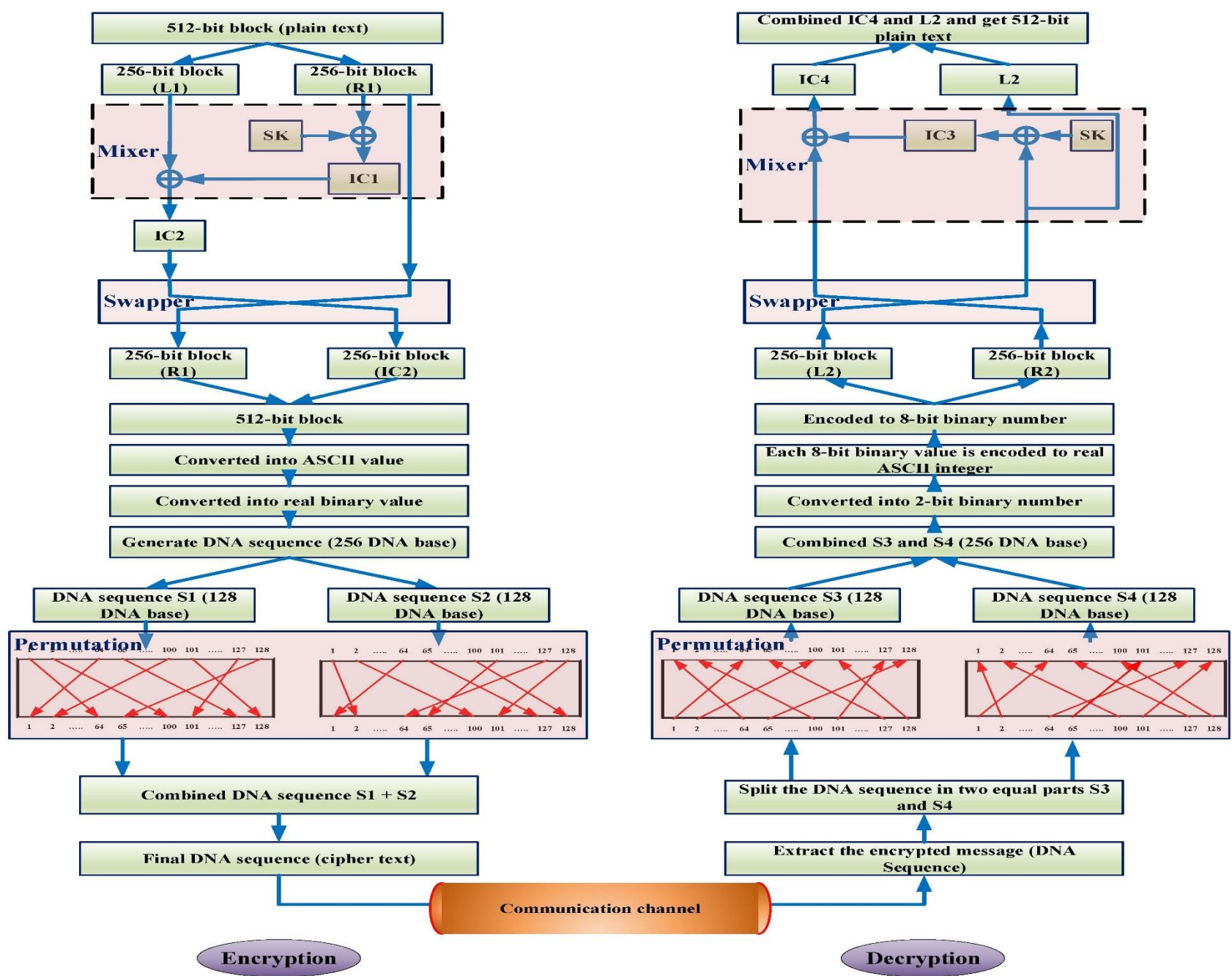


DNACDS: Cloud IoE Big Data Security and Accessing Scheme Based on DNA Cryptography

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Workflow of the proposed DNACDS

Different experimental results of the proposed DNACDS

Performance parameter ↓ /Existing Schemes →	Number of users	DNACDS	DNASK	DNA-proxy re-encryption	Shared secret key cryptosystem
Key Generation Time (MS)	50	8.65	10.45	12.45	14.23
	250	28.12	32.6	36.56	39.56
	500	49.89	51.6	51.4	55.56
	1000	105.56	107.23	108.41	110.67
Encryption Time (MS)	50	3.58	4.47	6.14	8.55
	250	10.22	11.27	9.77	16.03
	500	13.82	15.17	14.60	24.19
	1000	19.60	23.66	36.13	44.58
Decryption Time (MS)	50	2.91	5.88	8.60	14.05
	250	7.75	13.96	14.53	23.48
	500	10.44	20.83	26.11	36.53
	1000	20.58	34.69	44.18	59.60
Data Access Time (MS)	50	1.34	2.90	2.86	4.36
	250	5.86	12.64	9.31	16.11
	500	9.15	21.89	17.90	27.18
	1000	19.20	31.56	37.57	55.22
Authentication Time (MS)	50	1.52	2.31	4.52	6.93
	250	6.07	8.39	13.92	19.13
	500	13.47	13.99	20.44	25.76
	1000	22.11	38.71	38.13	50.94
CPU Utilization (%)	50	8.83	12.06	17.48	18.48
	250	22.03	20.44	27.32	35.52
	500	30.16	28.17	42.93	54.47
	1000	51.29	57.53	75.39	86.73