

MVABAS v2: experimentation networks and results

VITTORIA DE NITTO PERSONÉ and ANDREA DI LONARDO, University of Rome Tor Vergata

Blocking is the phenomenon where a service request is momentarily stopped, but not lost, until the service becomes available again. Despite its importance, blocking is a difficult phenomenon to model analytically, because it creates strong inter-dependencies in the systems components. Mean Value Analysis (MVA) is one of the most appealing evaluation methodology due to its low computational cost and easy of use. In this report, an approximate MVA for Blocking After Service is presented that greatly outperforms previous results. The new algorithm, called MVABAS v2, is obtained by analyzing the inter-dependencies due to the blocking mechanism and by consequently modifying the MVA equations. Since its simplicity and easy of use, the proposed approach is particularly suitable for non-expert people. This report presents results obtained by applying MVABAS v2 over about 60 networks opportunely chosen to stress the most critical aspects of the proposed approximation. Moreover, the report shows parameters derivation for the method application to a case study in the field of healthcare.

Additional Key Words and Phrases: blocking, modeling techniques, performance, capacity planning, healthcare systems

1. INTRODUCTION

MVABAS v2 is an approximate algorithm for single-class closed queueing networks with routing matrix \mathbf{P} such that jobs departing from queue i are directed to queue j with probability p_{ij} . The network include abstract scheduling single-server nodes and IS nodes. The service time s_i is assumed exponentially distributed for single-server nodes and generally distributed for IS nodes i . If the capacity of queue j is B_j and n_j denotes the current population at queue j , then when $n_j = B_j$ queue j is *full* and does not accept in its waiting buffer any *new* job before a departure occurs. Queue i can become *blocked*. The blocking type is Blocking After Service (BAS) that defines the time of blocking, the unblocking rule and the behavior of the job possibly in execution in i at the blocking time. MVABAS v2 is an extension of Mean Value Analysis and it is presented in [De Nitto Personé and Di Lonardo 2018]. In the following, we present the experimentation on 57 networks opportunely selected.

2. EXPERIMENTATION

The networks selected for the experimentation include both balanced and unbalanced cases. For balanced case, we mean that the behaviour of nodes in the network is quite similar in terms of both blocking and service times. In the following tables, we list the parameters by grouping for network topology. We show all the network parameters: the ID network, the node finite capacities and the node mean service time. In particular, Table I, II and III show the parameters for the cyclic topologies with 3, 4 and 5 nodes respectively. For the central server topology, Table IV includes the routing probabilities in the second column.

In the following, we show the error statistics, the execution times and the convergence statistic. M is the number of nodes in the network. In the following, we list all the statistics definitions used in the tables:

- \bar{e} is the global mean error on all relative errors $e_{i,j}$, for node i and performance index j , where j may be mean population n , mean response time t and effective throughput X

$$\bar{e} = \sum_{i=1}^M \sum_{j \in \{X,t,n\}} \frac{e_{i,j}}{3 \cdot M} \quad (1)$$

- e_m is the minimum relative error over all nodes and performance metrics

$$e_m = \min_{i \in [1,M], j \in \{X,t,n\}} e_{i,j} \quad (2)$$

ID Network	B_0	B_1	B_2	$E[s_0]$	$E[s_1]$	$E[s_2]$
1	12	10	14	1.0	0.5	0.3
2	12	10	14	0.2	2.5	6.0
3	20	21	22	0.2	2.5	6.0
4	20	21	22	0.2	2.5	6.0
5	5	20	40	1.0	0.5	0.3
6	5	20	40	0.2	2.5	6.0
7	10	10	10	1.0	0.5	0.3
8	10	10	10	0.2	2.5	6.0

Table I: Cyclic networks 3 nodes

ID Network	B_0	B_1	B_2	B_3	$E[s_0]$	$E[s_1]$	$E[s_2]$	$E[s_2]$
9	12	10	14	10	1.0	0.5	0.3	0.7
10	12	10	14	10	0.2	4.5	2.3	2.1
11	20	5	22	23	1.0	0.5	0.3	0.7
12	20	5	22	23	1.0	0.5	0.3	0.7
13	5	18	27	35	1.0	0.5	0.3	0.7
14	5	18	27	35	0.2	4.5	1.3	2.1
15	10	10	10	10	1.0	0.5	0.3	0.7
16	10	10	10	10	0.2	4.5	1.3	2.1

Table II: Cyclic networks 4 nodes

— e_M is the maximum relative error over all nodes and performance metrics

$$e_M = \max_{i \in [1, M], j \in \{X, t, n\}} e_{i, j} \quad (3)$$

— err_M is the maximum relative error over all computed errors

$$err_M = \max_{i \in [1, M], j \in \{X, t, n\}, k \in [1, N]} err_{i, j, k} \quad (4)$$

— $\bar{\theta}$: mean number of capacity violation (ncv) for a set of networks;

— σ_θ : standard deviation of ncv for a set of networks;

— $\bar{\varepsilon}, \sigma_\varepsilon, \varepsilon_m, \varepsilon_M$: mean, standard deviation, minimum and maximum execution time respectively for a set of networks.

Note that $\bar{\varepsilon}, e_m, e_M$, are errors averaged over all possible population values, while $err_{i, j, k}$ and err_M are errors for just one population value k .

First, we show the global statistics for all networks in Table V and in Table VI. Then we show the same results of precision, computational cost and convergence aggregated by topology in Tables VII and VIII. By analyzing the results, it is easy to be convinced that the cyclic topology is the most difficult case. Indeed, in Table VIII we see that the number of iterations needed to converge $\bar{\theta} = 634.85$ is much bigger than for the other two methods ($\bar{\theta} = 106.6, 113.42$). Also it is worth noting the biggest dispersion ($\sigma_\theta = 1158.39$ against $\sigma_\theta = 120.24, 108.23$). Nevertheless, our method quickly converges, outperforming the other two in both the global mean error $\bar{\varepsilon} = 0.05$ and the worst case $err_M = 1.65$. For the central server case, our method improves the global mean error $\bar{\varepsilon} = 0.04$ in about the same time $\bar{\varepsilon} = 13.07$ at the expense of a little worsening in just the worst case ($err_M = 3.98$ against $err_M = 2.81$).

ID Network	B_0	B_1	B_2	B_3	B_4	$E[s_0]$	$E[s_1]$	$E[s_2]$	$E[s_2]$	$E[s_4]$
17	4	3	5	4	2	1.0	0.5	0.3	0.7	0.45
18	4	3	5	4	2	20.1	2.0	10.0	2.1	5.0
19	14	13	12	11	10	1.0	0.5	0.3	0.7	0.45
20	14	13	12	11	10	20.1	2.0	10.0	2.1	5.0
21	1	5	15	25	32	1.0	0.5	0.3	0.7	0.45
22	1	5	15	25	32	20.1	2.0	10.0	2.1	5.0
23	10	10	10	10	10	1.0	0.5	0.3	0.7	0.45
24	10	10	10	10	10	20.1	2.0	10.0	2.1	5.0
25	4	3	5	4	2	20.1	5	5.0	2.1	5.0
26	3	3	5	4	3	18.0	2.0	8.0	2.0	5.0
27	3	3	8	4	5	18.0	3.0	8.0	2.0	5.0
28	3	3	8	4	5	23.0	2.0	10.0	6.0	4.0

Table III: Cyclic networks 5 nodes

At the end of this report, we show all the results, ordered by network index. For each network and each node we show a comparison among the performance index computed according to exact solution (red), MVABLO (brown) [Akyildiz 1988], MVABAS v1 (blue) [De Nitto Personé and Di Lonardo 2013] and MVABAS v2 (green) [De Nitto Personé and Di Lonardo 2018]. Beside each graph, we show the relative error for the three methods in respect of the exact case. All curves are as network population grows until the maximum admissible value. At the end, the reader can find for each network a table that compares the global general error, the minimum and maximum relative error and the worst case for the three approximate methods.

We start from a case different from the selected topologies: Network 0 has been obtained from a particularly unbalanced case (Network 46). In this last network, node 2 is the slowest node with the smallest buffer (see the parameters table below). Network 0 is obtained by adding node 3 as sending node of d_BIN node 1 [De Nitto Personé and Di Lonardo 2018]. This pair of nodes have the same parameters $B_3 = B_1 = 20$ and service time $E[s_3] = E[s_1] = 2.5$, so to have a quite balanced behaviour between them. This particular case is able to stress our algorithm, as shown in [De Nitto Personé and Di Lonardo 2018].

3. CASE STUDY: MODEL PARAMETERS

We consider planning decisions in healthcare [Hulshof et al. 2012]. The choice of this case study is also due to the importance of ease-of-use tools for this field. Indeed, the proposed method can be easily used even by non-expert people. Note that queueing networks with BAS blocking can well represent a network of care structures in which the capacity to admit patients is finite. Moreover, the "after service" blocking exactly corresponds to the therapy conclusion in the current structure and when a patient hospitalized cannot be admitted in the next appropriate structure, the patient blocks the current hospital bed. In this case, the health system lose both in care efficiency (for the delay in the appropriate therapy) and in financial perspective. As a consequence, controlling the congestion and planning the appropriate size for the structures are important goals.

As a case study, we consider the Philadelphia mental health system that was the forefront of the health system rearrangement [Koizumi et al. 2005]. In this case, the downsizing and the rearrangement of mental health institutions has the aim is to provide mentally ill patients with a "continuum care network of facilities with various levels of structure and support". As introduced above, BAS blocking conforms to model patients that find full the structures where they were referred and are forced to wait at their current facilities. These clients "block" beds in the current structure, preventing their utilization by potential patients requiring care at these facilities. This behaviour is quite

ID Network	Routing	B_0	B_1	B_2	$E[s_0]$	$E[s_1]$	$E[s_2]$
29	0.5—0.5	40	18	4	0.1	3.0	6.0
30	0.5—0.5	35	15	10	0.1	2.5	6.0
31	0.5—0.5	35	15	10	0.6	3.0	7.0
32	0.5—0.5	35	15	10	0.5	5.0	9.0
33	0.5—0.5	8	7	6	1.0	0.3	0.5
34	0.5—0.5	8	7	6	0.1	2.5	6.0
35	0.3—0.7	8	7	6	1.0	0.3	0.5
36	0.3—0.7	8	7	6	0.1	2.5	6.0
37	0.7—0.3	8	7	6	1.0	0.3	0.5
38	0.7—0.3	8	7	6	0.1	2.5	6.0
39	0.5—0.5	21	25	18	1.0	0.3	0.5
40	0.5—0.5	21	25	18	0.1	2.5	6.0
41	0.3—0.7	21	25	18	1.0	0.3	0.5
42	0.3—0.7	21	25	18	0.1	2.5	6.0
43	0.7—0.3	21	25	18	1.0	0.3	0.5
44	0.7—0.3	21	25	18	0.1	2.5	6.0
45	0.5—0.5	35	20	5	1.0	0.3	0.5
46	0.5—0.5	35	20	5	0.1	2.5	6.0
47	0.3—0.7	35	20	5	1.0	0.3	0.5
48	0.3—0.7	35	20	5	0.1	2.5	6.0
49	0.7—0.3	35	20	5	1.0	0.3	0.5
50	0.7—0.3	35	20	5	0.1	2.5	6.0
51	0.5—0.5	10	10	10	1.0	0.3	0.5
52	0.5—0.5	10	10	10	0.1	2.5	6.0
53	0.3—0.7	10	10	10	1.0	0.3	0.5
54	0.3—0.7	10	10	10	0.1	2.5	6.0
55	0.7—0.3	10	10	10	1.0	0.3	0.5
56	0.7—0.3	10	10	10	0.1	2.5	6.0

Table IV: Server central networks

	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.08	0.04	0.12
e_m	$1.47 \cdot 10^{-8}$	$1.47 \cdot 10^{-8}$	$2.90 \cdot 10^{-5}$
e_M	0.65	0.46	2.67
err_M	2.81	3.98	24.95

Table V: Error statistics for 56 input networks

	EXACT	MVABAS v1	MVABAS v2	MVABLO
$\bar{\theta}$	–	58.12	323.03	61.25
σ_{θ}	–	98.01	876.48	92.76
$\bar{\varepsilon}$ (ms)	173.35	13.8	13.39	13.25
σ_{ε} (ms)	597.14	1.32	1.33	1.27
ε_m (ms)	22.0	11.0	11.0	11.0
ε_M (ms)	3376.0	16.0	17.0	16.0

Table VI: Execution time and convergence statistics for 56 networks

	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.08	0.05	0.16
e_m	$1.47 \cdot 10^{-8}$	$1.47 \cdot 10^{-8}$	$6.90 \cdot 10^{-5}$
e_M	0.35	0.46	2.67
err_M	1.92	1.65	24.95

(a) Cyclic networks

	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.09	0.04	0.07
e_m	$2.90 \cdot 10^{-5}$	$2.90 \cdot 10^{-5}$	$2.90 \cdot 10^{-5}$
e_M	0.65	0.46	0.45
err_M	2.81	3.98	2.81

(b) Central server networks

Table VII: Error statistics aggregated by topology

well captured by the simultaneous transition mechanism. Fig.1 describes the different structures and the patients flows. Next section introduces the model for this system.

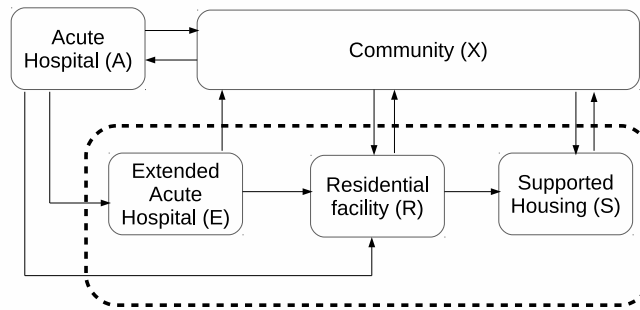


Fig. 1: Structures and patients flows

We model the considered healthcare system with the closed queueing network with BAS blocking in Fig.2. We consider a closed model to analyze the behaviour in case of congestion and assume

Cyclic network				
	EXACT	MVABAS v1	MVABAS v2	MVABLO
$\bar{\theta}$	–	106.6	634.85	113.42
σ_{θ}	–	120.24	1158.39	108.23
$\bar{\varepsilon}$ (ms)	306.42	13.75	14.07	13.57
σ_{ε} (ms)	824.17	1.12	1.27	1.37
ε_m (ms)	21.0	12.0	12.0	11.0
ε_M (ms)	3370.0	16.0	17.0	16.0
Central server network				
	EXACT	MVABAS v1	MVABAS v2	MVABLO
$\bar{\theta}$	–	9.64	11.21	9.07
σ_{θ}	–	7.41	10.34	7.04
$\bar{\varepsilon}$ (ms)	42.17	13.67	13.07	13.0
σ_{ε} (ms)	17.92	1.44	1.19	1.25
ε_m (ms)	27.0	12.0	11.0	11.0
ε_M (ms)	108.0	17.0	15.0	16.0

Table VIII: Execution time and convergence statistics aggregated by topology

$N = 1700$ patients. Each center represents a care structure with a finite number of beds. Note that, for the lack of specific parameters for the acute hospitals center A in [Koizumi et al. 2005], we collapse the two structures A and X in a unique center denoted by X . In the following, we define opportunely the routing probabilities from X .

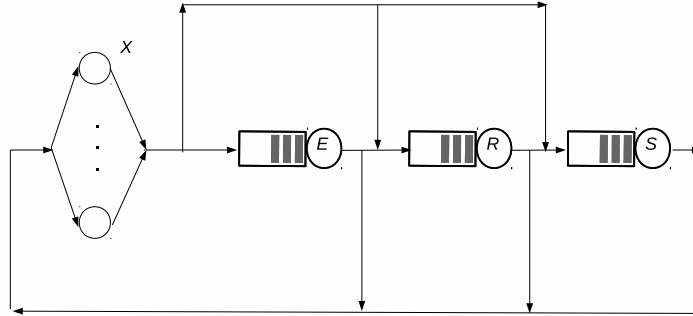


Fig. 2: Queuing network model

By assuming congestion, we can model a structure as a finite capacity single server, but with an "aggregate" service rate to take into account the "service" of each bed. By denoting with d_i the mean treatment time in the structure i , we define the mean rate of patients as follows:

$$\mu_i = \frac{B_i}{d_i} \quad (5)$$

where B_i represents the number of beds in the structure i and it is consistent with the concept of node capacity. The values for B_i and d_i are derived in [Koizumi et al. 2005] from the real system (see Table IX). The nodes represent the care structures and their mean service time is $E[s_i] = 1/\mu_i$. Differently for the center X , the mean service time is derived directly from observations of the real system [Koizumi et al. 2005]. Table X shows the mean service times.

	X	E	R	S
X	0	0.223	0.664	0.113
E	0.748	0	0.252	0
R	0.943	0	0	0.057
S	1.0	0	0	0

(a) Routing matrix

d_i (days)		
E	R	S
60	893	2500

(b) Mean service therapy time for each structure

B_i		
E	R	S
64	1206	416

(c) Maximum capacity structure (number of patients)

Table IX: Parameters observed from the real system

Finally, the routing matrix is derived from external or internal arrival rates λ_{ij} to the care structures. In particular, the routing probabilities p_{ij} , for $i = E, R, S$ and $j = X, E, R, S$, are defined from measurements [Koizumi et al. 2005], while we derive routing probabilities from X as follows:

$$\begin{cases} p_{XE} = \lambda_{AE}/\lambda_{Atot} \\ p_{XR} = (\lambda_{AR} + \lambda_{XR})/\lambda_{Atot} \\ p_{XS} = \lambda_{XS}/\lambda_{Atot} \end{cases} \quad (6)$$

where the total arrival rate is $\lambda_{Atot} = \lambda_{AE} + \lambda_{AR} + \lambda_{XR} + \lambda_{XS}$. The routing matrix is shown in Table IXa.

Without any predictive analysis, one could naively think that the structure R is the most congested one since this is selected by the most patients. This is confirmed by the routing probability value in Table IXa. Nevertheless, by using an efficient predictive model, different alternatives can be considered so to take opportunely planning decisions. Our method low computational cost is appealing to study several alternative solutions.

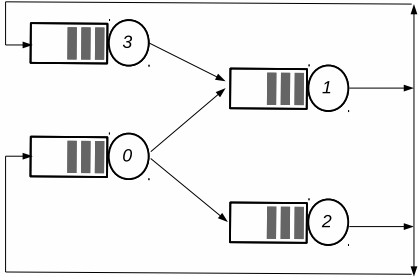
In [De Nitto Personé and Di Lonardo 2018], we consider the baseline system and we obtain performance results by MVABAS v2. By assuming budget availability for other 20 beds, the aim of

$E[s_i]$ (days)			
X	E	R	S
0.331	0.94	0.74	6.0

Table X: Mean service time for queues in patients flow model

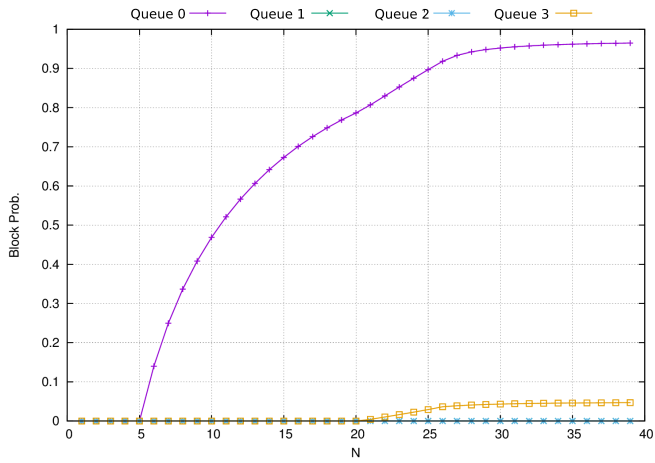
further study is the identification of the appropriate structure to upgrade with the extra beds from both the perspectives of the human rights and the finance [Koizumi et al. 2005]. The baseline results could confirm to upgrade the most congested structure as suggested from the parameters above. By using MVABAS v2, a different direction proves to be most beneficial and several objectives can be easily considered with low computational cost.

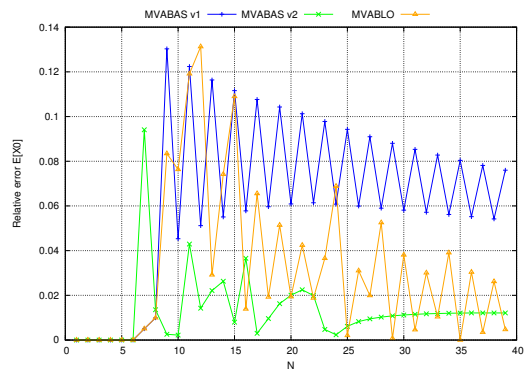
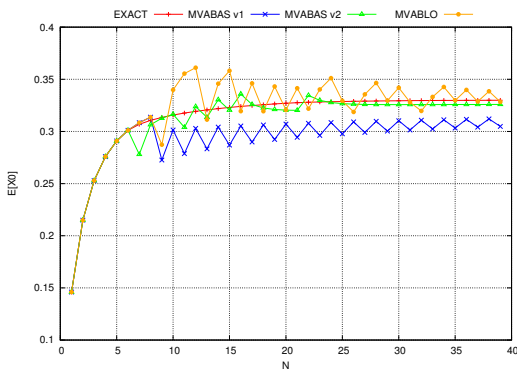
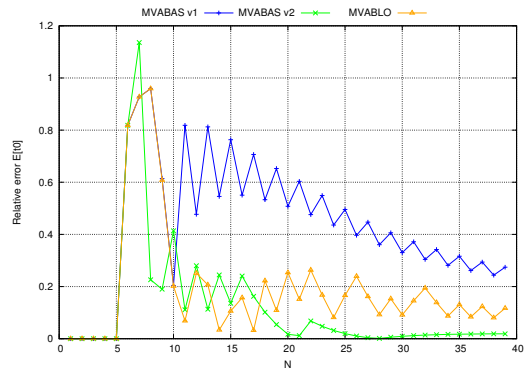
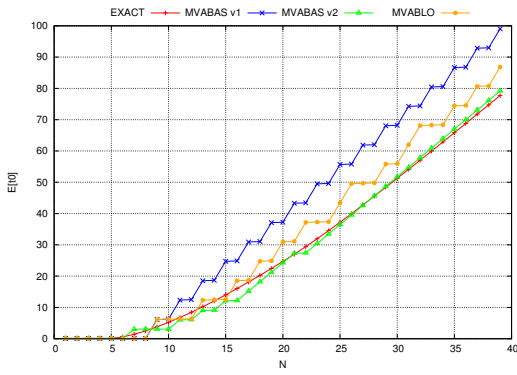
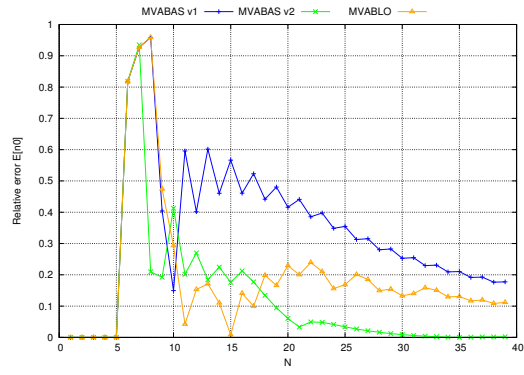
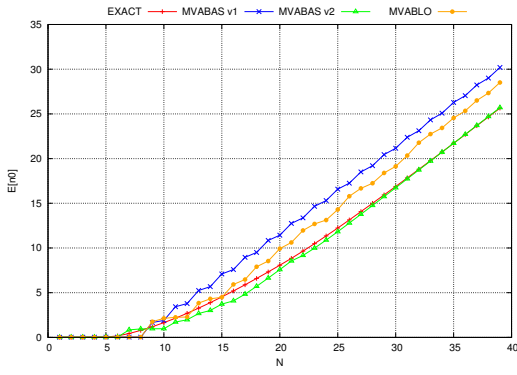
Network 0

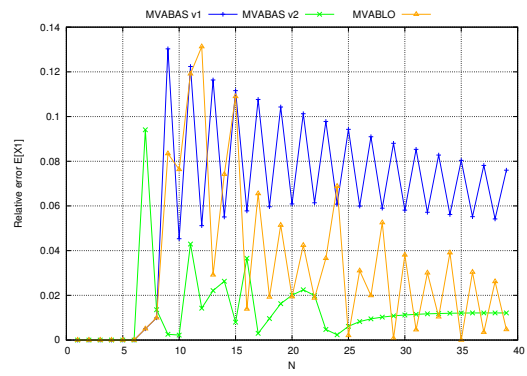
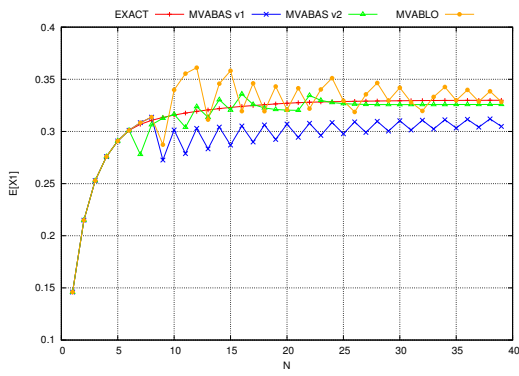
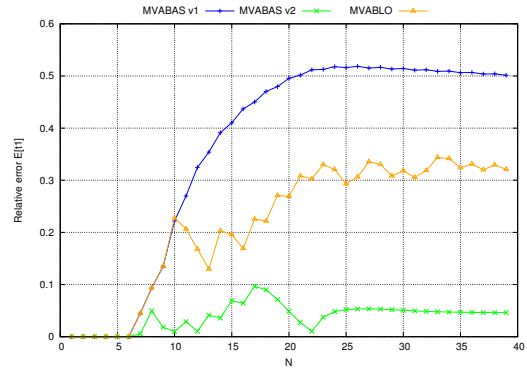
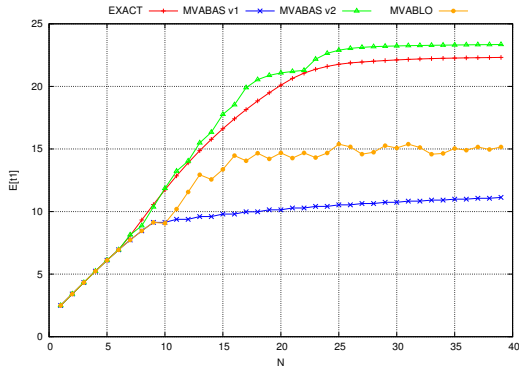
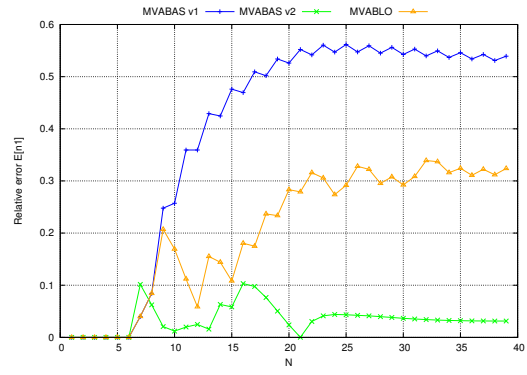
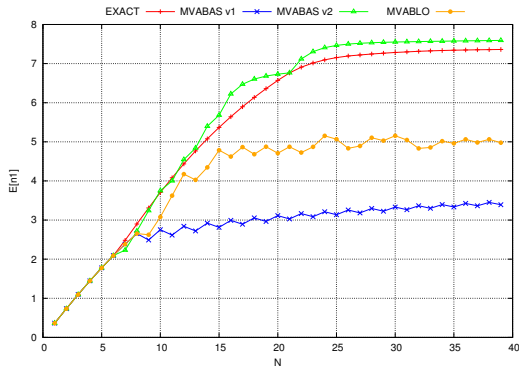


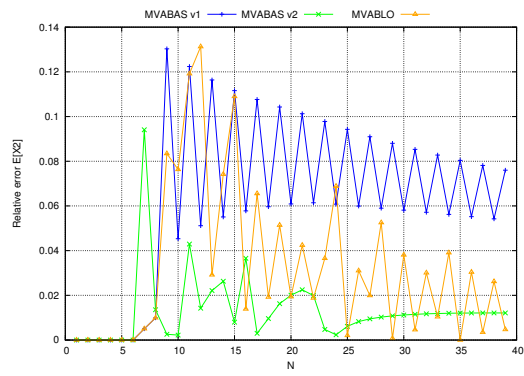
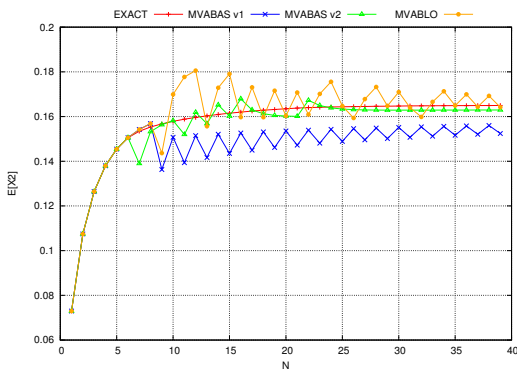
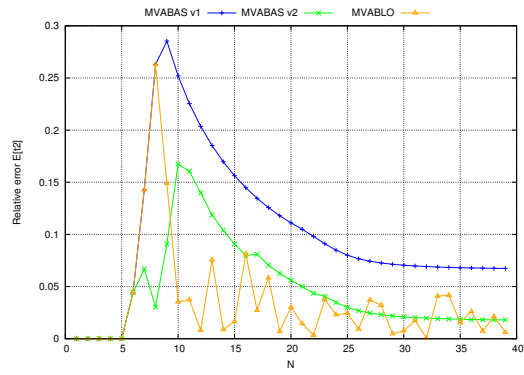
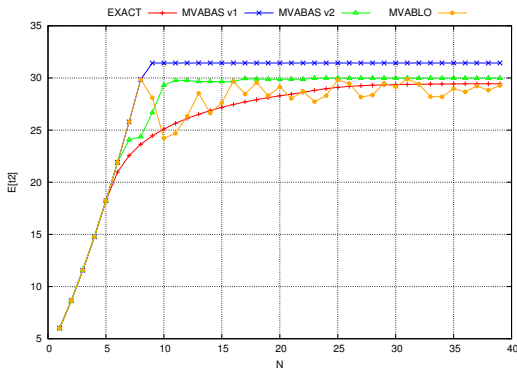
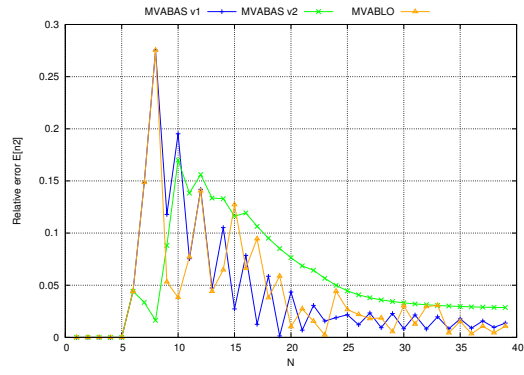
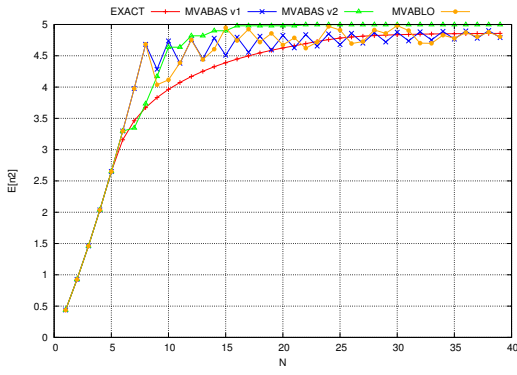
	B	$E[t_s]$
Queue 0	35	0.1
Queue 1	20	2.5
Queue 2	5	6.0
Queue 3	20	2.5

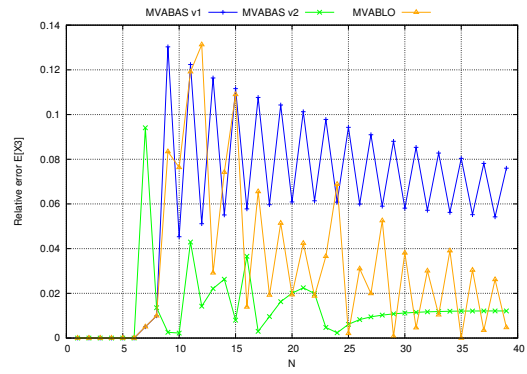
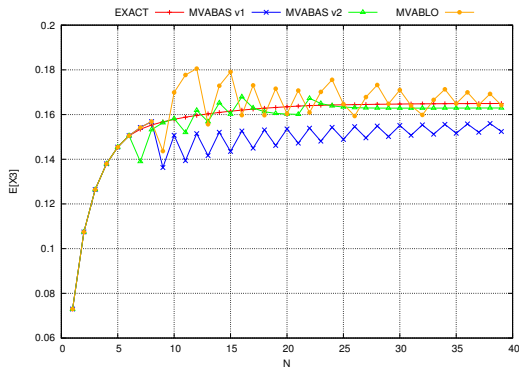
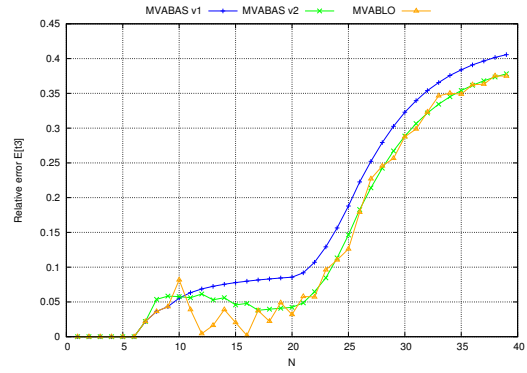
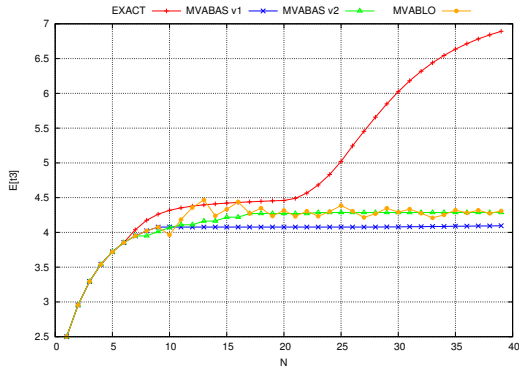
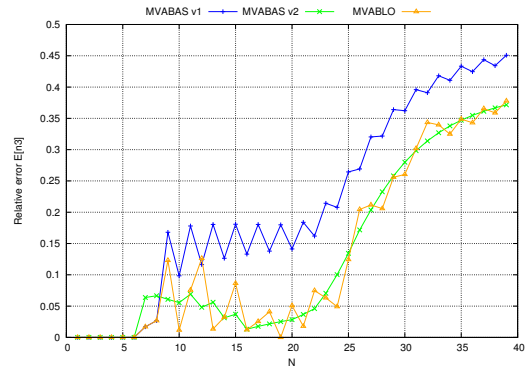
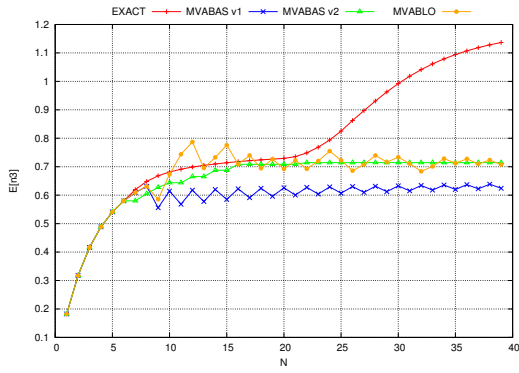
P			
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0.5	0	0	0.5
1.0	0	0	0
0	1.0	0	0









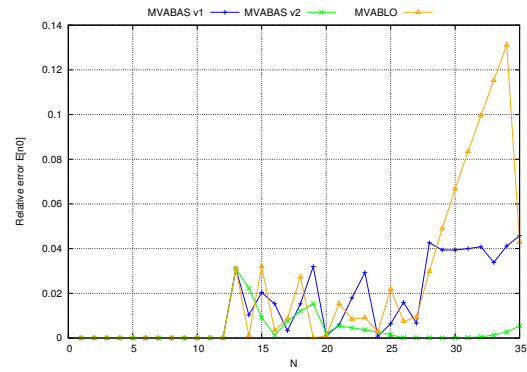
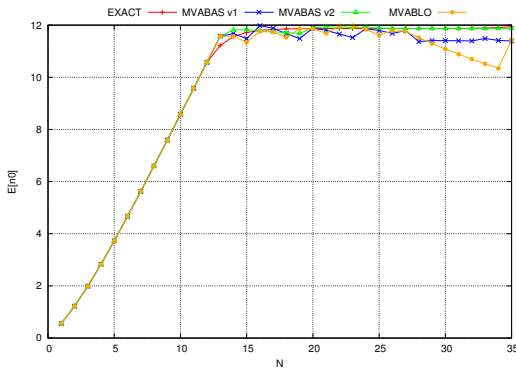
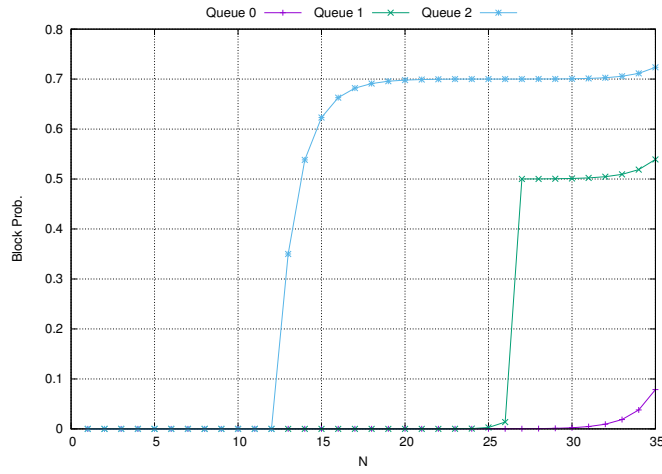


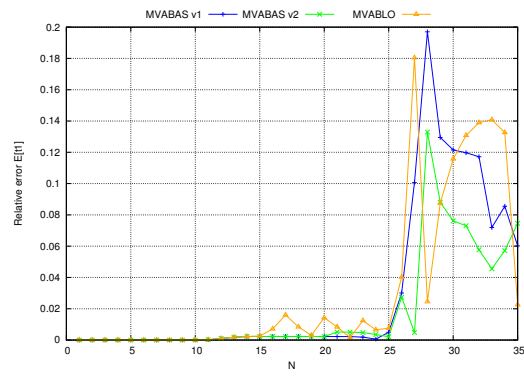
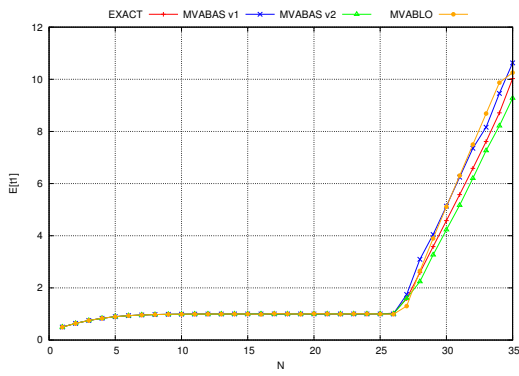
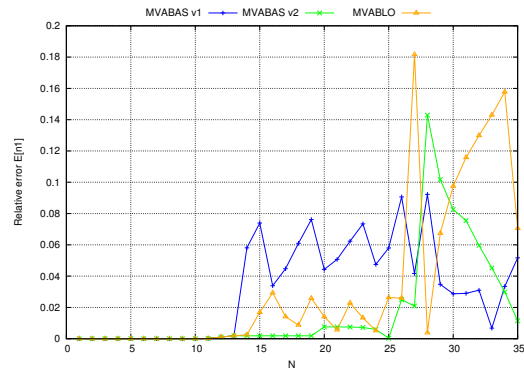
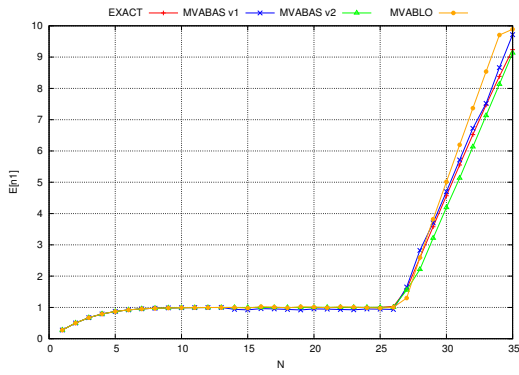
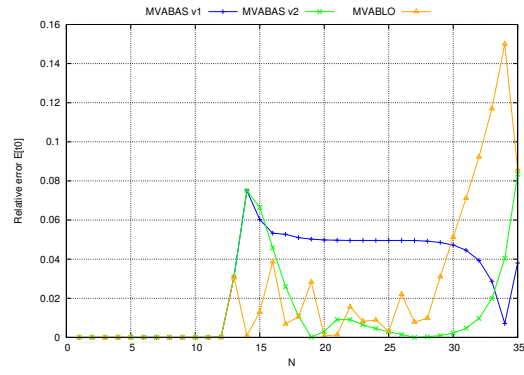
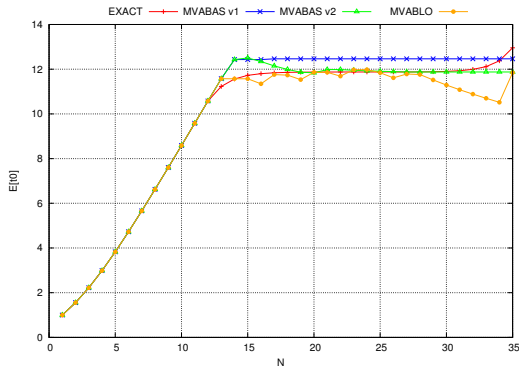
Network 0			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.19	0.06	0.10
e_m	0.04	0.01	0.03
e_M	0.43	0.14	0.22
err_M	0.95	1.13	0.95

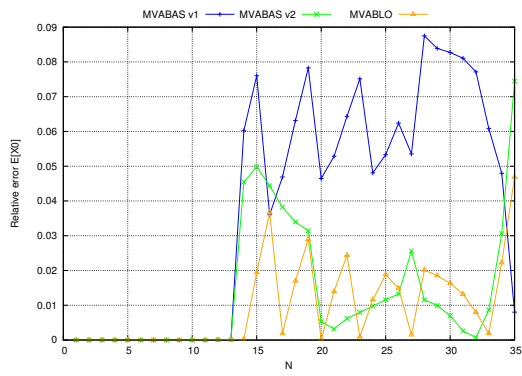
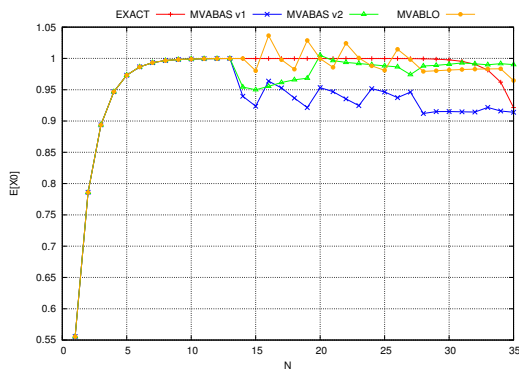
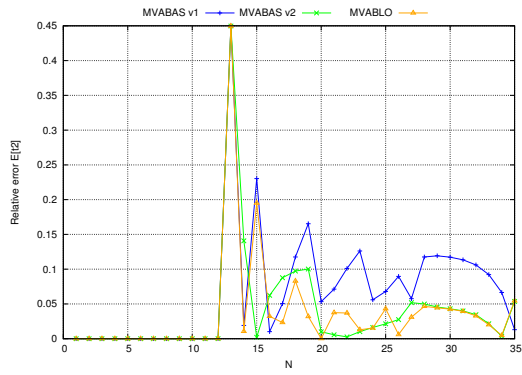
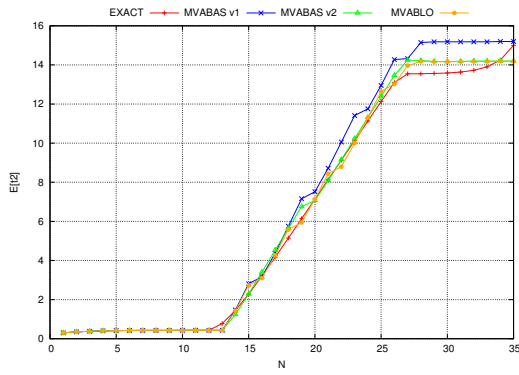
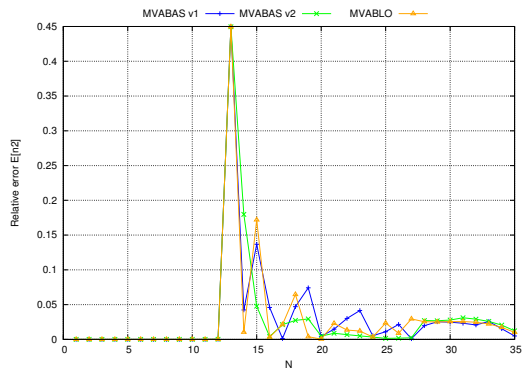
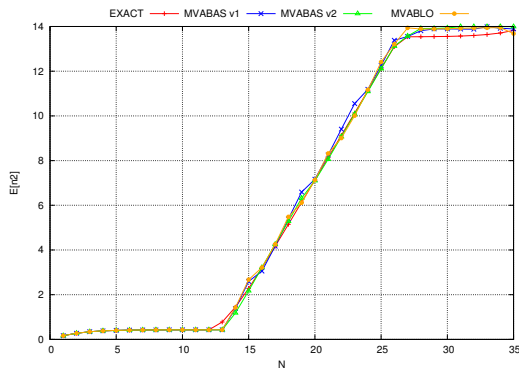
Network 1

	B	$E[t_s]$
Queue 0	12	1.0
Queue 1	10	0.5
Queue 2	14	0.3

P		
0	1.0	0
0	0	1.0
1.0	0	0





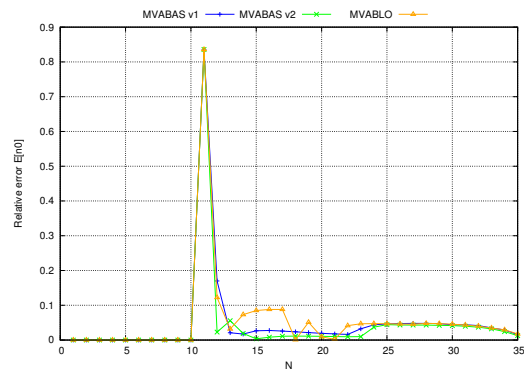
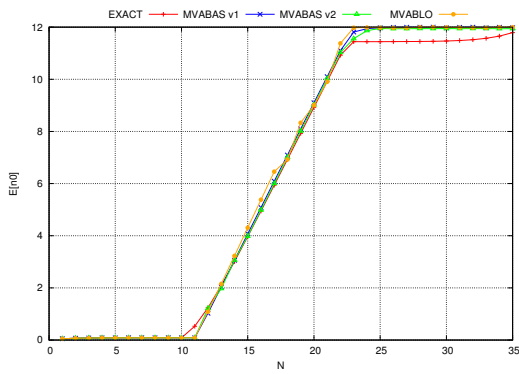
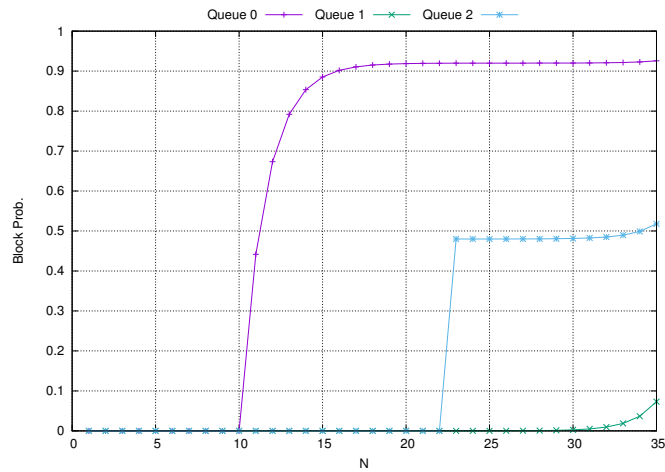


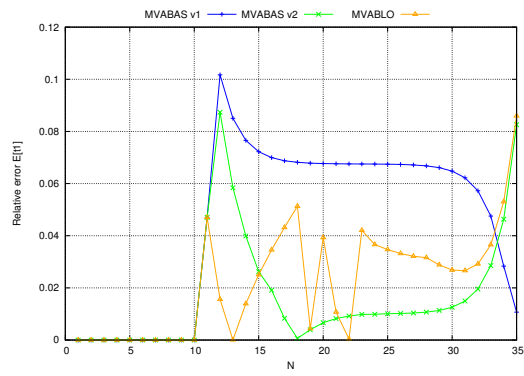
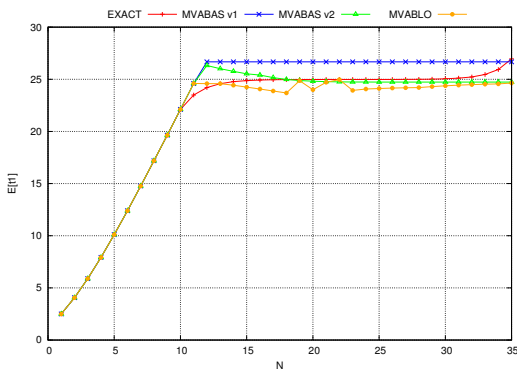
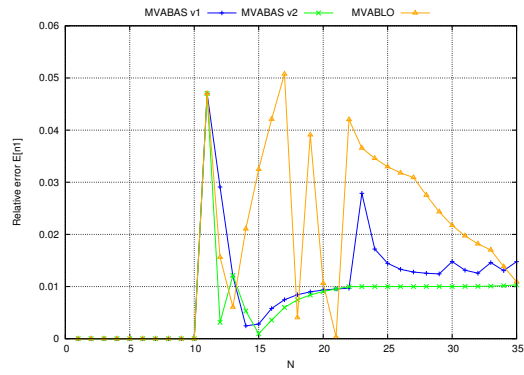
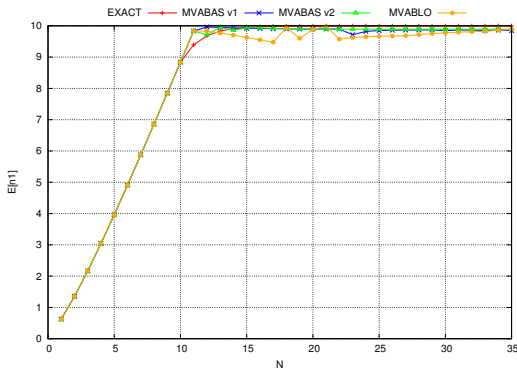
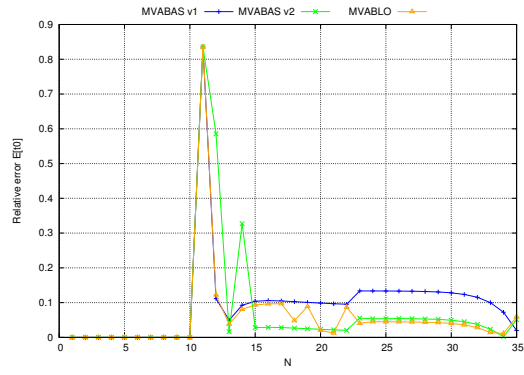
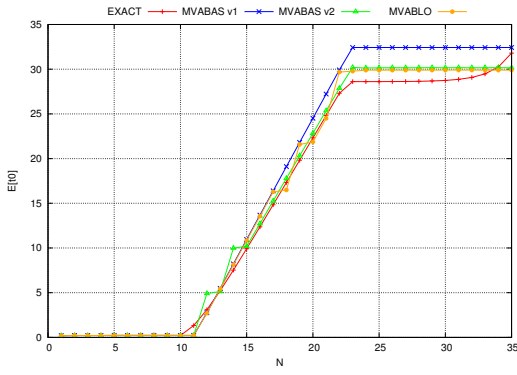
Network 1			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.03	0.01	0.02
e_m	0.01	0.003	0.009
e_M	0.06	0.03	0.03
err_M	0.449	0.449	0.449

