Energy-Efficient Offloading for DNN-based Smart IoT Systems in Cloud-Edge Environments

The configurations of edge servers

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The edge-clou	id environm	ent with 2	edge servers

Servers	p_{i}	C_{i}	t_{i}	e_i^r	e_i^s	e_i^c
$\{s_1,s_2,,s_{10}\}$	0.5	1	0	0.1	30	0.1
<i>S</i> ₁₁	0.8	4	1	0.18	45	0.18
<i>S</i> ₁₂	1.2	4	1	0.22	45	0.22
S ₁₃	2	8	2	0.3	60	0.3

The edge-cloud environment with 4 edge servers

Servers	p_{i}	C_{i}	t_{i}	e_i^r	e_i^s	e_i^c
$\{s_1,s_2,,s_{10}\}$	0.5	1	0	0.1	30	0.1
<i>S</i> ₁₁	1	4	1	0.2	45	0.2
<i>S</i> ₁₂	0.8	4	1	0.18	45	0.18
<i>S</i> 13	1.2	4	1	0.22	45	0.22
<i>S</i> ₁₄	1.5	4	1	0.27	45	0.27
S15	2	8	2	0.3	60	0.3

The edge-cloud environment with 6 edge servers

Servers	p_{i}	C_{i}	t_{i}	e_i^r	e_i^s	e_i^c
$\{s_1,s_2,,s_{10}\}$	0.5	1	0	0.1	30	0.1
S ₁₁	1	4	1	0.2	45	0.2
<i>S</i> ₁₂	0.9	4	1	0.19	45	0.19
<i>S</i> ₁₃	0.8	4	1	0.18	45	0.18
S ₁₄	1.2	4	1	0.22	45	0.22
<i>S</i> 15	1.3	4	1	0.24	45	0.25
<i>S</i> 16	1.5	4	1	0.27	45	0.27
S_{17}	2	8	2	0.3	60	0.3

The edge-cloud environment with 8 edge servers

Servers	p_{i}	C_{i}	t_{i}	e_i^r	e_i^s	e_i^c
$\{s_1,s_2,,s_{10}\}$	0.5	1	0	0.1	30	0.1
s_{11}	1	4	1	0.2	45	0.2
<i>S</i> ₁₂	0.9	4	1	0.19	45	0.19
<i>S</i> 13	0.8	4	1	0.18	45	0.18
<i>S</i> 14	1.1	4	1	0.2	45	0.2
S ₁₅	1.2	4	1	0.22	45	0.22
<i>S</i> 16	1.3	4	1	0.24	45	0.25
<i>s</i> ₁₇	1.4	4	1	0.26	45	0.26
<i>S</i> ₁₈	1.5	4	1	0.27	45	0.27
S ₁₉	2	8	2	0.3	60	0.3

The edge-cloud environment with 10 edge servers

Servers	p_{i}	C_{i}	t_i	e_i^r	e_i^s	e_i^c
$\{s_1,s_2,,s_{10}\}$	0.5	1	0	0.1	30	0.1
<i>S</i> ₁₁	0.8	4	1	0.18	45	0.18
S ₁₂	0.9	4	1	0.19	45	0.19
<i>S</i> ₁₃	1	4	1	0.2	45	0.2
S ₁₄	1.1	4	1	0.2	45	0.2
S ₁₅	1.2	4	1	0.22	45	0.22
S ₁₆	1.2	4	1	0.22	45	0.22
<i>S</i> 17	1.3	4	1	0.24	45	0.25
S ₁₈	1.3	4	1	0.24	45	0.25
<i>S</i> 19	1.4	4	1	0.26	45	0.26
S ₂₀	1.5	4	1	0.27	45	0.27
S21	2	8	2	0.3	60	0.3