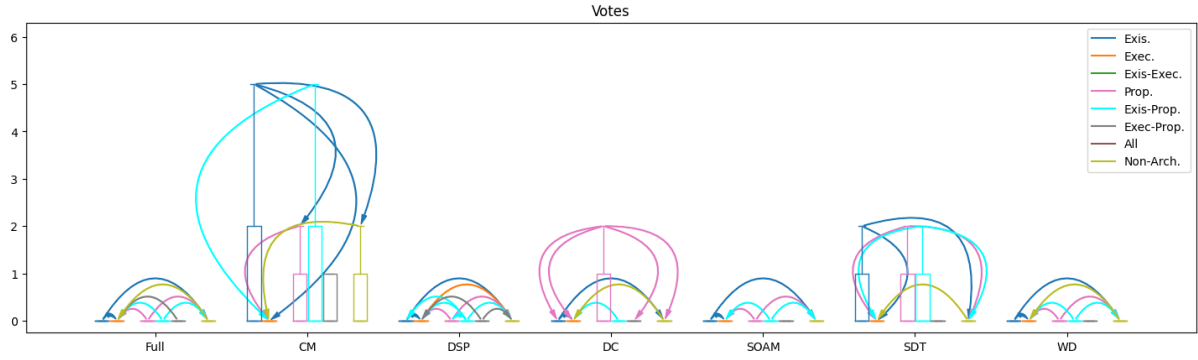


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 12: Mann-Whitney test on the relations between *votes*, domain, and **simple** decision type contained in the issue. High-confidence labels only.

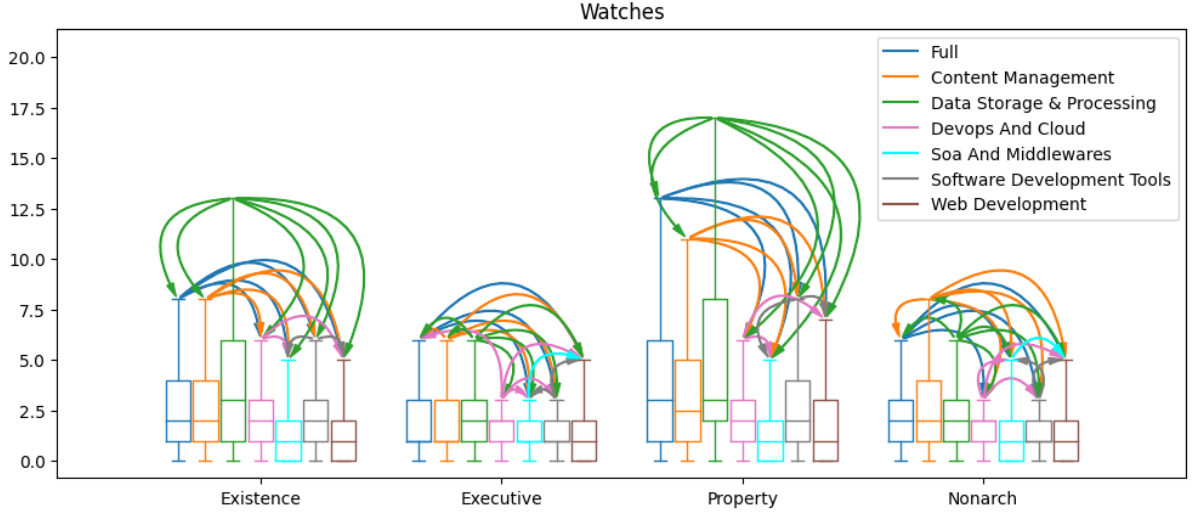


(a) Grouped by decision type first and subgrouped by domain.