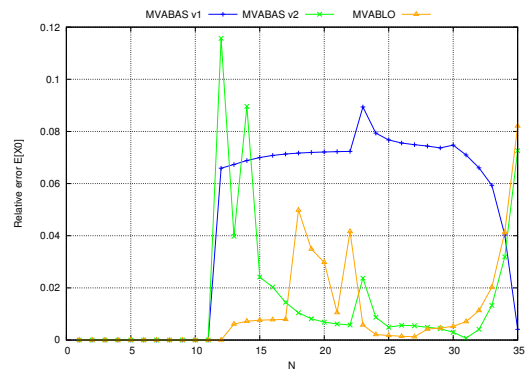
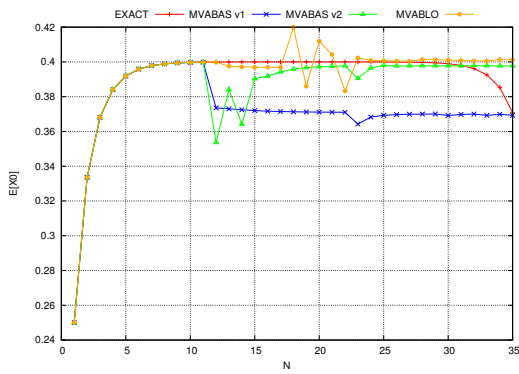
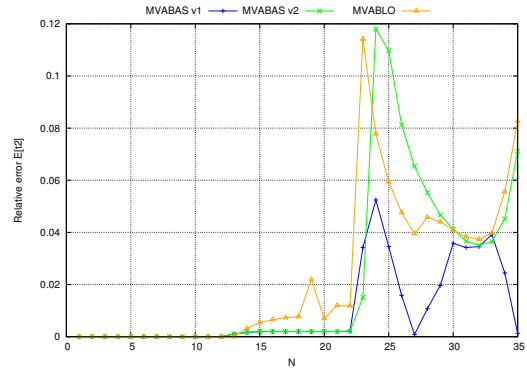
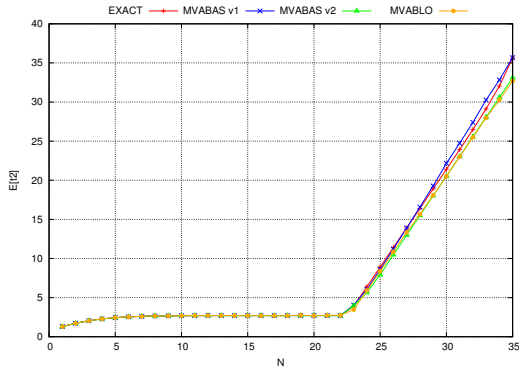
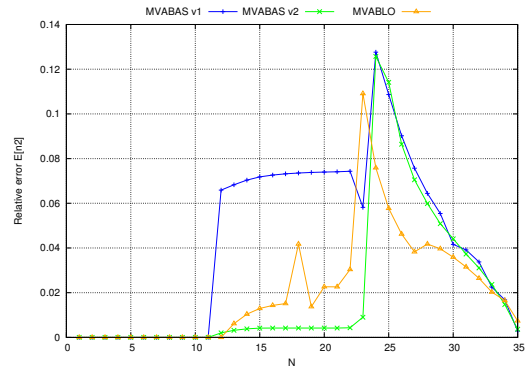
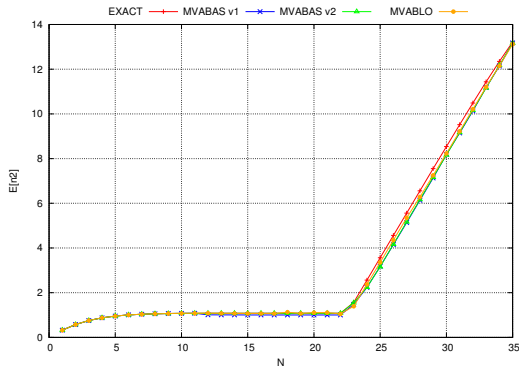
Network 2

	B	$E[t_s]$
Queue 0	12	0.2
Queue 1	10	2.5
Queue 2	14	6.0

P		
0	1.0	0
0	0	1.0
1.0	0	0





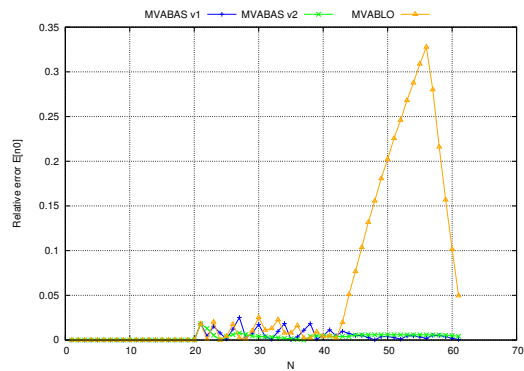
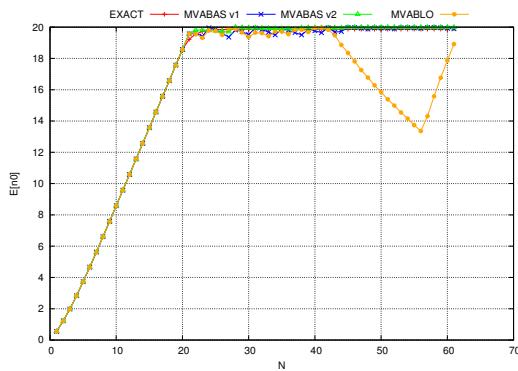
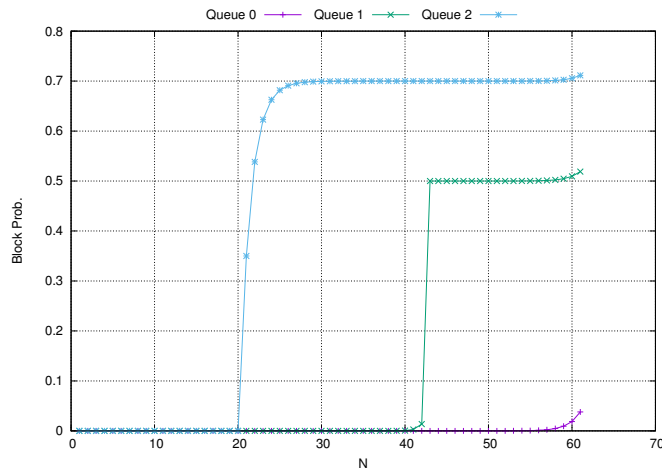


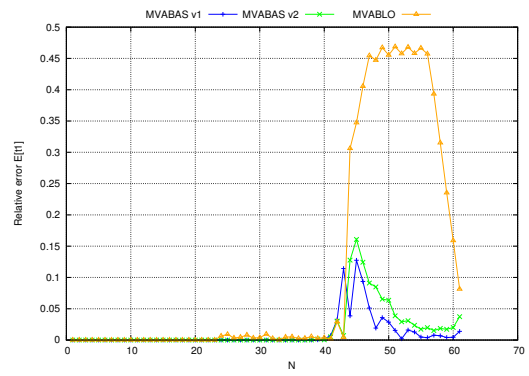
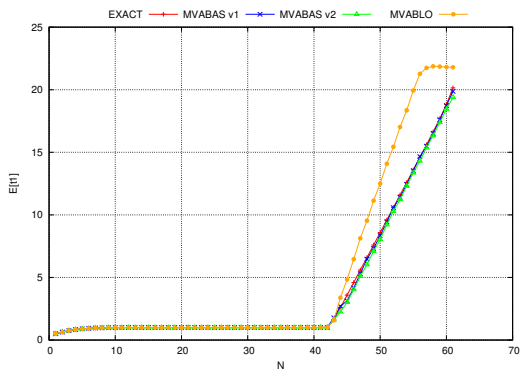
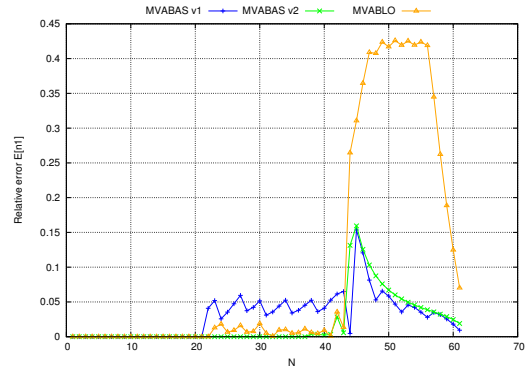
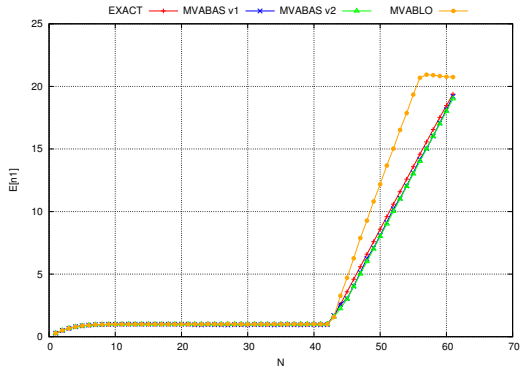
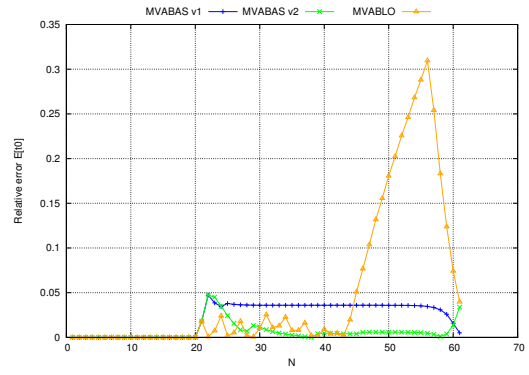
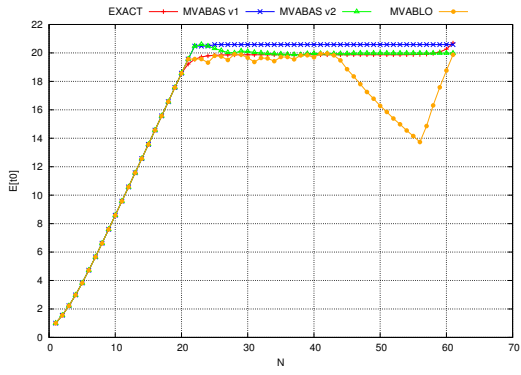
Network 2			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.04	0.025	0.026
e_m	0.009	0.007	0.0111
e_M	0.096	0.072	0.060
err_M	0.835	0.835	0.835

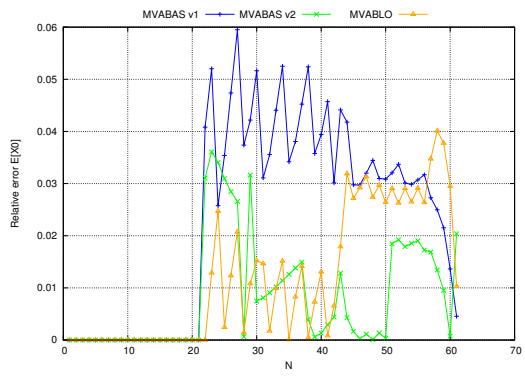
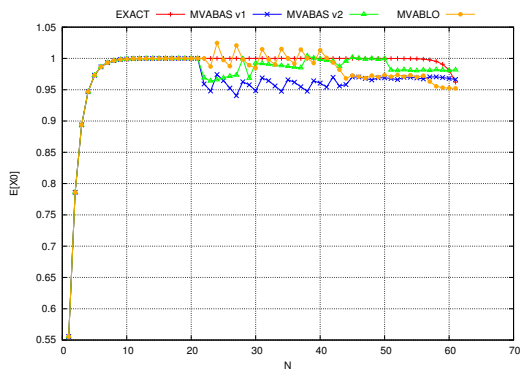
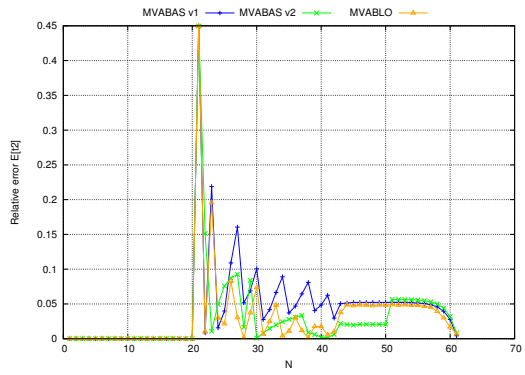
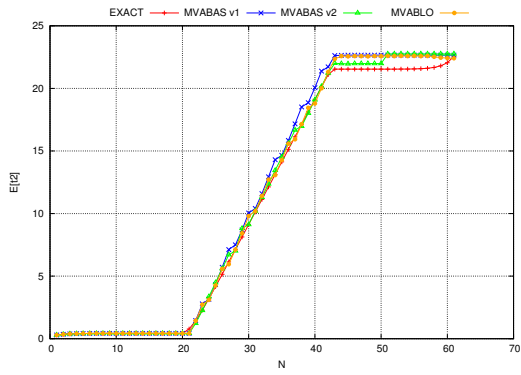
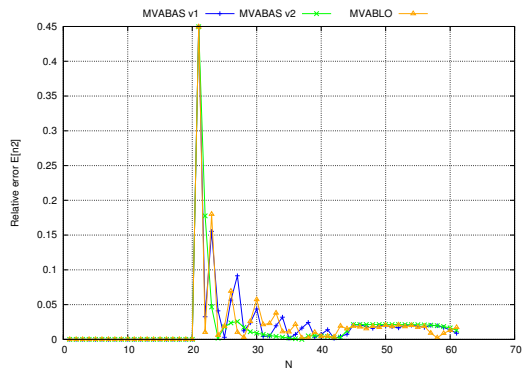
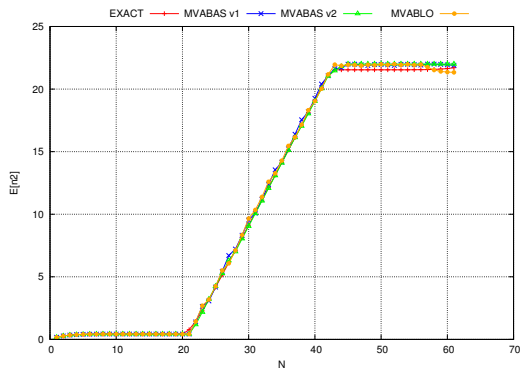
Network 3

	B	$E[t_s]$
Queue 0	20	0.2
Queue 1	21	2.5
Queue 2	22	6.0

P		
0	1.0	0
0	0	1.0
1.0	0	0





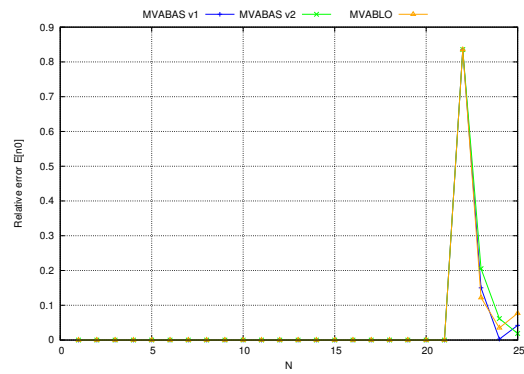
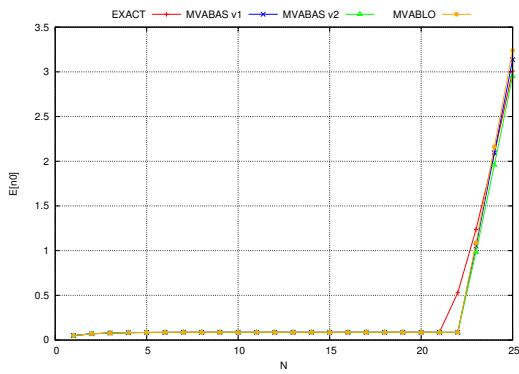
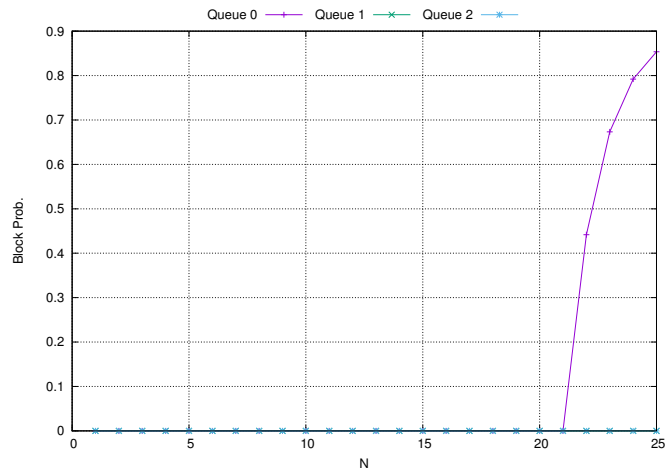


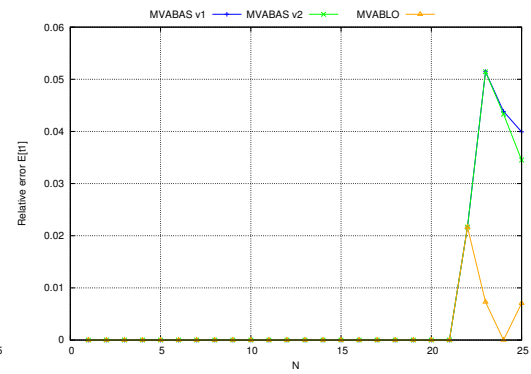
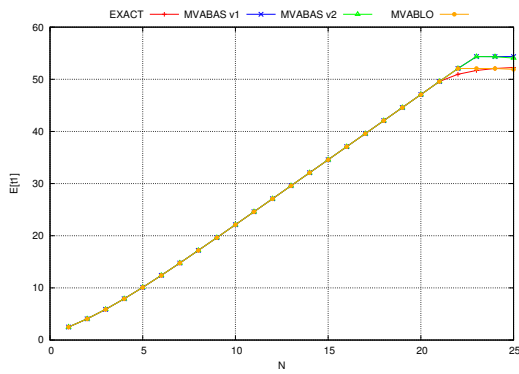
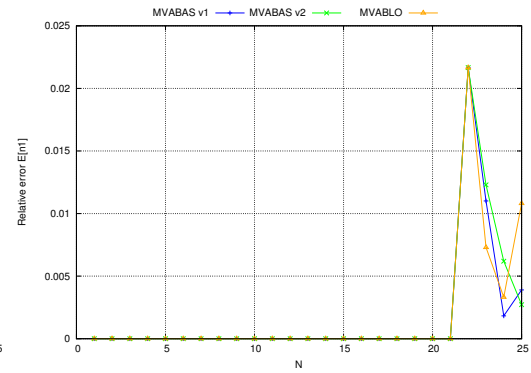
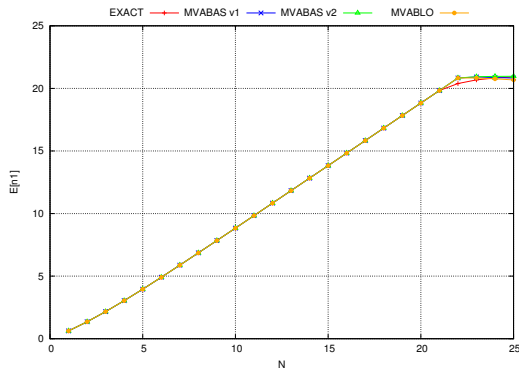
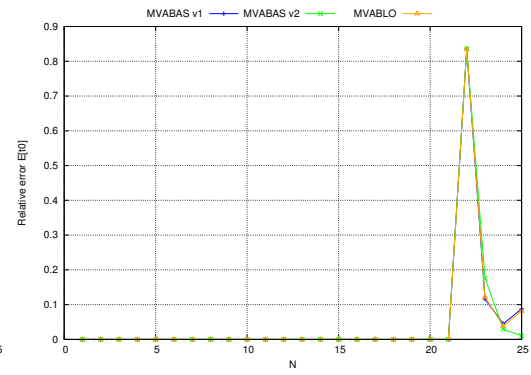
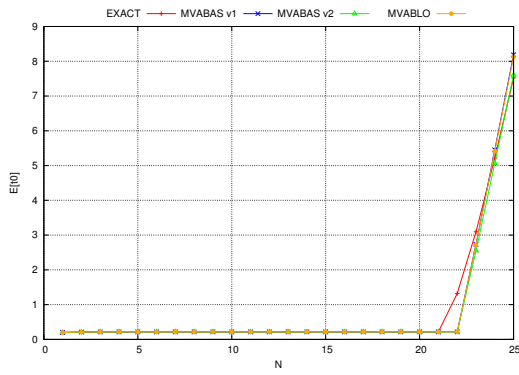
Network 3			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.02	0.01	0.04
e_m	0.004	0.003	0.012
e_M	0.045	0.030	0.114
err_M	0.449	0.449	0.468

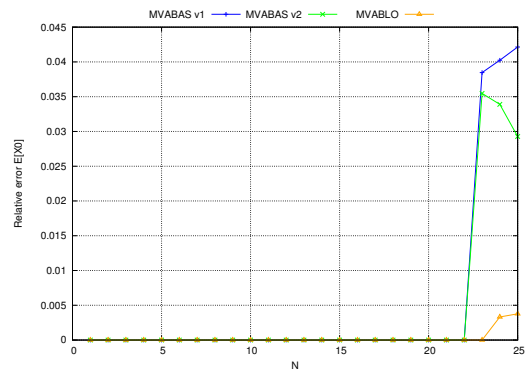
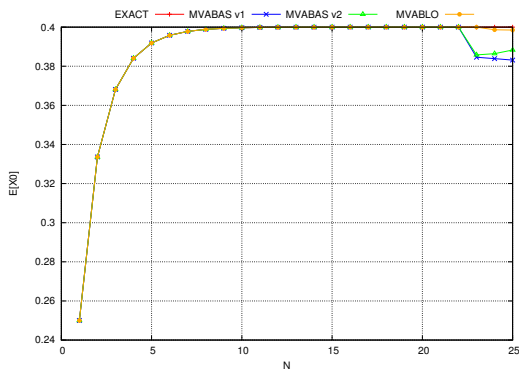
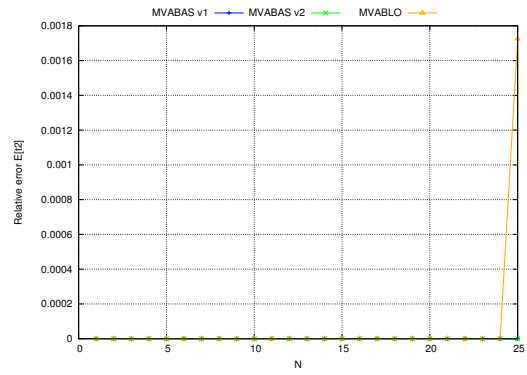
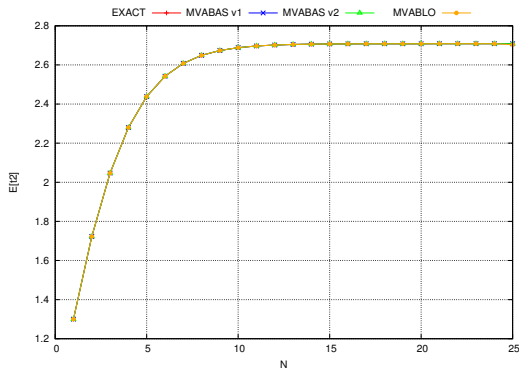
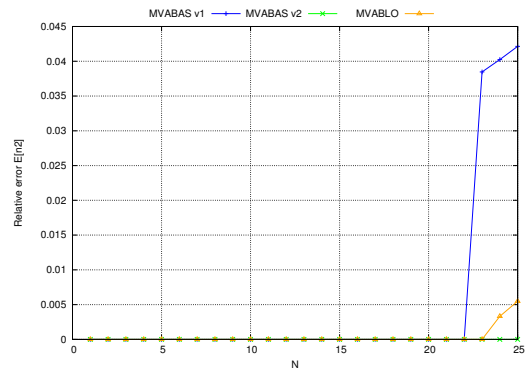
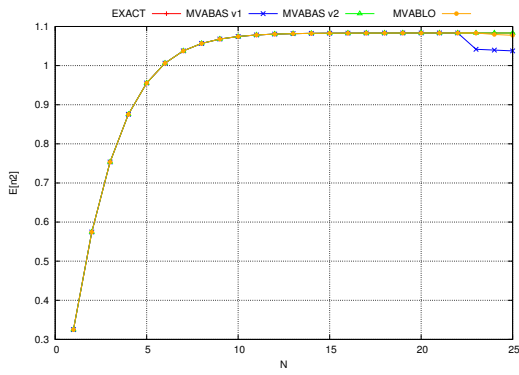
Network 4

	B	$E[t_s]$
Queue 0	20	0.2
Queue 1	21	2.5
Queue 2	22	6.0

P		
0	1.0	0
0	0	1.0
1.0	0	0





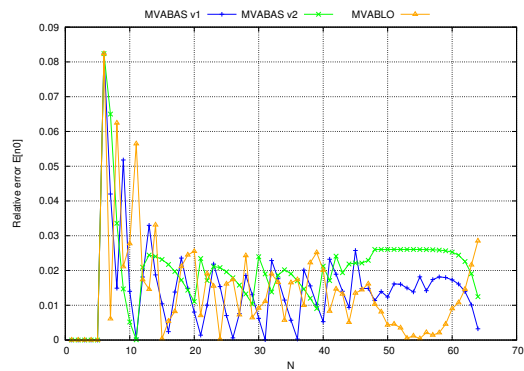
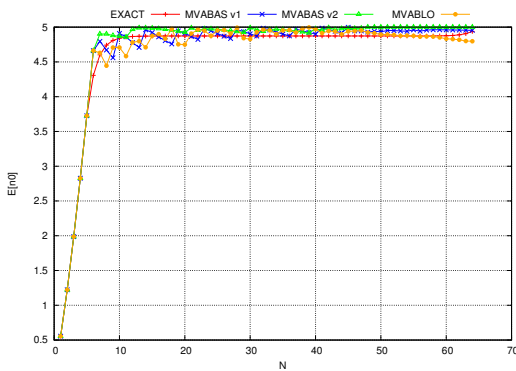
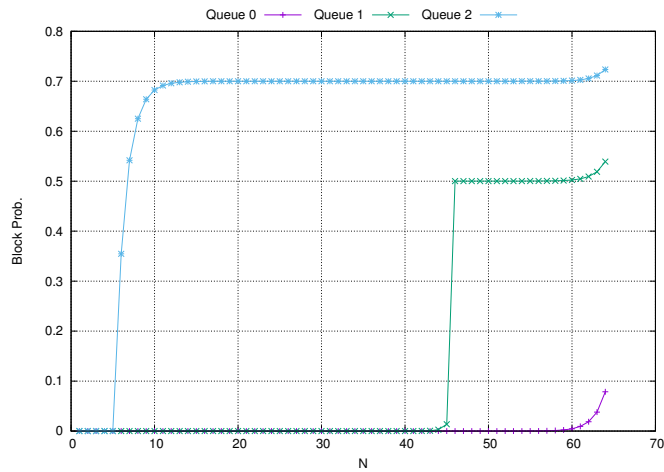


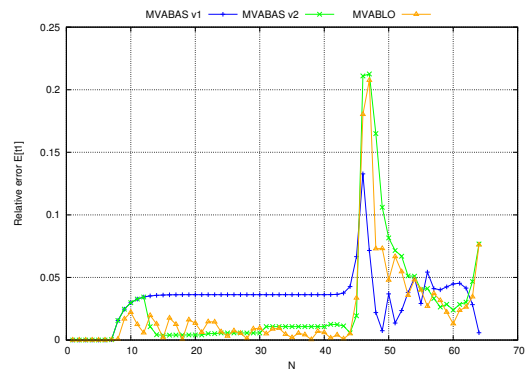
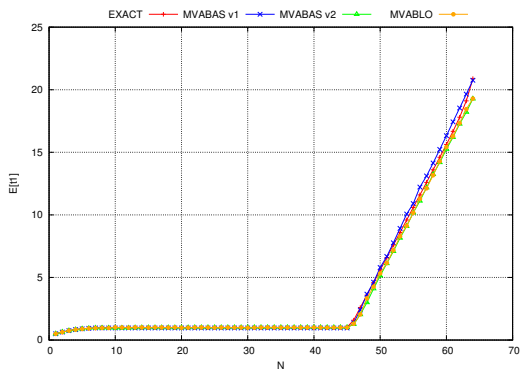
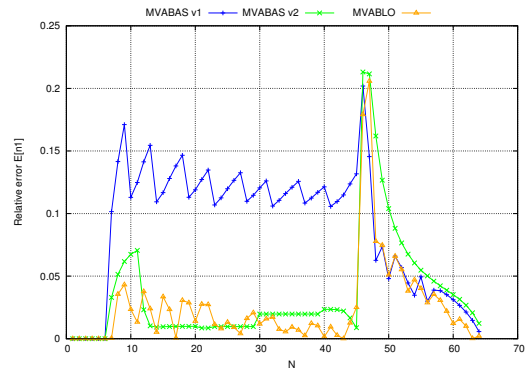
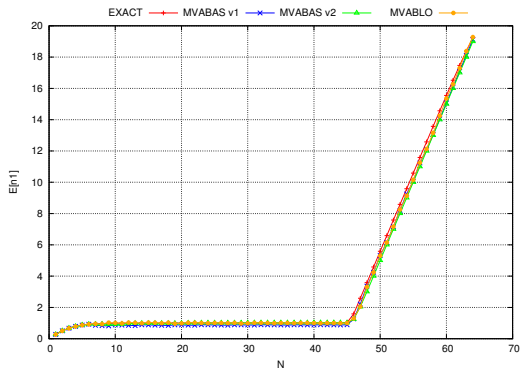
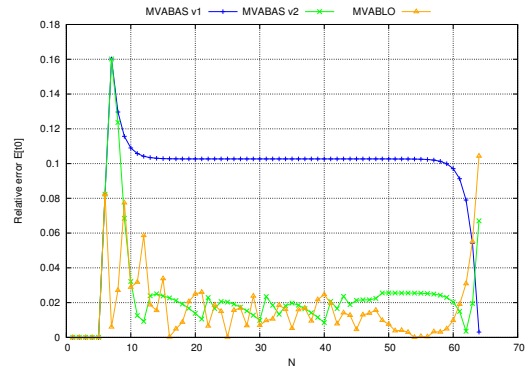
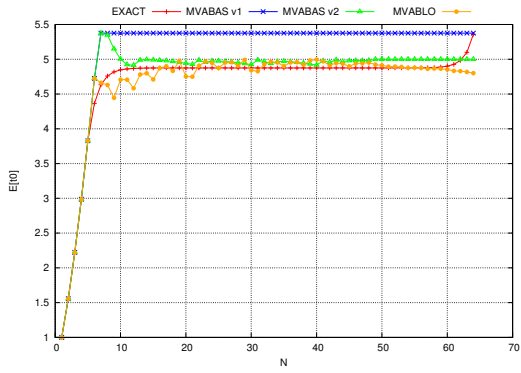
Network 4			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.012	0.011	0.010
e_m	$1.47 \cdot 10^{-8}$	$1.47 \cdot 10^{-8}$	$6.90 \cdot 10^{-5}$
e_M	0.043	0.044	0.043
err_M	0.835	0.835	0.835

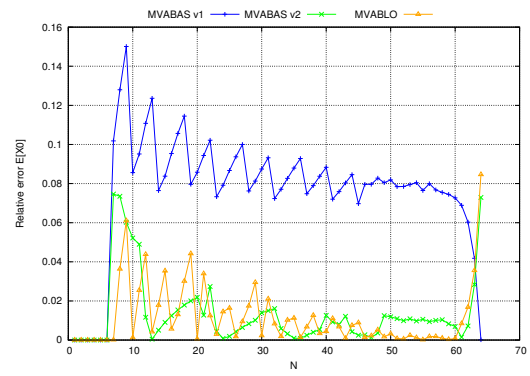
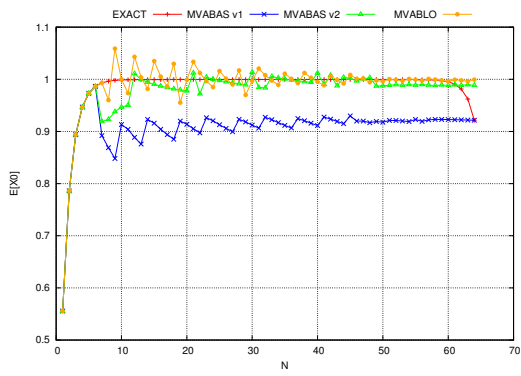
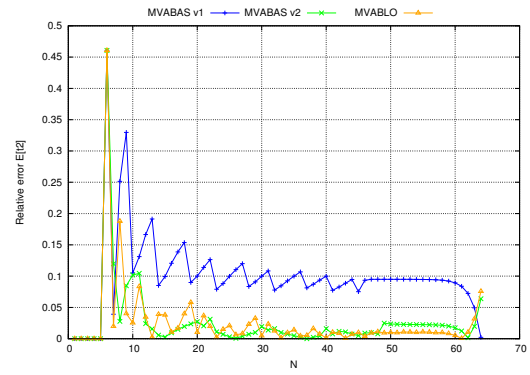
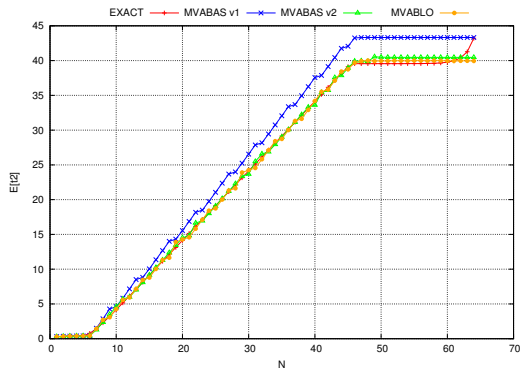
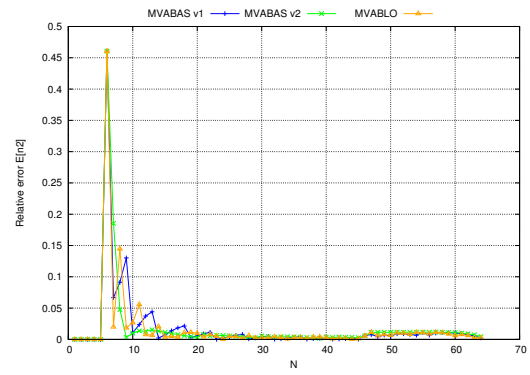
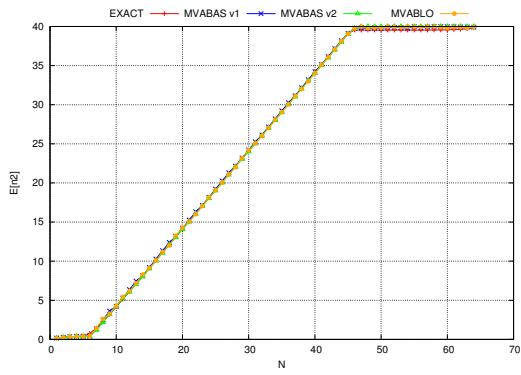
Network 5

	B	$E[t_s]$
Queue 0	5	1.0
Queue 1	20	0.5
Queue 2	40	0.3

P		
0	1.0	0
0	0	1.0
1.0	0	0





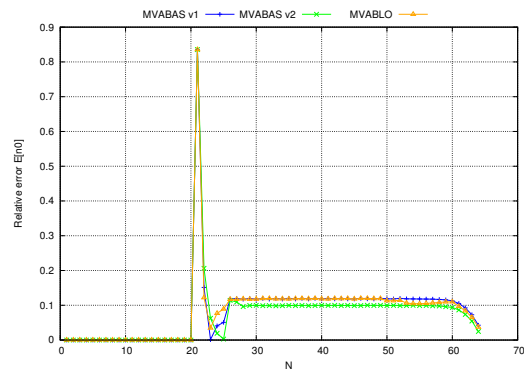
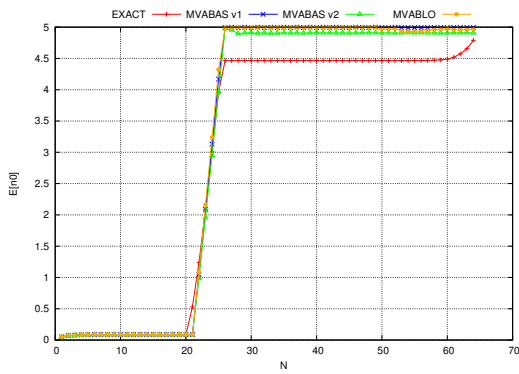
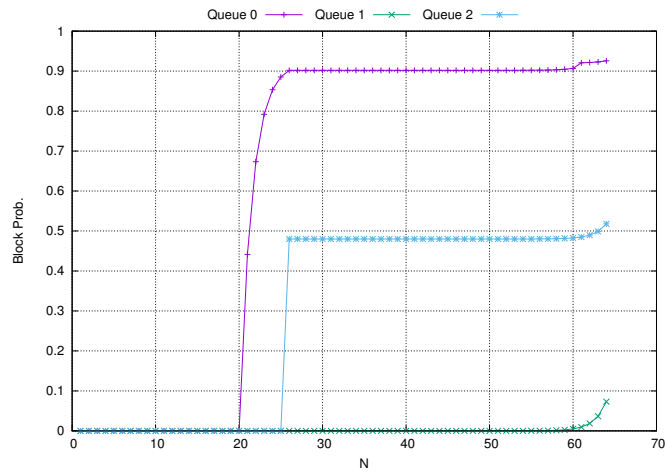


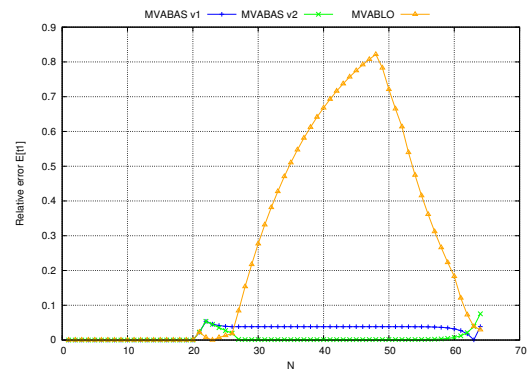
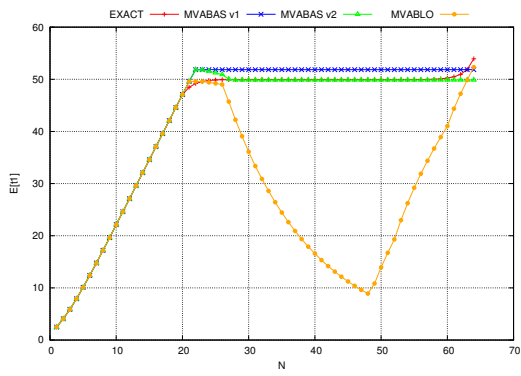
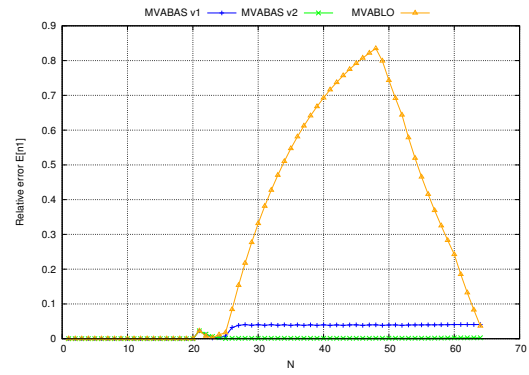
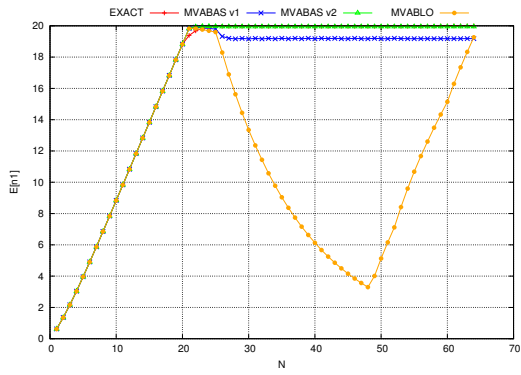
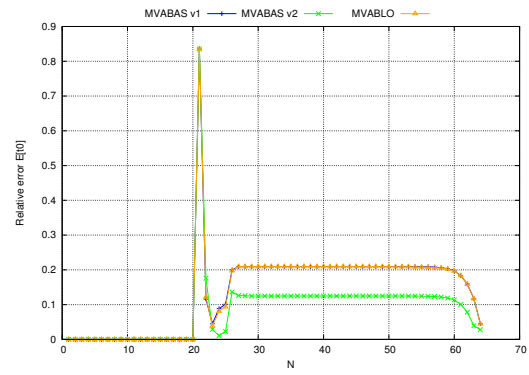
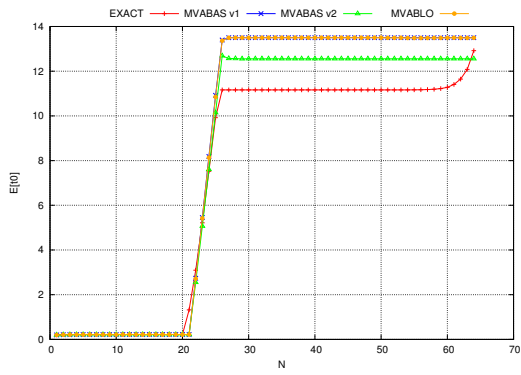
Network 5			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.06	0.02	0.01
e_m	0.014	0.013	0.011
e_M	0.10	0.03	0.02
err_M	0.46	0.46	0.46

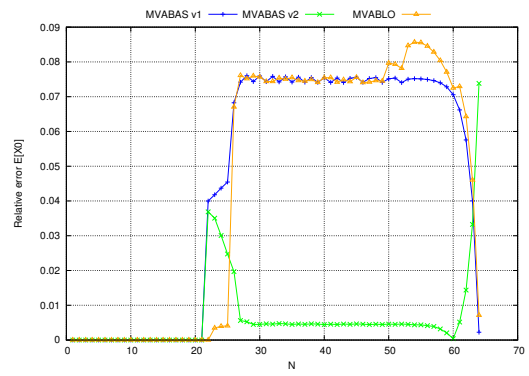
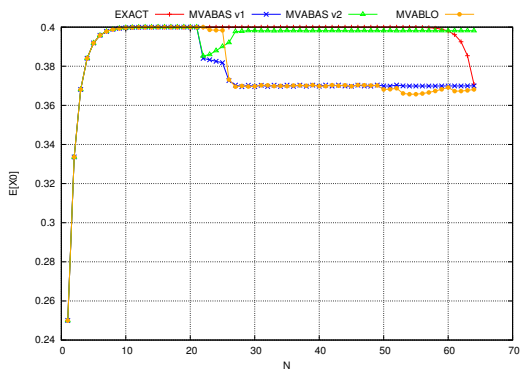
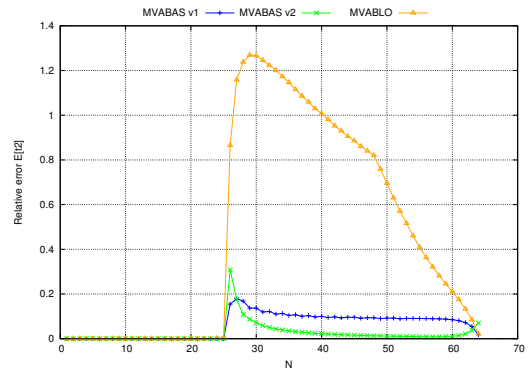
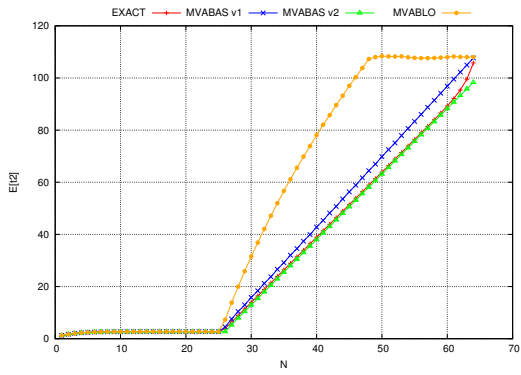
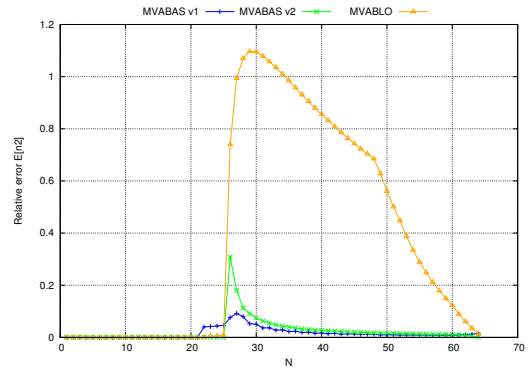
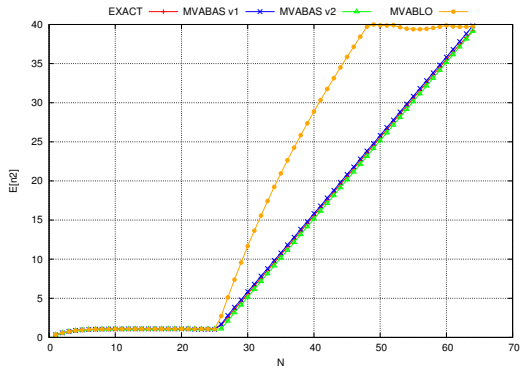
Network 6

	B	$E[t_s]$
Queue 0	5	0.2
Queue 1	20	2.5
Queue 2	40	6.0

P		
0	1.0	0
0	0	1.0
1.0	0	0





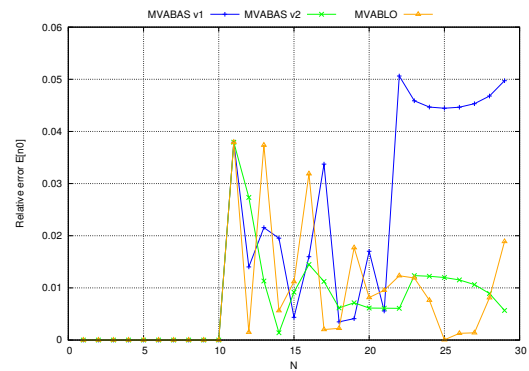
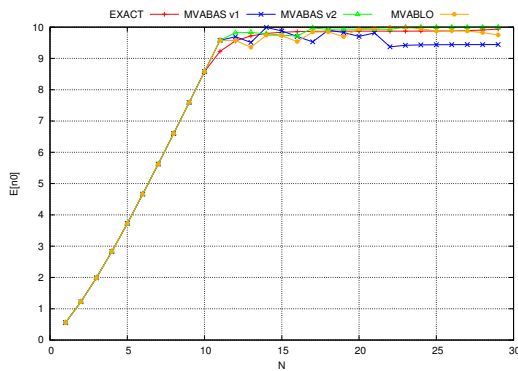
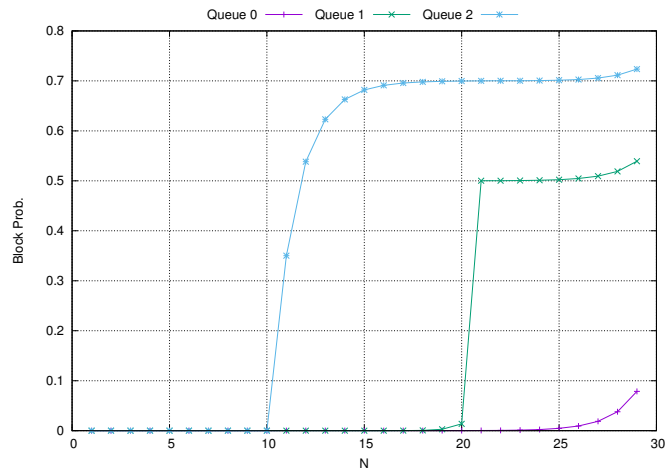


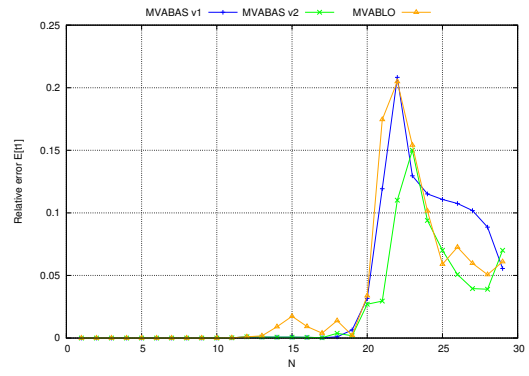
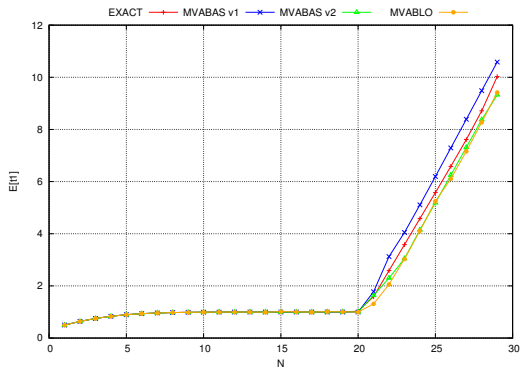
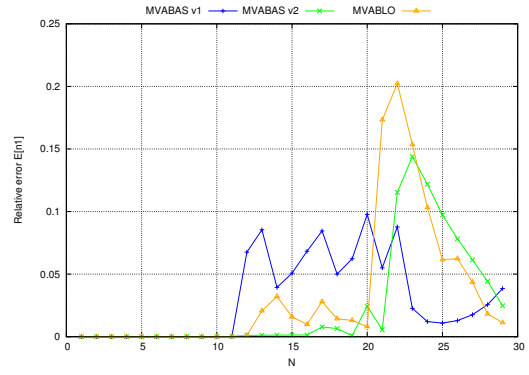
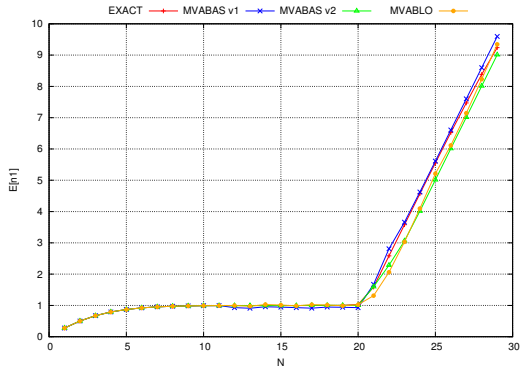
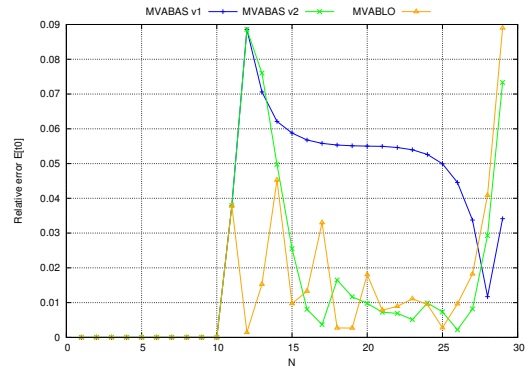
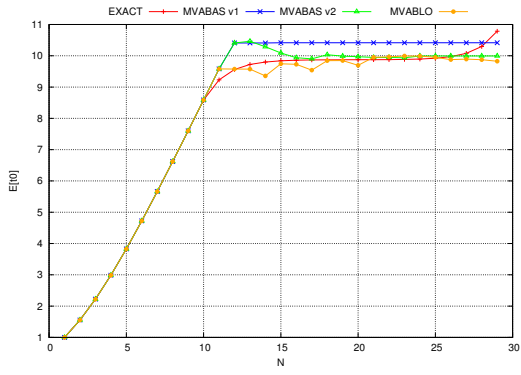
Network 6			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.05	0.02	0.20
e_m	0.01	0.001	0.045
e_M	0.14	0.08	0.47
err_M	0.83	0.83	1.26

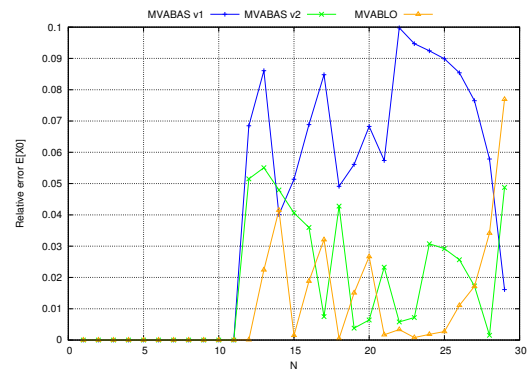
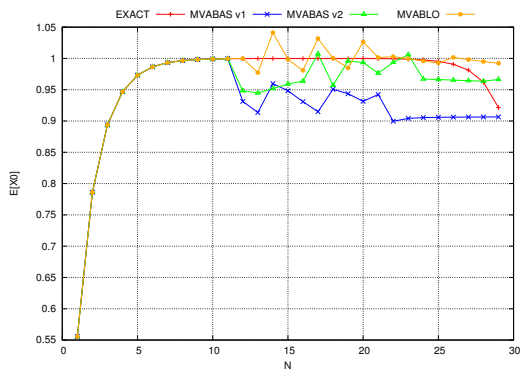
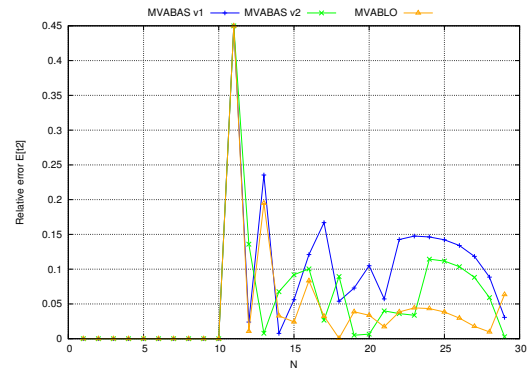
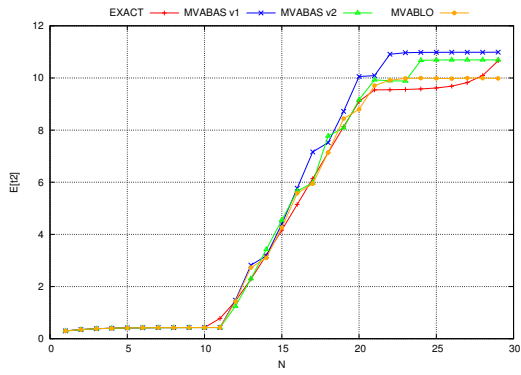
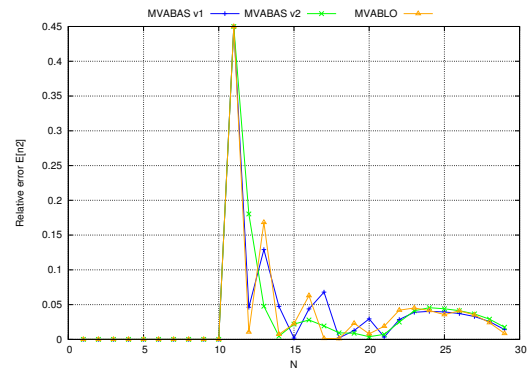
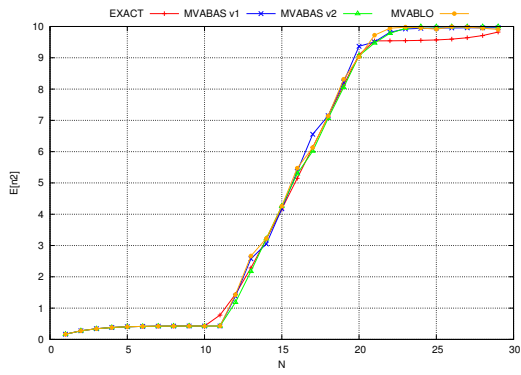
Network 7

