

Automated deployment: State of the art

Deployment issue/challenge	Category / Support Level	#Approaches	Approaches' references
Automation mechanism	DSL	7	[17, 8, 1, 18, 16, 5, 2], AMELIA
	Scripting-based framework	4	[21, 10, 19, 3]
	Model-based	4	[12, 11, 13, 14]
	Scripting	3	[15, 22, 7]
	GUI-aided framework	3	[4, 20, 6]
	ADL extension	1	[9]
Deployment granularity	Components	13	[17, 15, 4, 1, 16, 19, 5, 9, 3, 11, 13, 2, 14], AMELIA
	Services	3	[21, 12, 18]
	Execution environments	3	[8, 22, 6]
	HPC applications / Splittable jobs	2	[20, 7]
	Composite applications	1	[10]
Application domain	Cloud computing	13	[17, 15, 4, 12, 20, 10, 22, 7, 16, 19, 6, 5, 14]
	Non-cloud web-based systems	2	[8, 3]
	Pervasive computing	2	[9, 13]
	Parallel / Grid environments	2	[21, 1]
	Heterogeneous distributed systems	1	[18], AMELIA
	Dynamic reconfiguration	1	[11]
	Multiscale distributed systems	1	[2]
Composability	Not evidenced	10	[8, 15, 21, 4, 20, 22, 7, 16, 6, 14]
	Some support	4	[12, 9, 11, 19]
	Strong support	2	[10, 13]
	Full support	6	[17, 1, 18, 5, 2, 3], AMELIA
Reusability	Not evidenced	7	[8, 15, 21, 7, 9, 11, 13]
	Some support	6	[4, 12, 20, 22, 16, 6]
	Strong support	7	[17, 1, 18, 14, 10, 19, 3]
	Full support	2	[5, 2], AMELIA
Extensibility	Not evidenced	15	[8, 15, 21, 4, 12, 20, 22, 7, 1, 16, 6, 2, 10, 3, 13]
	Some support	5	[17, 18, 5, 9, 14]
	Strong support	2	[11, 19]
	Full support	0	AMELIA
Expresiveness	Low	12	[8, 15, 21, 4, 12, 20, 7, 6, 11, 14, 9, 3]
	Medium	6	[17, 22, 1, 2, 19, 13]
	High	4	[5, 16, 18, 10], AMELIA

Table 1: Deployment issues/challenges support in selection of relevant literature

References

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