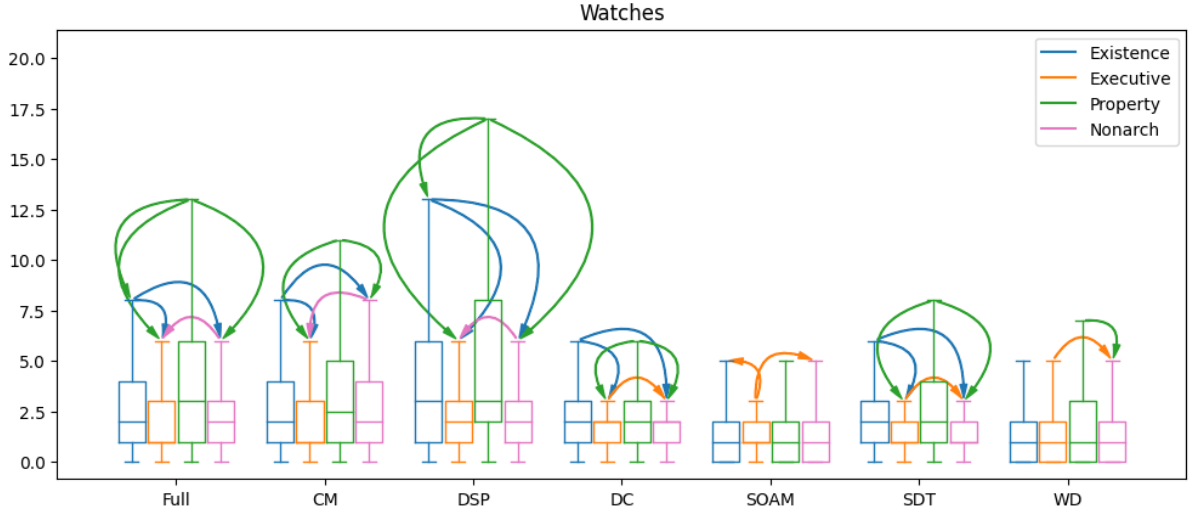


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 13: Mann-Whitney test on the relations between *votes*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.

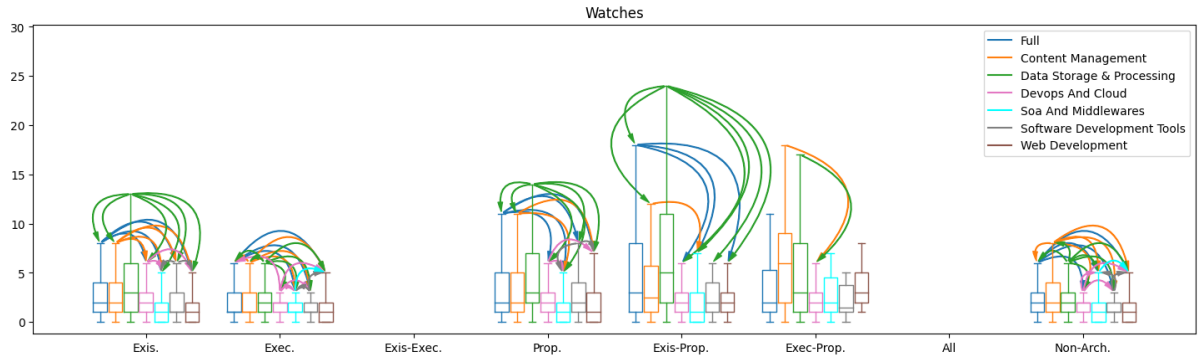


(a) Grouped by decision type first and subgrouped by domain.

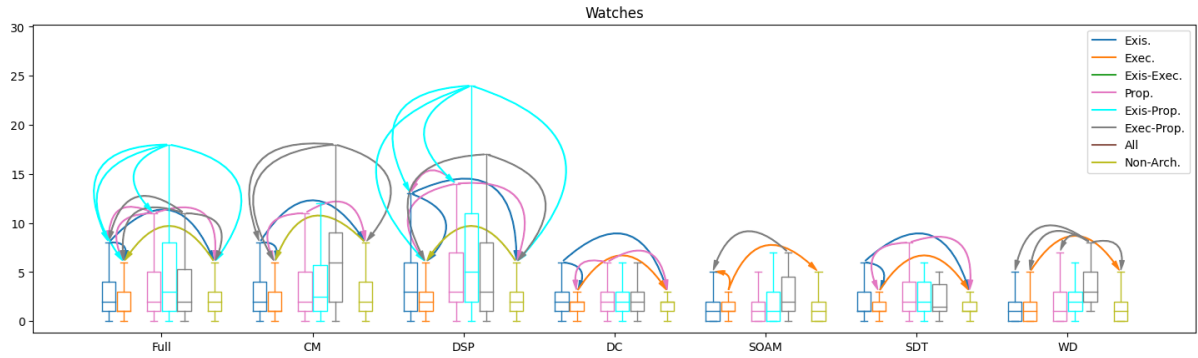


(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 14: Mann-Whitney test on the relations between *watches*, domain, and **simple** decision type contained in the issue. High-confidence labels only.



(a) Grouped by decision type first and subgrouped by domain.



(b) Grouped by domain first and subgrouped by decision type. (CM = Content Management, DSP = Data Storage and Processing, DC = DevOps and Cloud, SOAM = SOA and Middlewares, SDT = Software Development Tools, WD = Web Development)

Figure 15: Mann-Whitney test on the relations between *watches*, domain, and **intersected** decision type contained in the issue. High-confidence labels only.