	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.5
Queue 2	10	0.3

P		
0	1.0	0
0	0	1.0
1.0	0	0





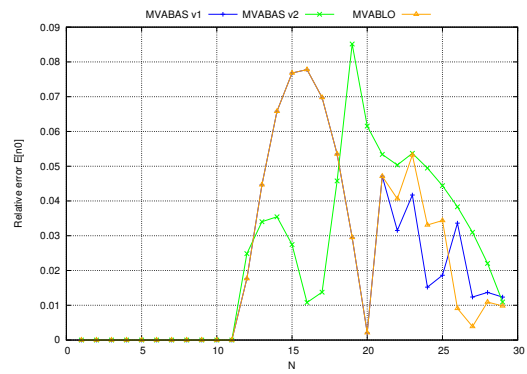
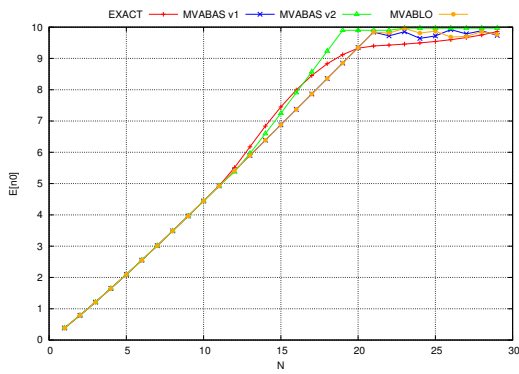
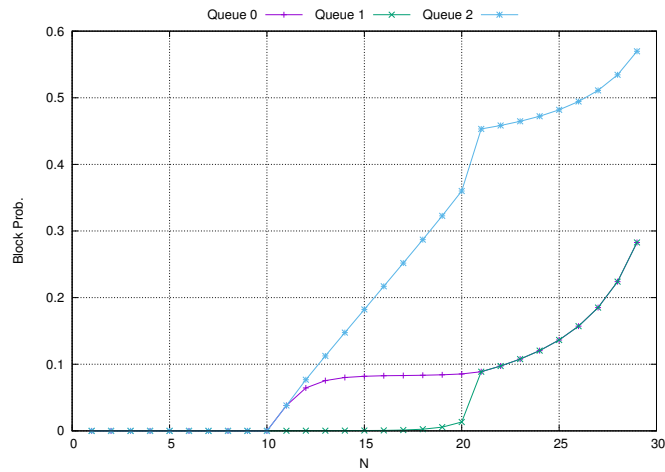


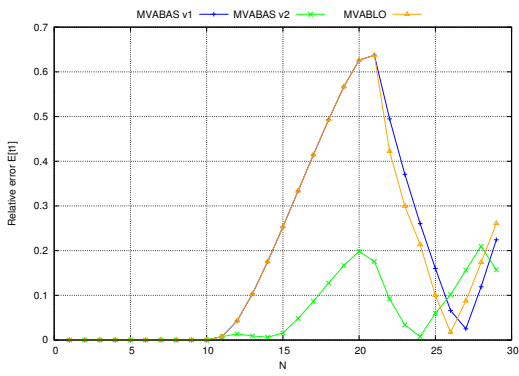
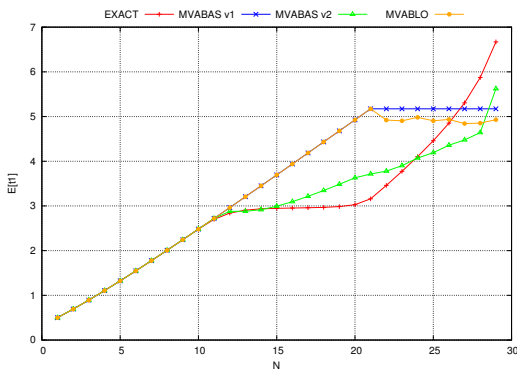
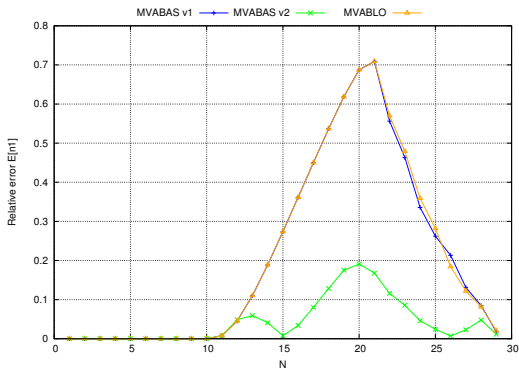
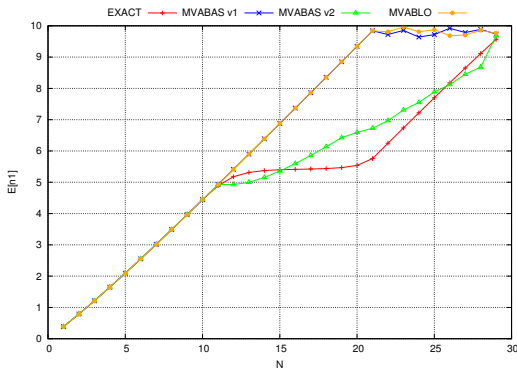
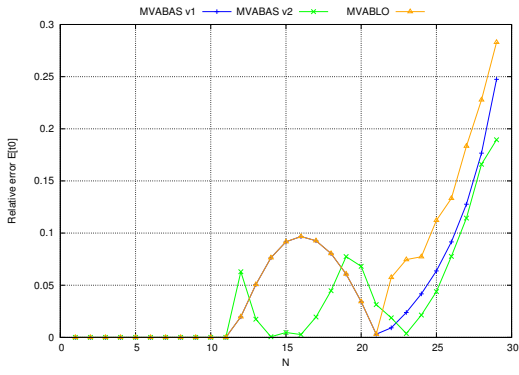
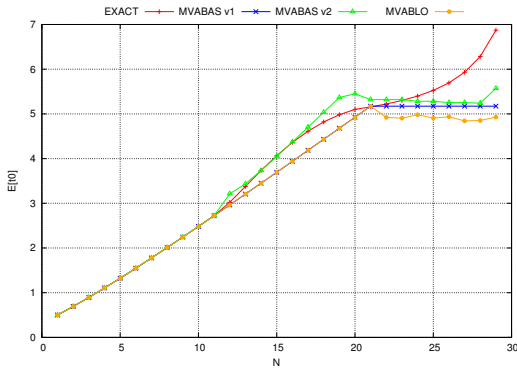
Network 7			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.04	0.02	0.02
e_m	0.018	0.007	0.0078
e_M	0.07	0.05	0.04
err_M	0.449	0.449	0.449

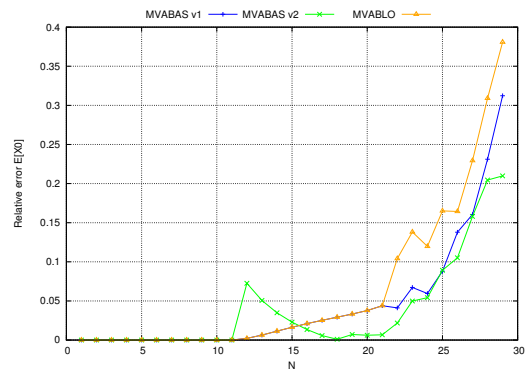
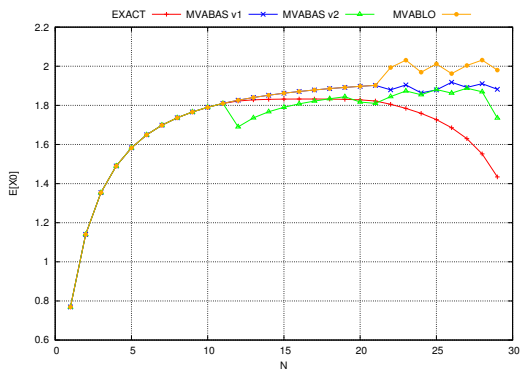
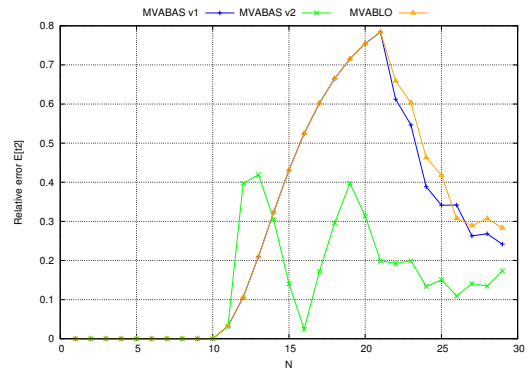
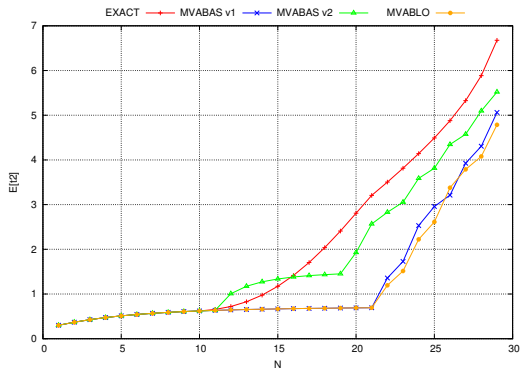
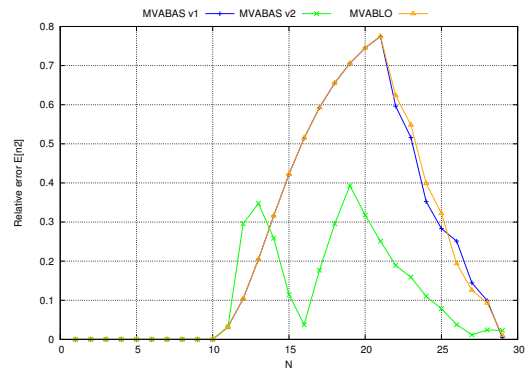
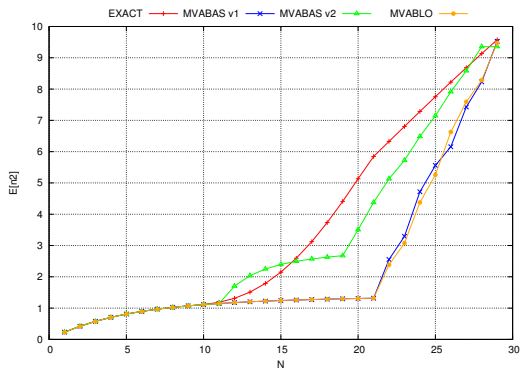
Network 8

	B	$E[t_s]$
Queue 0	10	0.2
Queue 1	10	2.5
Queue 2	10	6.0

P		
0	1.0	0
0	0	1.0
1.0	0	0





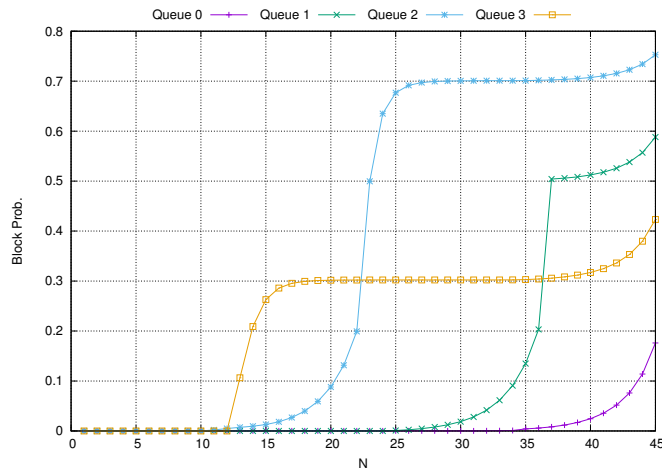


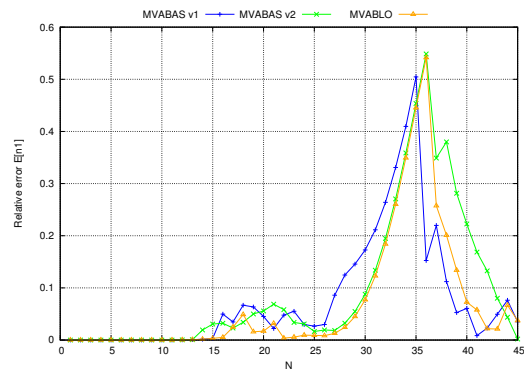
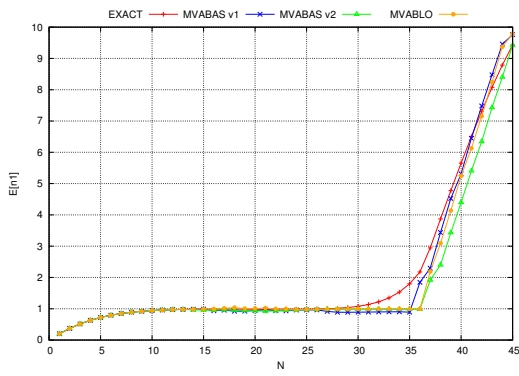
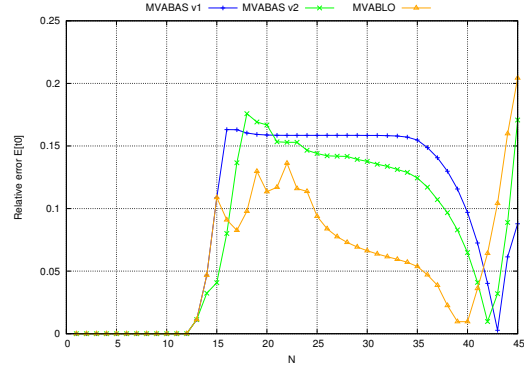
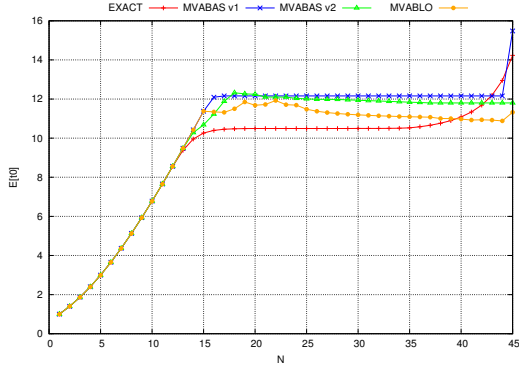
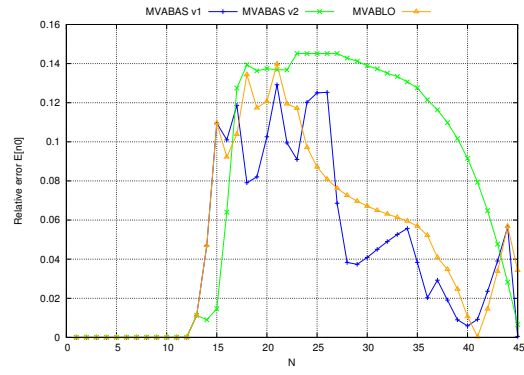
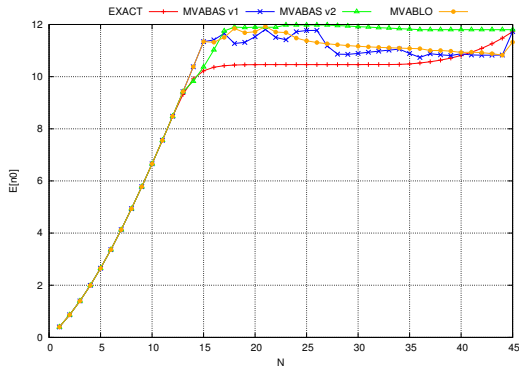
Network 8			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.12	0.05	0.13
e_m	0.022	0.023	0.023
e_M	0.28	0.13	0.29
err_M	0.78	0.41	0.78

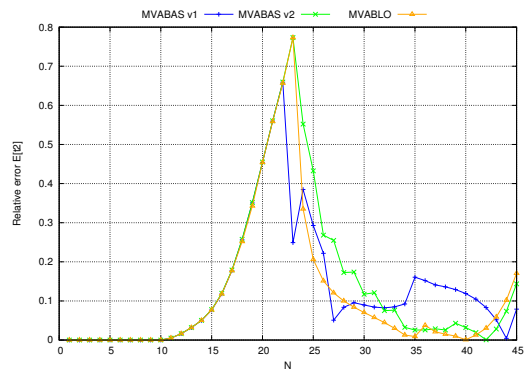
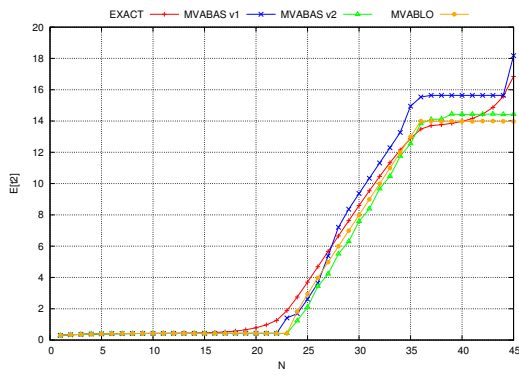
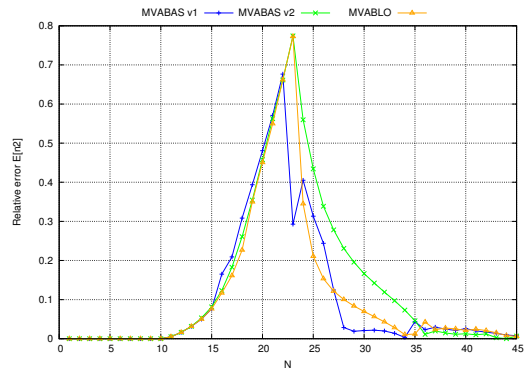
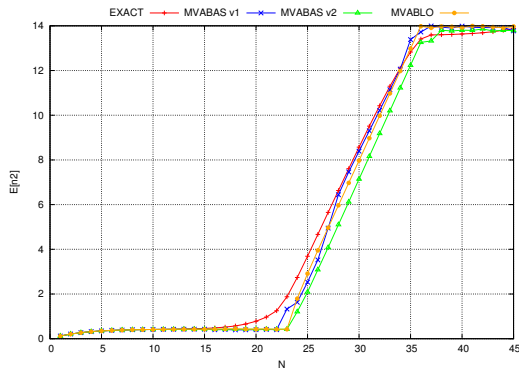
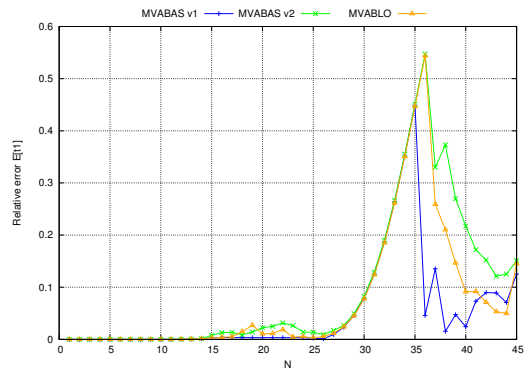
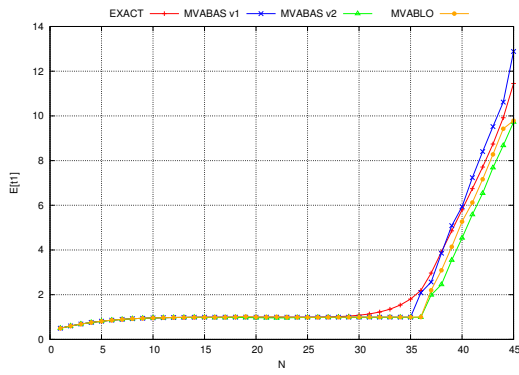
Network 9

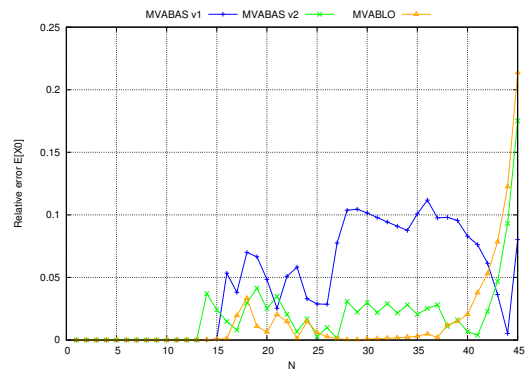
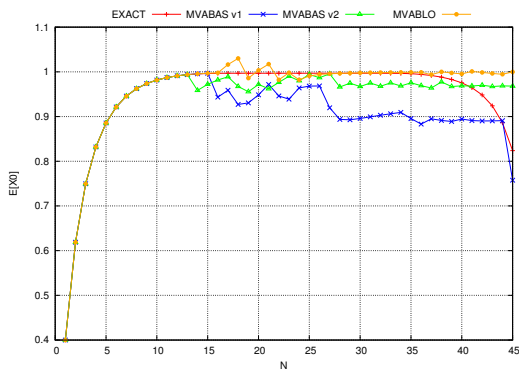
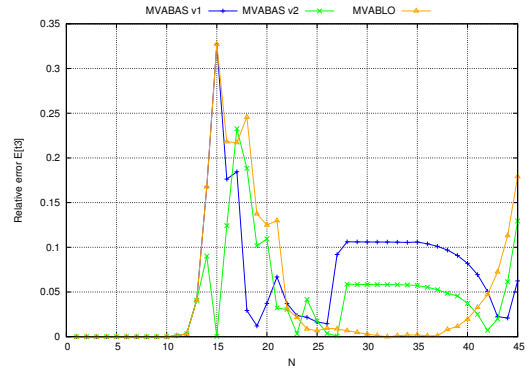
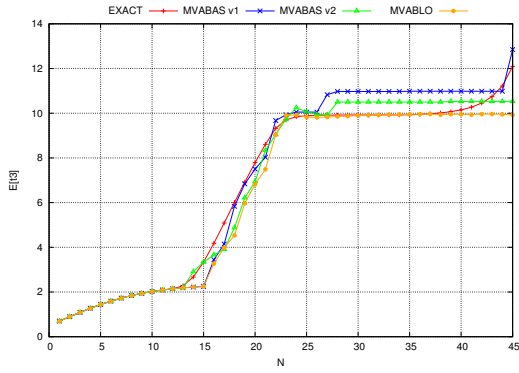
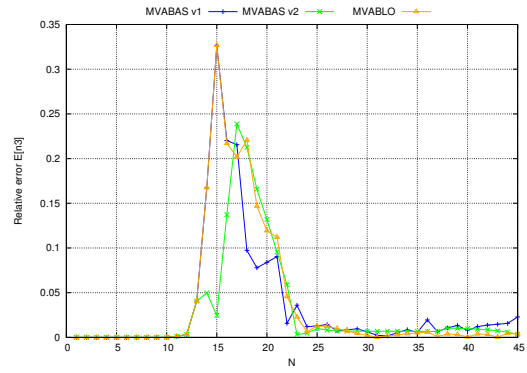
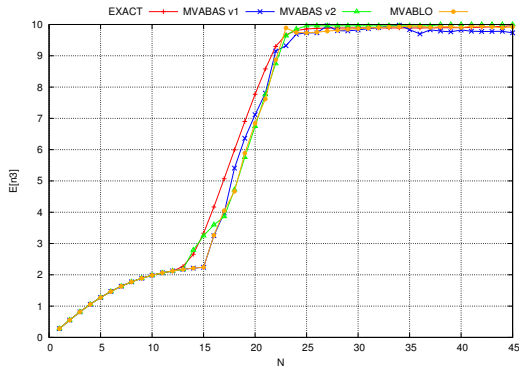
	B	$E[t_s]$
Queue 0	12	1.0
Queue 1	10	0.5
Queue 2	14	0.3
Queue 3	10	0.7

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







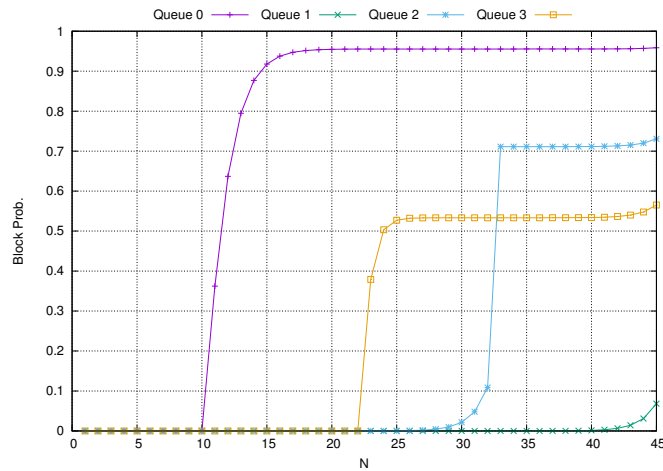


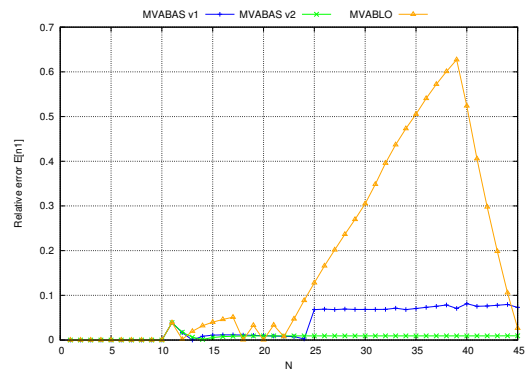
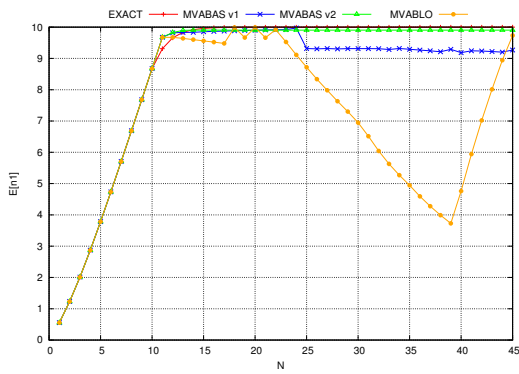
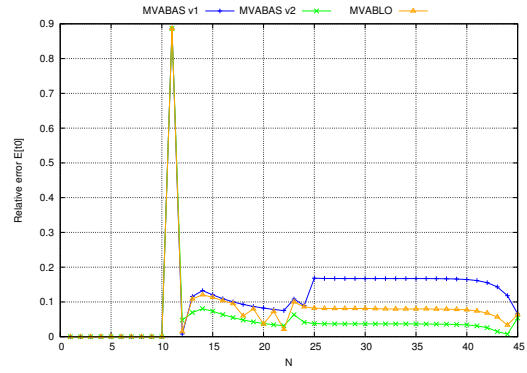
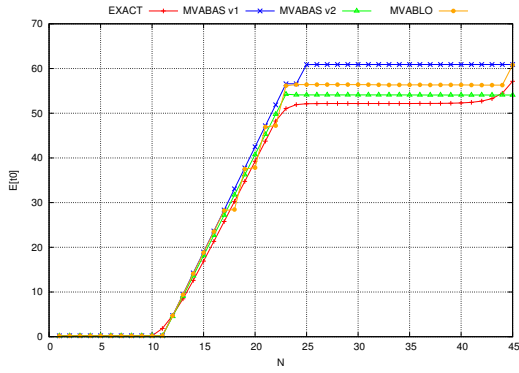
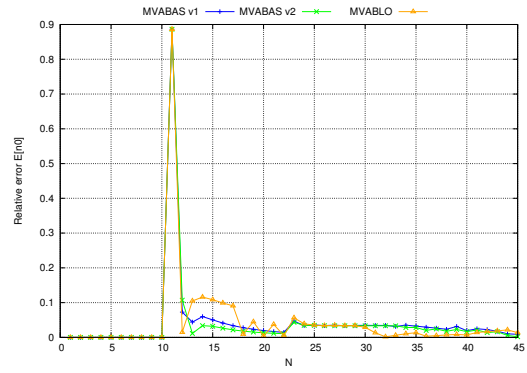
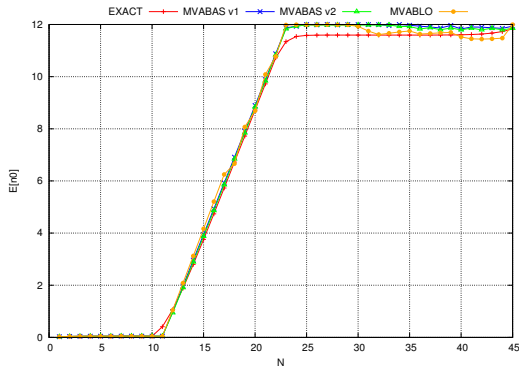
Network 9			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.065	0.065	0.052
e_m	0.03	0.02	0.01
e_M	0.12	0.14	0.11
err_M	0.67	0.774	0.773

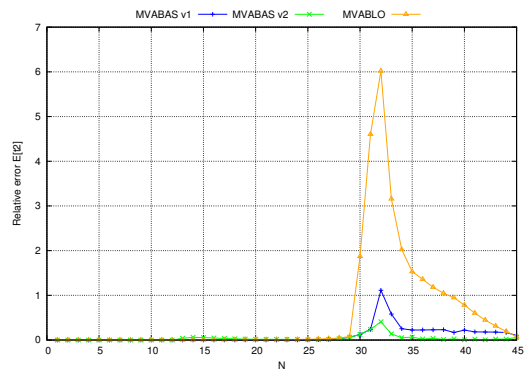
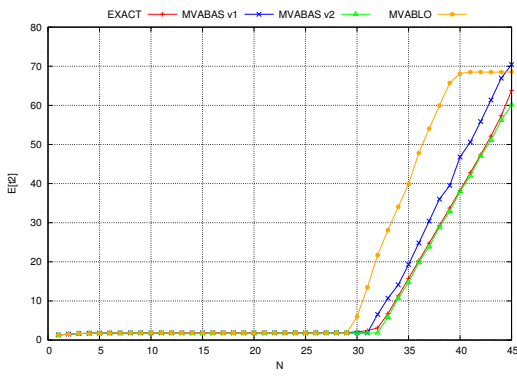
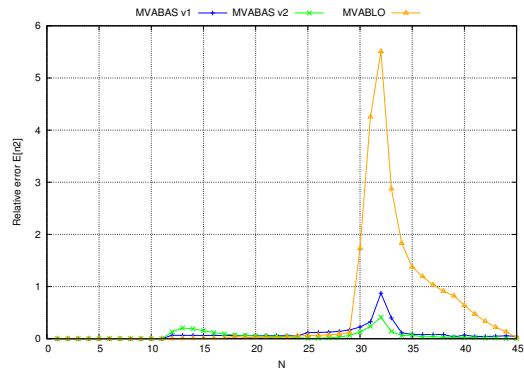
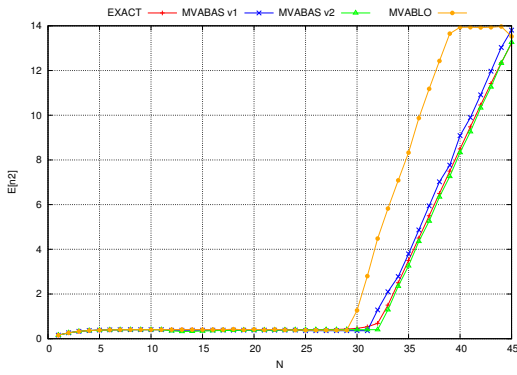
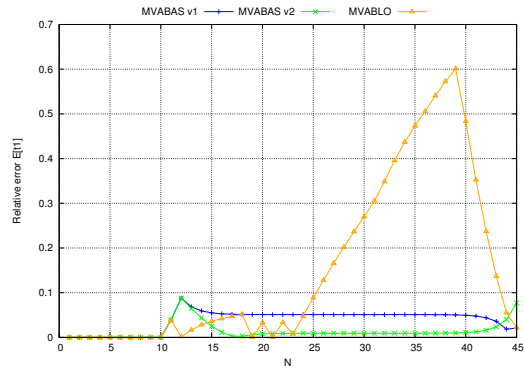
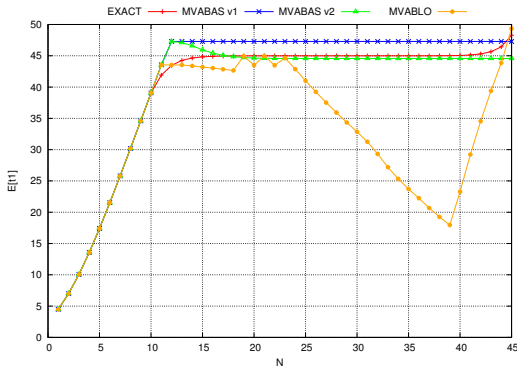
Network 10

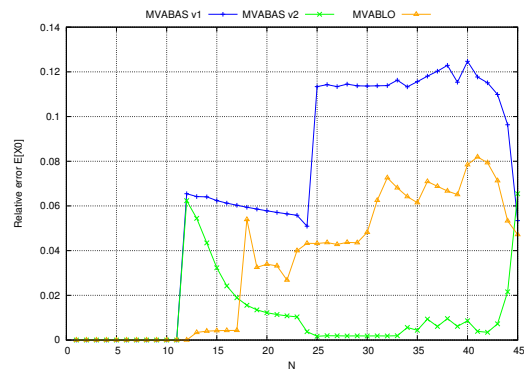
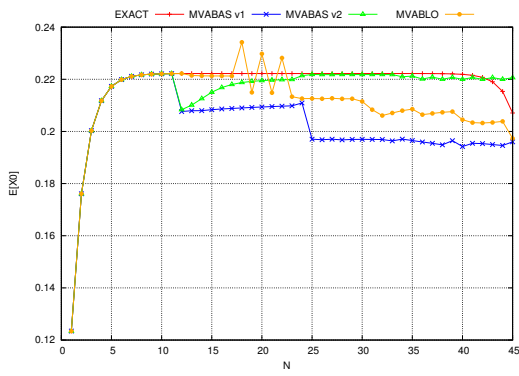
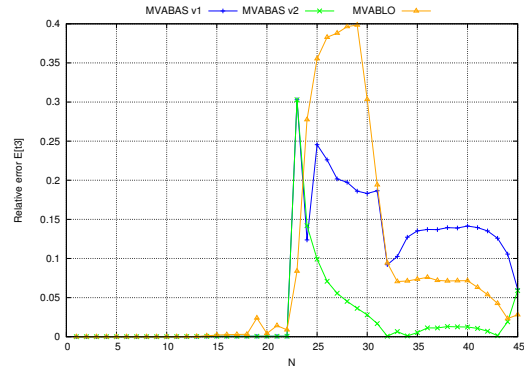
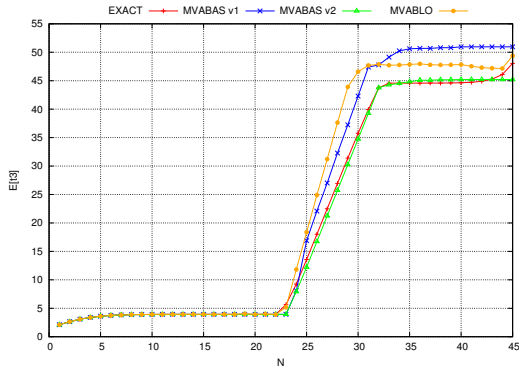
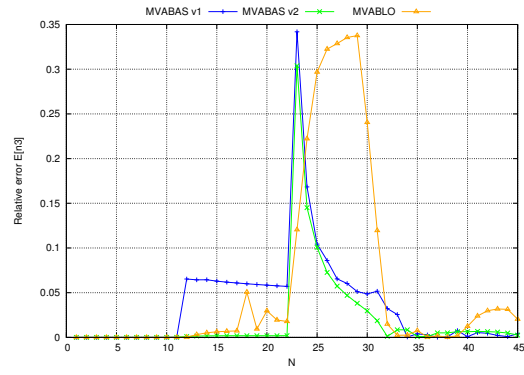
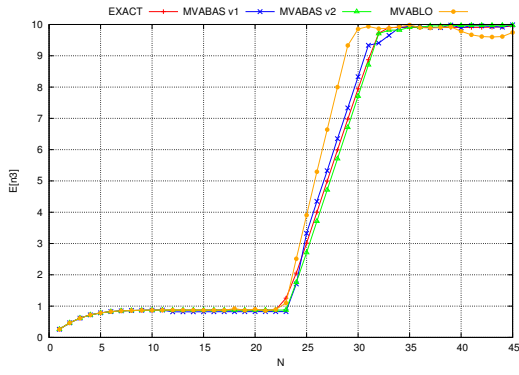
	B	$E[t_s]$
Queue 0	12	0.2
Queue 1	10	4.5
Queue 2	14	2.3
Queue 3	10	2.1

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







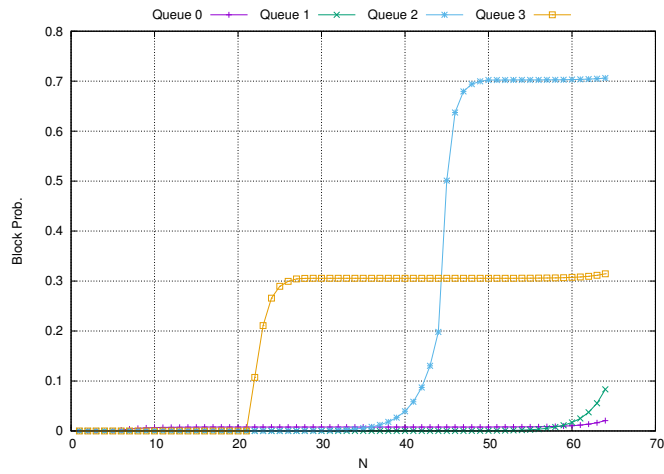


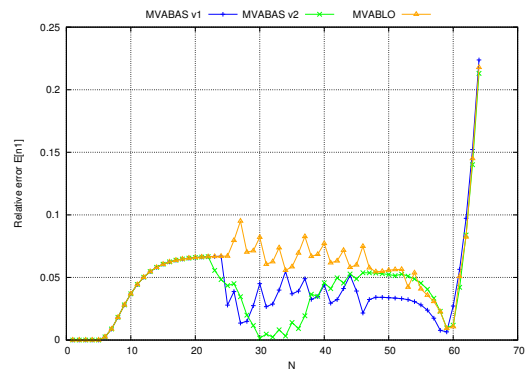
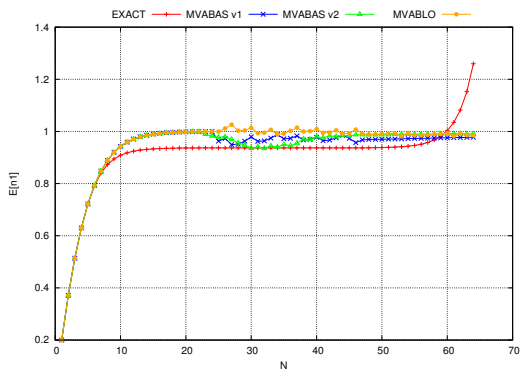
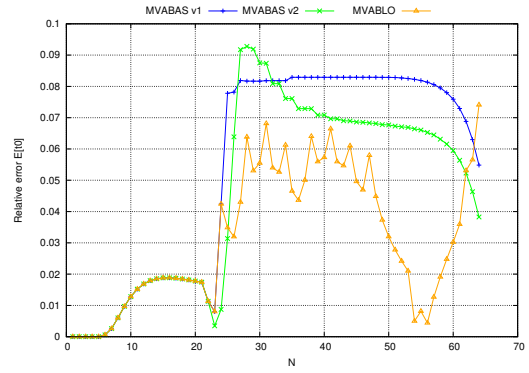
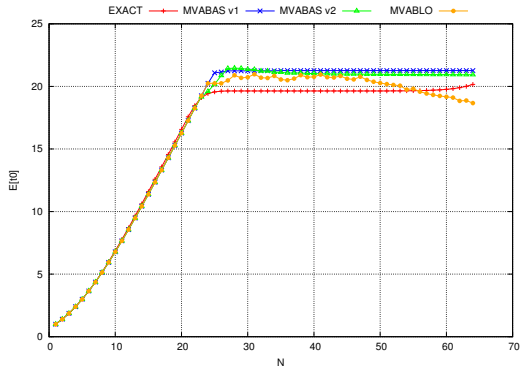
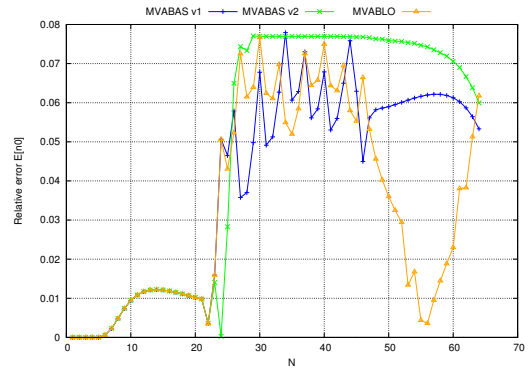
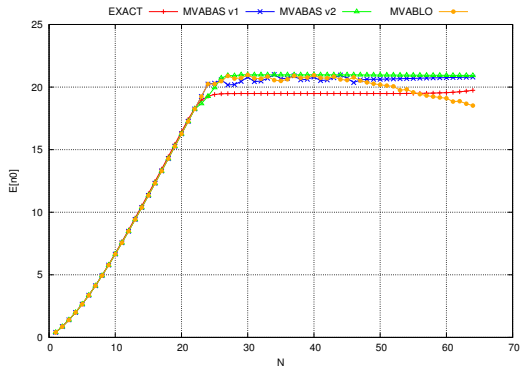
Network 10			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.06	0.02	0.15
e_m	0.037	0.007	0.034
e_M	0.12	0.05	0.58
err_M	1.11	0.88	6.01

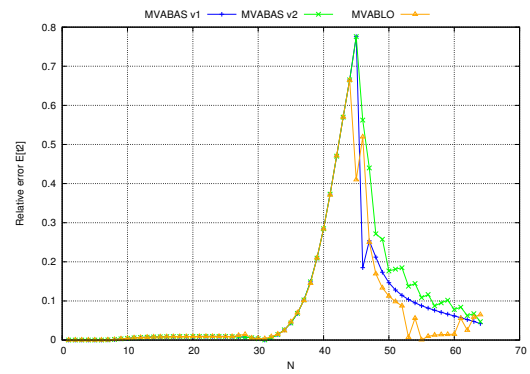
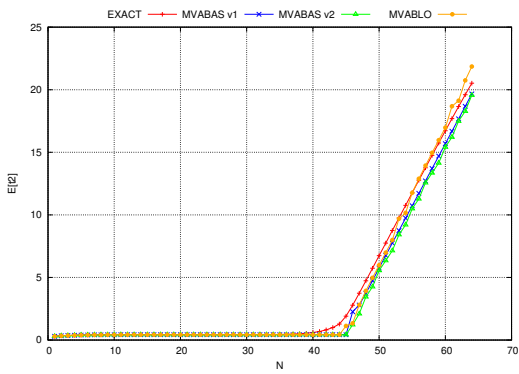
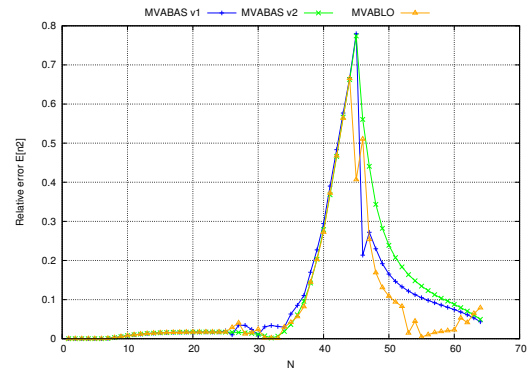
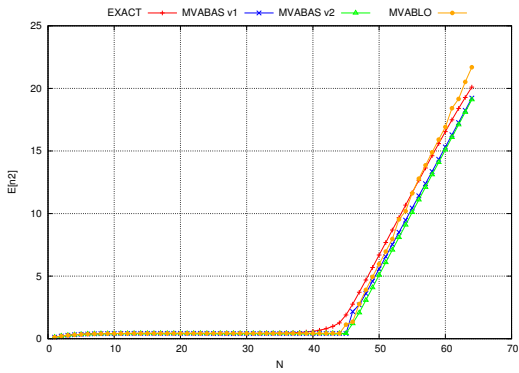
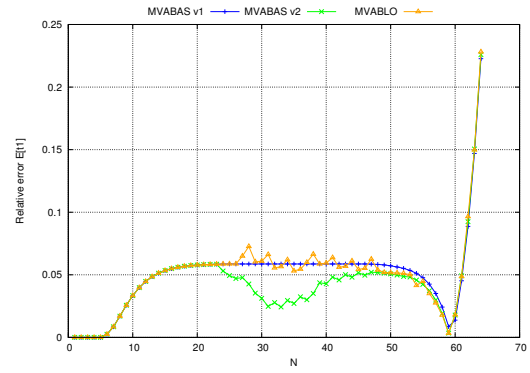
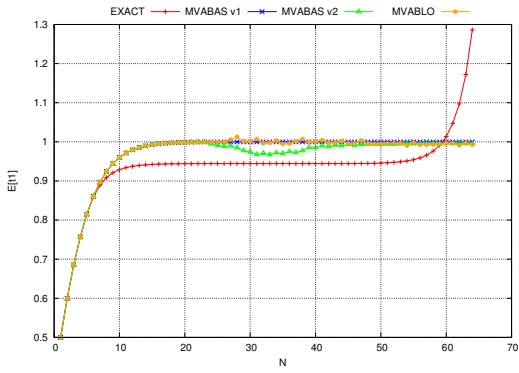
Network 11

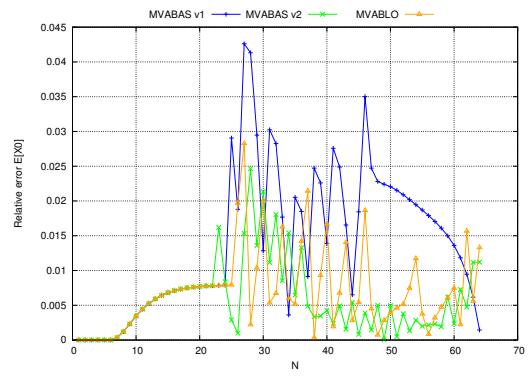
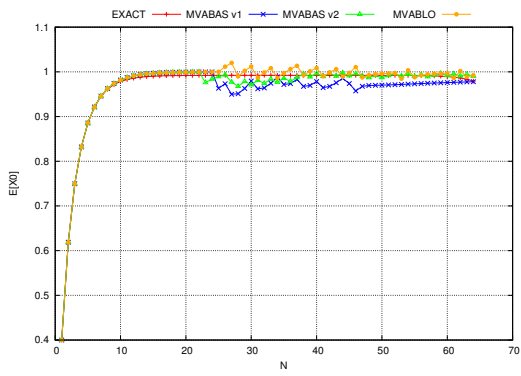
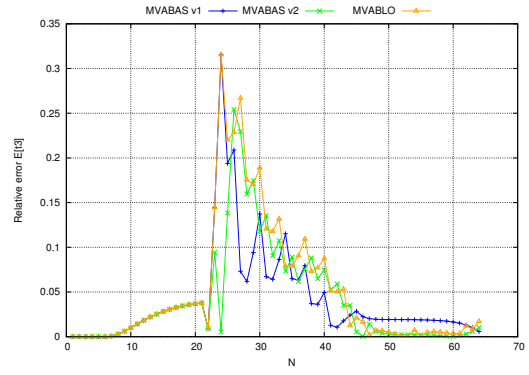
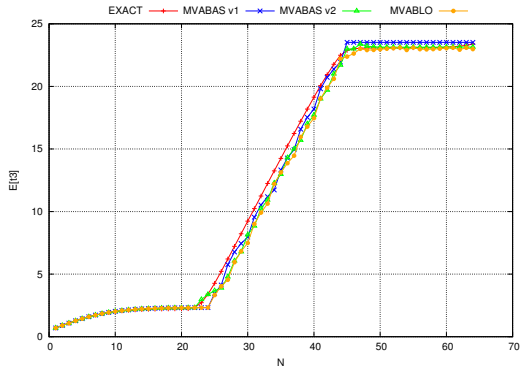
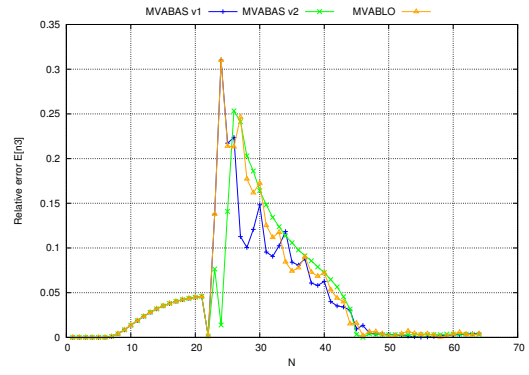
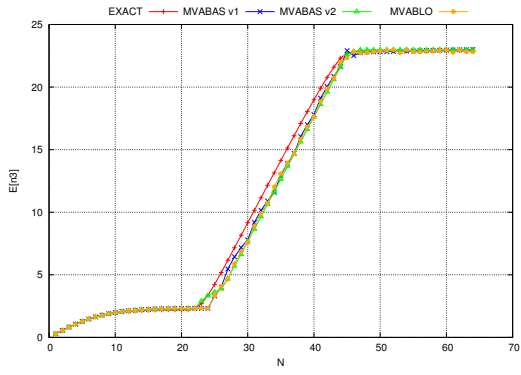
	B	$E[t_s]$
Queue 0	20	1.0
Queue 1	5	0.5
Queue 2	22	0.3
Queue 3	23	0.7

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







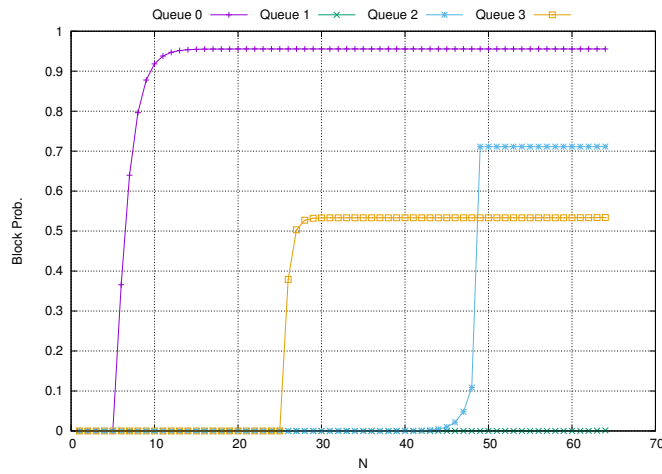


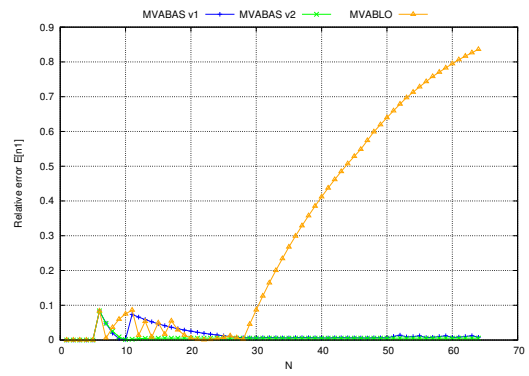
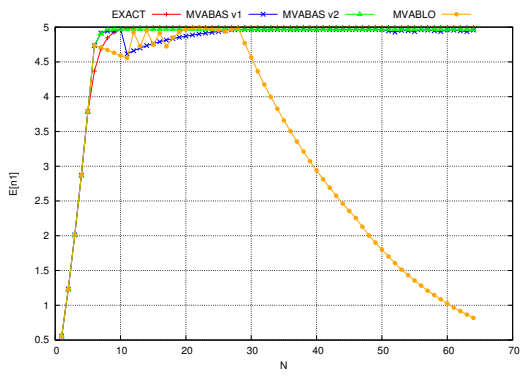
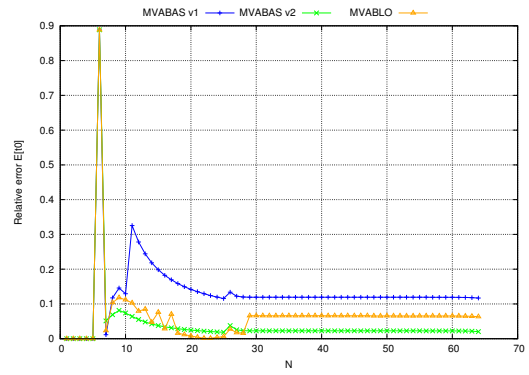
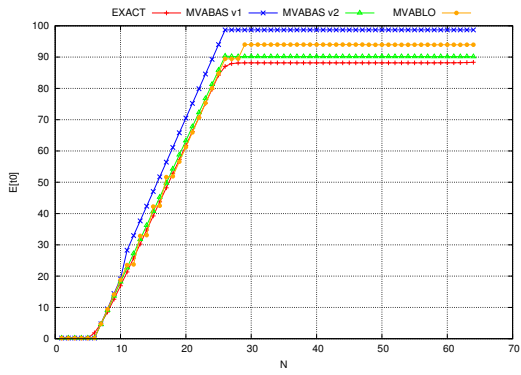
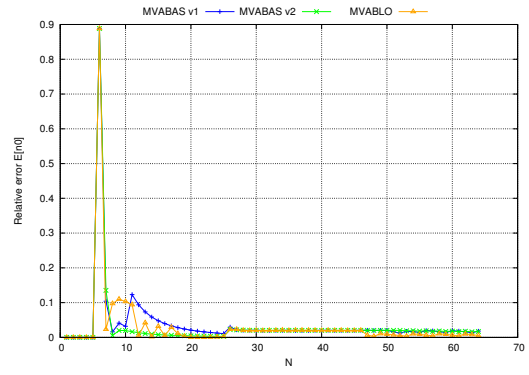
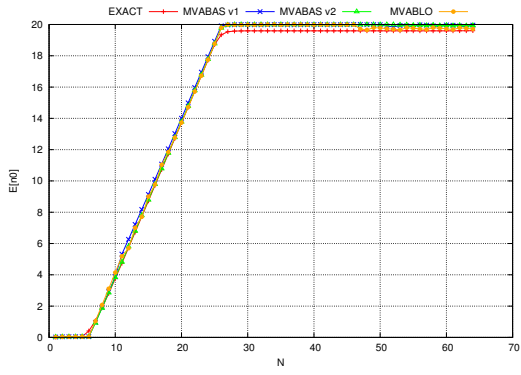
Network 11			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.0438	0.0432	0.0390
e_m	0.014	0.005	0.007
e_M	0.104	0.117	0.084
err_M	0.779	0.775	0.665

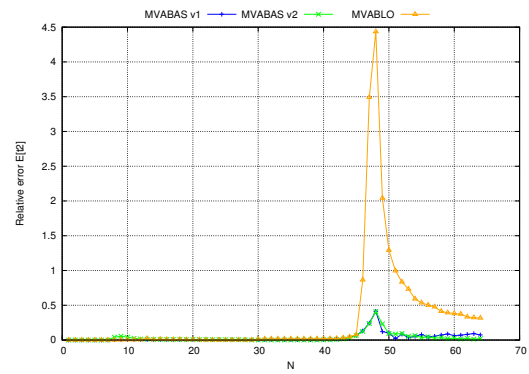
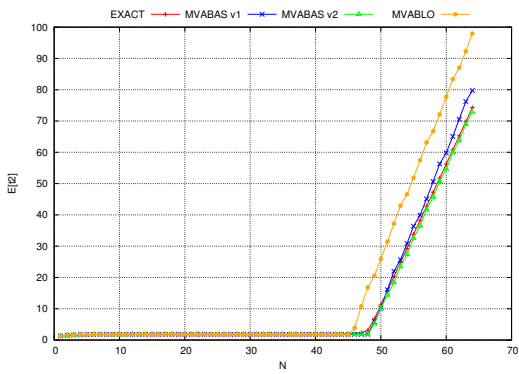
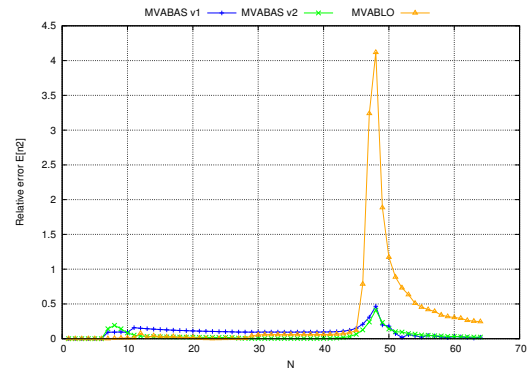
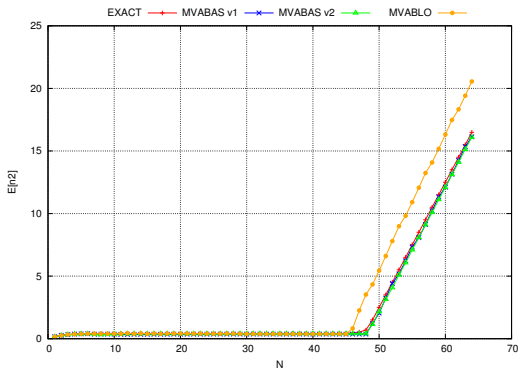
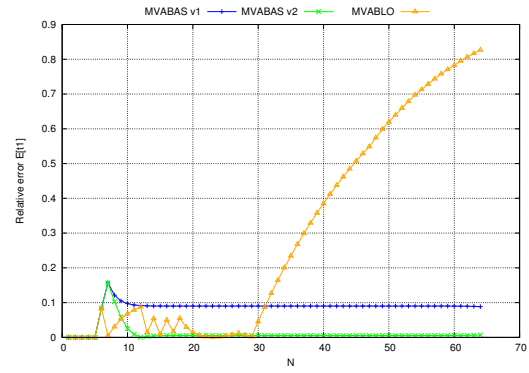
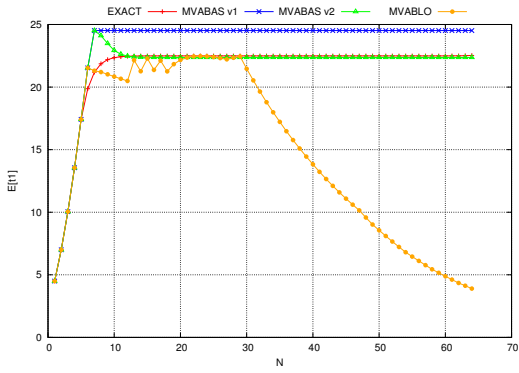
Network 12

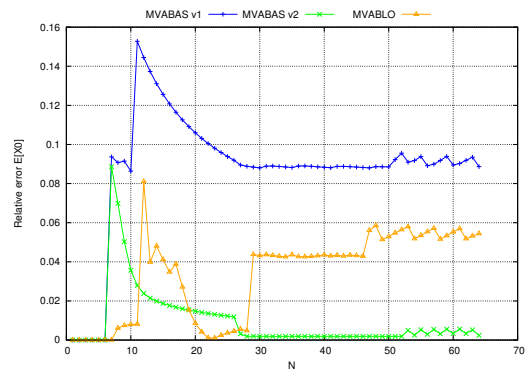
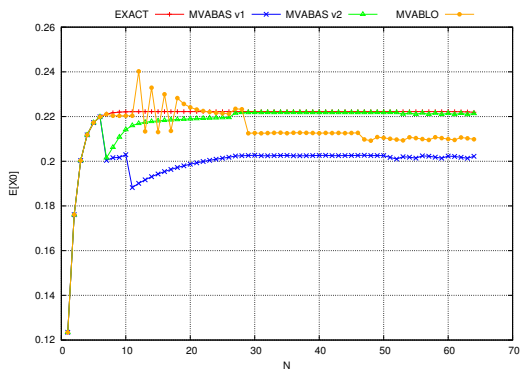
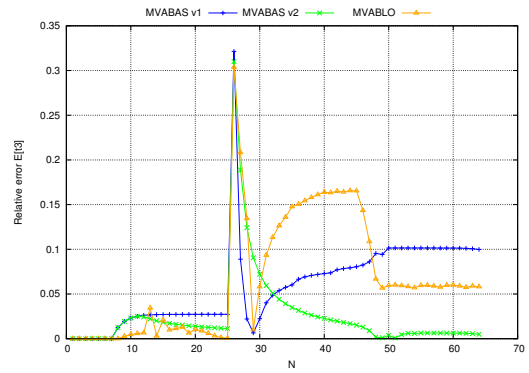
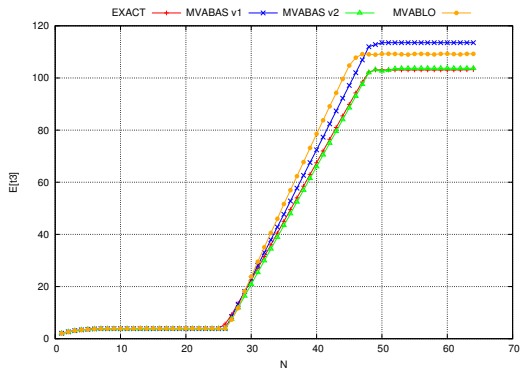
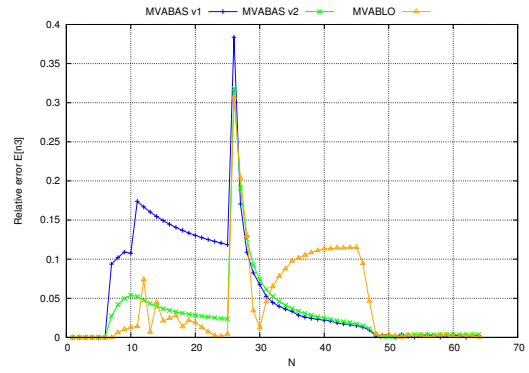
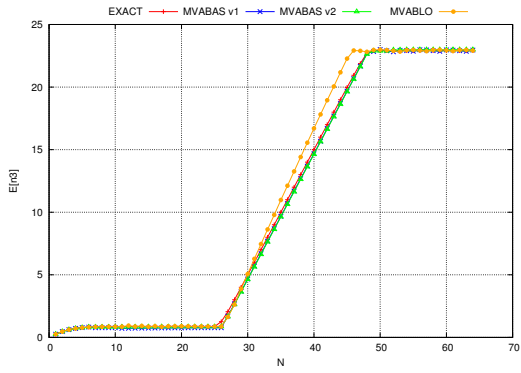
	B	$E[t_s]$
Queue 0	20	1.0
Queue 1	5	0.5
Queue 2	22	0.3
Queue 3	23	0.7

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







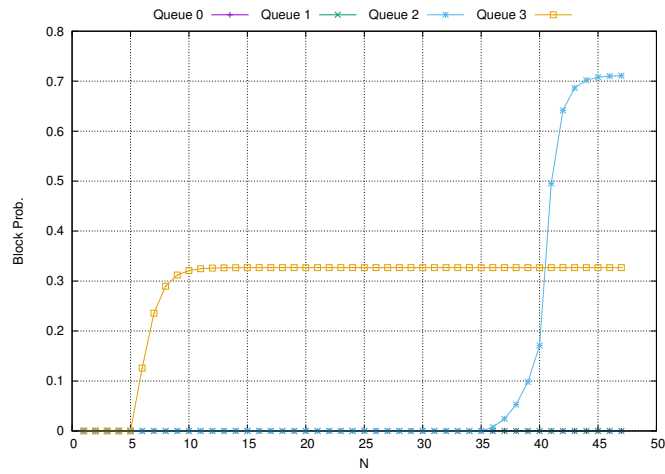


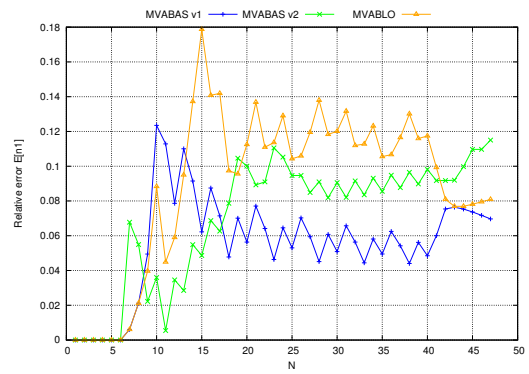
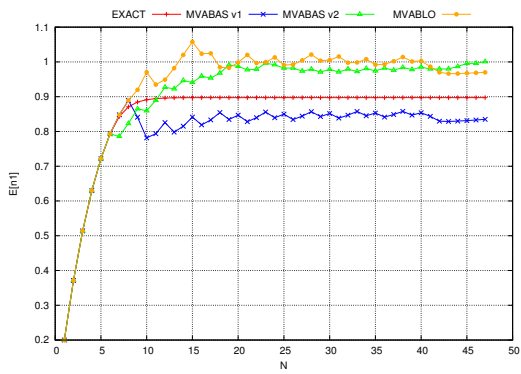
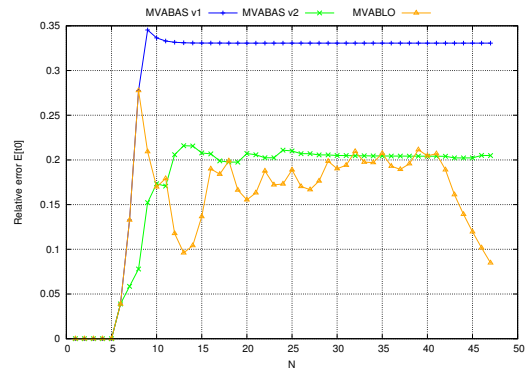
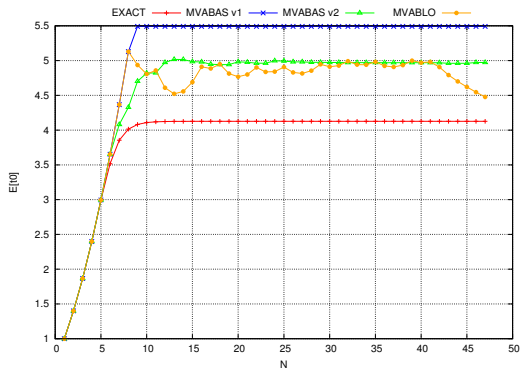
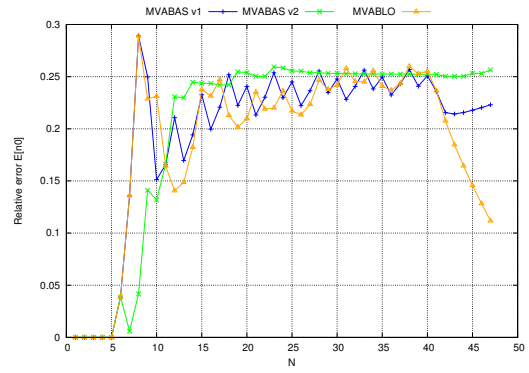
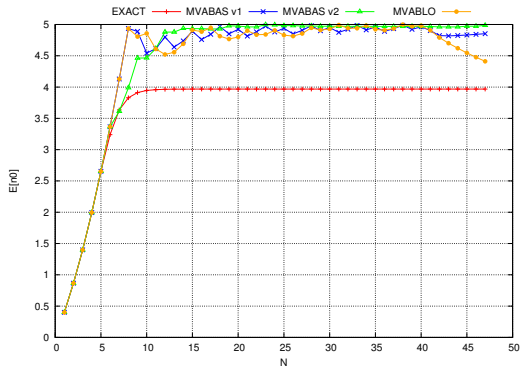
Network 12			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.07	0.02	0.12
e_m	0.015	0.007	0.031
e_M	0.13	0.04	0.30
err_M	0.88	0.88	4.43

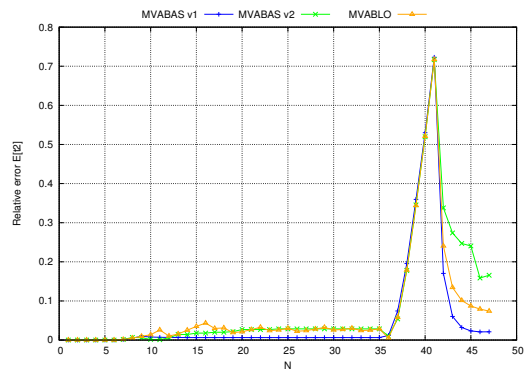
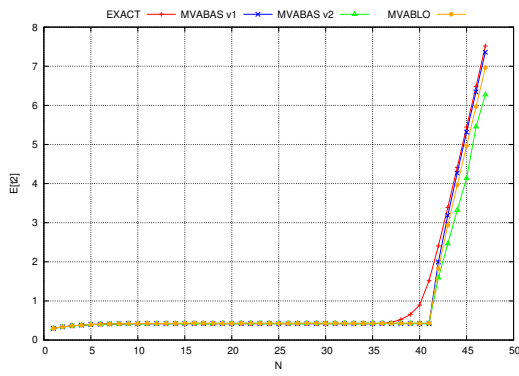
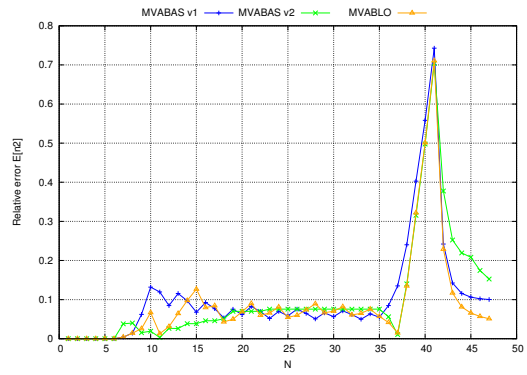
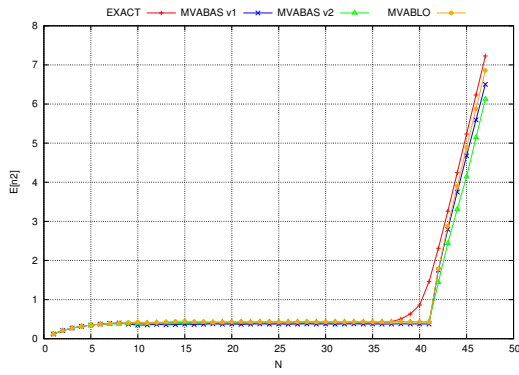
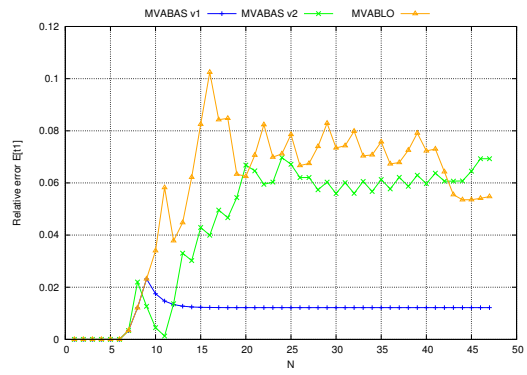
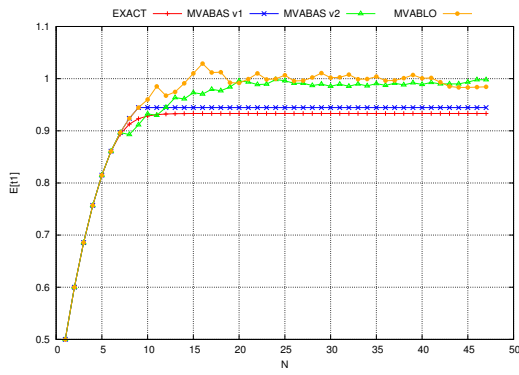
Network 13

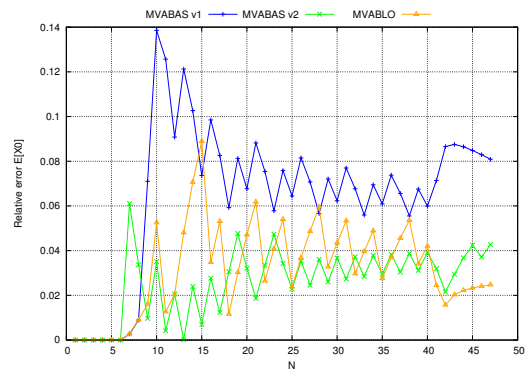
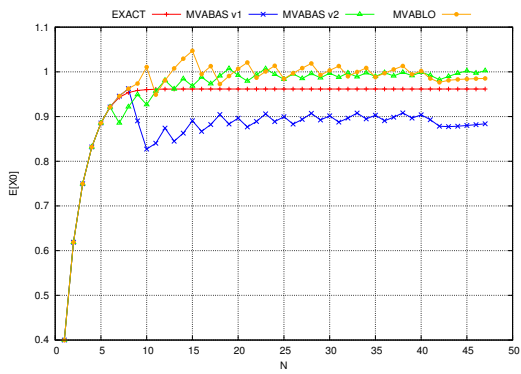
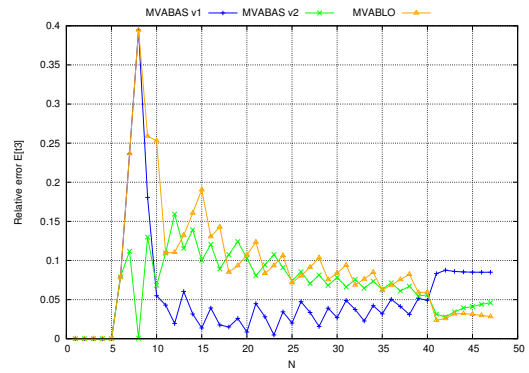
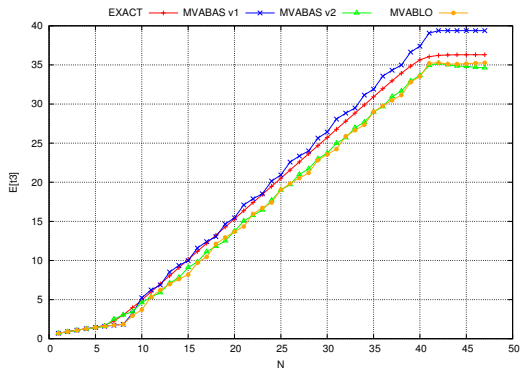
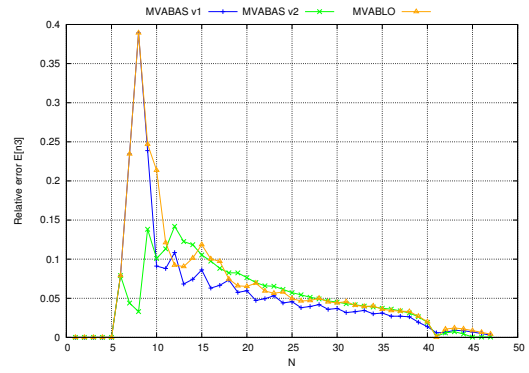
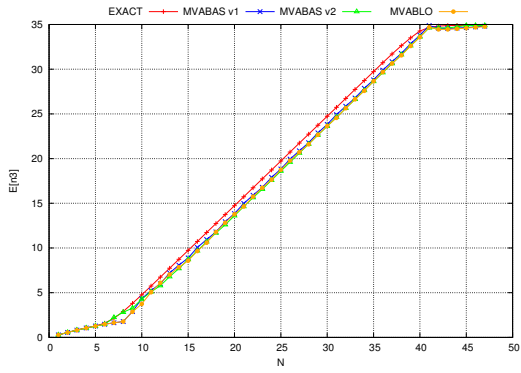
	B	$E[t_s]$
Queue 0	5	1.0
Queue 1	18	0.5
Queue 2	27	0.3
Queue 3	35	0.7

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







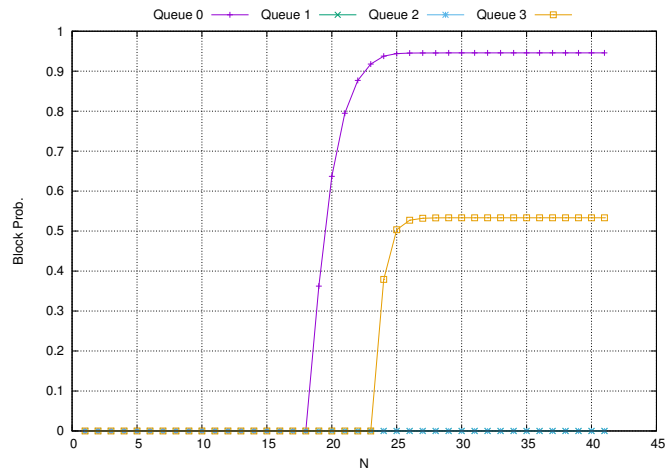


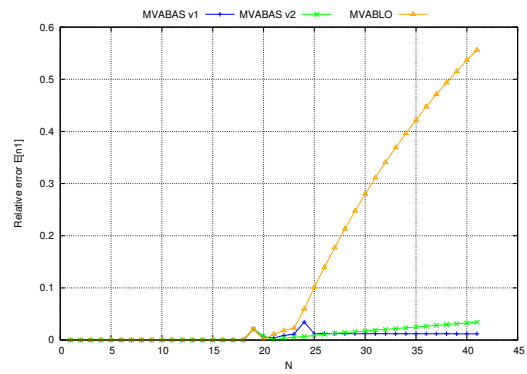
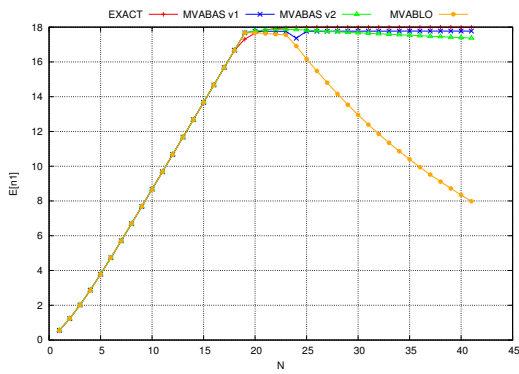
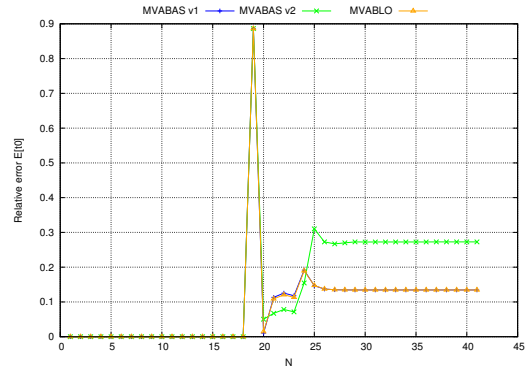
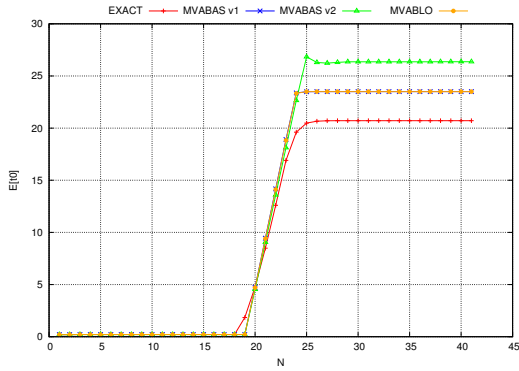
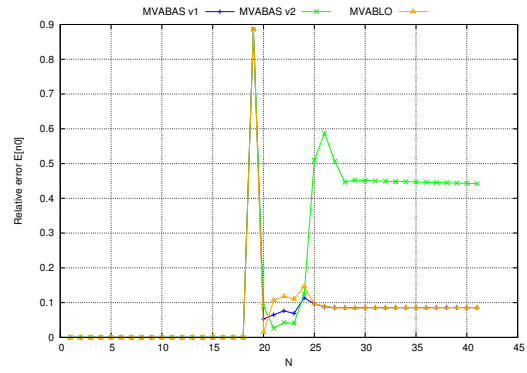
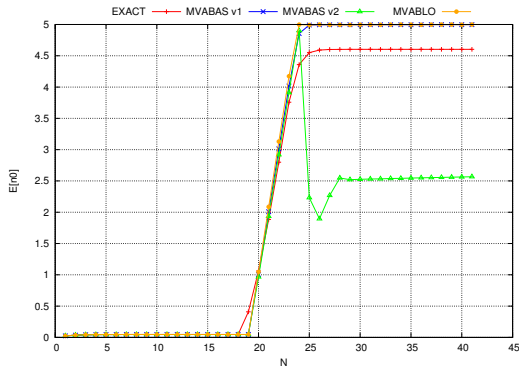
Network 13			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.089	0.074	0.077
e_m	0.010	0.026	0.031
e_M	0.28	0.20	0.18
err_M	0.742	0.716	0.717

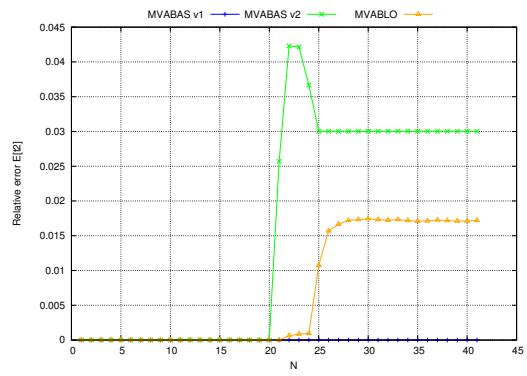
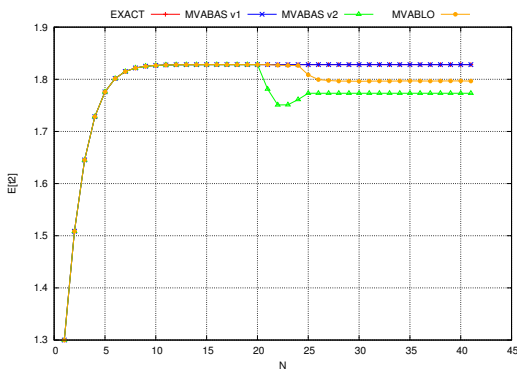
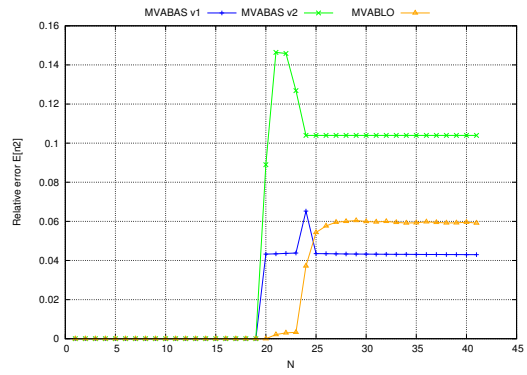
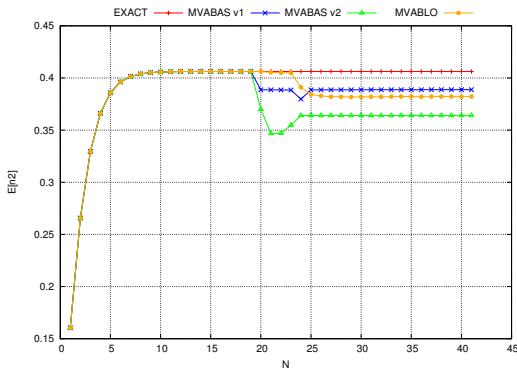
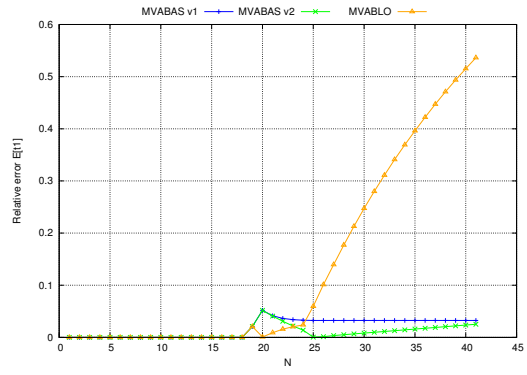
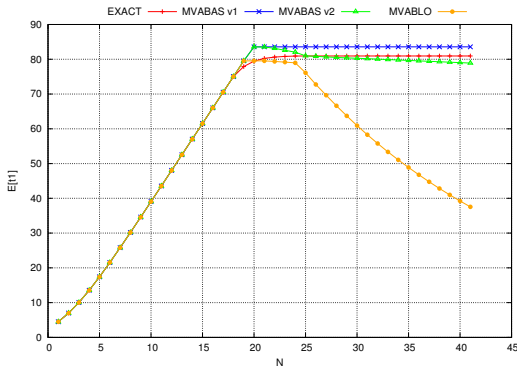
Network 14

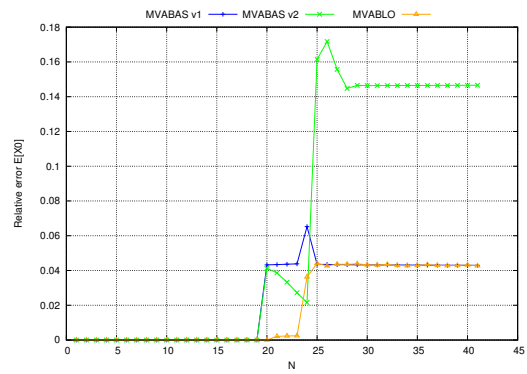
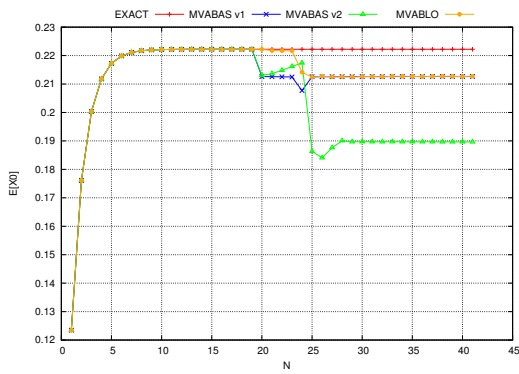
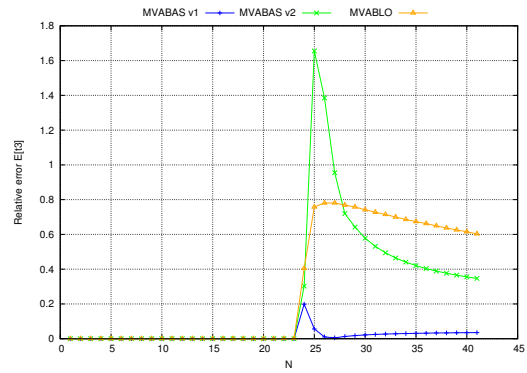
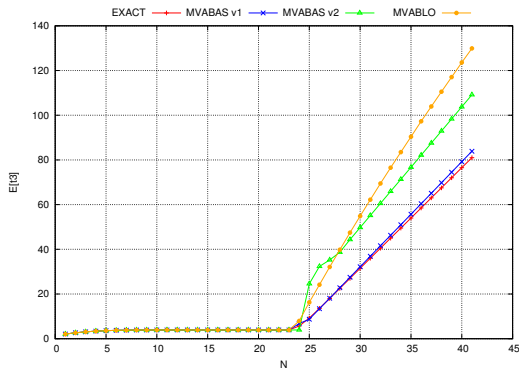
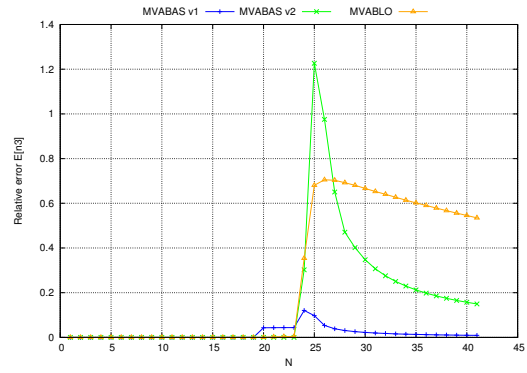
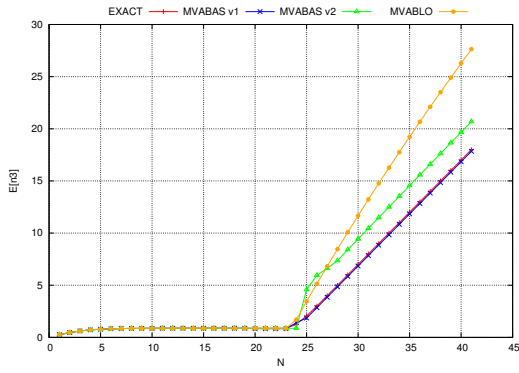
	B	$E[t_s]$
Queue 0	5	0.2
Queue 1	18	4.5
Queue 2	27	1.3
Queue 3	35	2.1

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







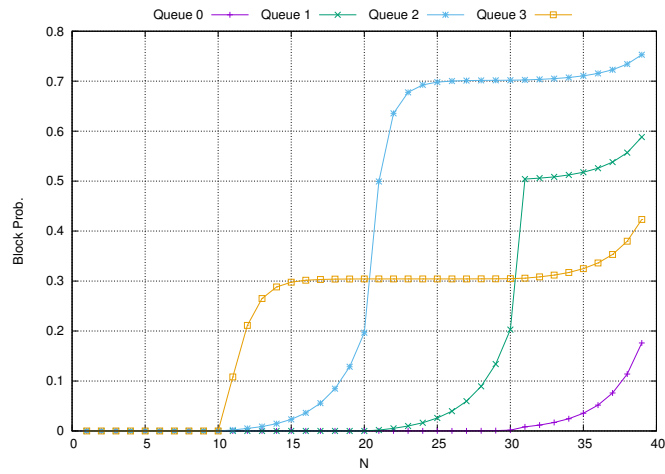


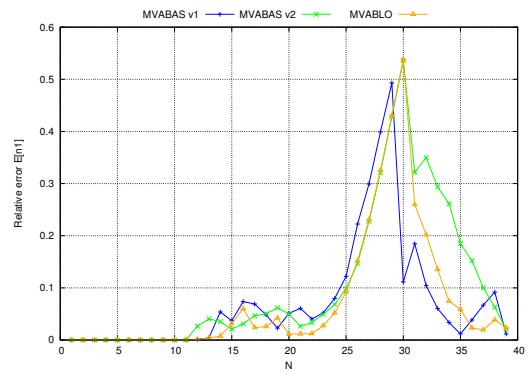
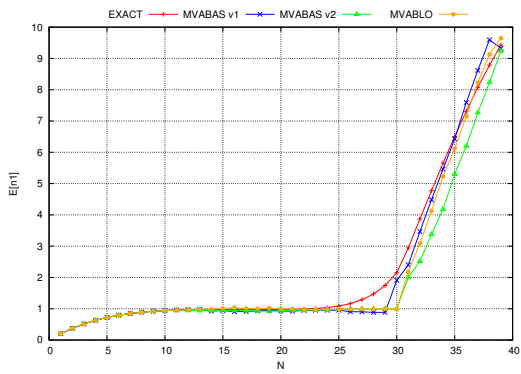
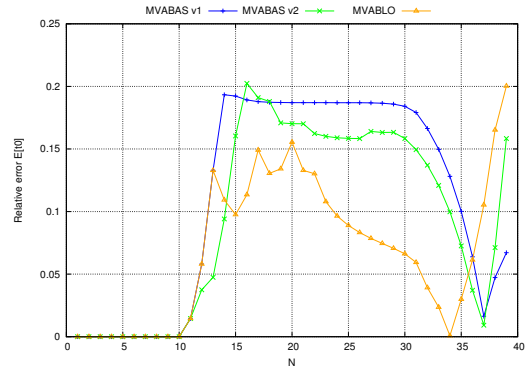
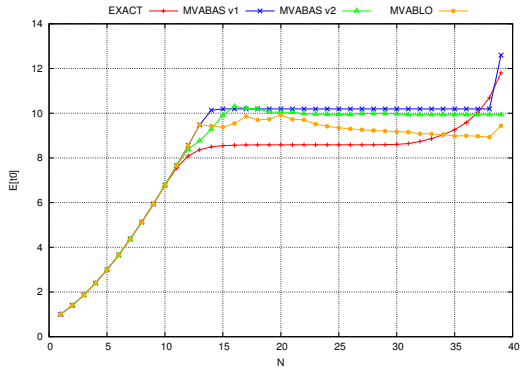
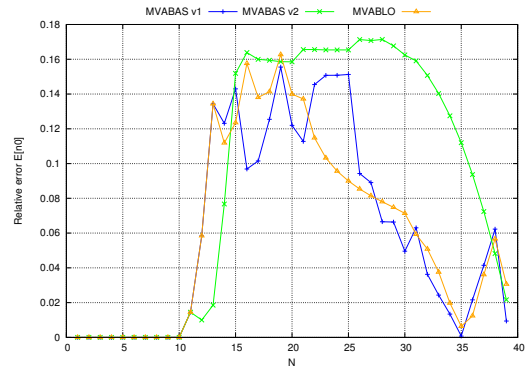
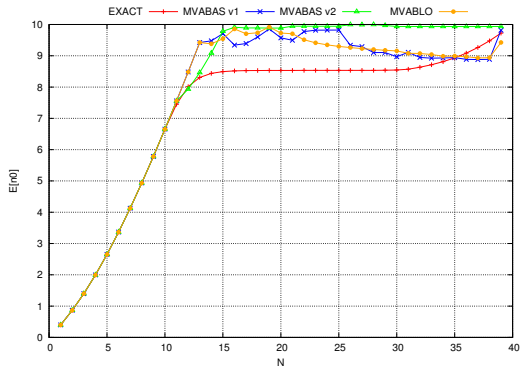
Network 14			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.028	0.095	0.093
e_m	$3.20 \cdot 10^{-7}$	0.0097	0.0069
e_M	0.09	0.26	0.29
err_M	0.886	1.655	0.886

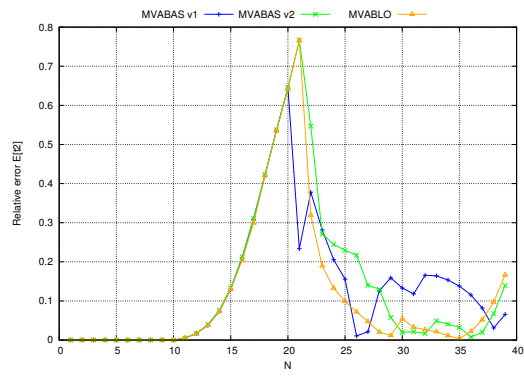
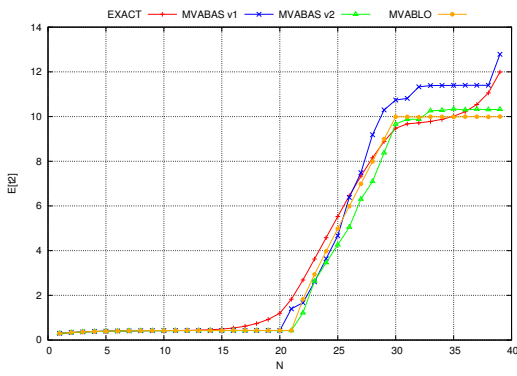
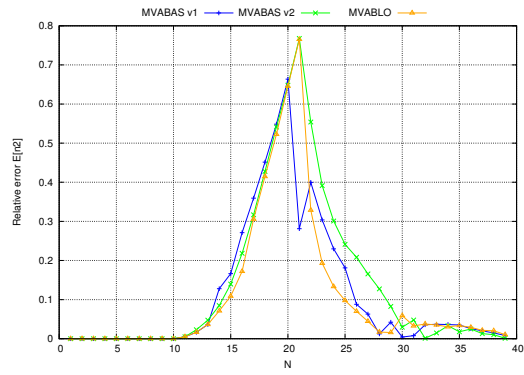
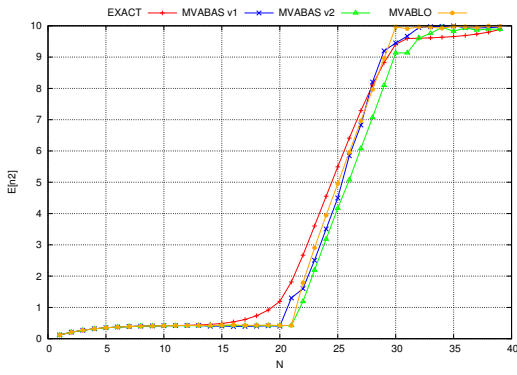
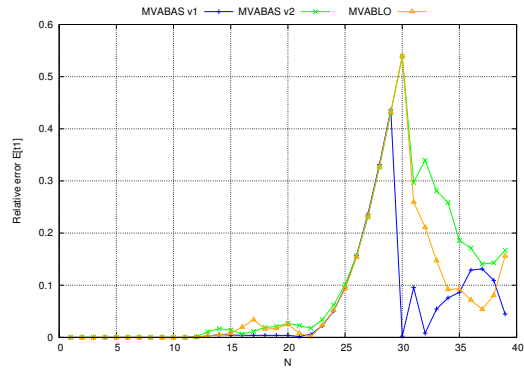
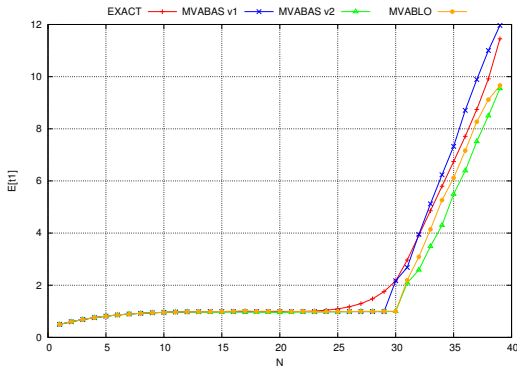
Network 15

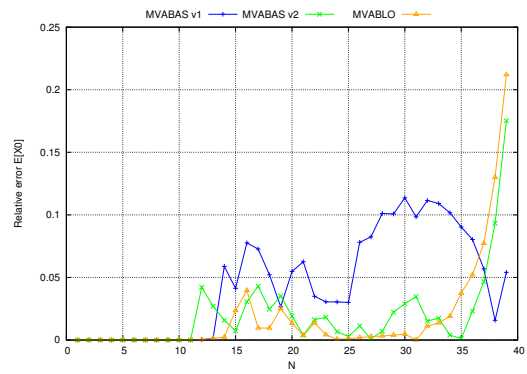
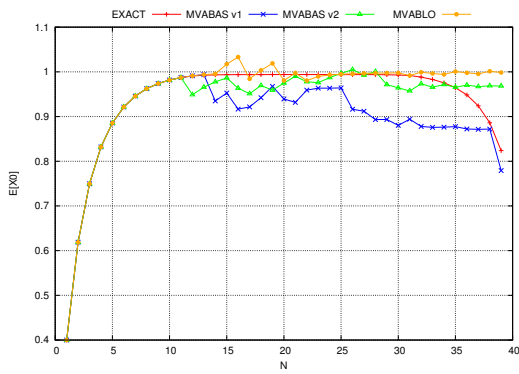
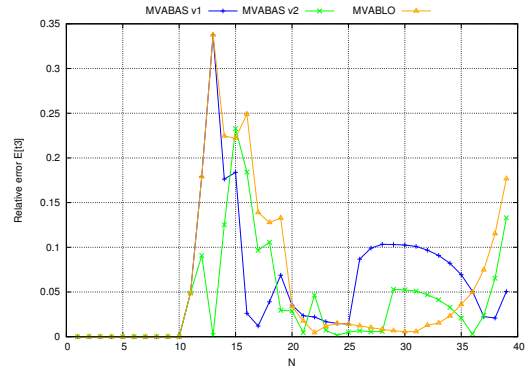
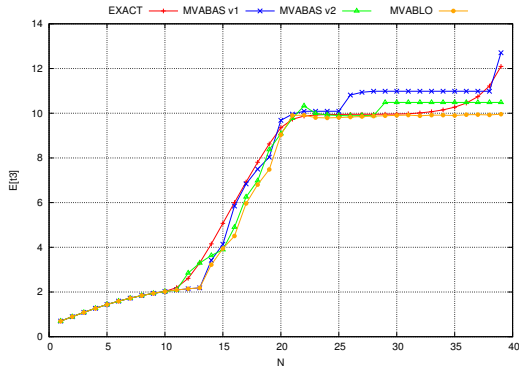
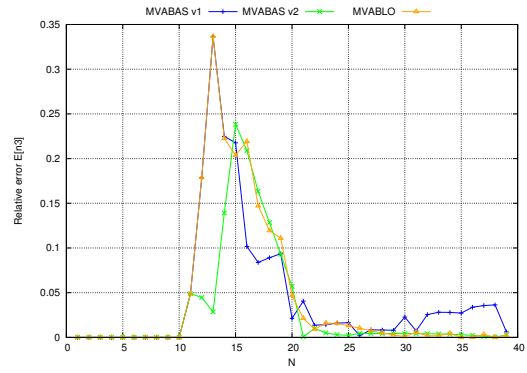
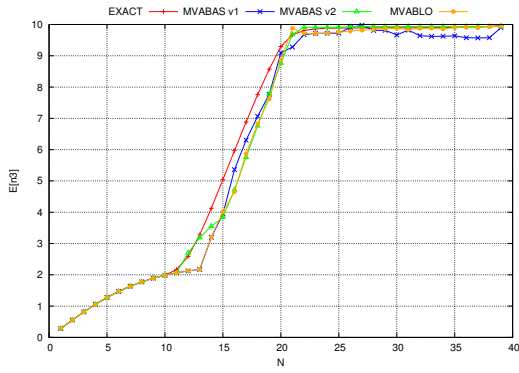
	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.5
Queue 2	10	0.3
Queue 3	10	0.7

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







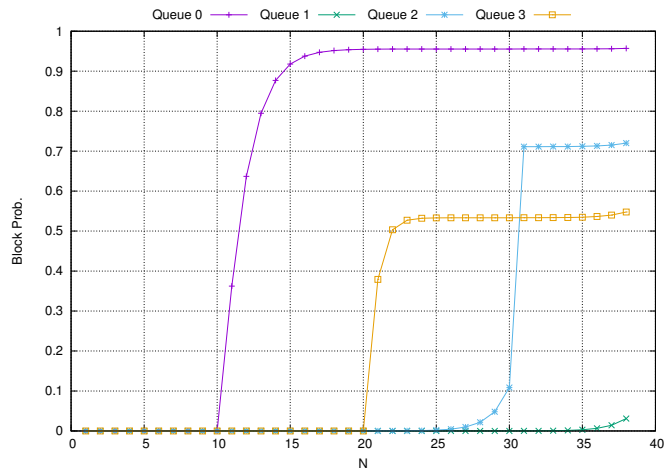


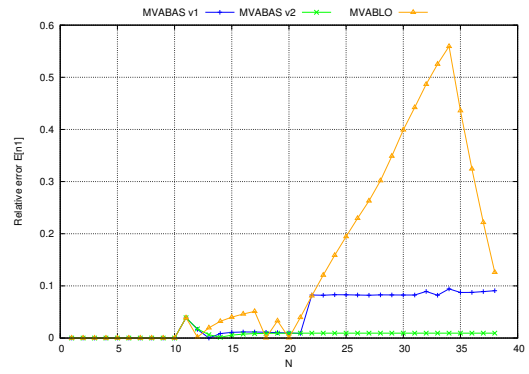
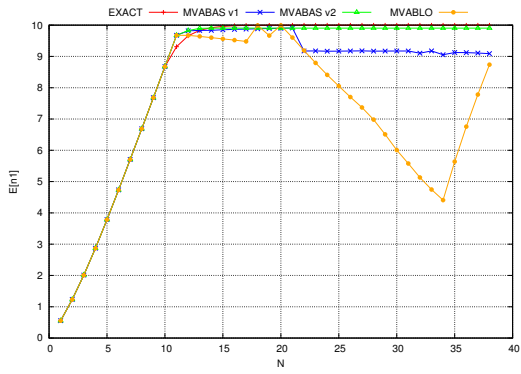
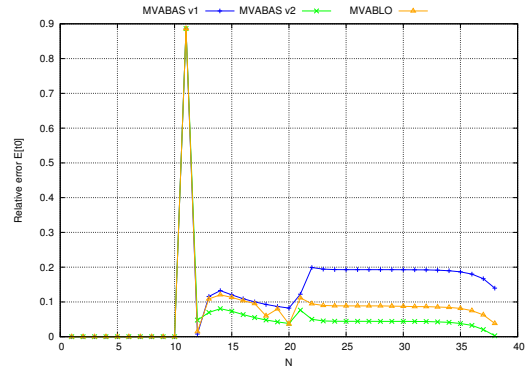
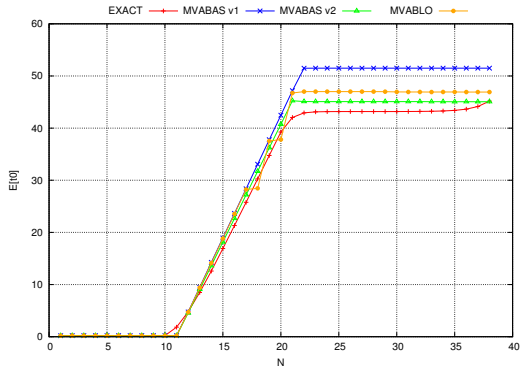
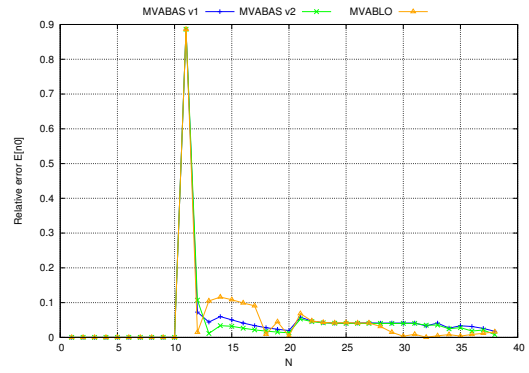
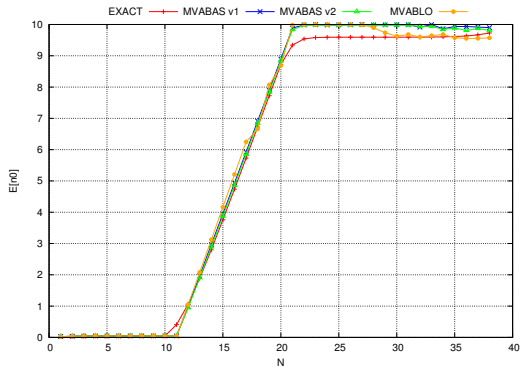
Network 15			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.069	0.068	0.057
e_m	0.045	0.019	0.018
e_M	0.13	0.14	0.11
err_M	0.66	0.76	0.76

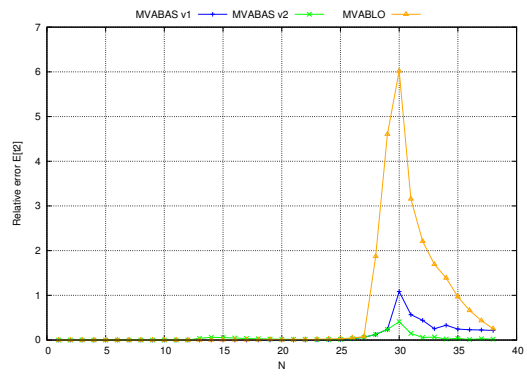
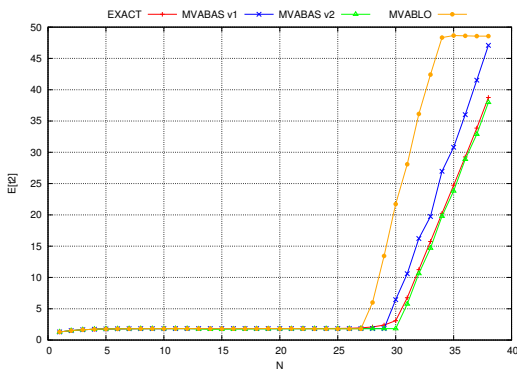
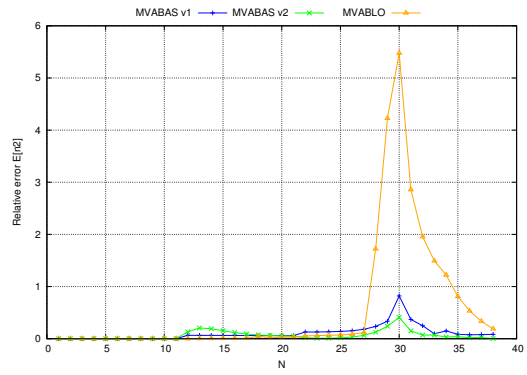
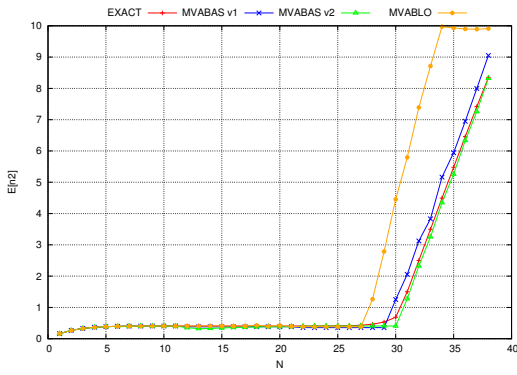
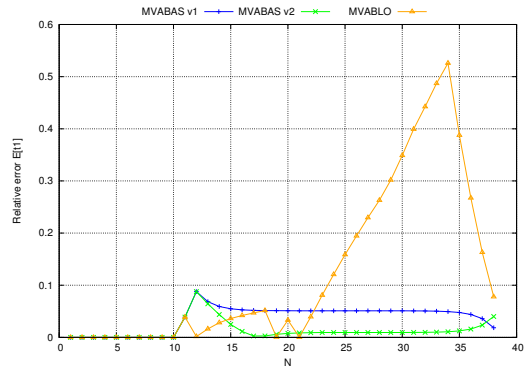
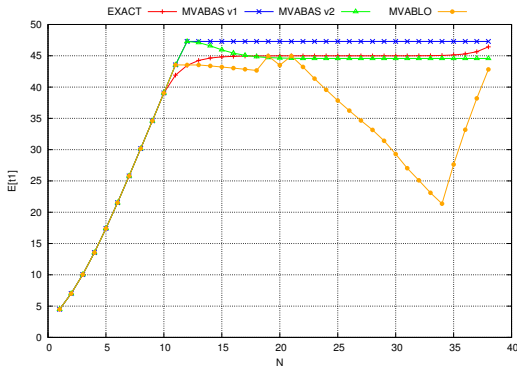
Network 16

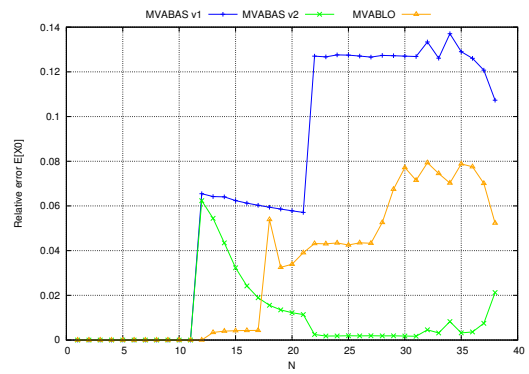
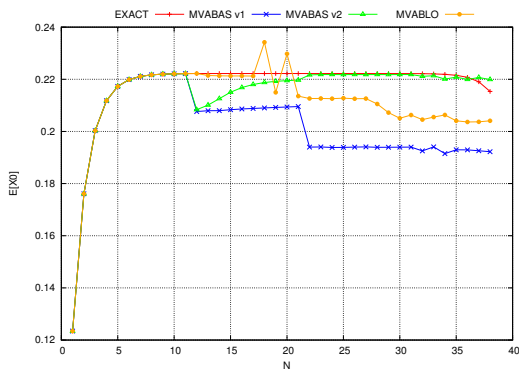
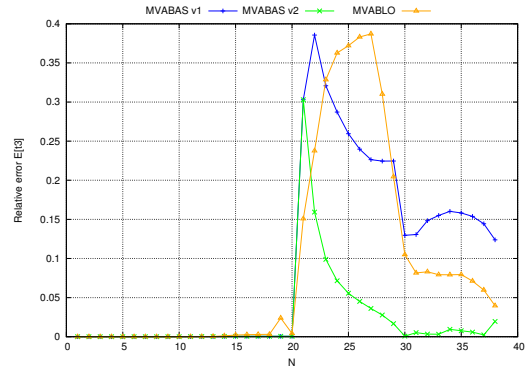
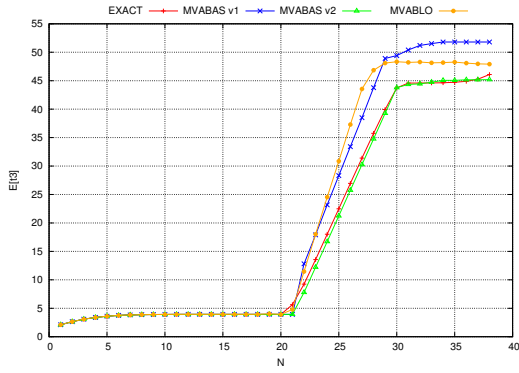
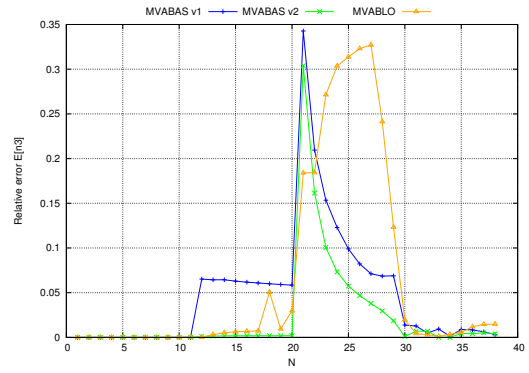
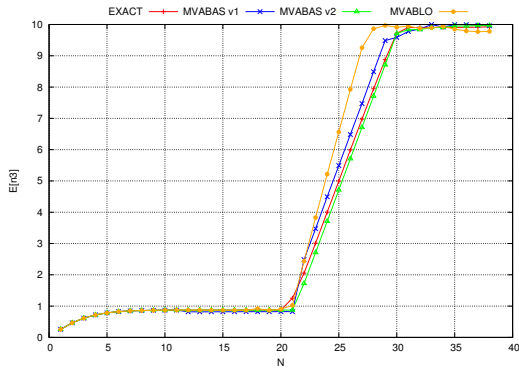
	B	$E[t_s]$
Queue 0	10	0.2
Queue 1	10	4.5
Queue 2	10	1.3
Queue 3	10	2.1

P			
0	1.0	0	0
0	0	1.0	0
0	0	0	1.0
1.0	0	0	0







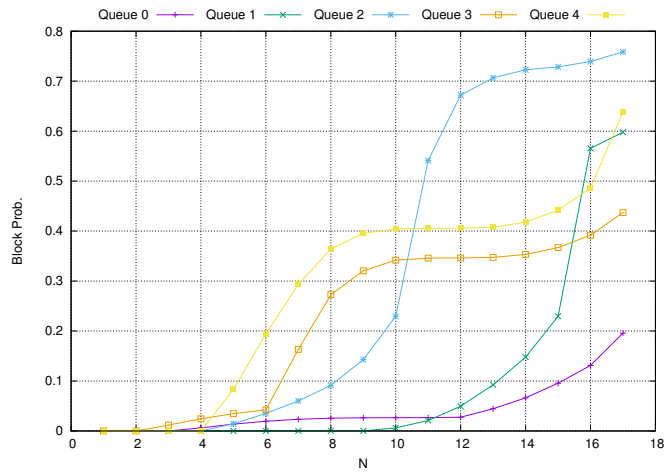


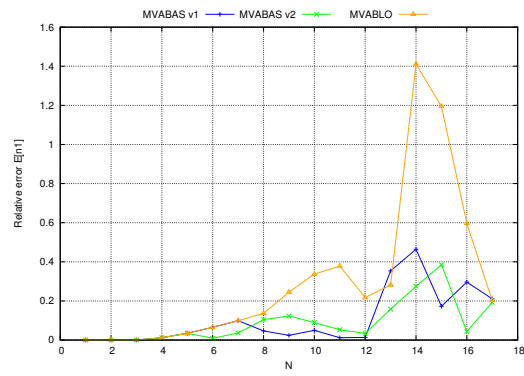
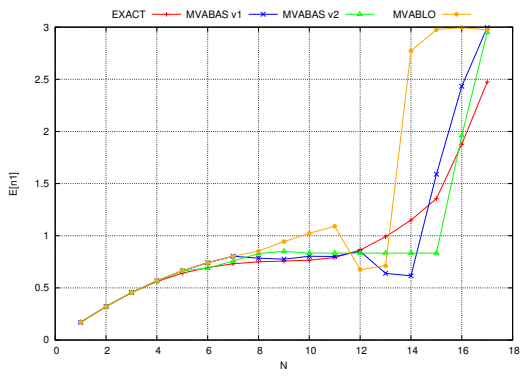
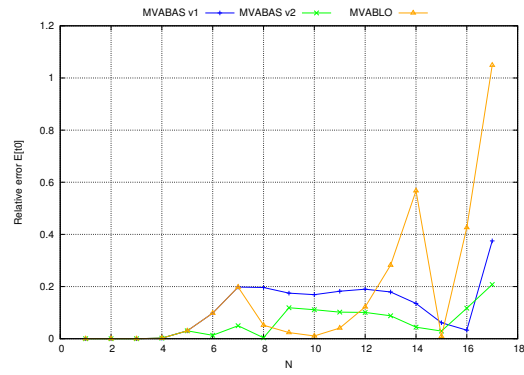
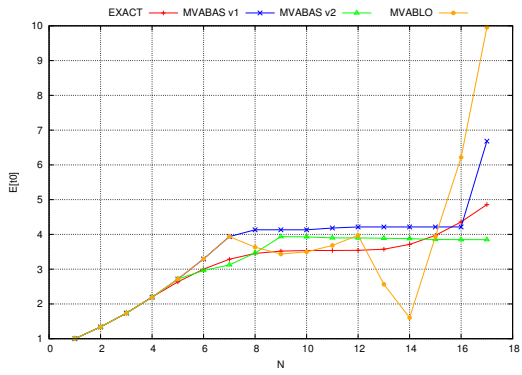
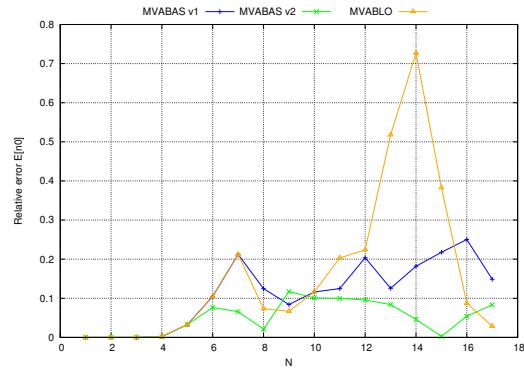
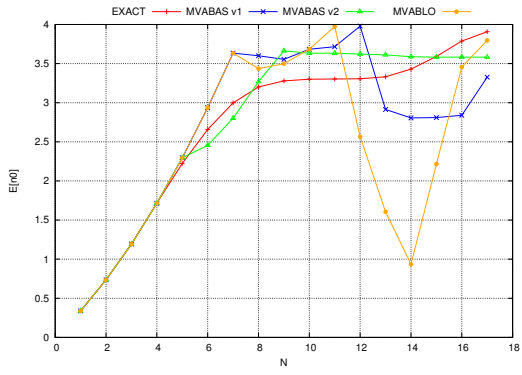
Network 16			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.07	0.02	0.15
e_m	0.037	0.007	0.031
e_M	0.13	0.06	0.61
err_M	1.08	0.88	6.01

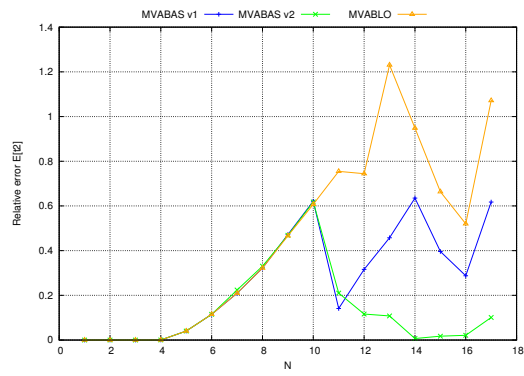
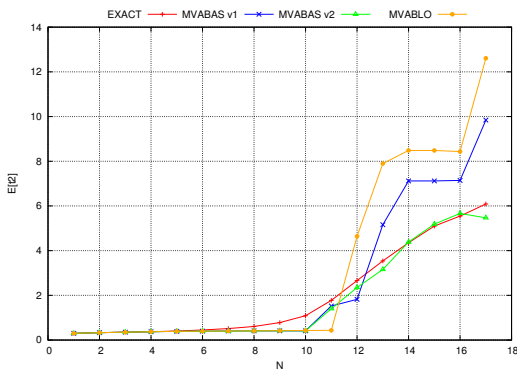
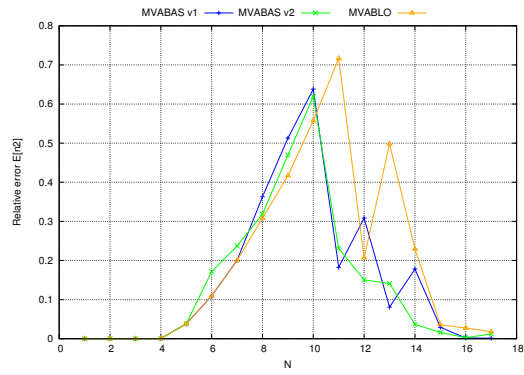
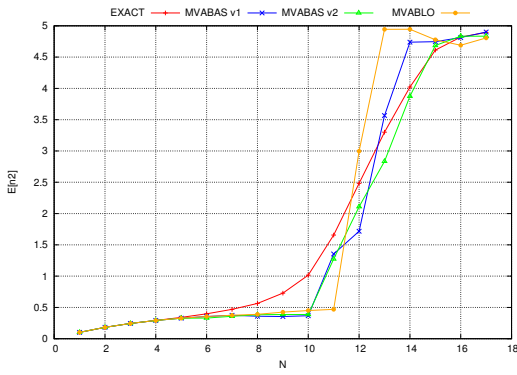
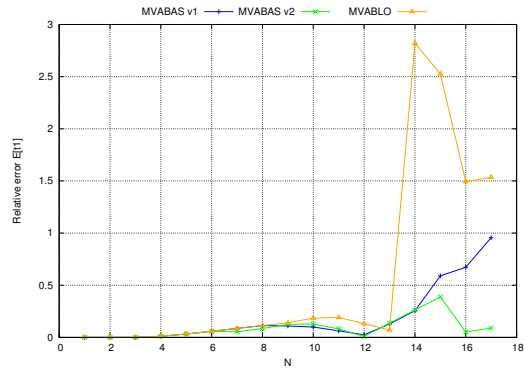
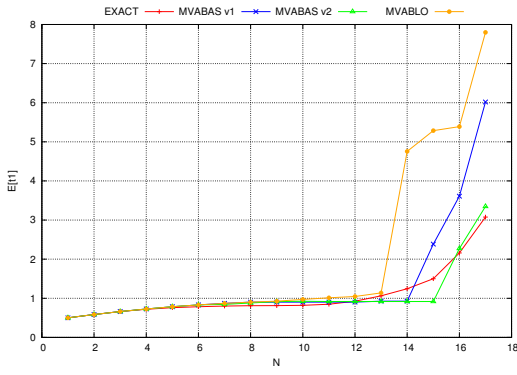
Network 17

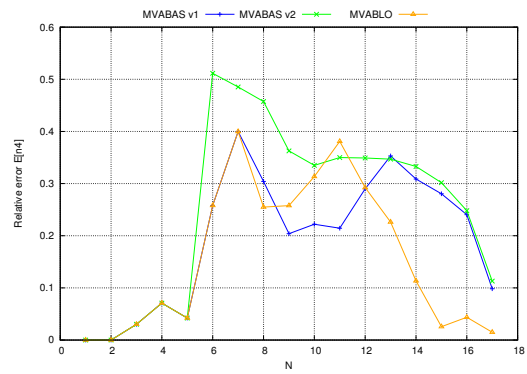
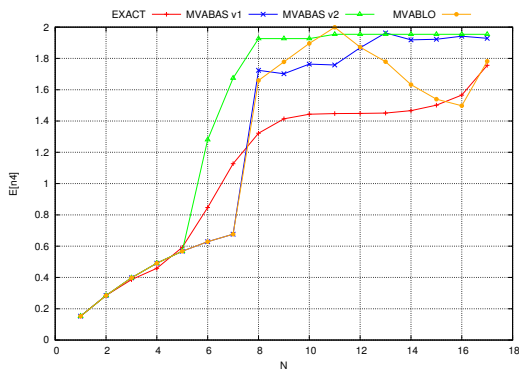
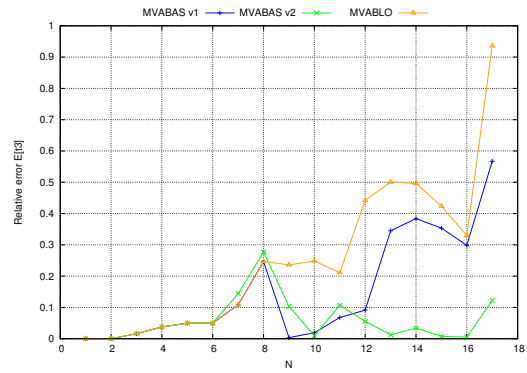
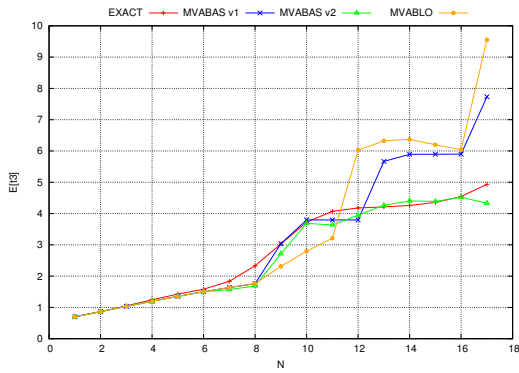
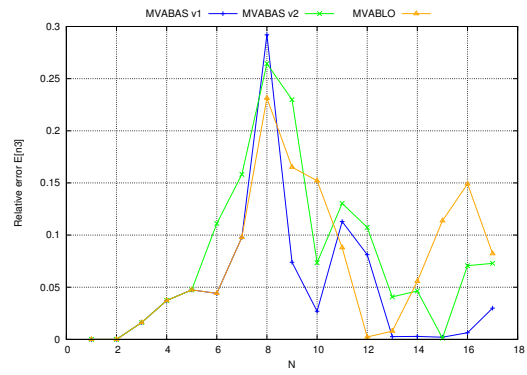
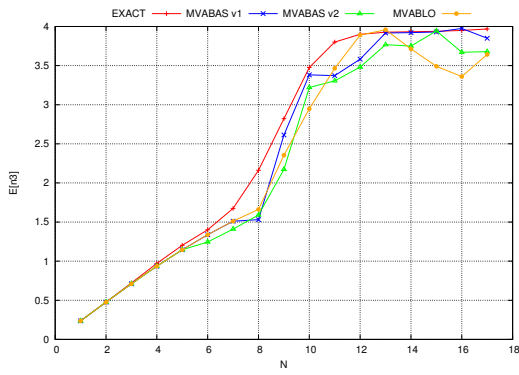
	B	$E[t_s]$
Queue 0	4	1.0
Queue 1	3	0.5
Queue 2	5	0.3
Queue 3	4	0.7
Queue 4	2	0.45

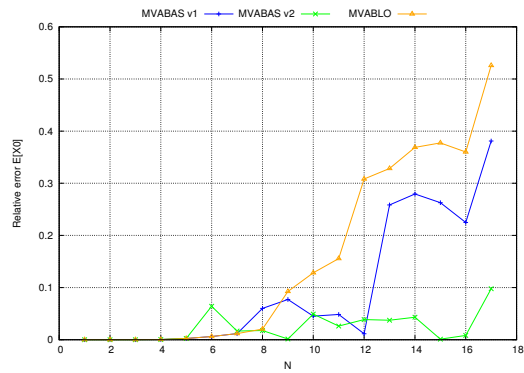
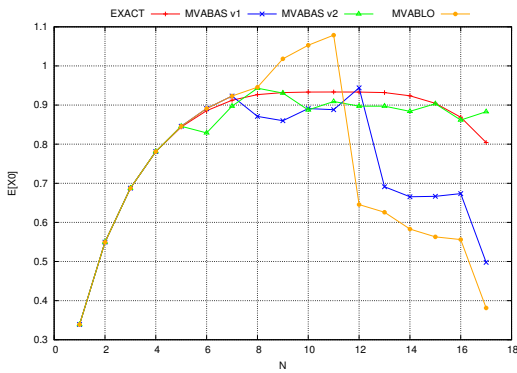
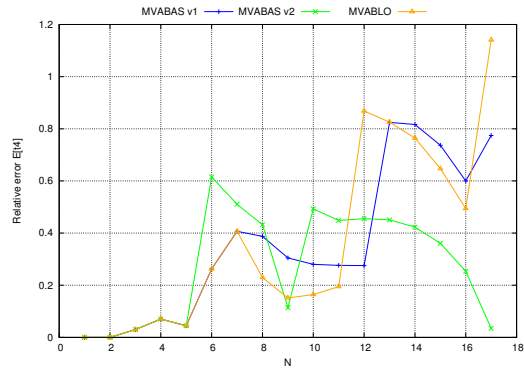
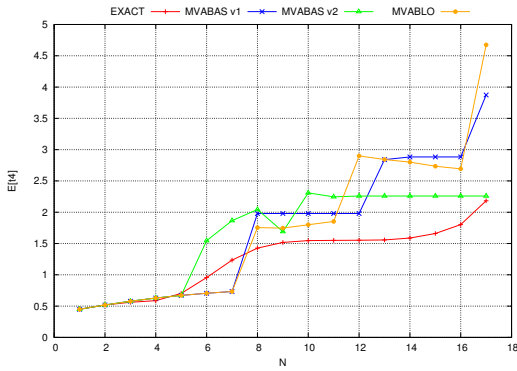
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









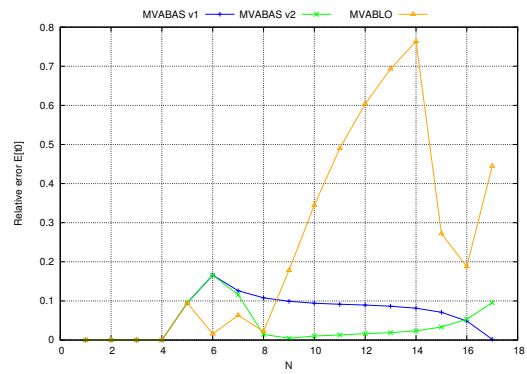
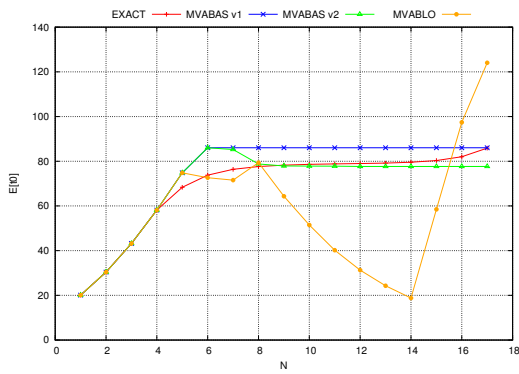
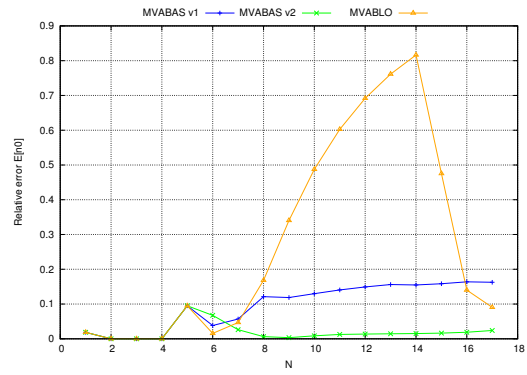
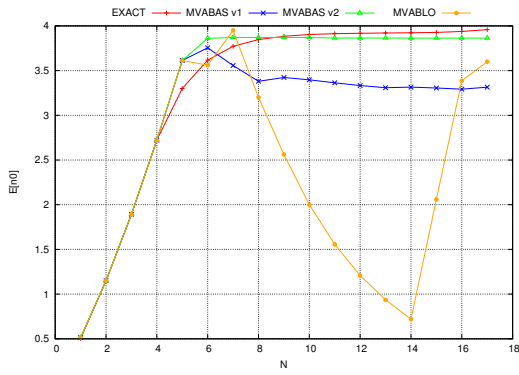
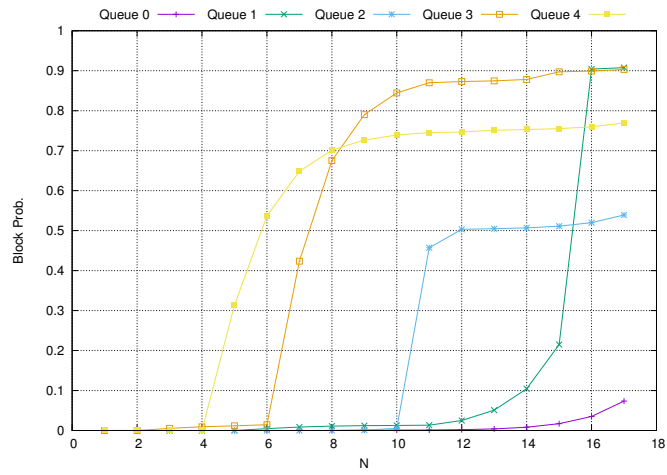


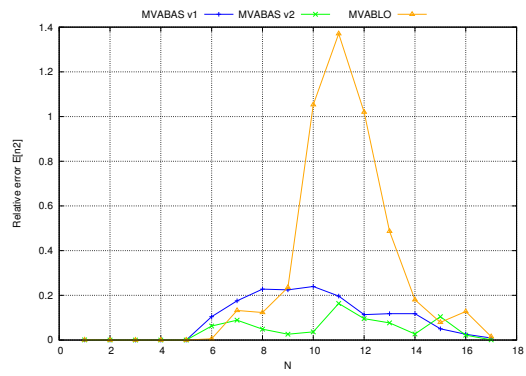
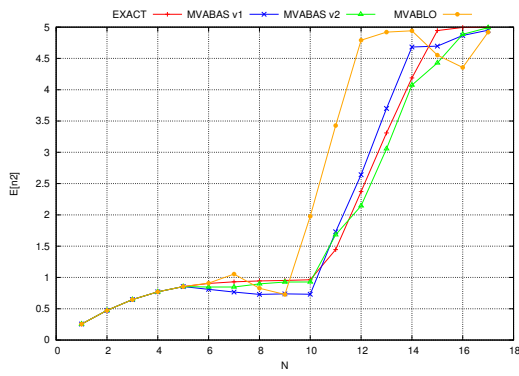
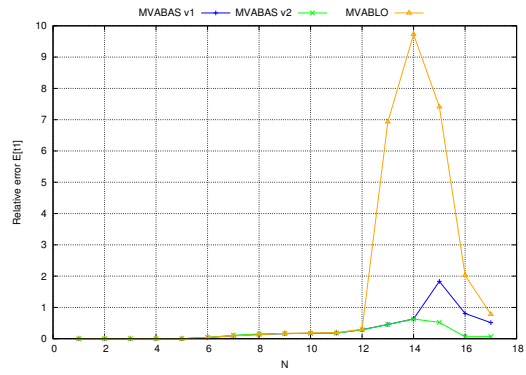
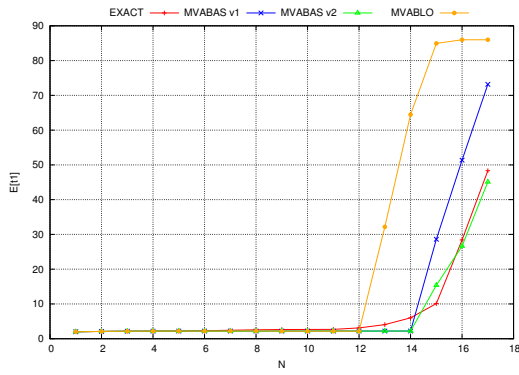
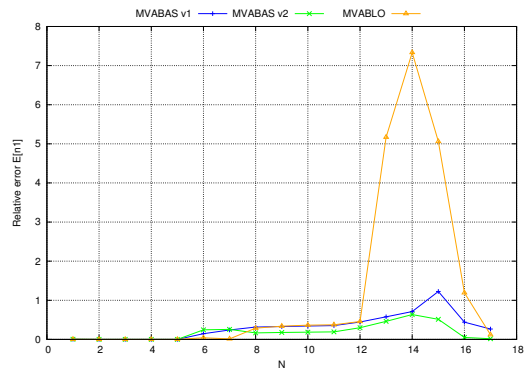
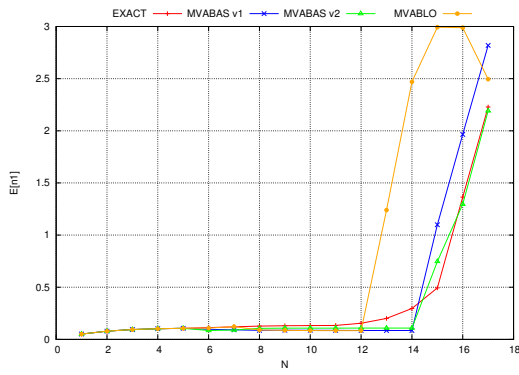
Network 17			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.14	0.09	0.23
e_m	0.05	0.02	0.07
e_M	0.35	0.27	0.55
err_M	0.95	0.61	2.82

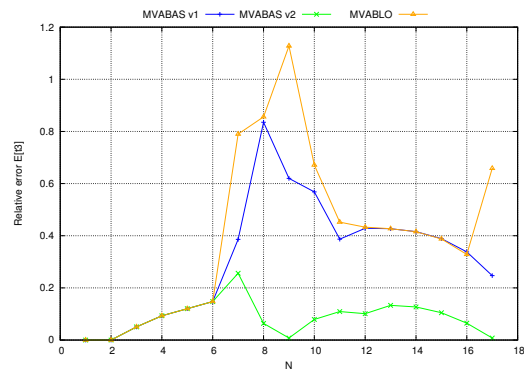
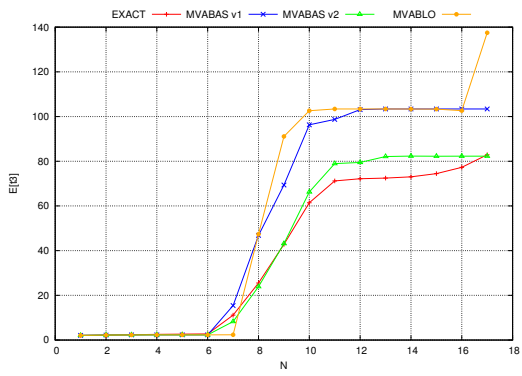
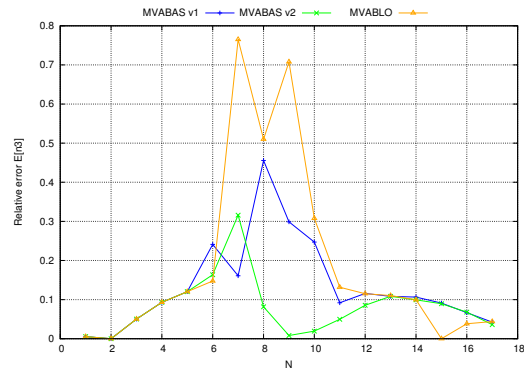
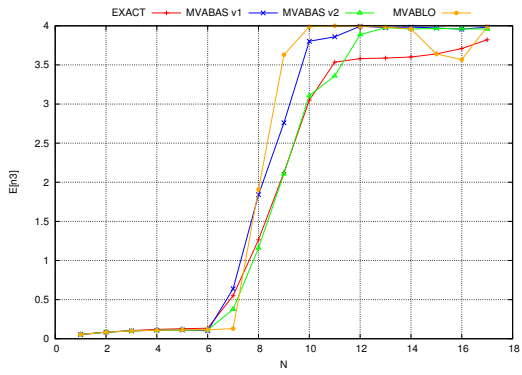
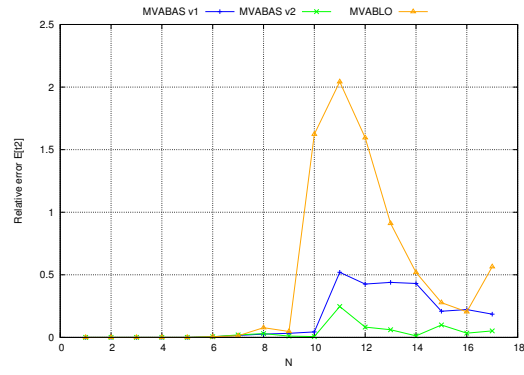
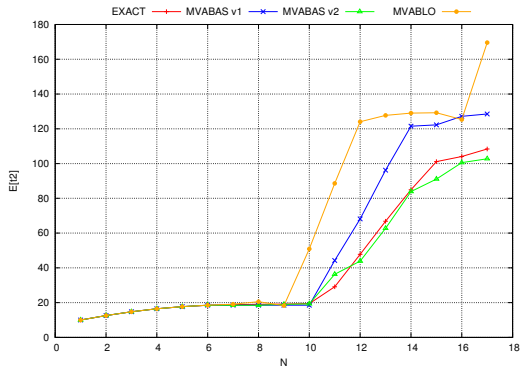
Network 18

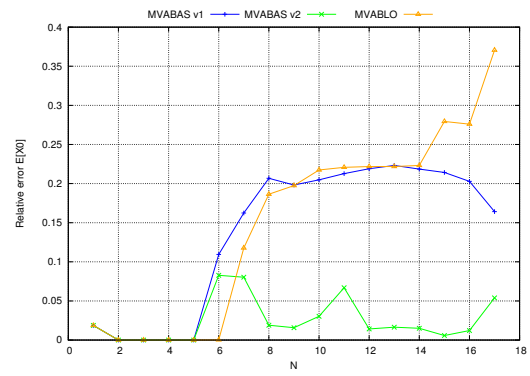
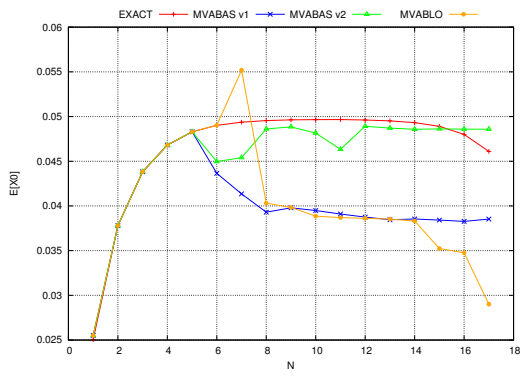
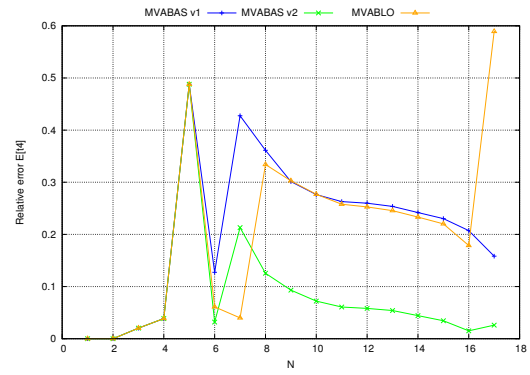
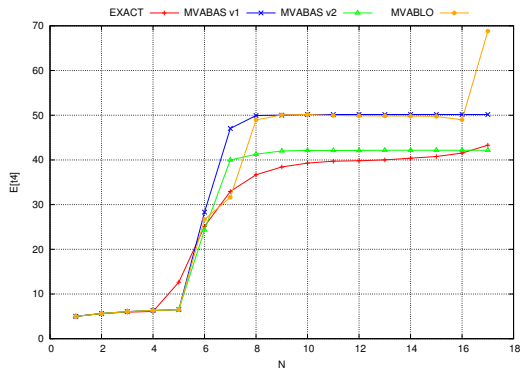
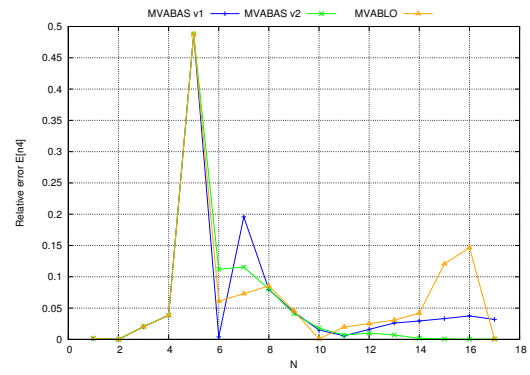
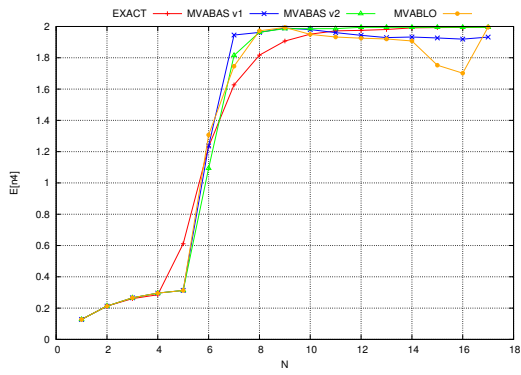
	B	$E[t_s]$
Queue 0	4	20.1
Queue 1	3	2.0
Queue 2	5	10.0
Queue 3	4	2.1
Queue 4	2	5.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







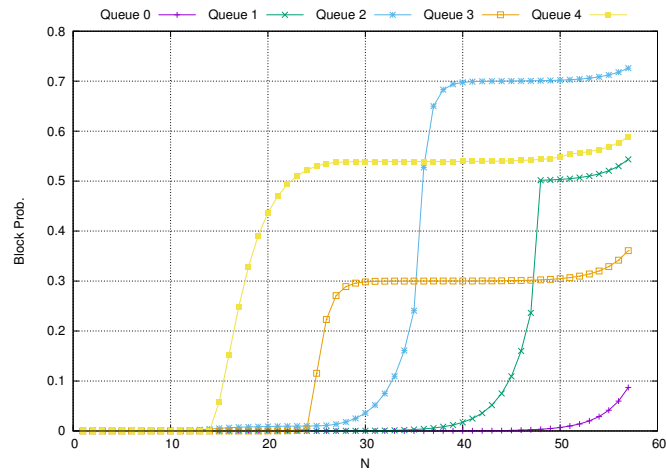


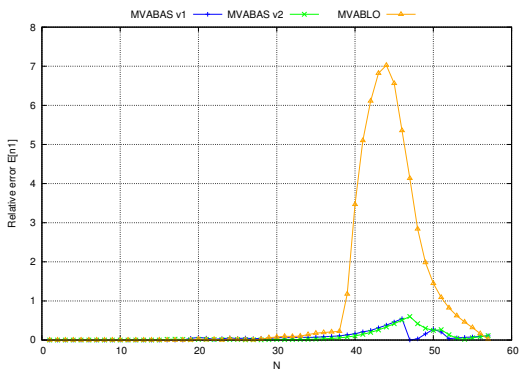
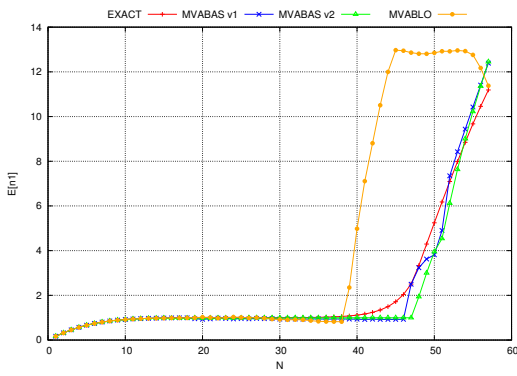
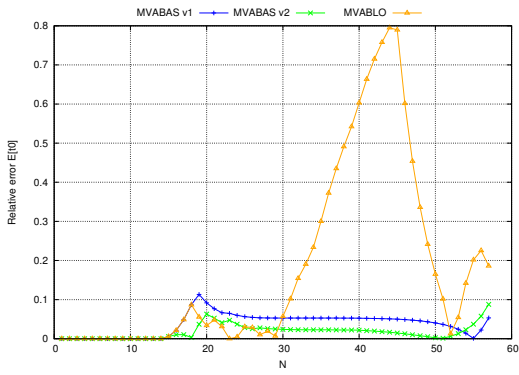
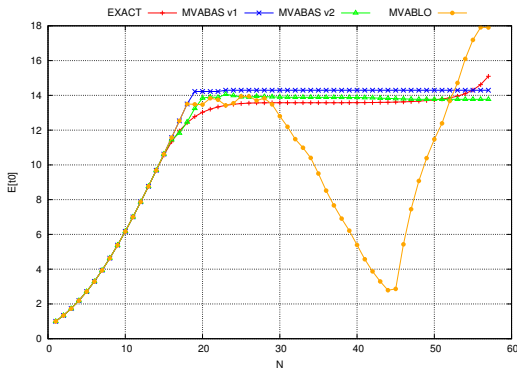
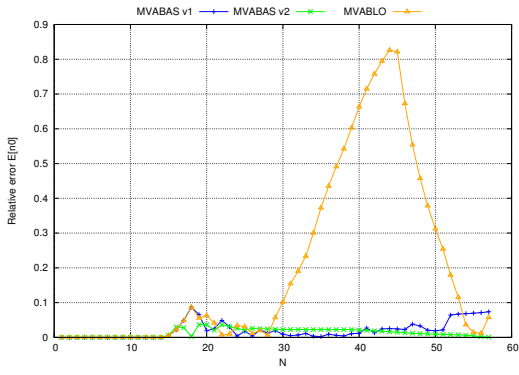
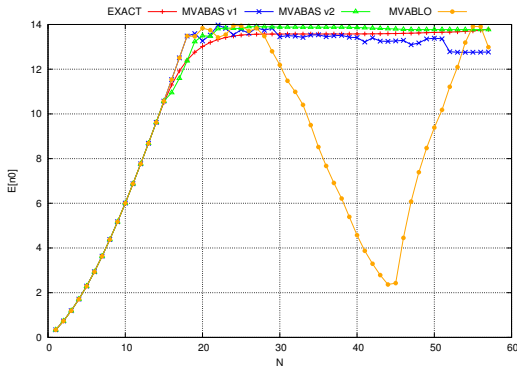
Network 18			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.16	0.06	0.38
e_m	0.06	0.02	0.07
e_M	0.32	0.18	1.64
err_M	1.83	0.63	9.72

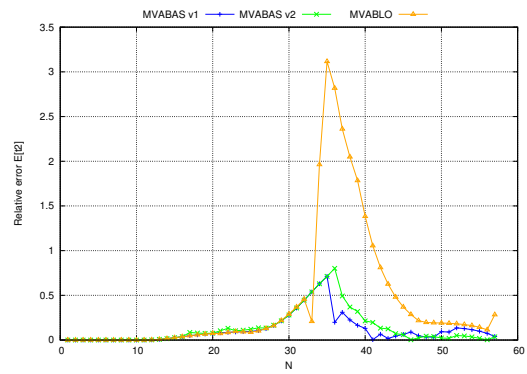
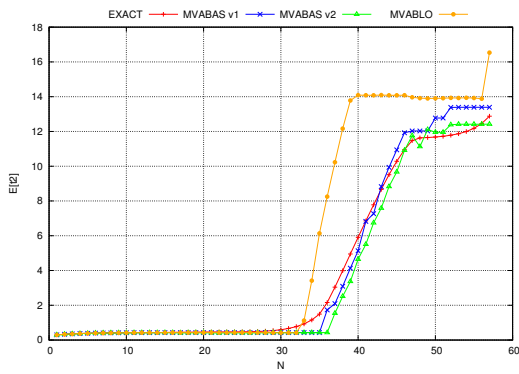
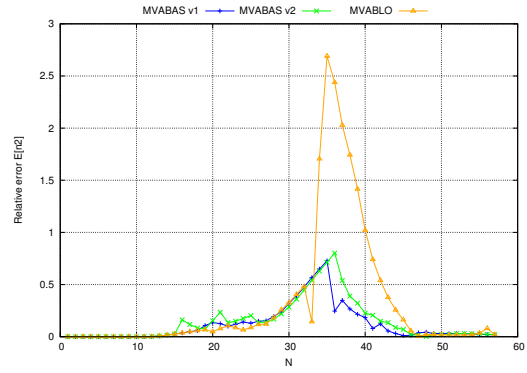
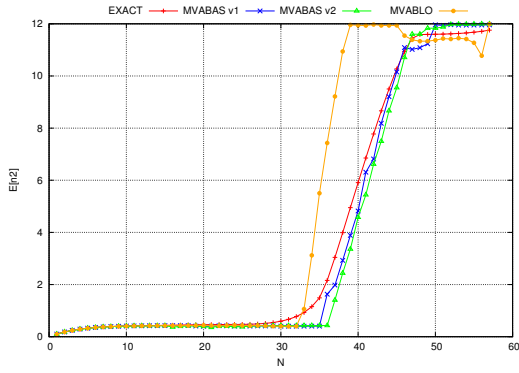
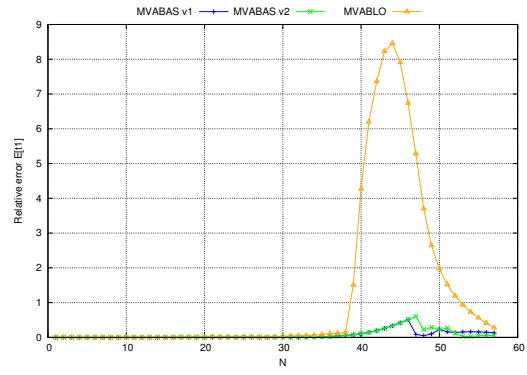
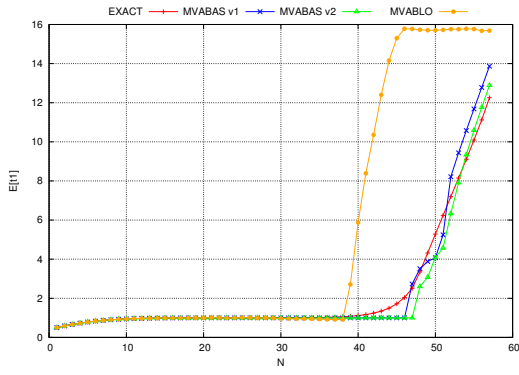
Network 19

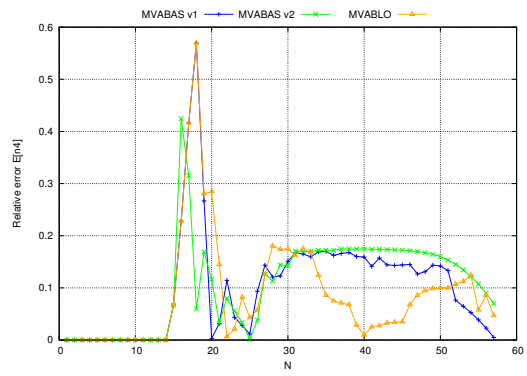
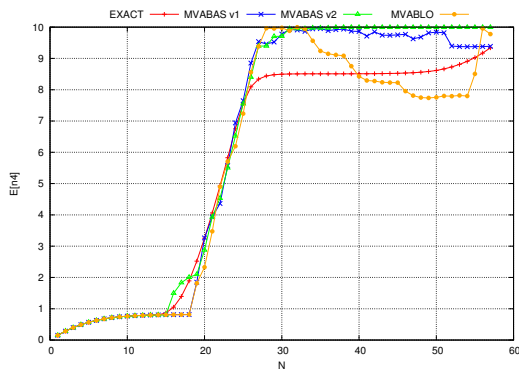
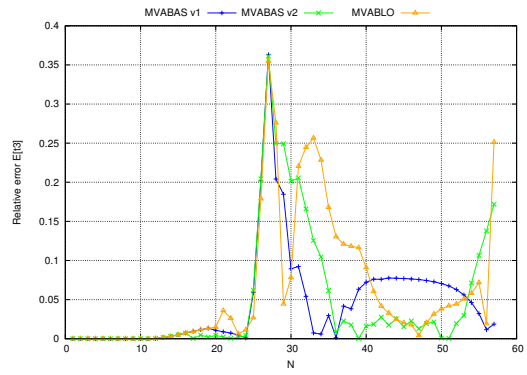
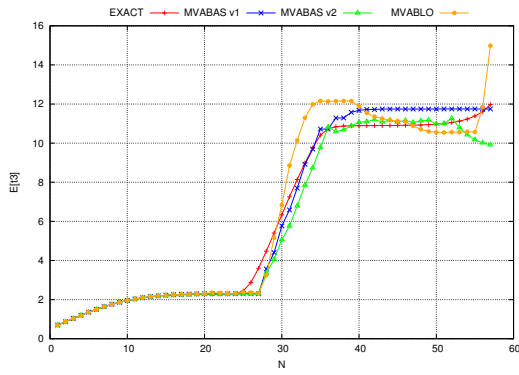
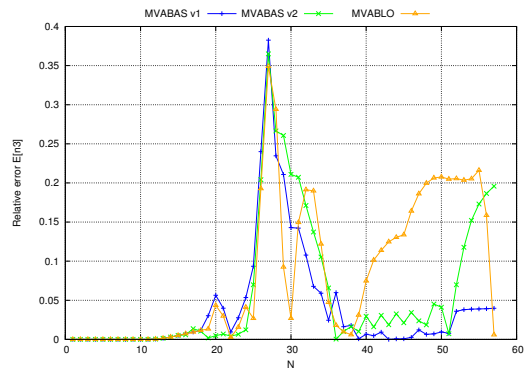
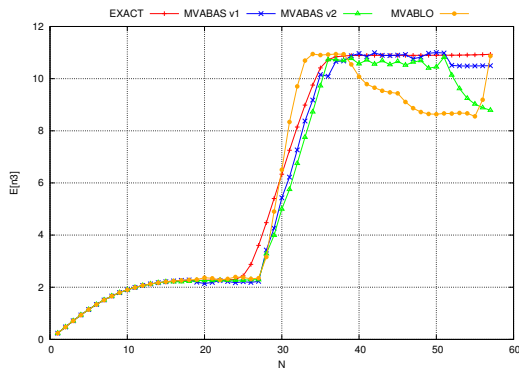
	B	$E[t_s]$
Queue 0	14	1.0
Queue 1	13	0.5
Queue 2	12	0.3
Queue 3	11	0.7
Queue 4	10	0.45

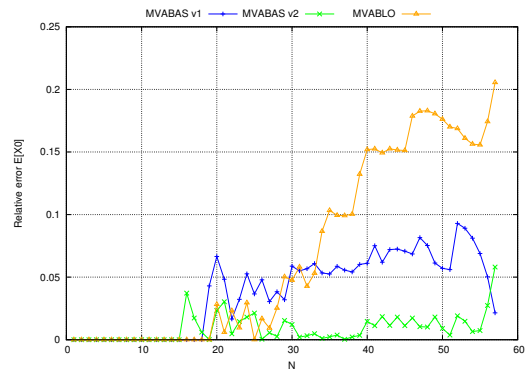
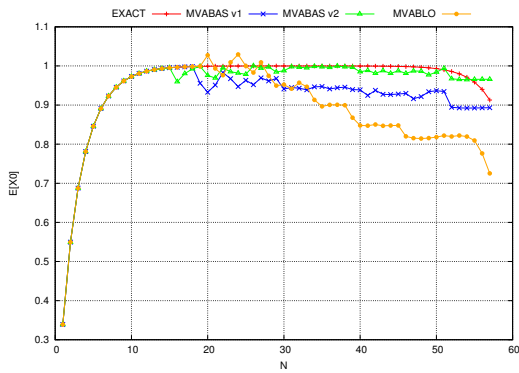
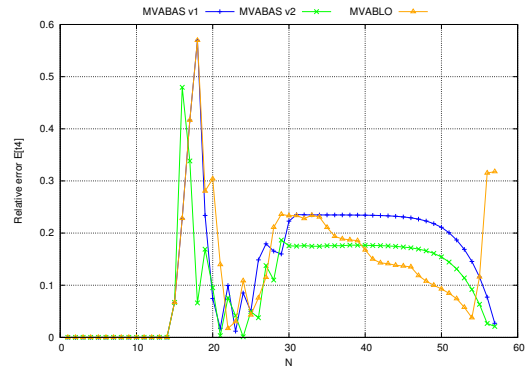
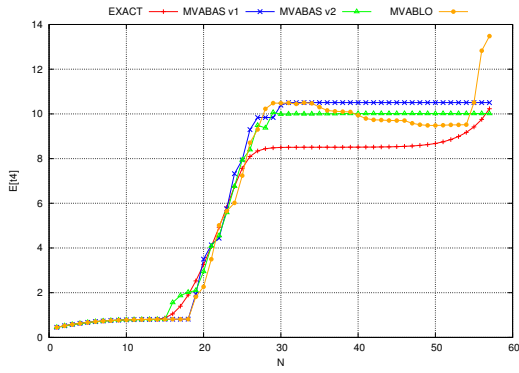
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









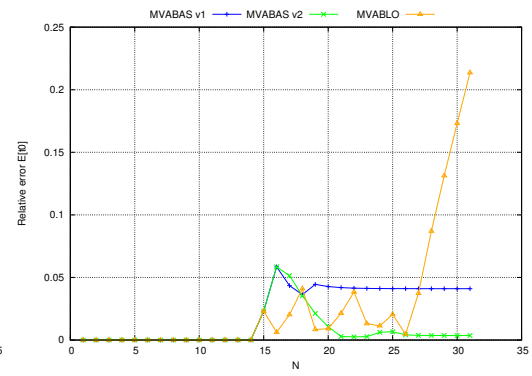
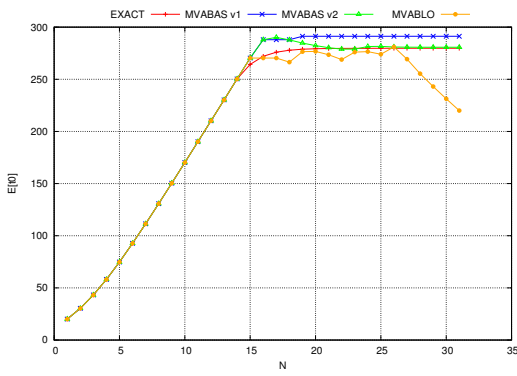
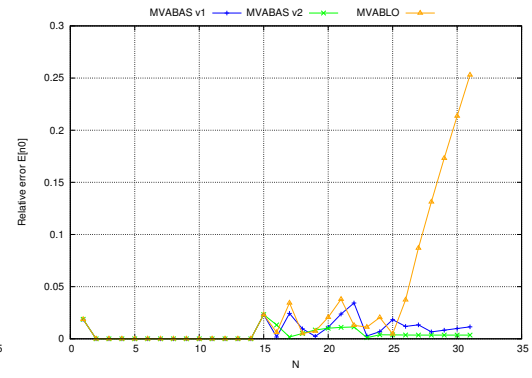
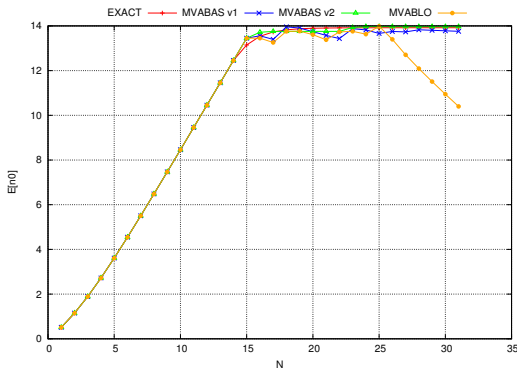
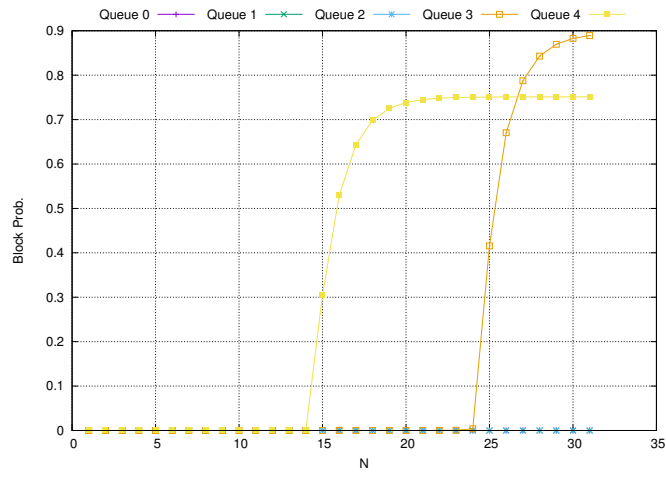


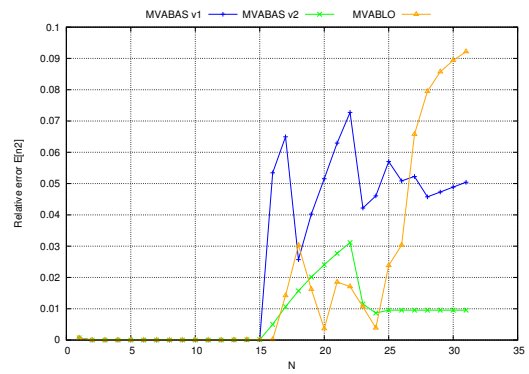
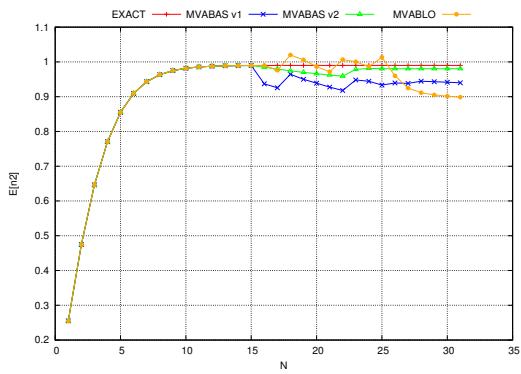
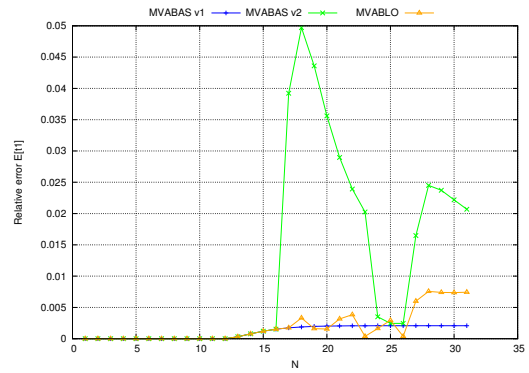
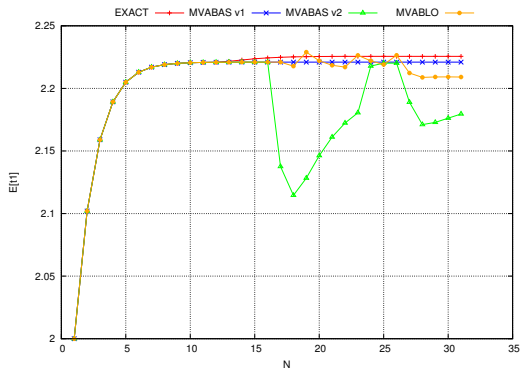
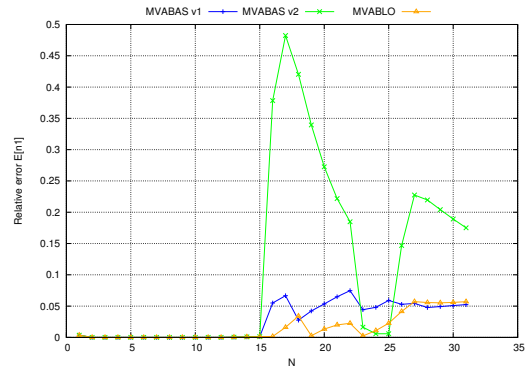
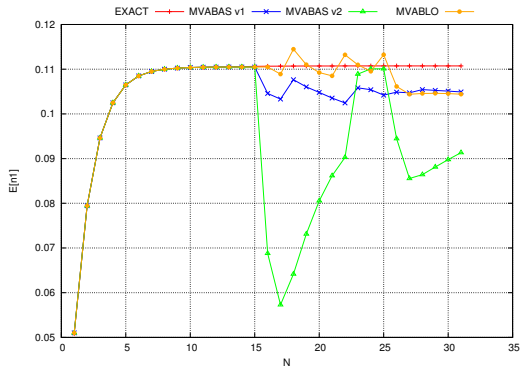
Network 19			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.064	0.056	0.272
e_m	0.020	0.009	0.063
e_M	0.145	0.146	1.23
err_M	0.72	0.80	8.45

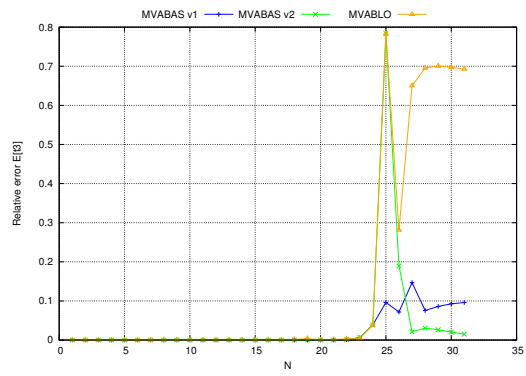
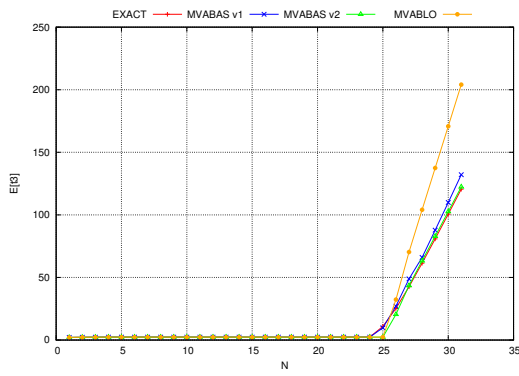
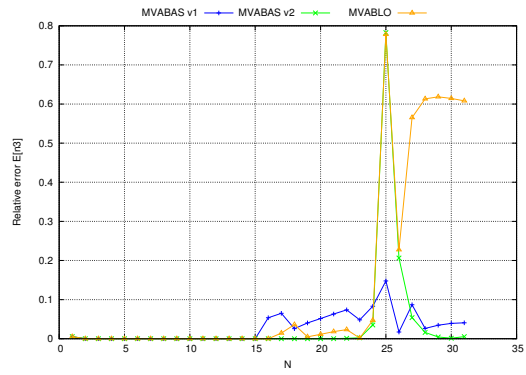
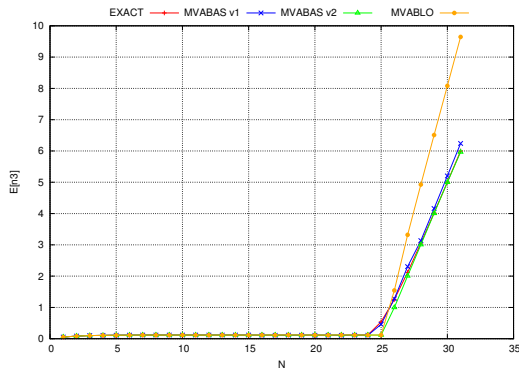
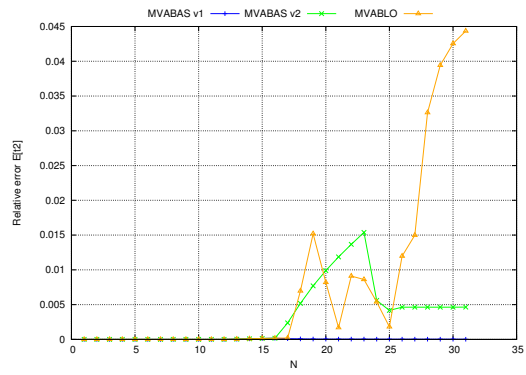
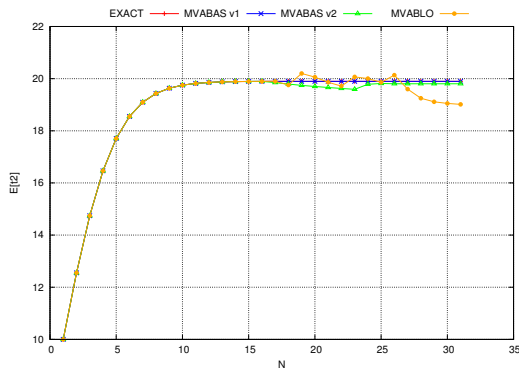
Network 20

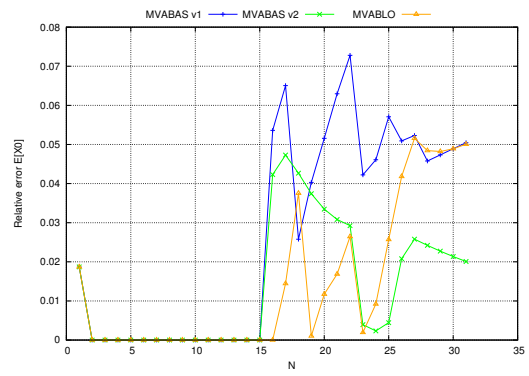
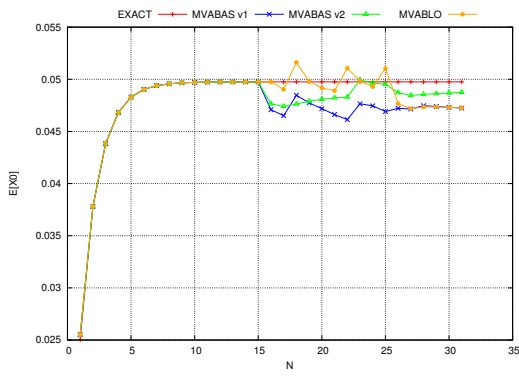
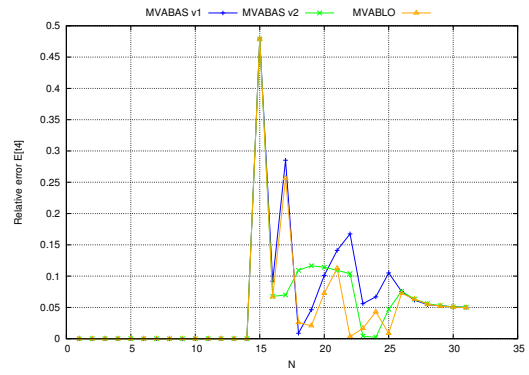
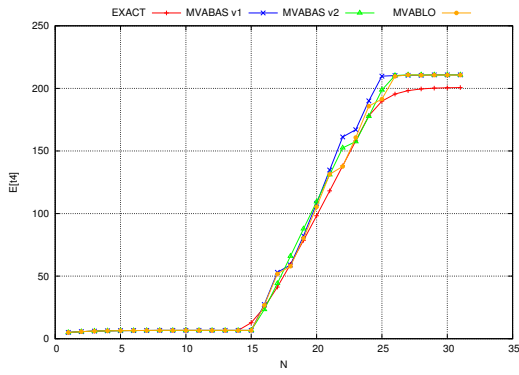
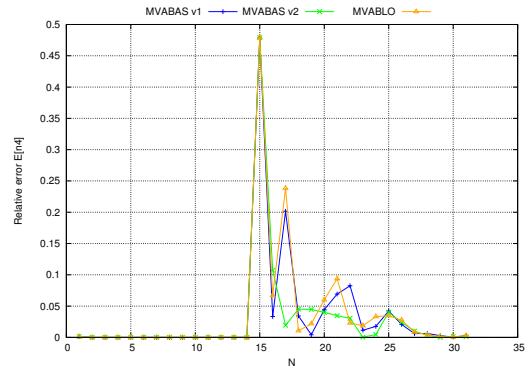
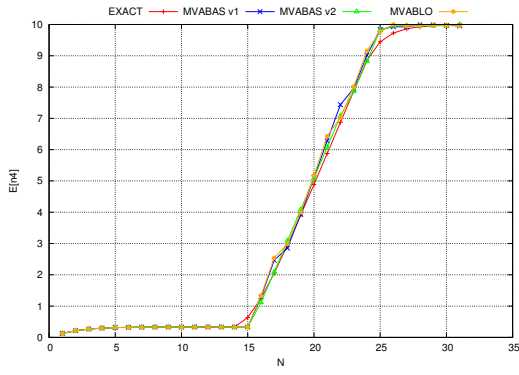
	B	$E[t_s]$
Queue 0	14	20.1
Queue 1	13	2.0
Queue 2	12	10.0
Queue 3	11	2.1
Queue 4	10	5.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







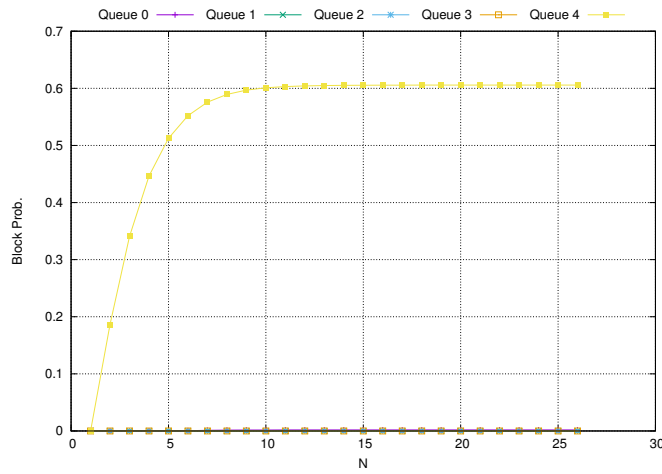


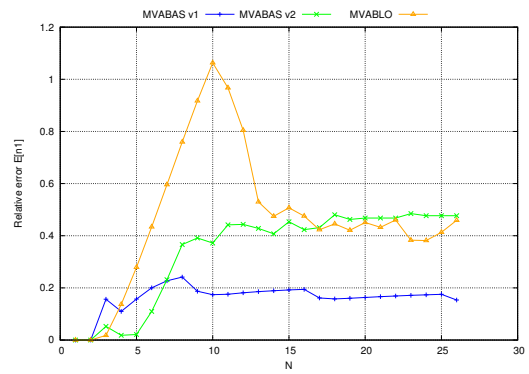
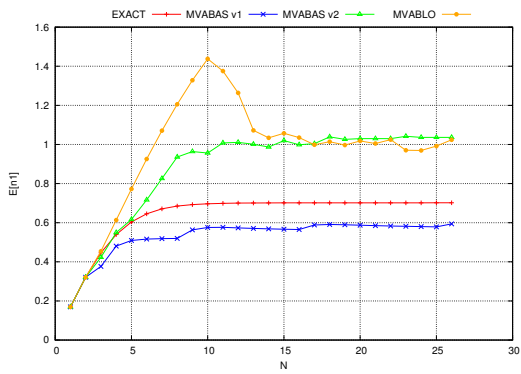
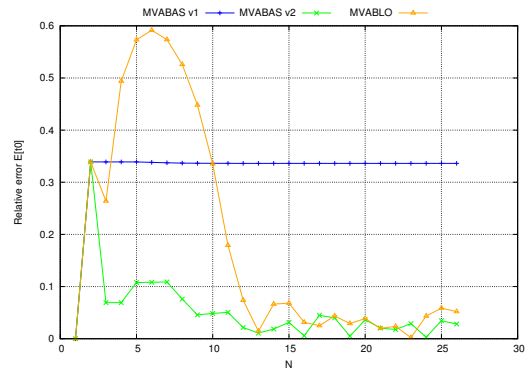
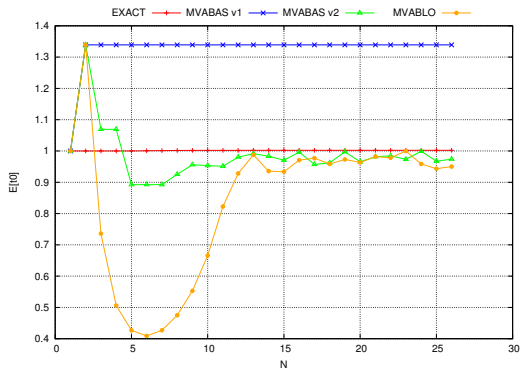
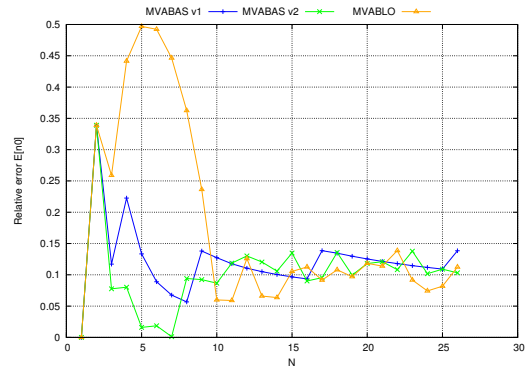
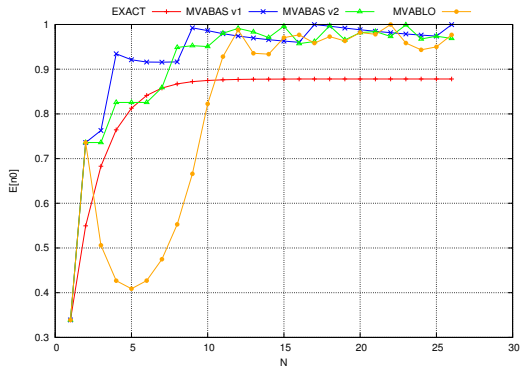
Network 20			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.02430	0.02439	0.0362
e_m	$3.50 \cdot 10^{-5}$	0.003	0.001
e_M	0.06	0.11	0.14
err_M	0.4790	0.7833	0.7836

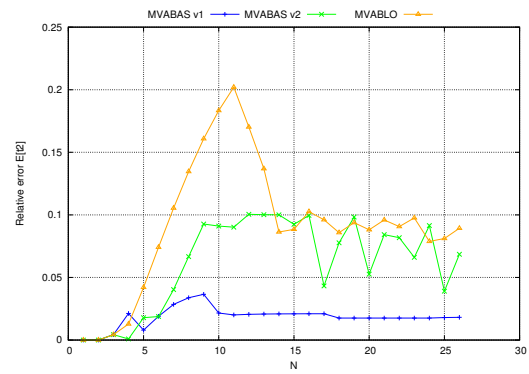
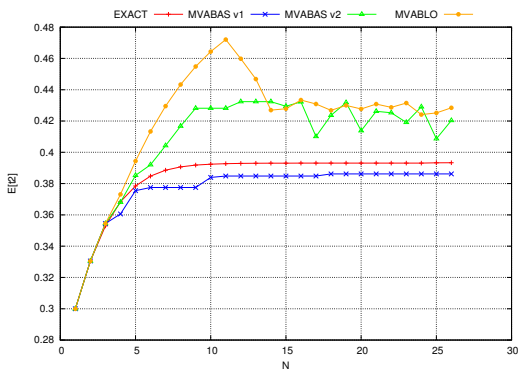
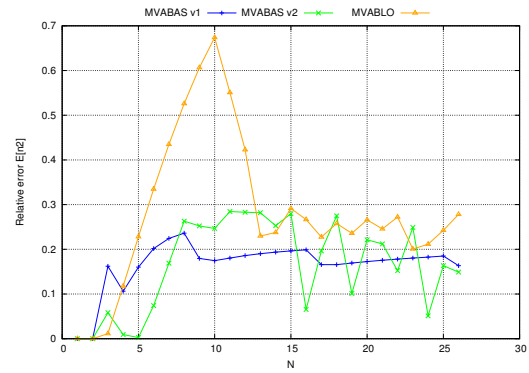
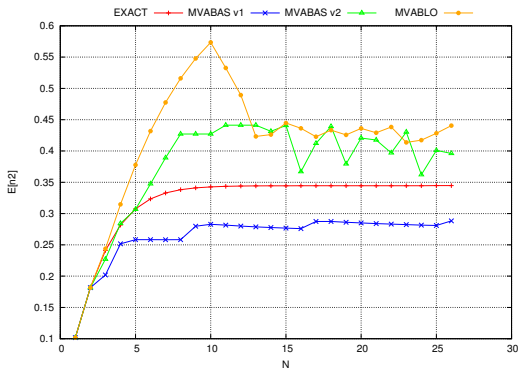
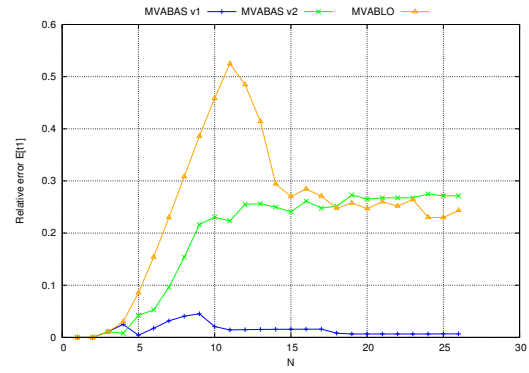
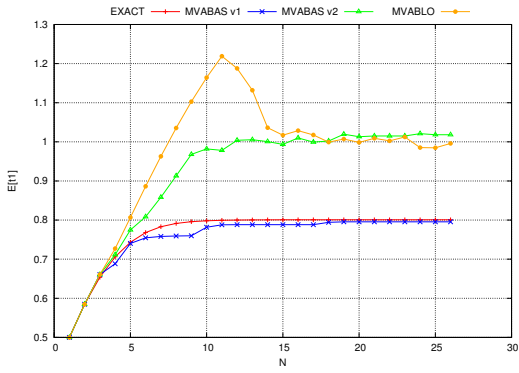
Network 21

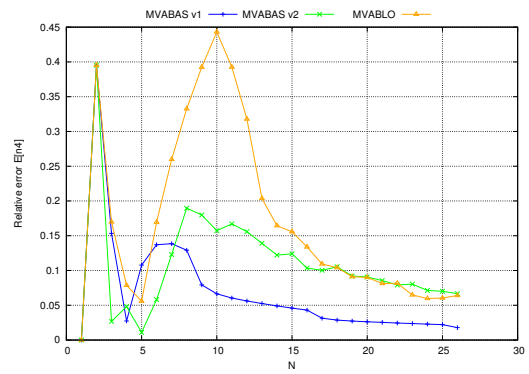
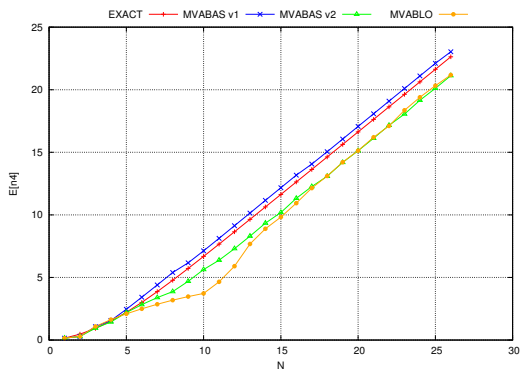
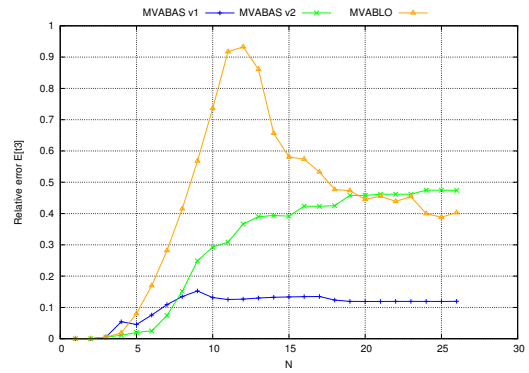
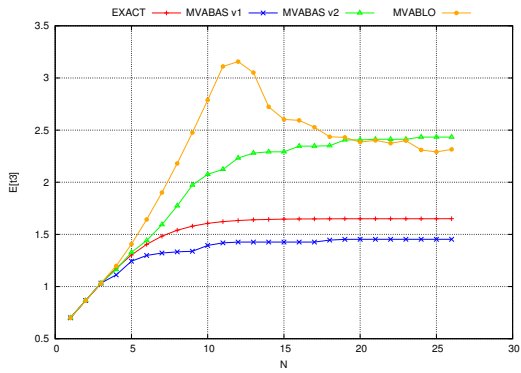
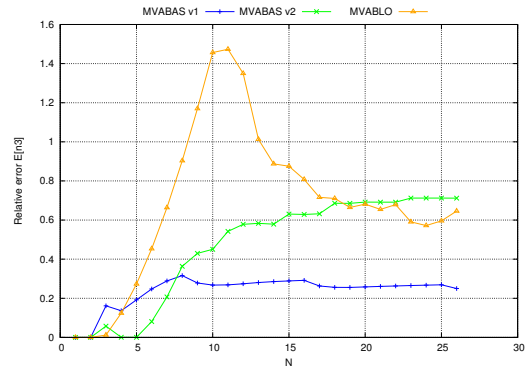
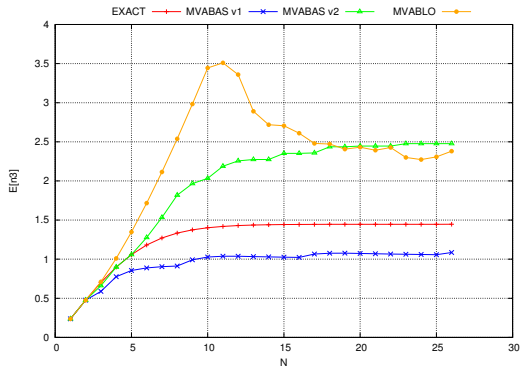
	B	$E[t_s]$
Queue 0	1	1.0
Queue 1	5	0.5
Queue 2	15	0.3
Queue 3	25	0.7
Queue 4	32	0.45

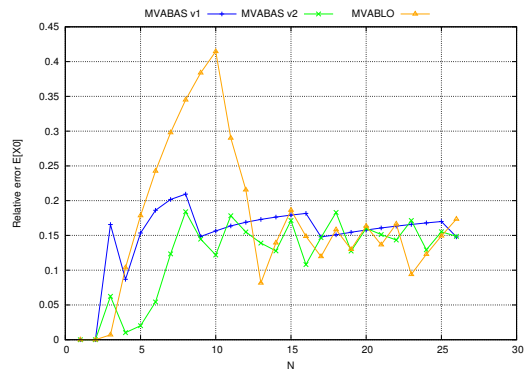
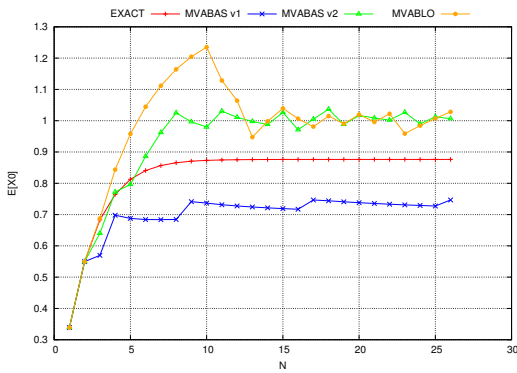
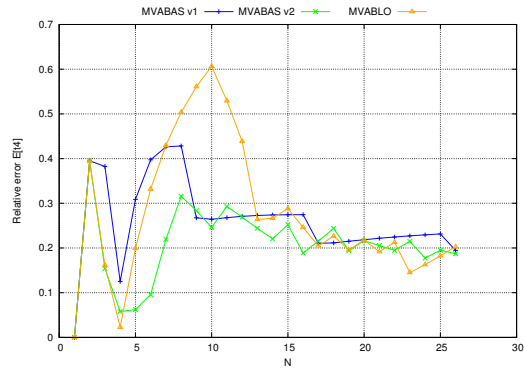
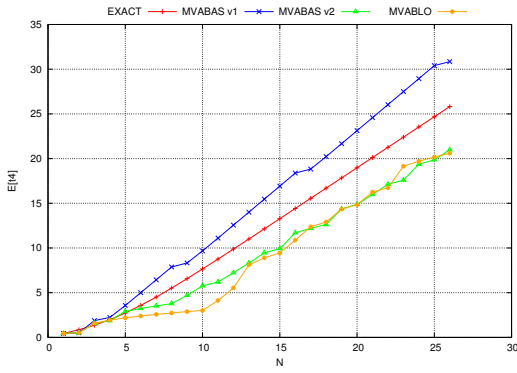
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









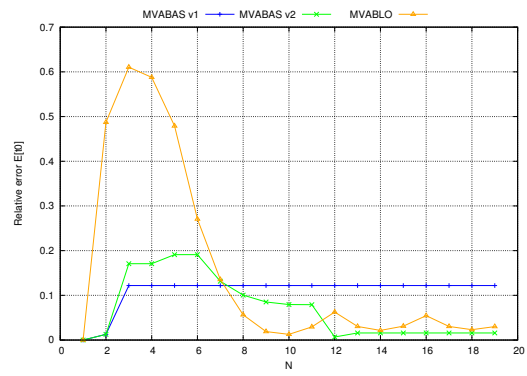
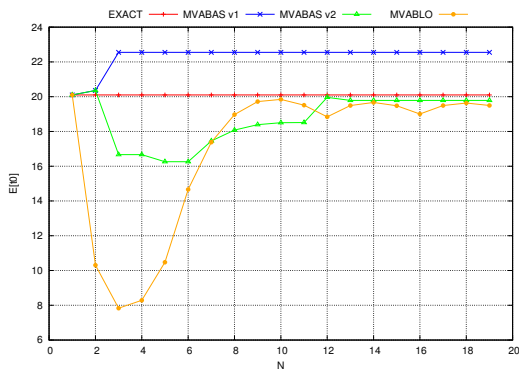
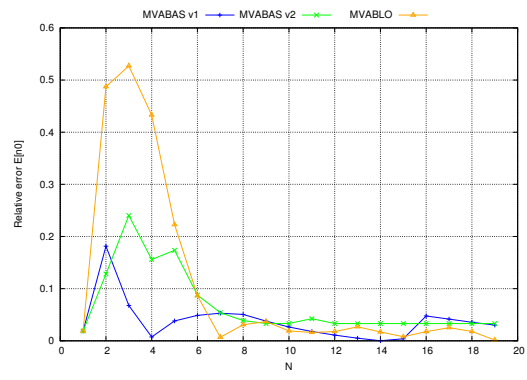
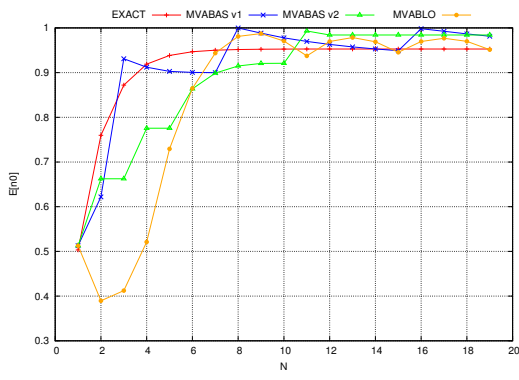
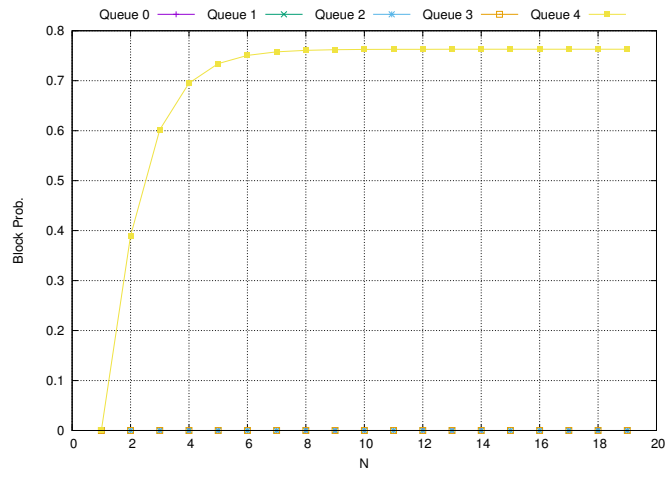


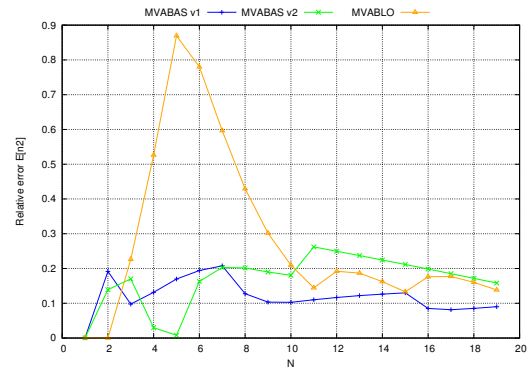
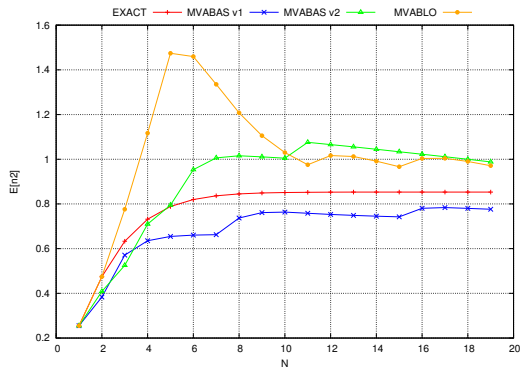
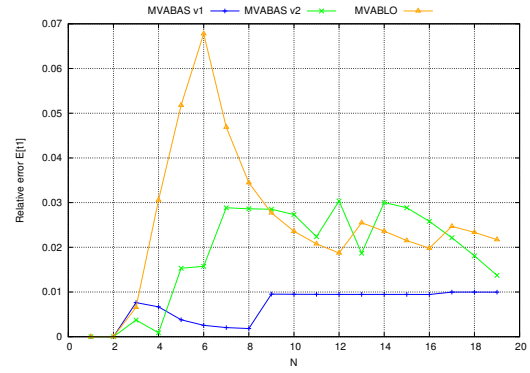
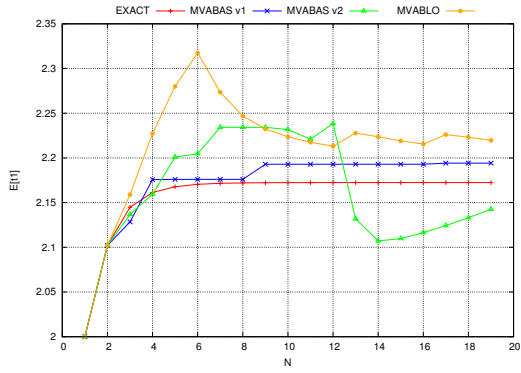
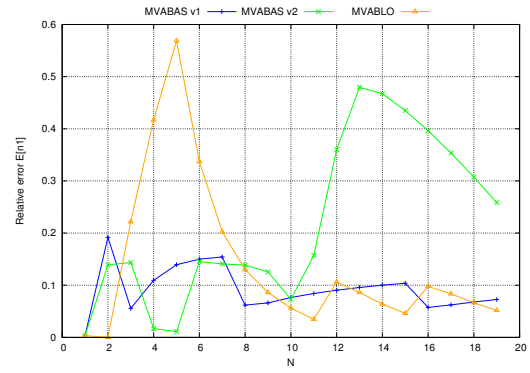
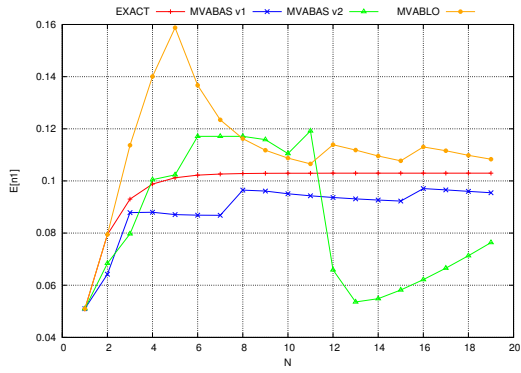
Network 21			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.14	0.17	0.25
e_m	0.01	0.05	0.09
e_M	0.32	0.46	0.69
err_M	0.42	0.71	1.47

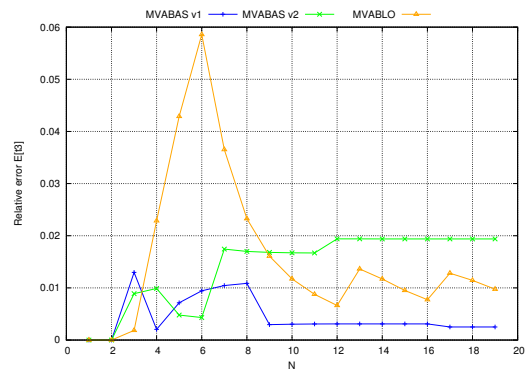
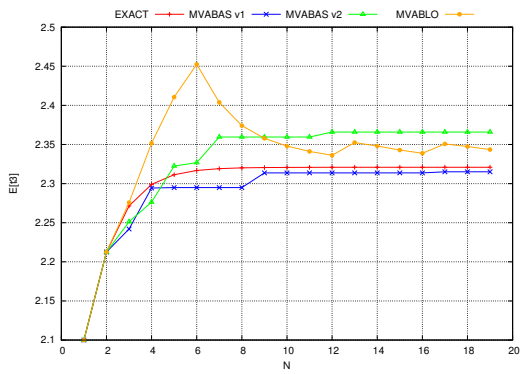
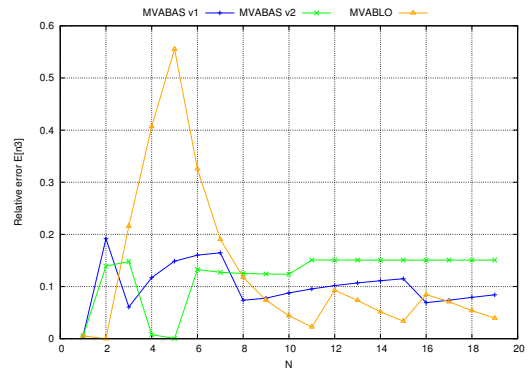
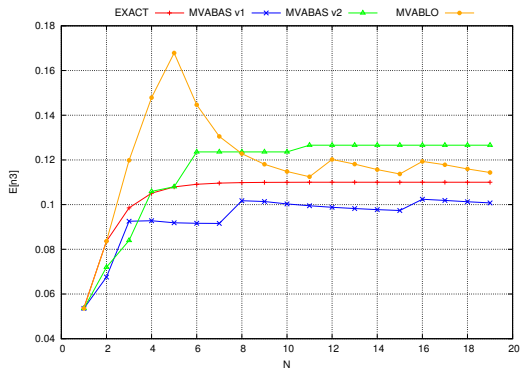
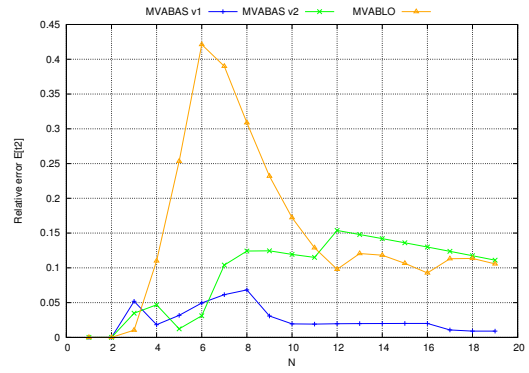
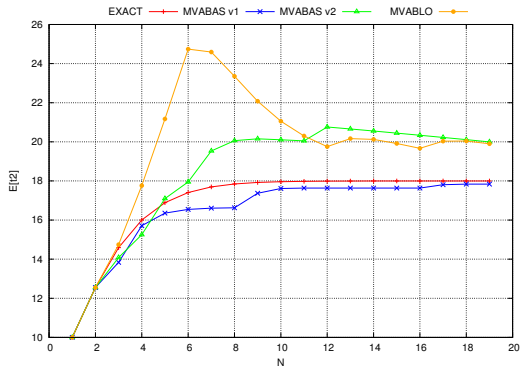
Network 22

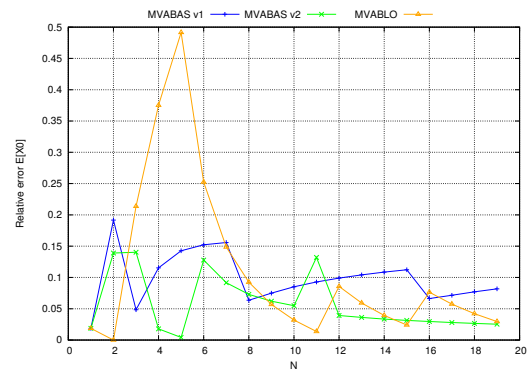
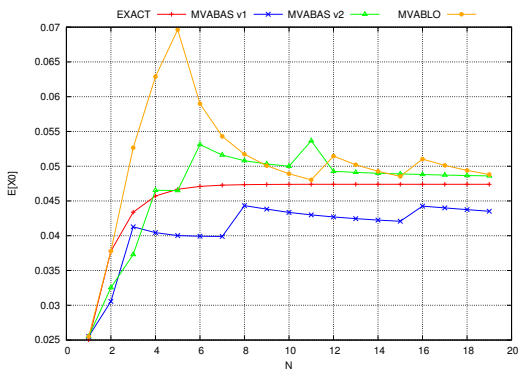
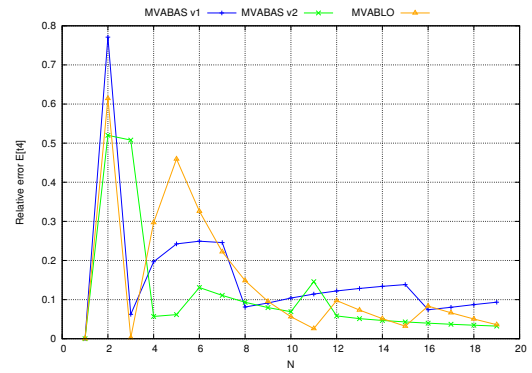
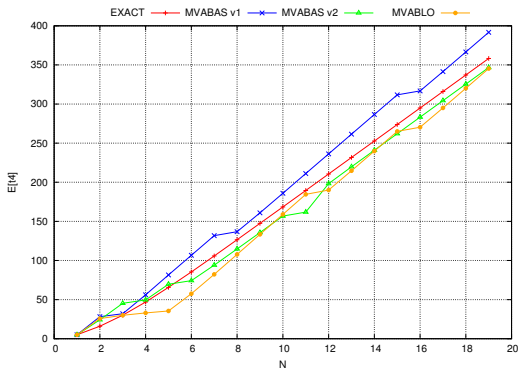
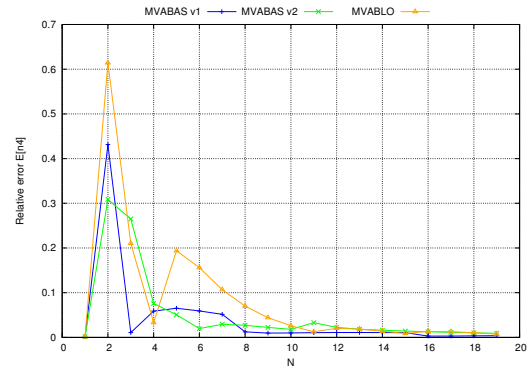
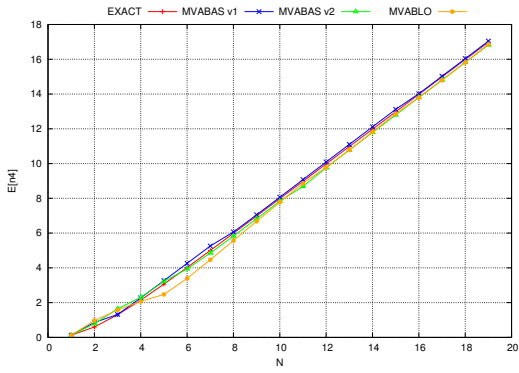
	B	$E[t_s]$
Queue 0	1	20.1
Queue 1	5	2.0
Queue 2	15	10.0
Queue 3	25	2.1
Queue 4	32	5.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







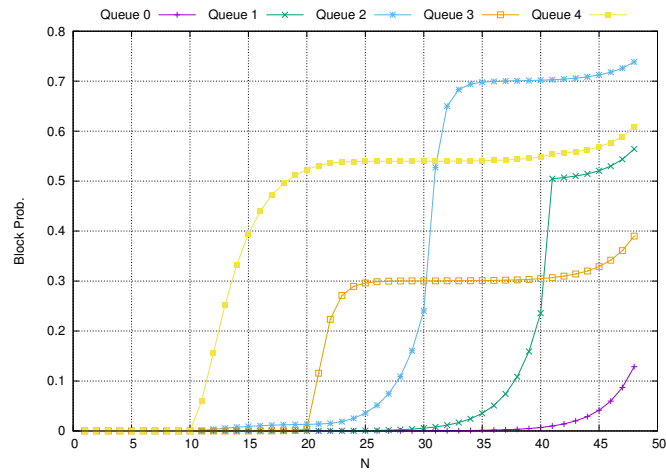


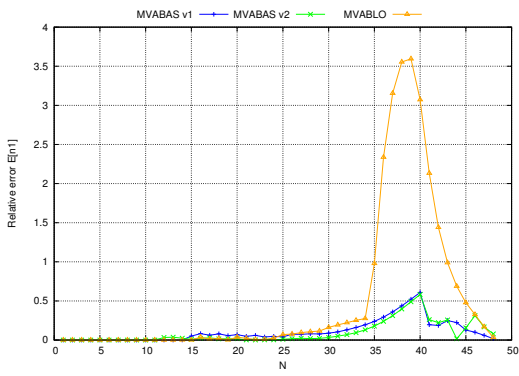
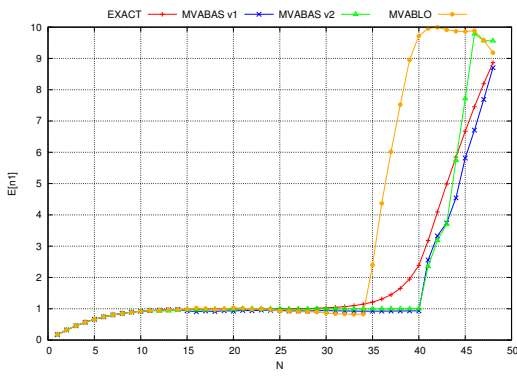
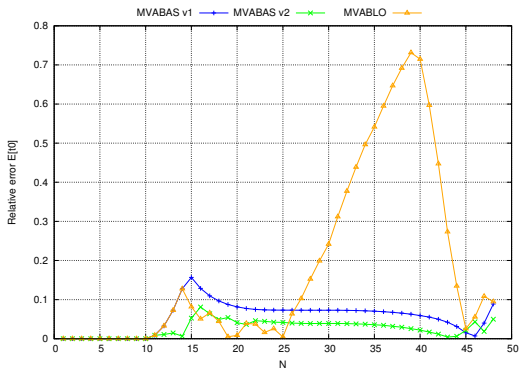
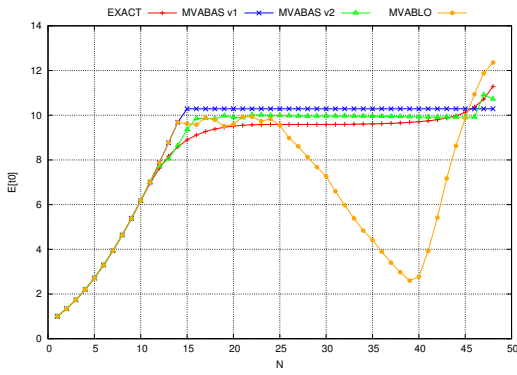
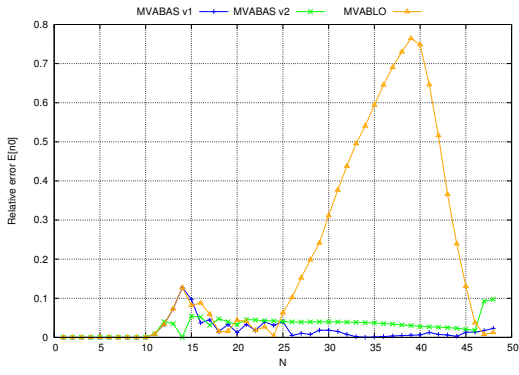
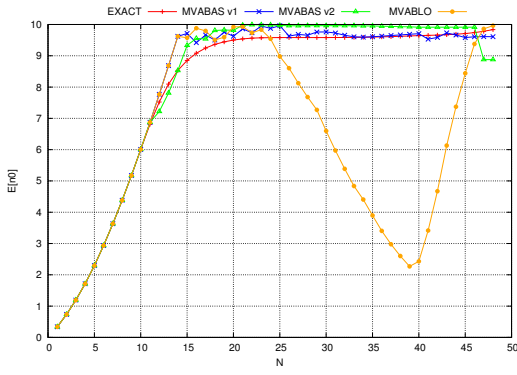
Network 22			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.078	0.081	0.119
e_m	0.004	0.014	0.016
e_M	0.158	0.218	0.284
err_M	0.77	0.51	0.86

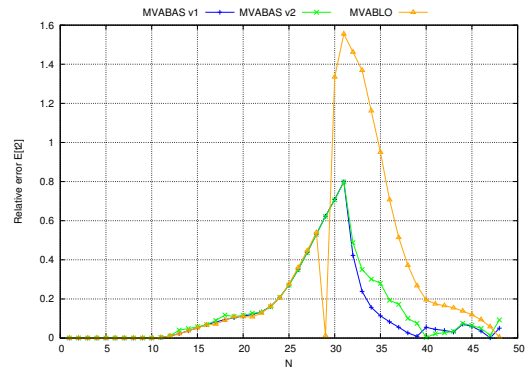
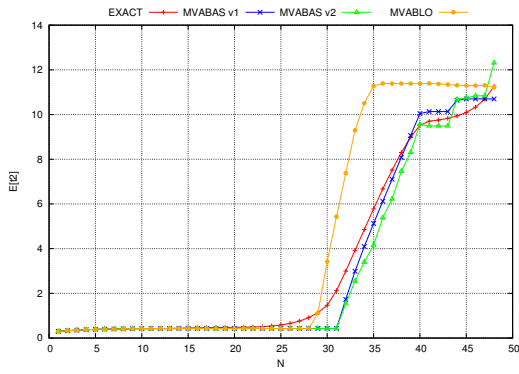
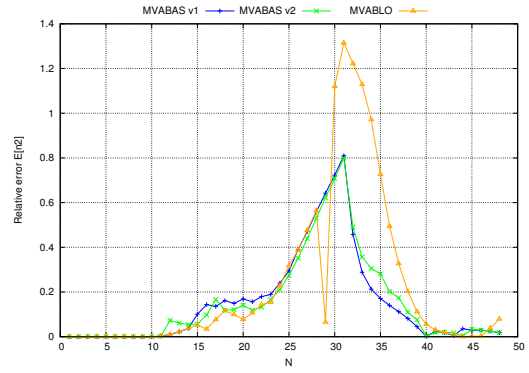
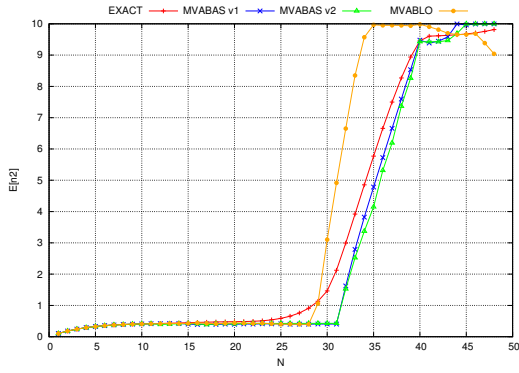
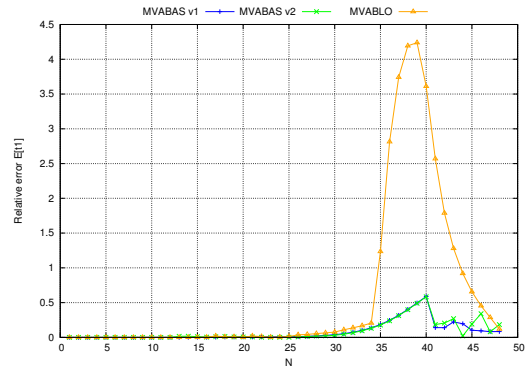
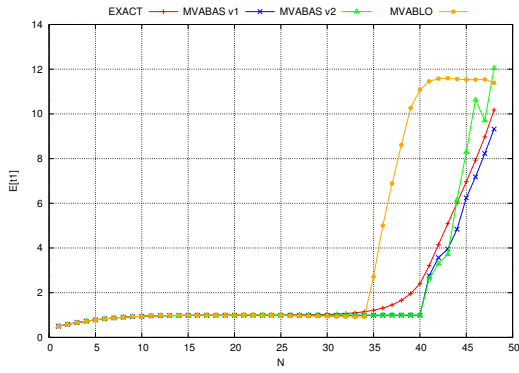
Network 23

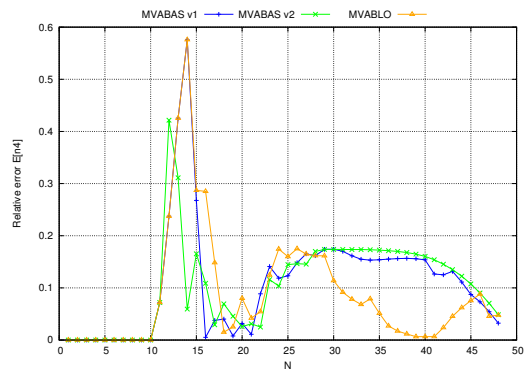
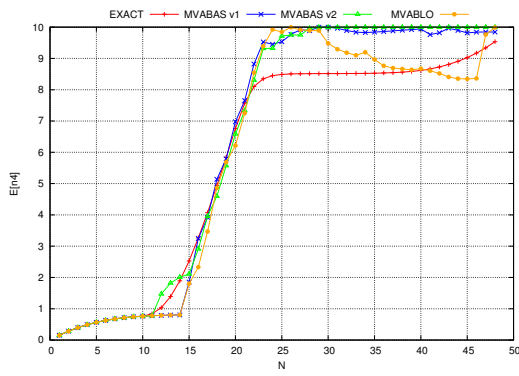
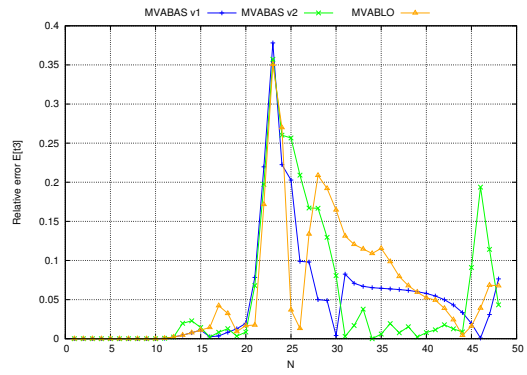
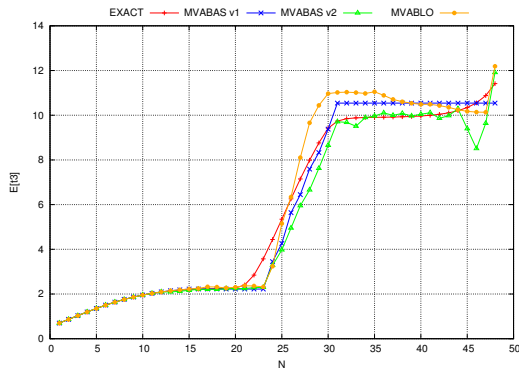
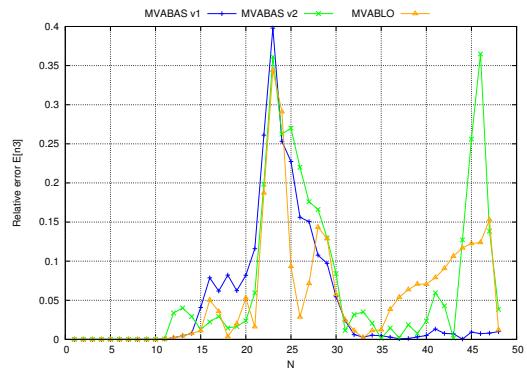
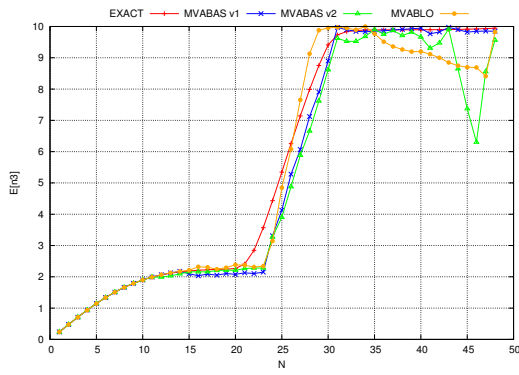
	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.5
Queue 2	10	0.3
Queue 3	10	0.7
Queue 4	10	0.45

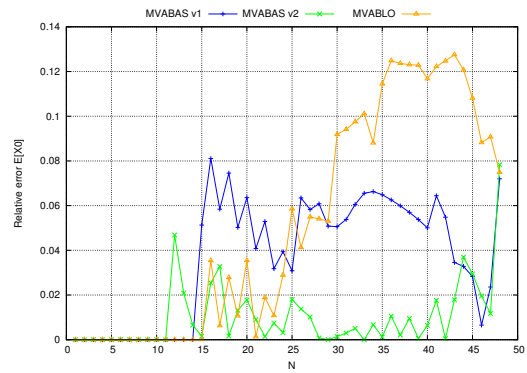
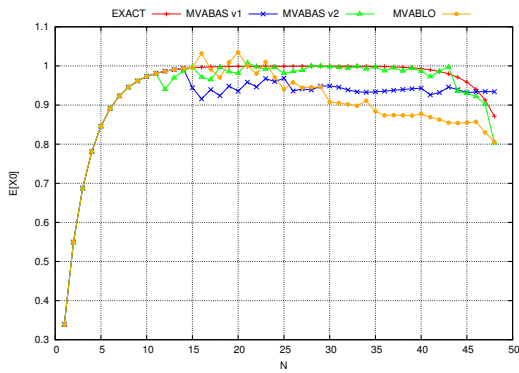
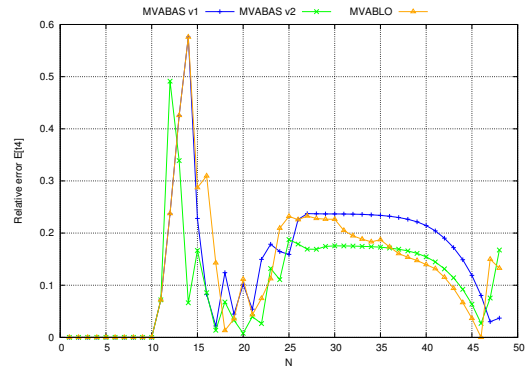
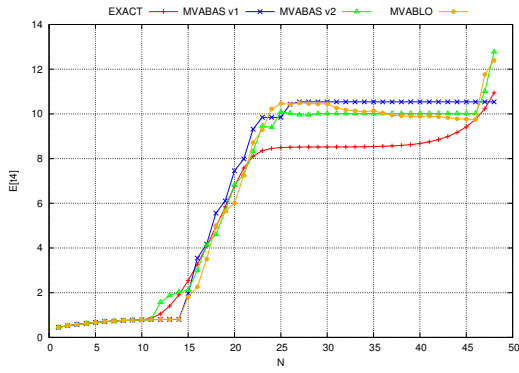
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









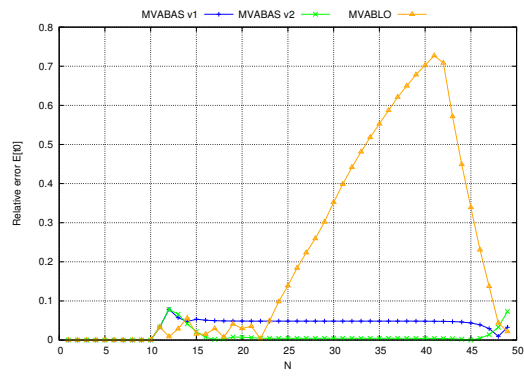
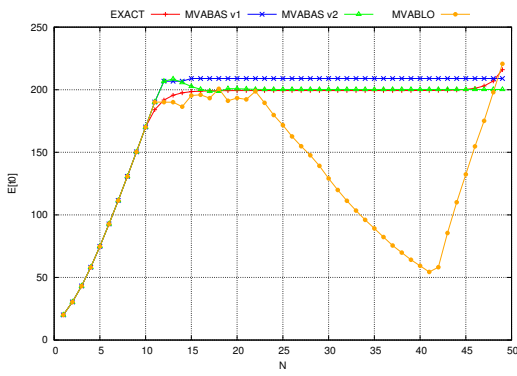
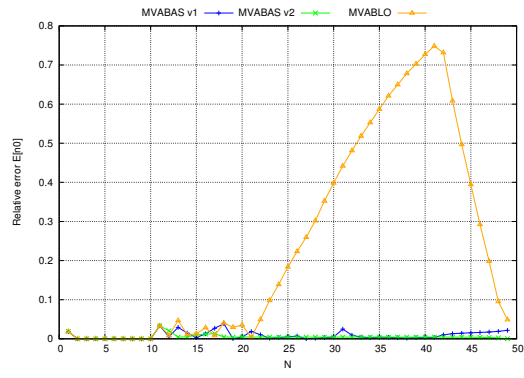
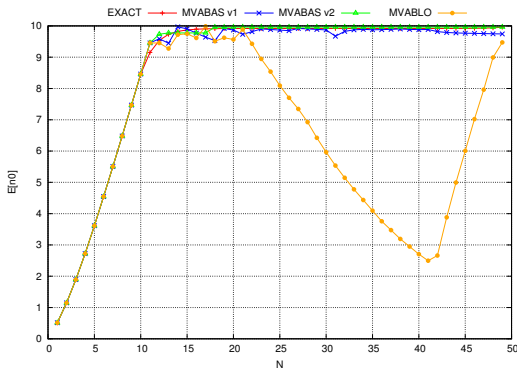
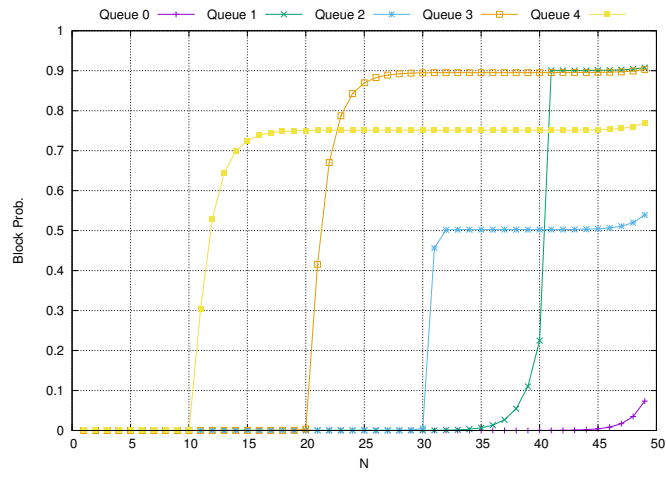


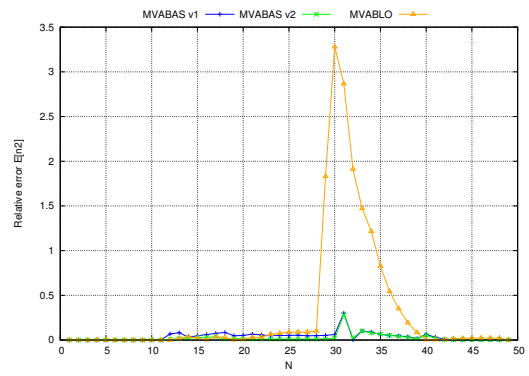
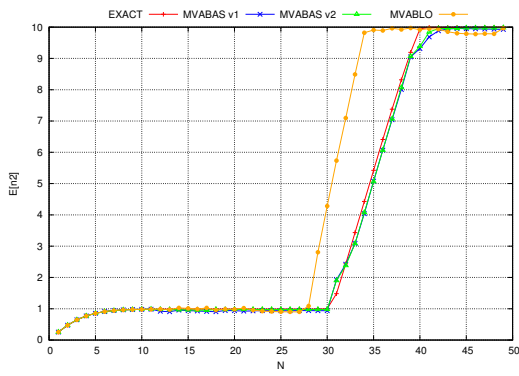
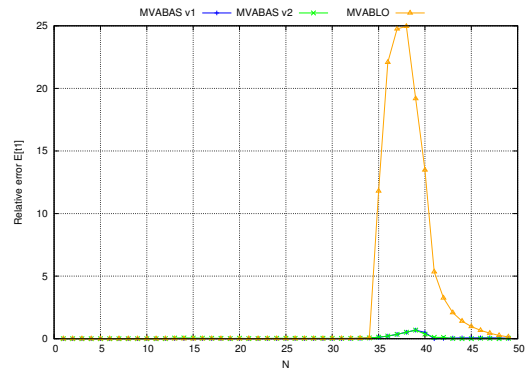
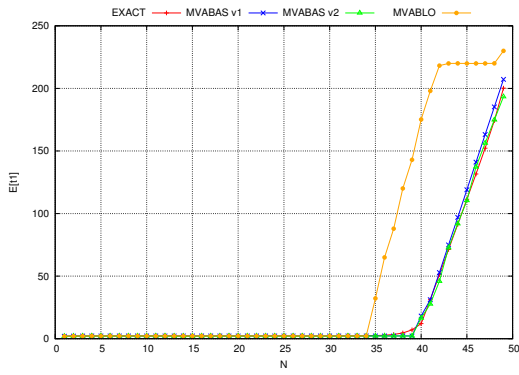
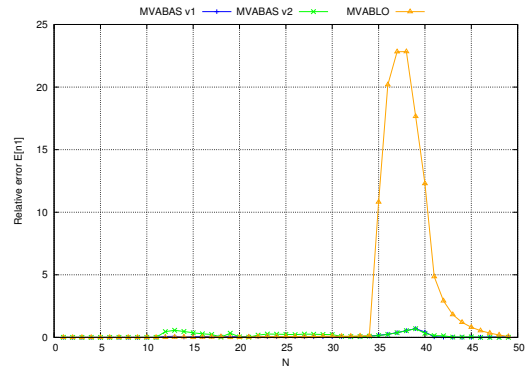
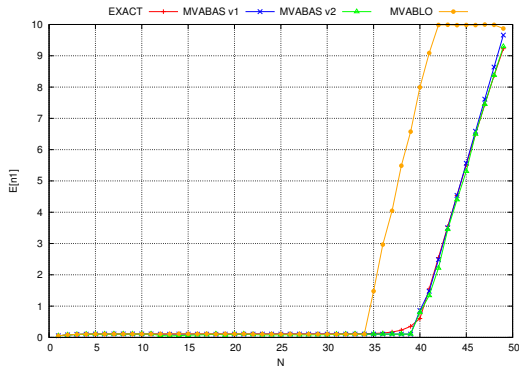
Network 23			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.072	0.062	0.174
e_m	0.017	0.010	0.051
e_M	0.151	0.154	0.602
err_M	0.80	0.79	4.23

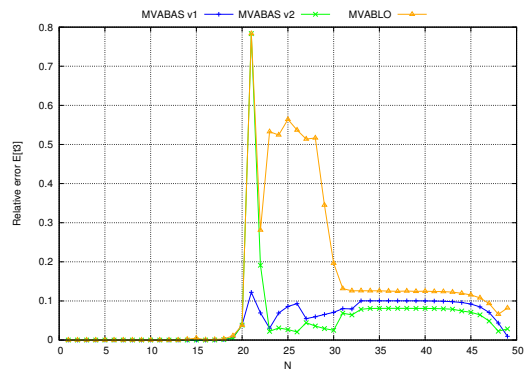
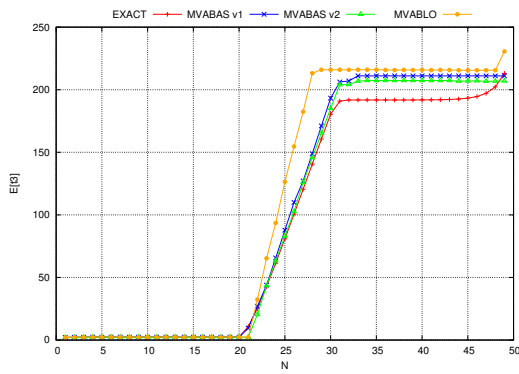
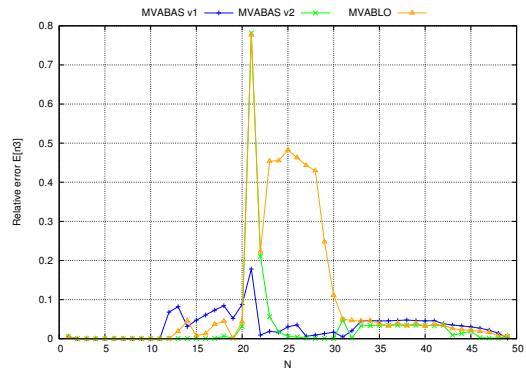
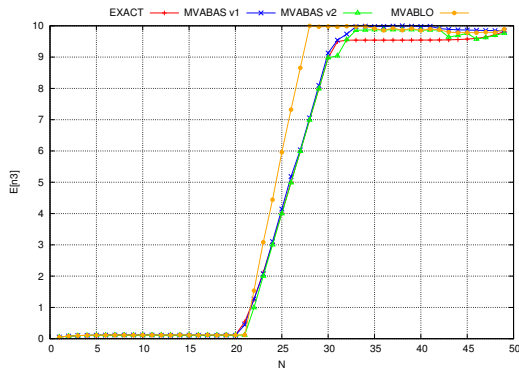
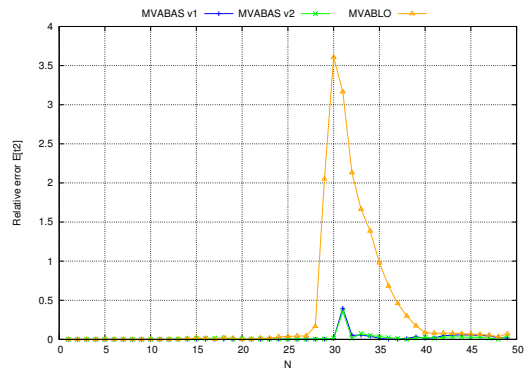
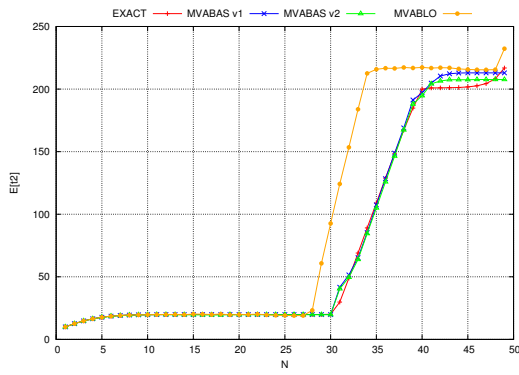
Network 24

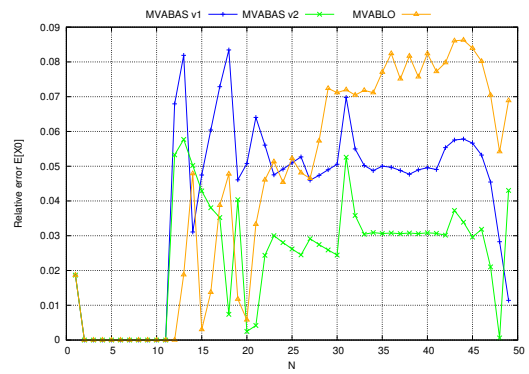
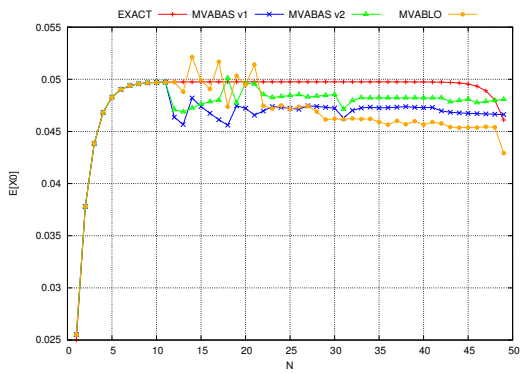
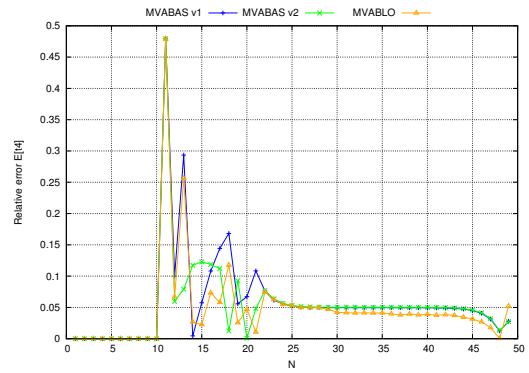
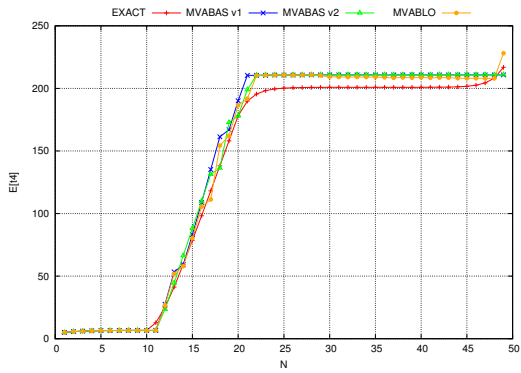
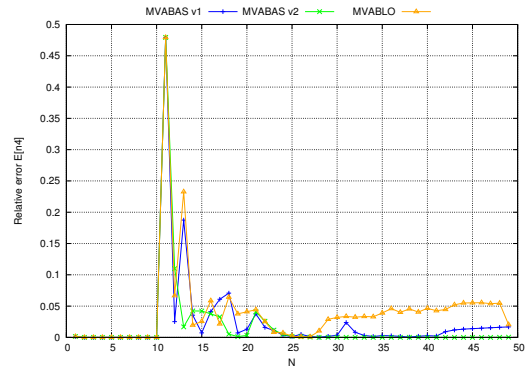
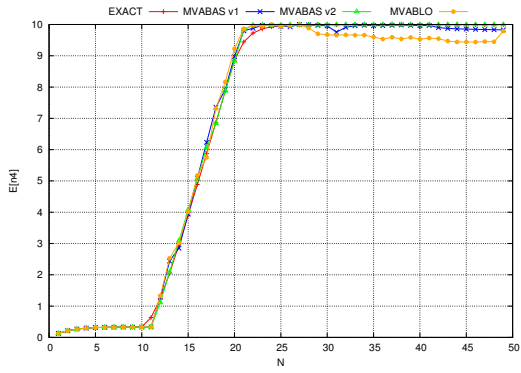
	B	$E[t_s]$
Queue 0	10	20.1
Queue 1	10	2.0
Queue 2	10	10.0
Queue 3	10	2.1
Queue 4	10	5.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







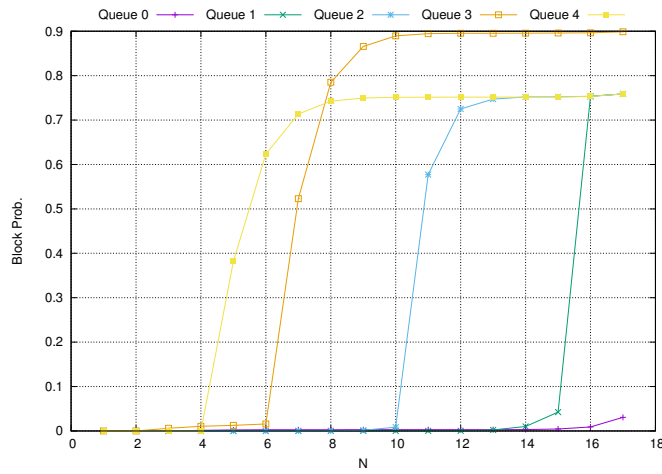


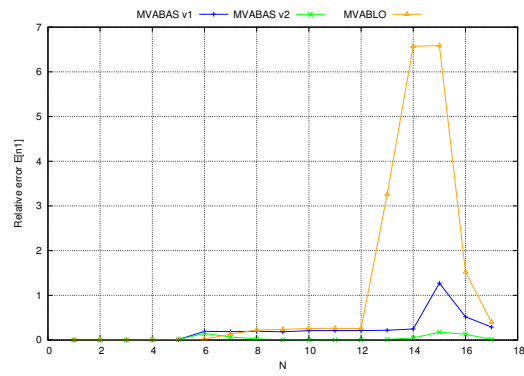
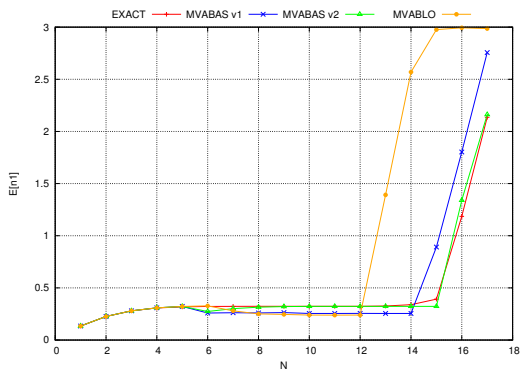
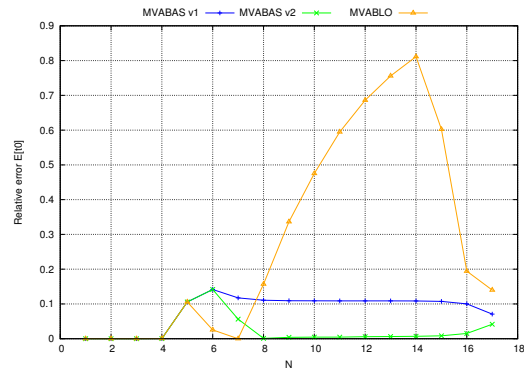
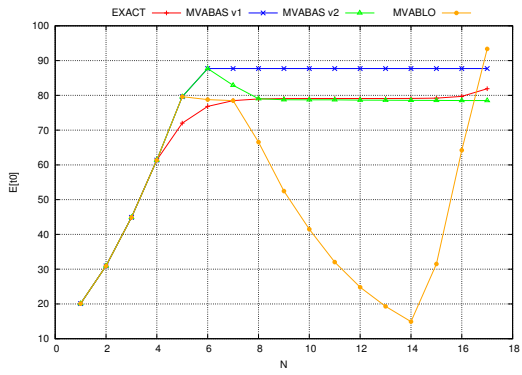
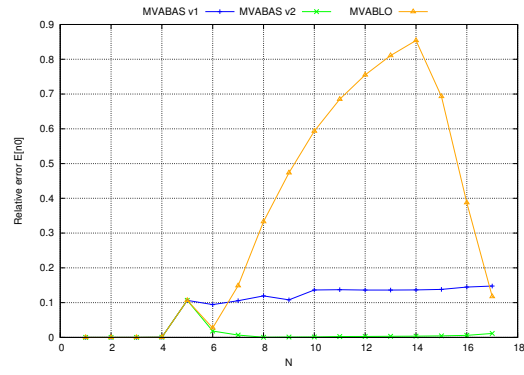
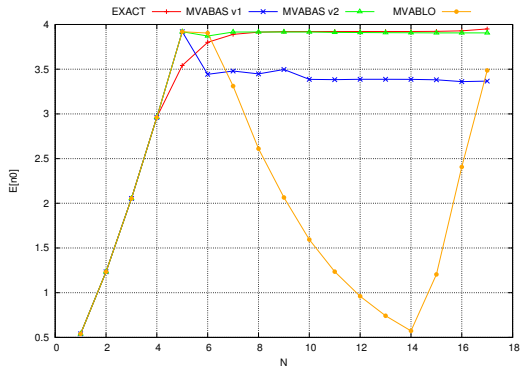
Network 24			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.041	0.03	0.455
e_m	0.008	0.005	0.041
e_M	0.08	0.16	2.67
err_M	0.70	0.78	24.95

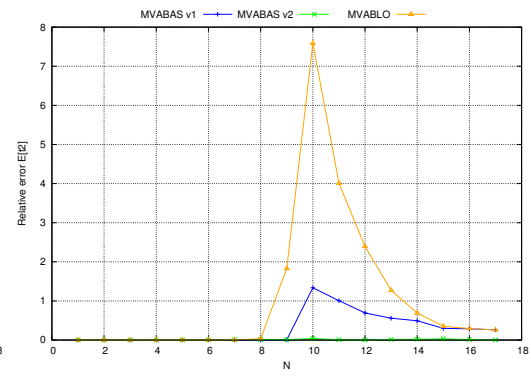
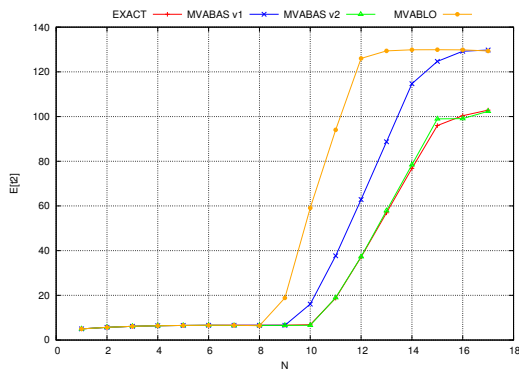
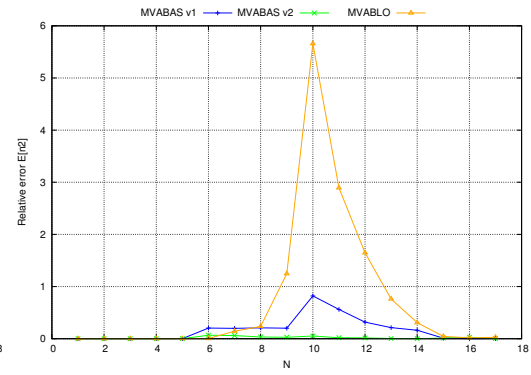
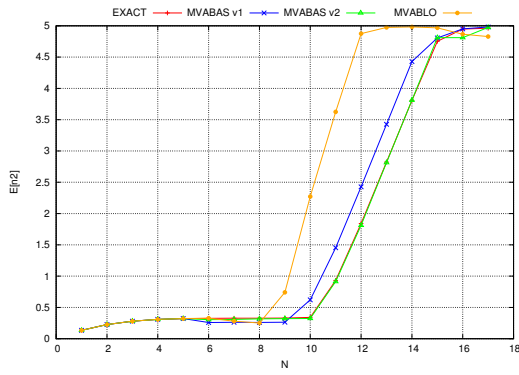
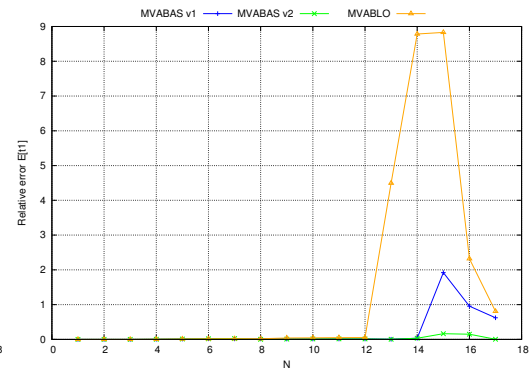
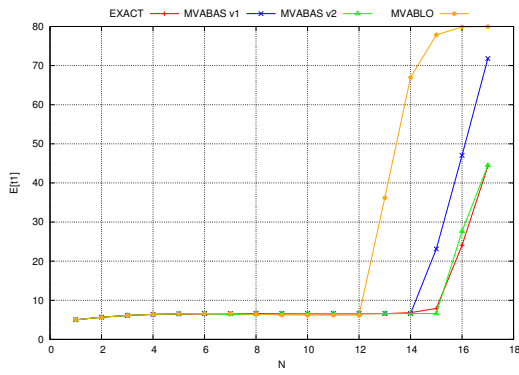
Network 25

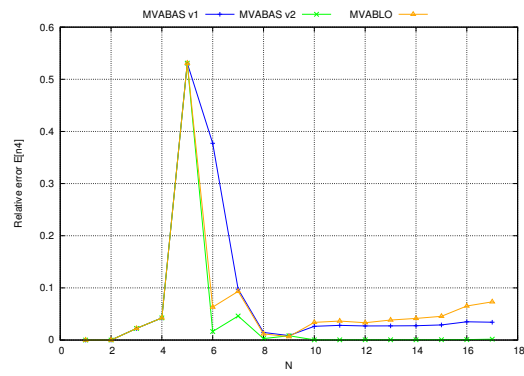
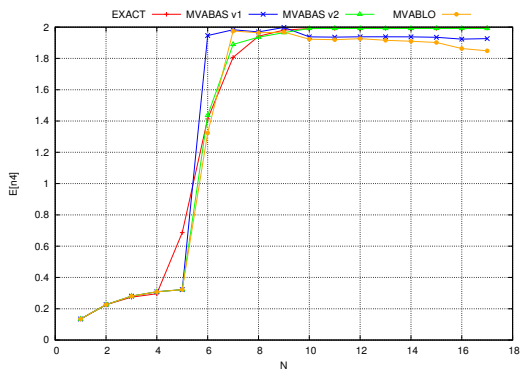
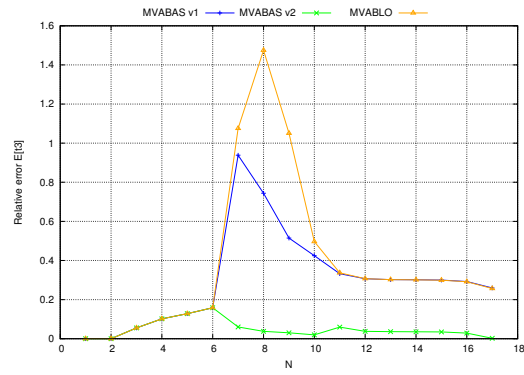
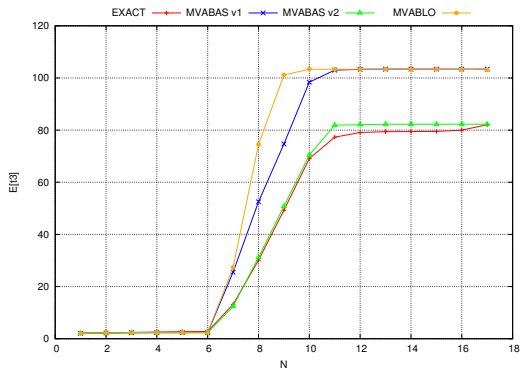
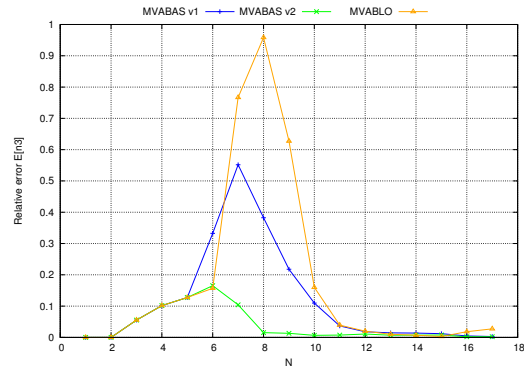
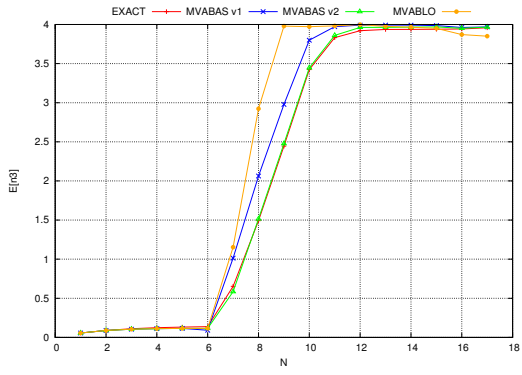
	B	$E[t_s]$
Queue 0	4	20.1
Queue 1	3	5.0
Queue 2	5	5.0
Queue 3	4	2.1
Queue 4	2	5.0

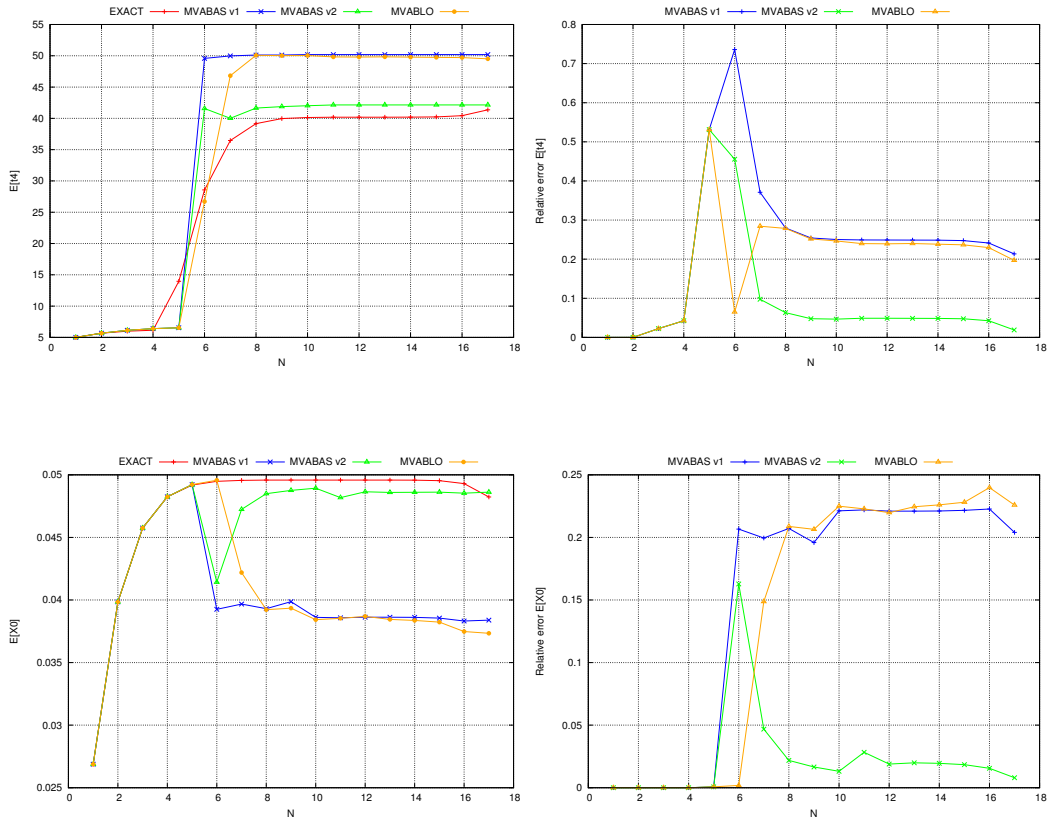
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









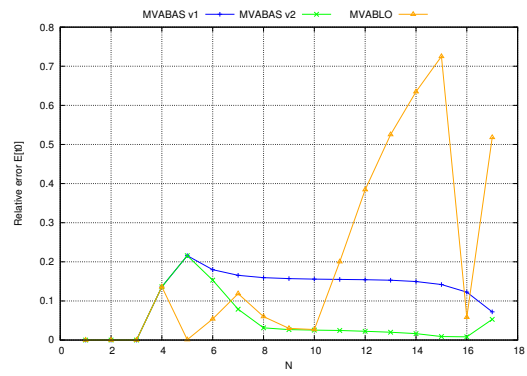
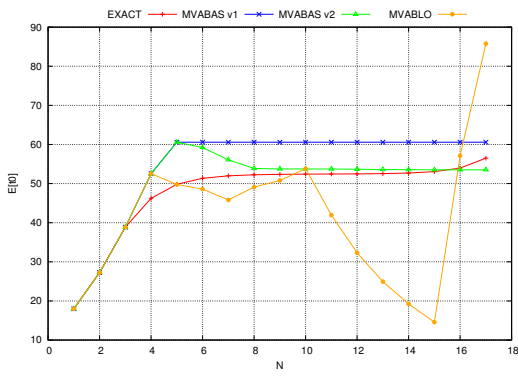
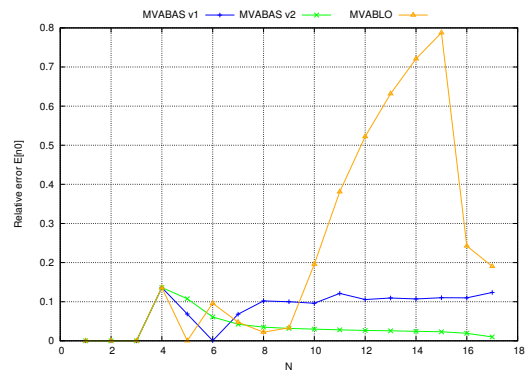
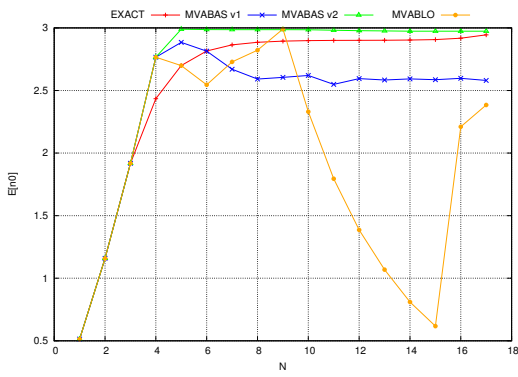
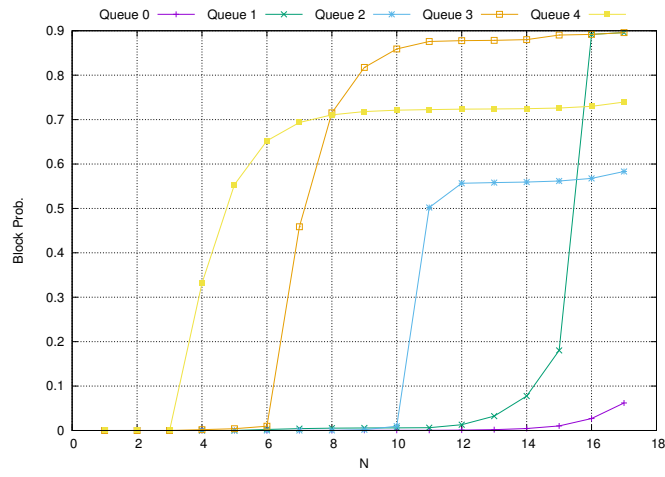


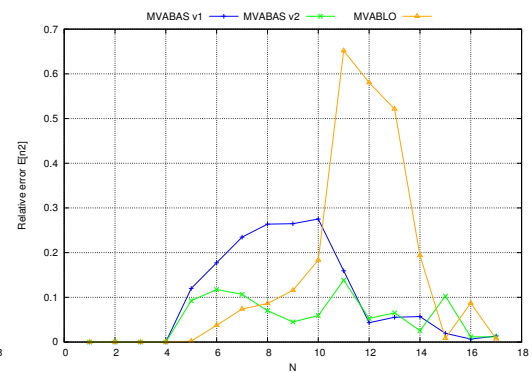
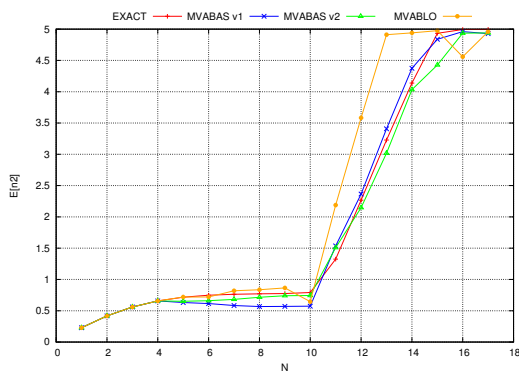
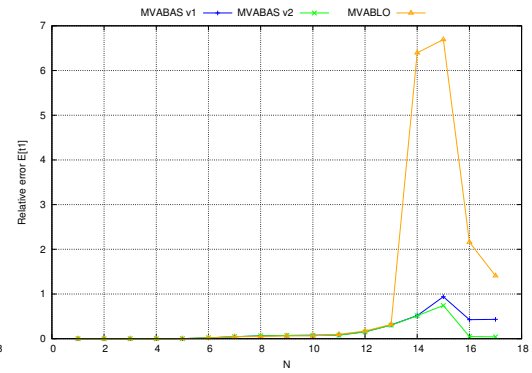
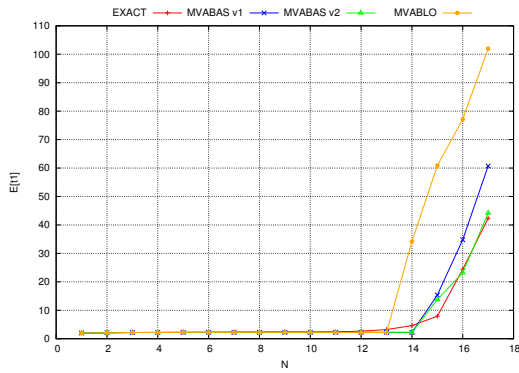
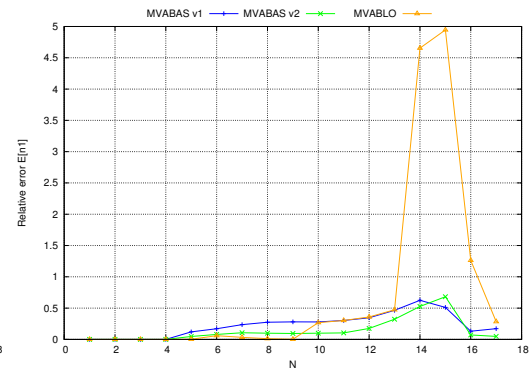
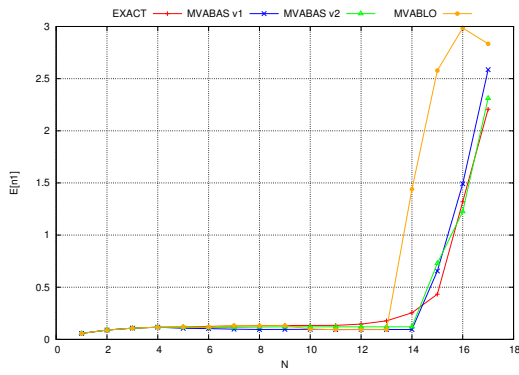
Network 25			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.17	0.03	0.44
e_m	0.078	0.009	0.066
e_M	0.30	0.09	1.49
err_M	1.92	0.53	8.82

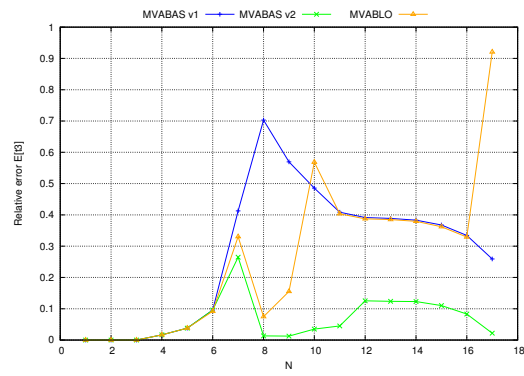
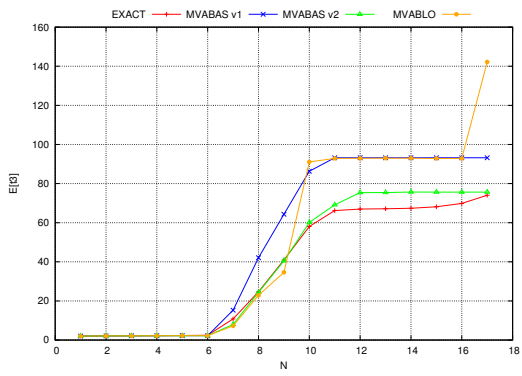
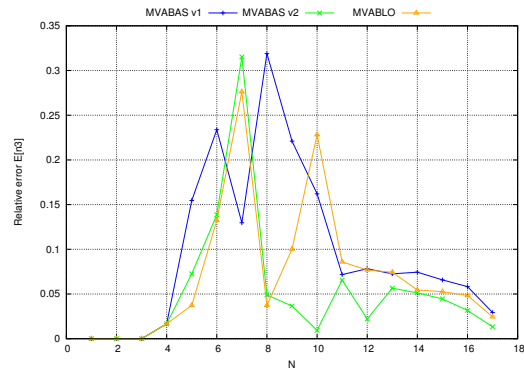
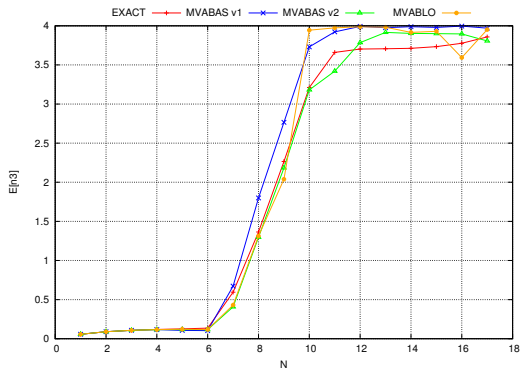
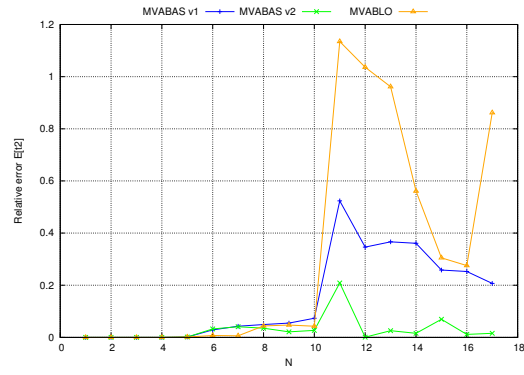
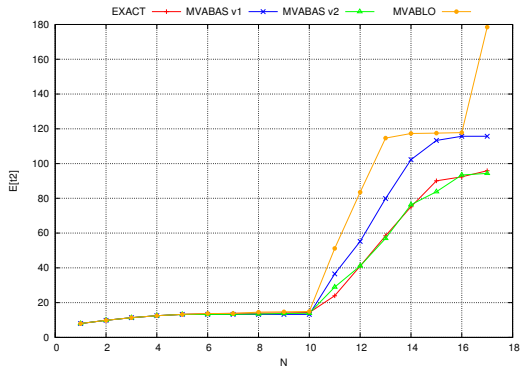
Network 26

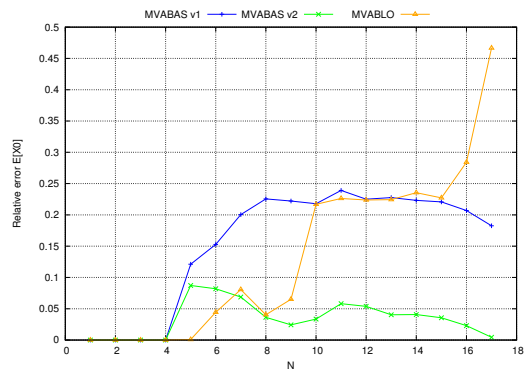
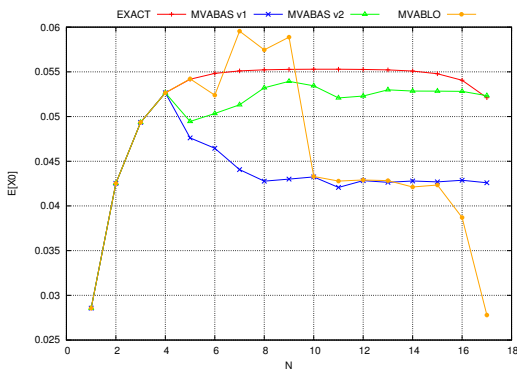
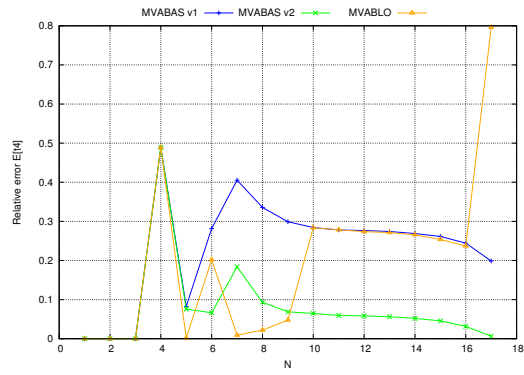
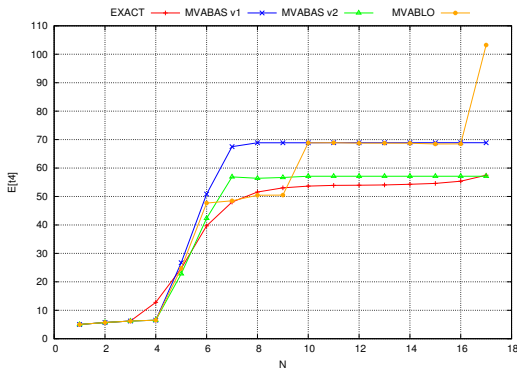
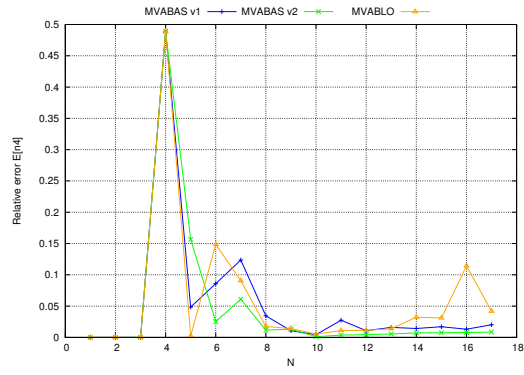
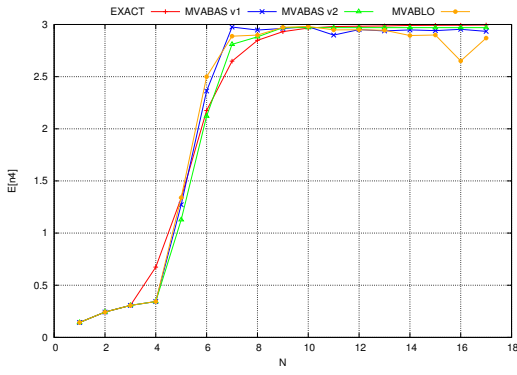
	B	$E[t_s]$
Queue 0	3	18.0
Queue 1	3	2.0
Queue 2	5	8.0
Queue 3	4	2.0
Queue 4	3	5.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







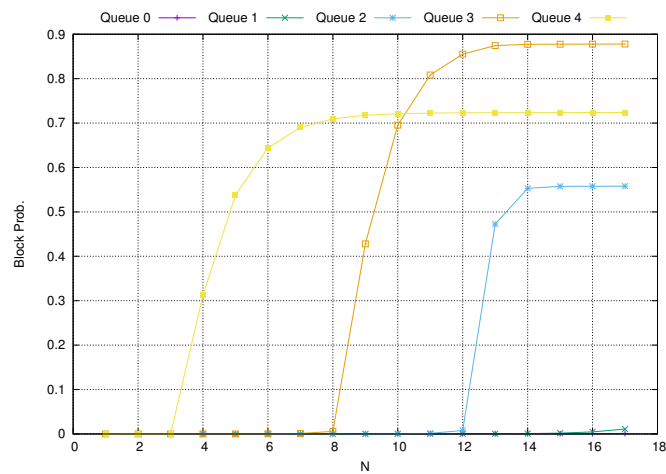


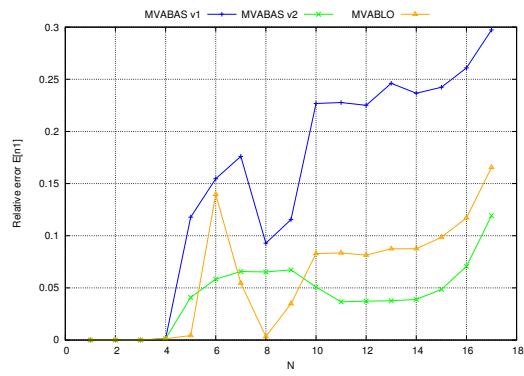
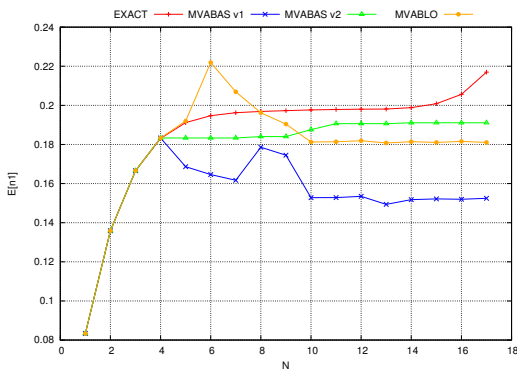
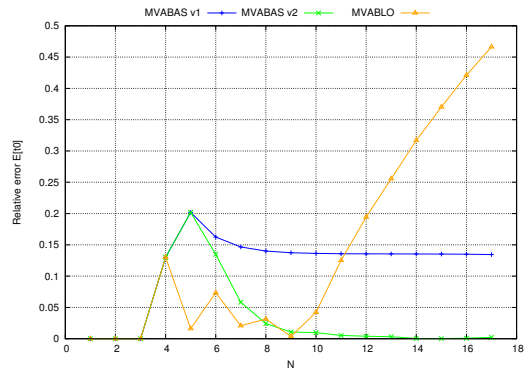
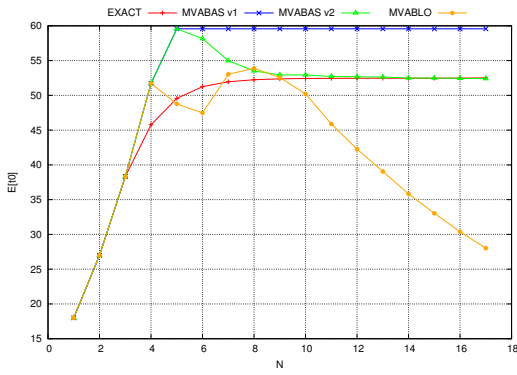
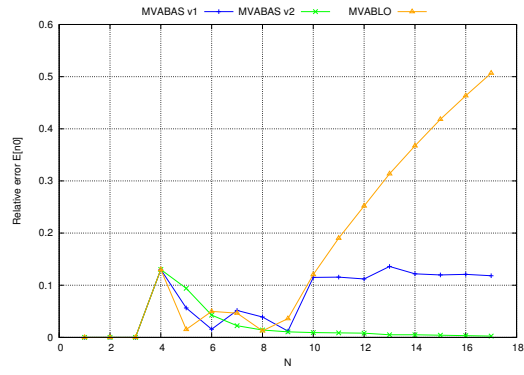
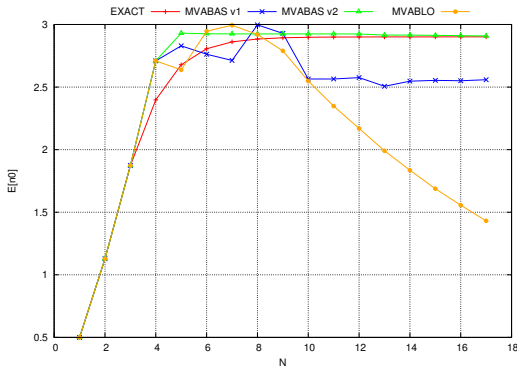
Network 26			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.15	0.05	0.26
e_m	0.05	0.02	0.06
e_M	0.28	0.14	1.02
err_M	0.94	0.74	6.69

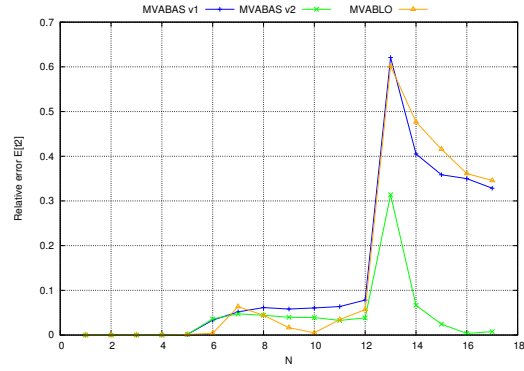
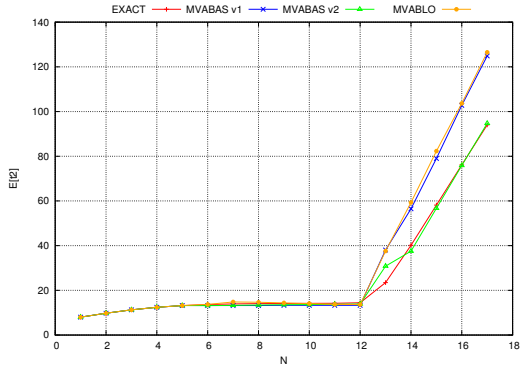
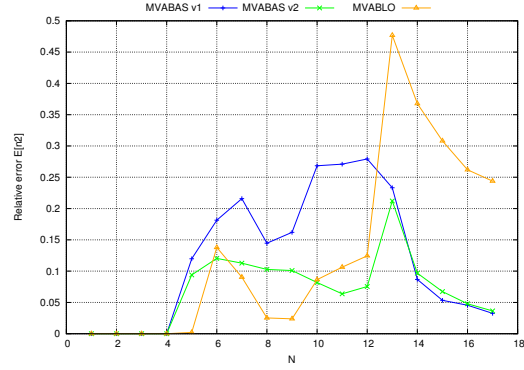
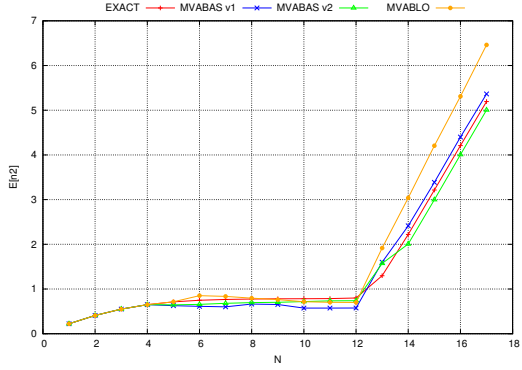
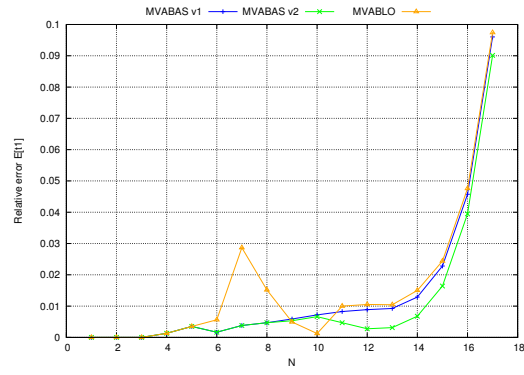
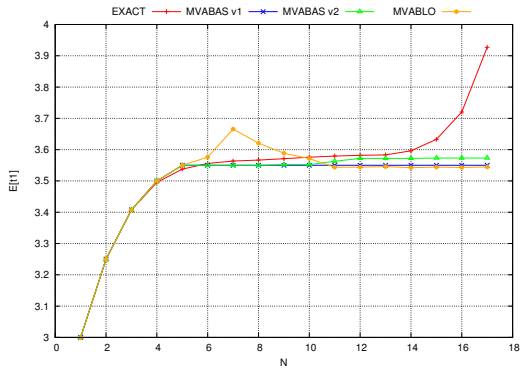
Network 27

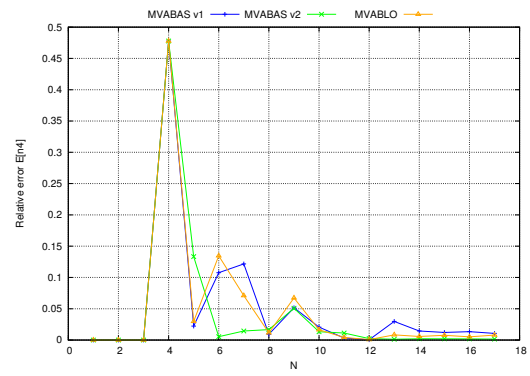
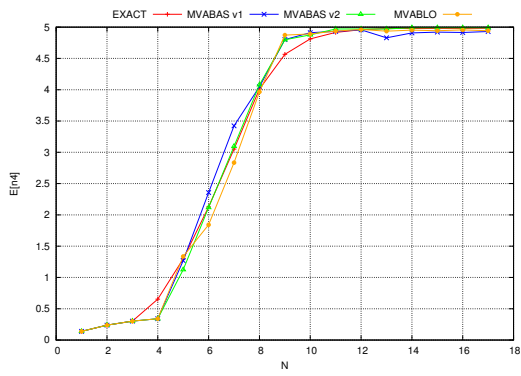
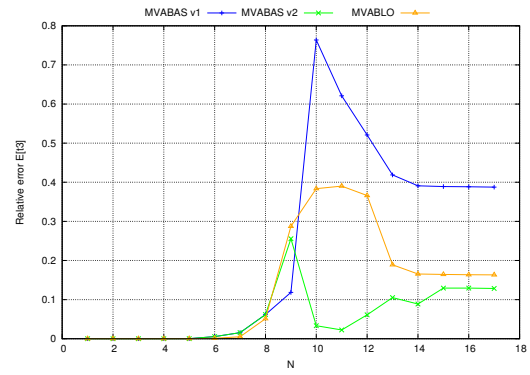
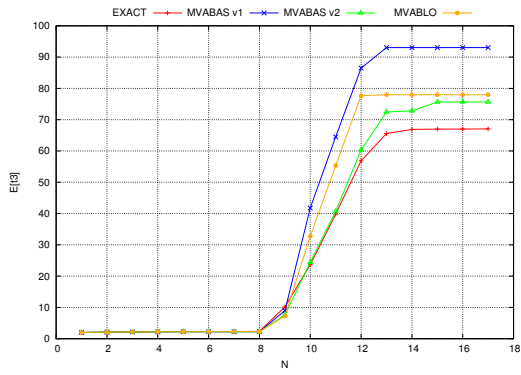
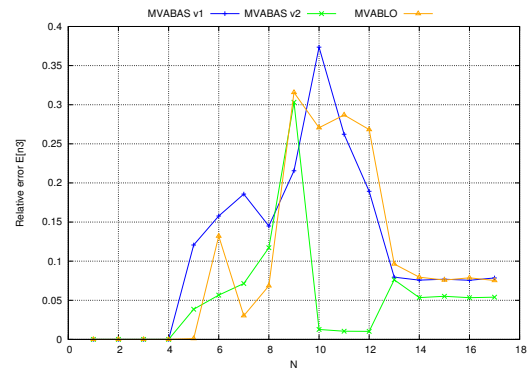
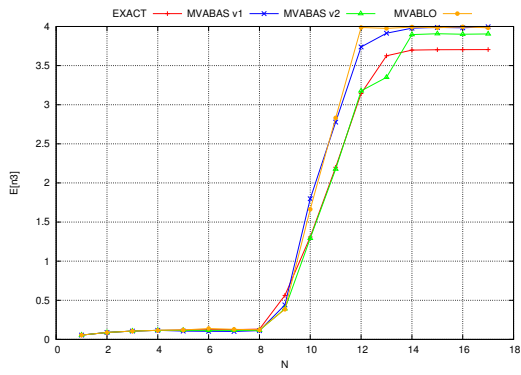
	B	$E[t_s]$
Queue 0	3	18.0
Queue 1	3	3.0
Queue 2	8	8.0
Queue 3	4	2.0
Queue 4	5	5.0

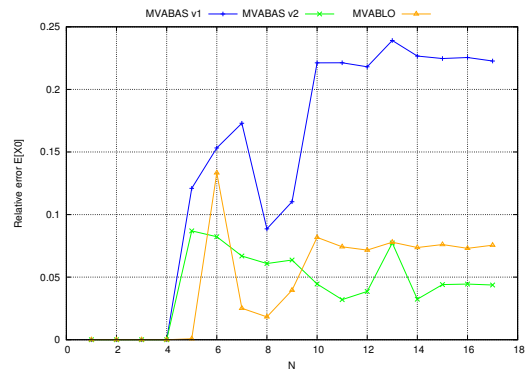
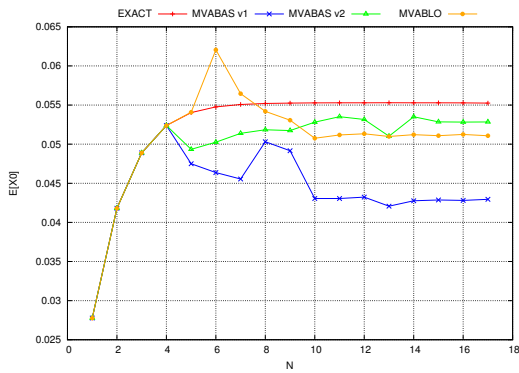
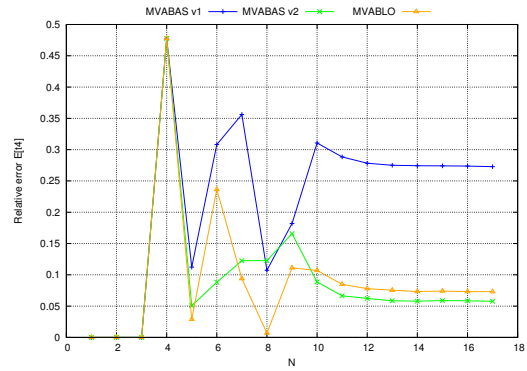
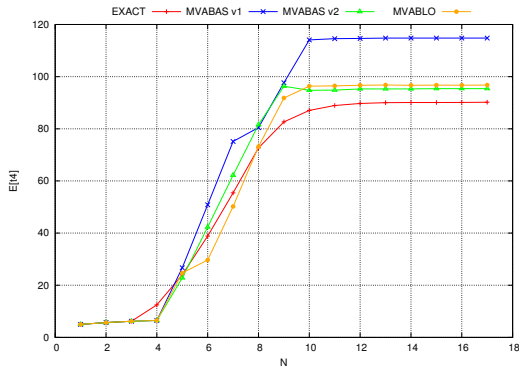
P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0









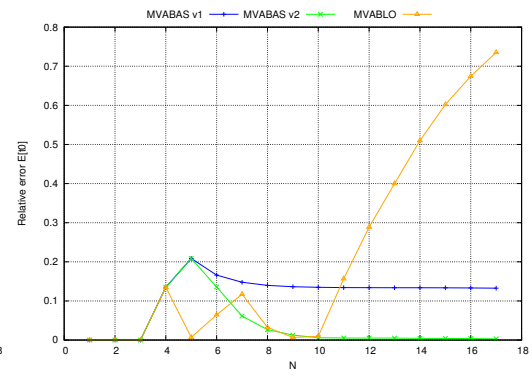
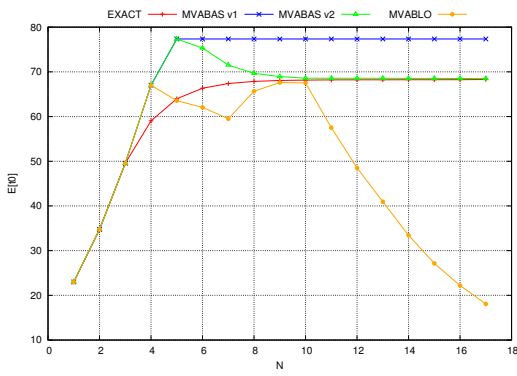
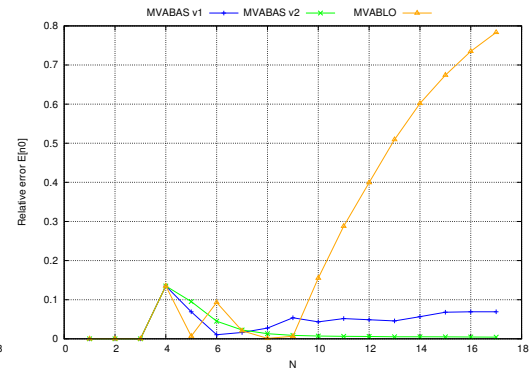
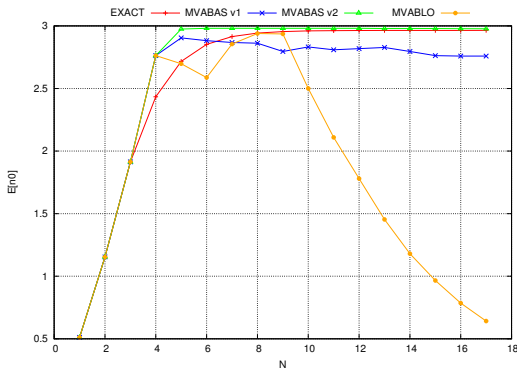
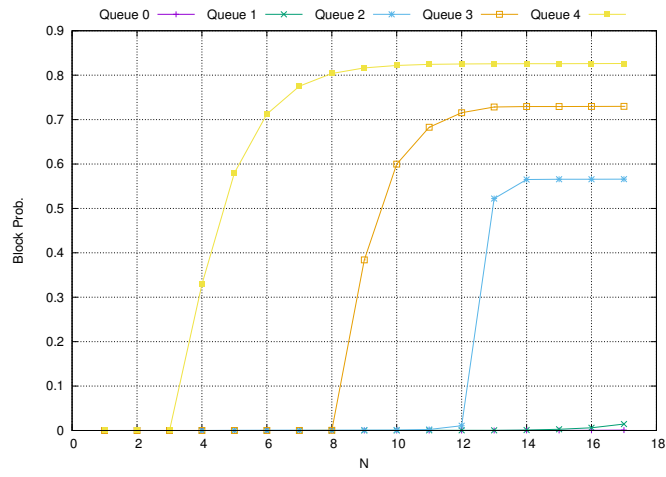


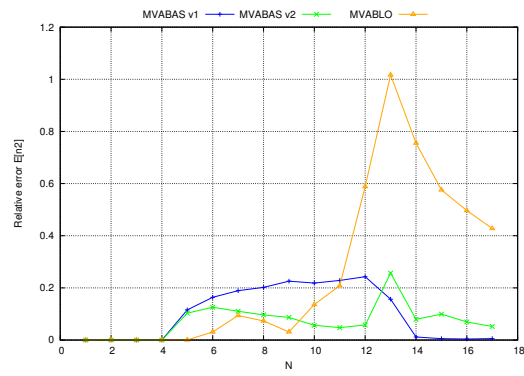
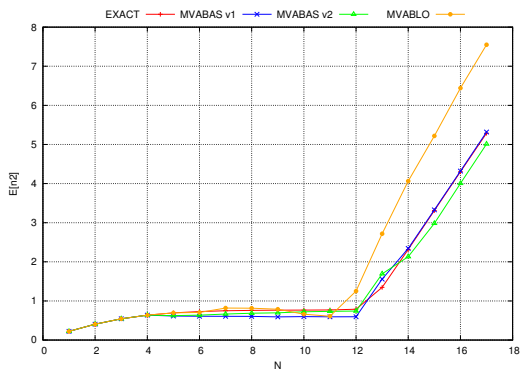
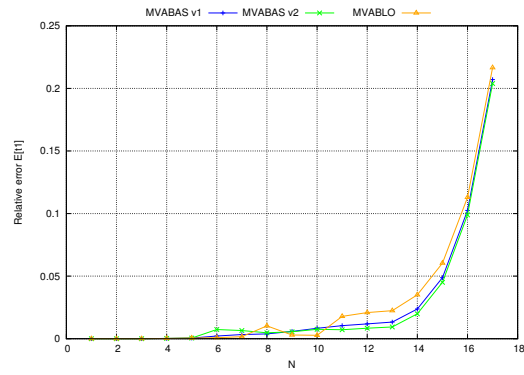
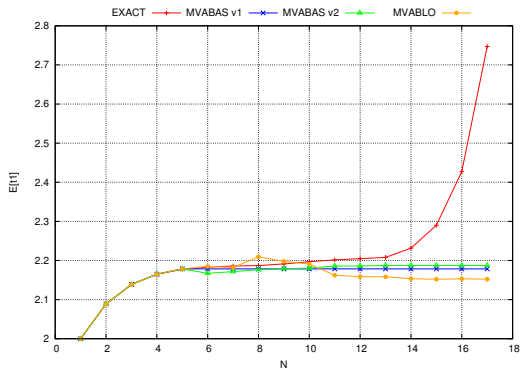
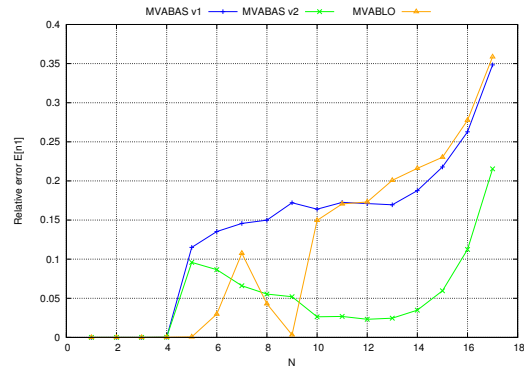
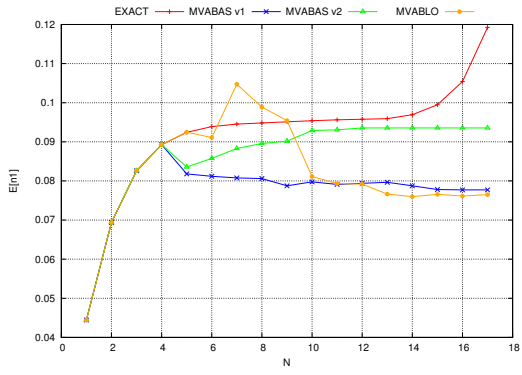
Network 27			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.13	0.04	0.08
e_m	0.013	0.011	0.016
e_M	0.24	0.09	0.17
err_M	0.76	0.47	0.60

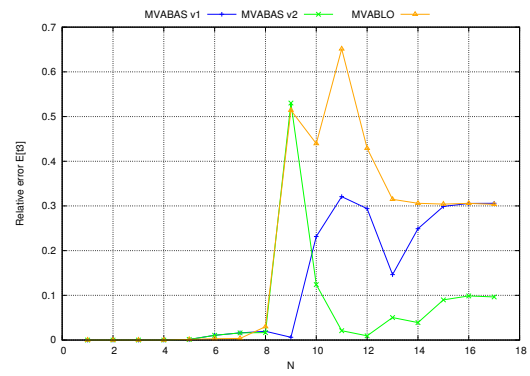
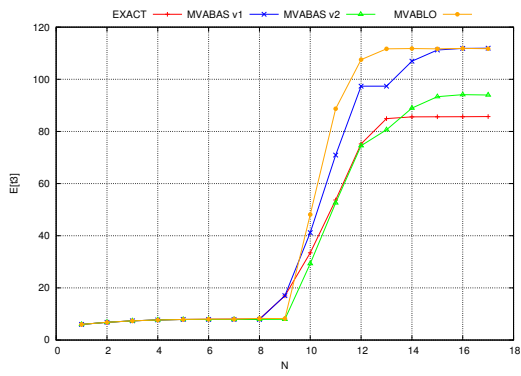
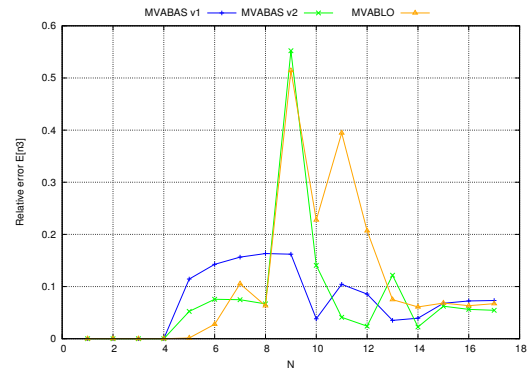
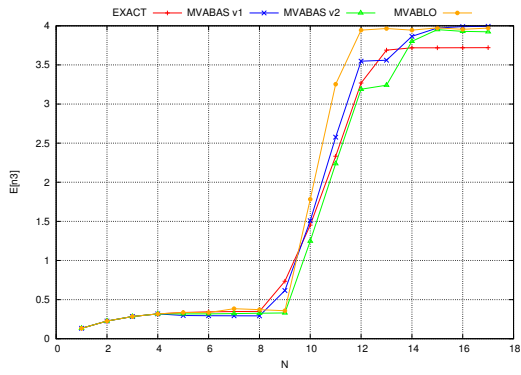
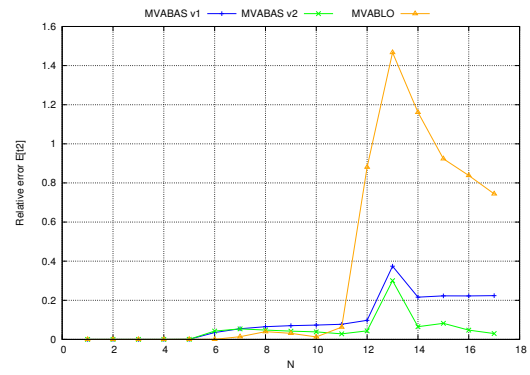
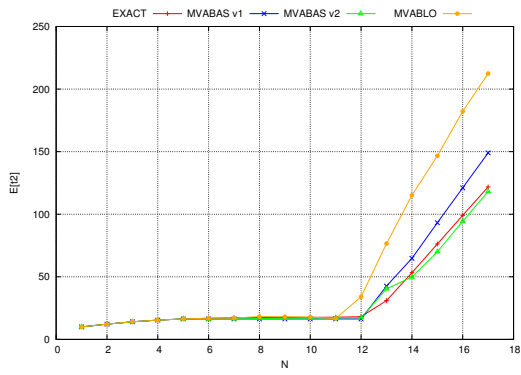
Network 28

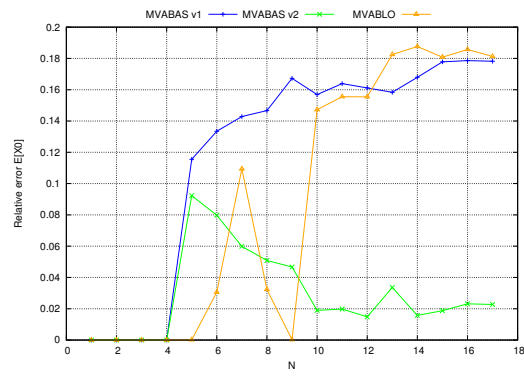
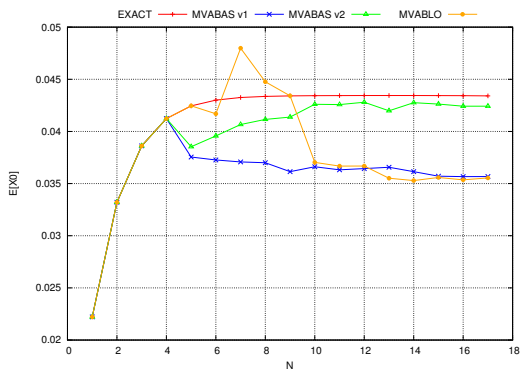
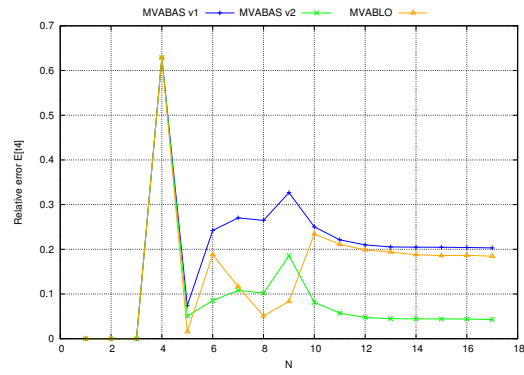
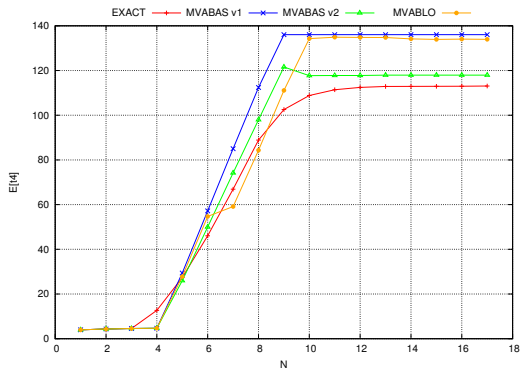
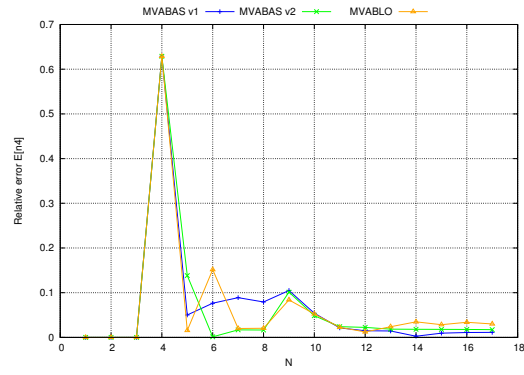
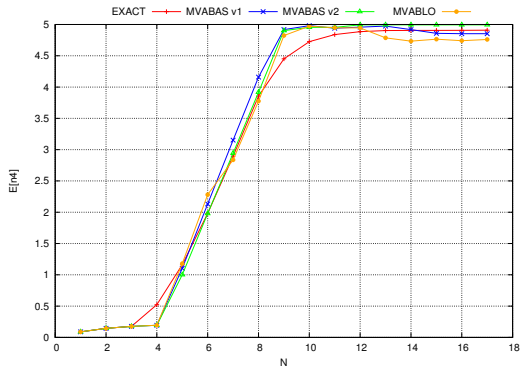
	B	$E[t_s]$
Queue 0	3	23.0
Queue 1	3	2.0
Queue 2	8	10.0
Queue 3	4	6.0
Queue 4	5	4.0

P				
0	1.0	0	0	0
0	0	1.0	0	0
0	0	0	1.0	0
0	0	0	0	1.0
1.0	0	0	0	0







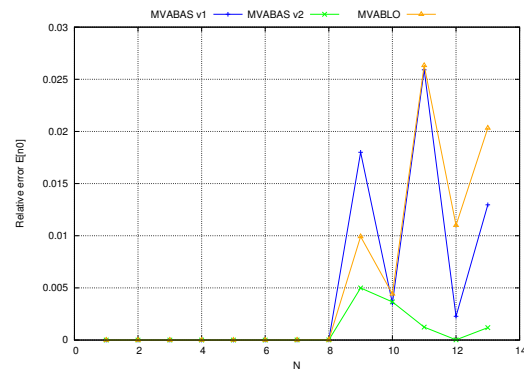
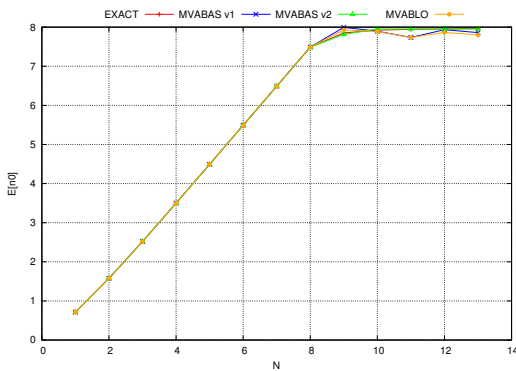
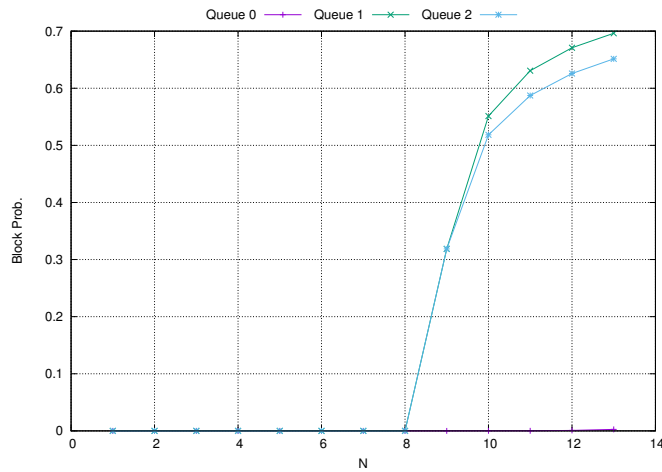


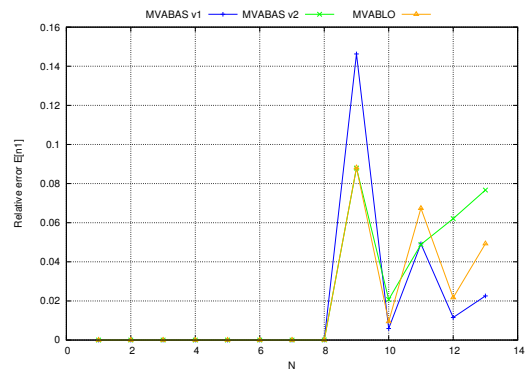
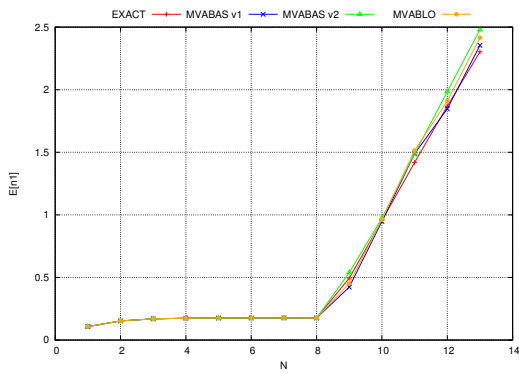
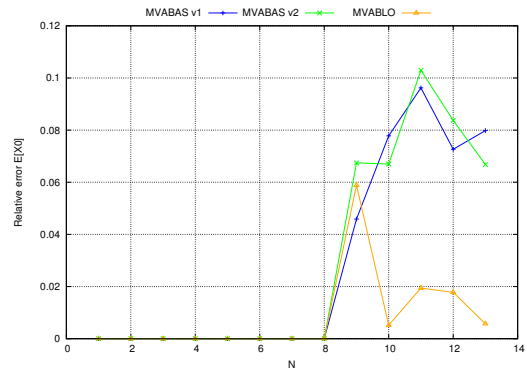
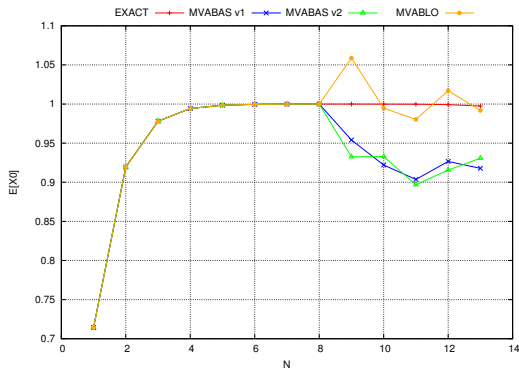
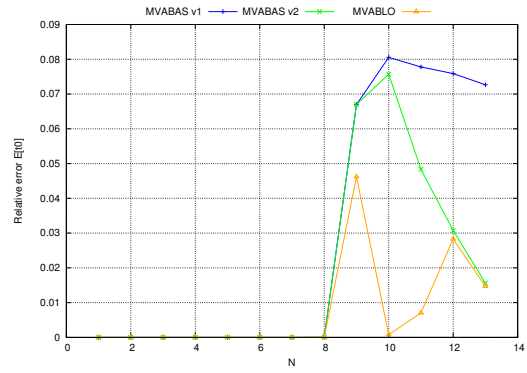
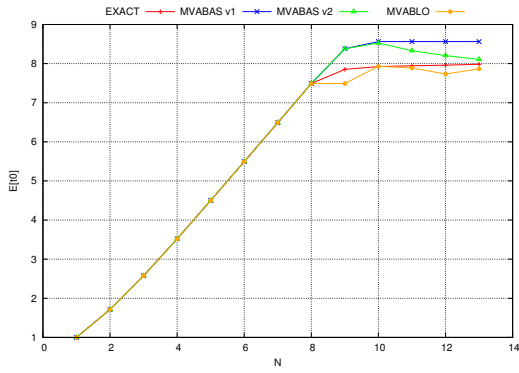
Network 28			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.10	0.04	0.15
e_m	0.025	0.021	0.029
e_M	0.206	0.092	0.363
err_M	0.628	0.628	1.466

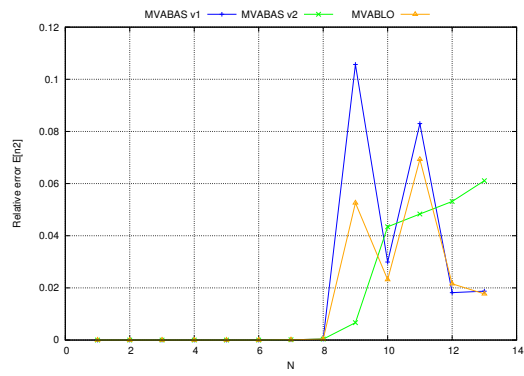
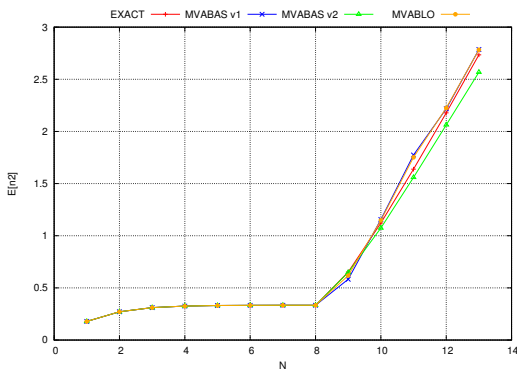
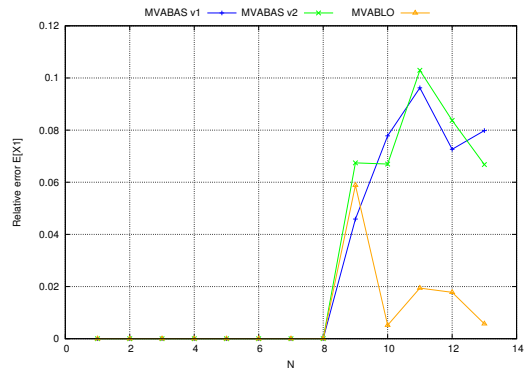
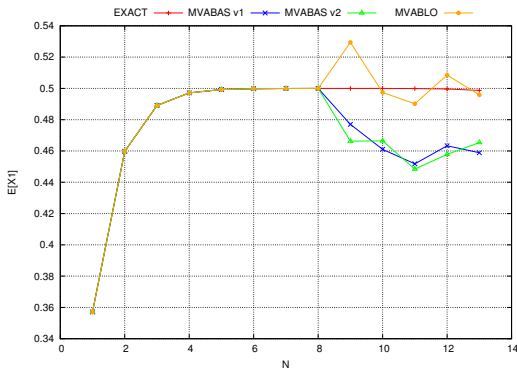
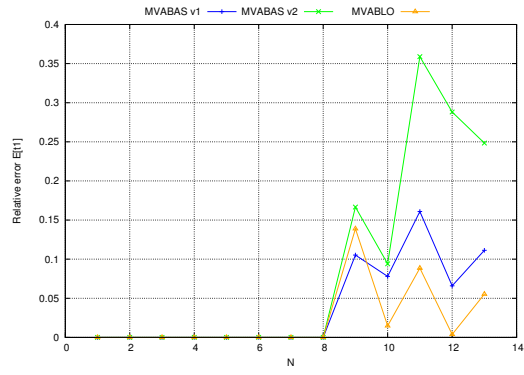
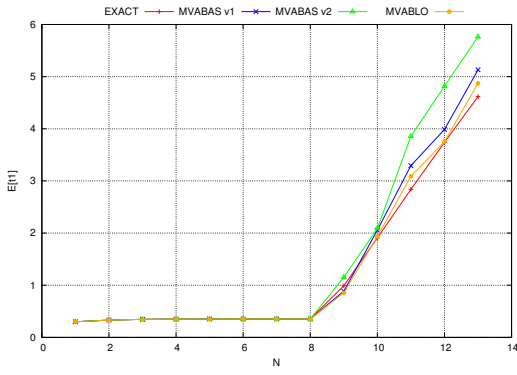
Network 33

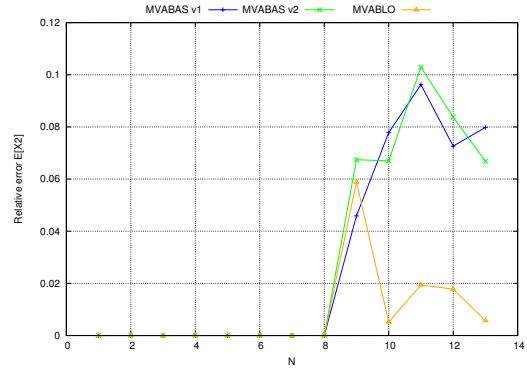
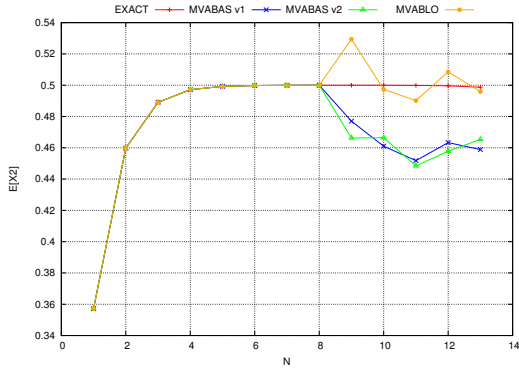
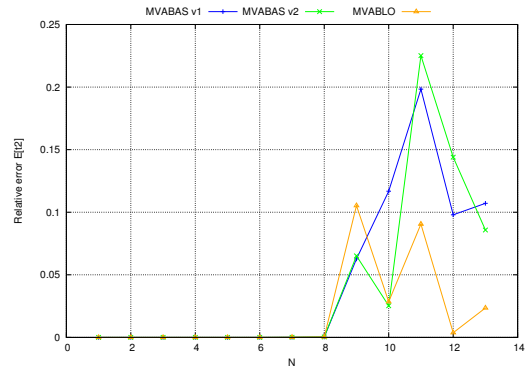
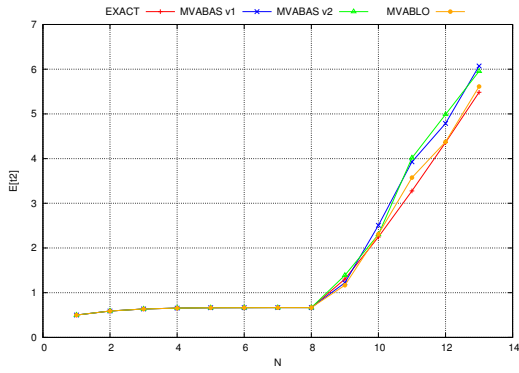
	B	$E[t_s]$
Queue 0	8	1.0
Queue 1	7	0.3
Queue 2	6	0.5

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







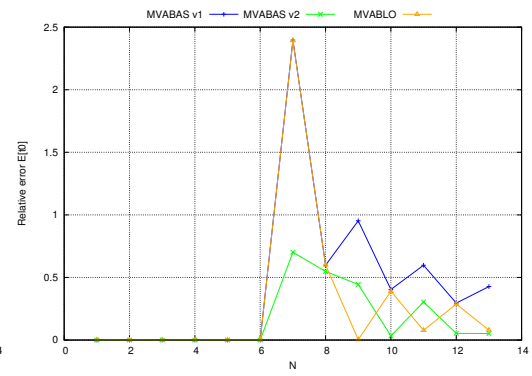
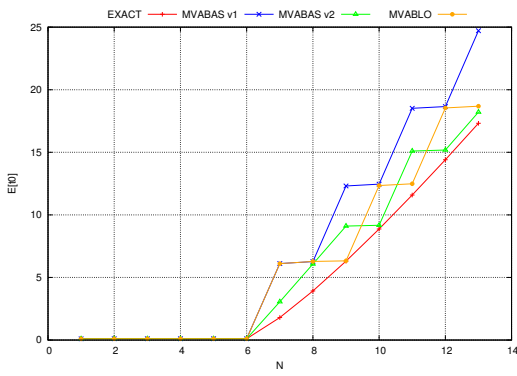
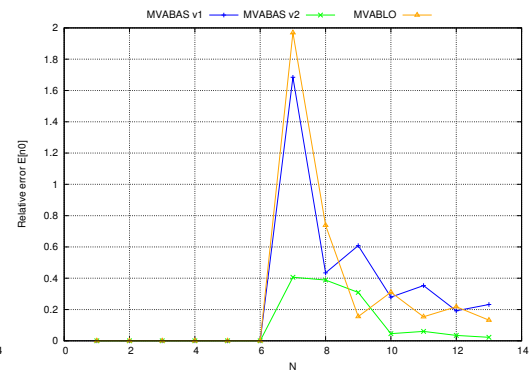
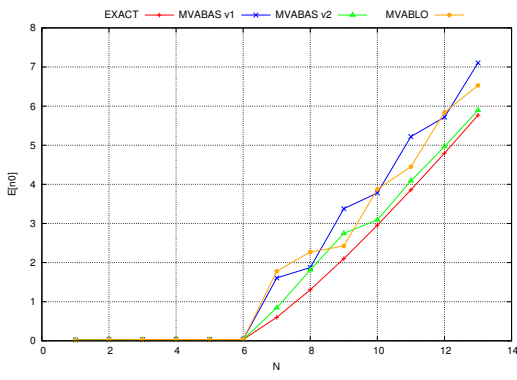
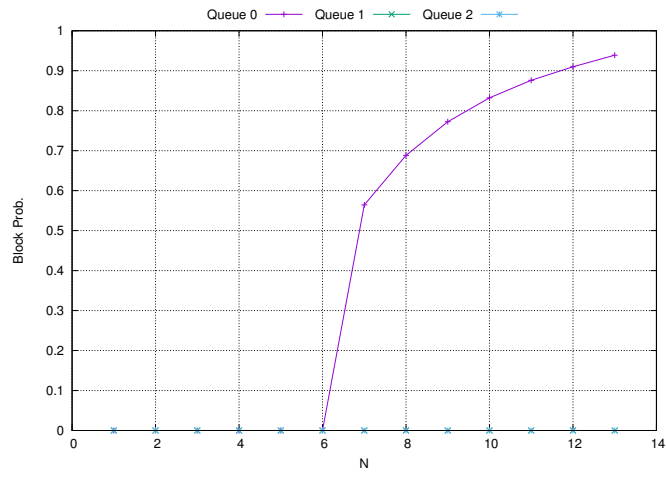


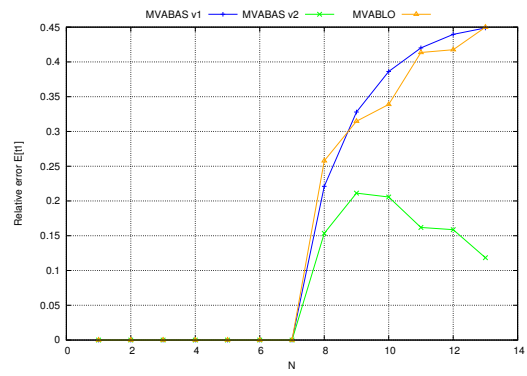
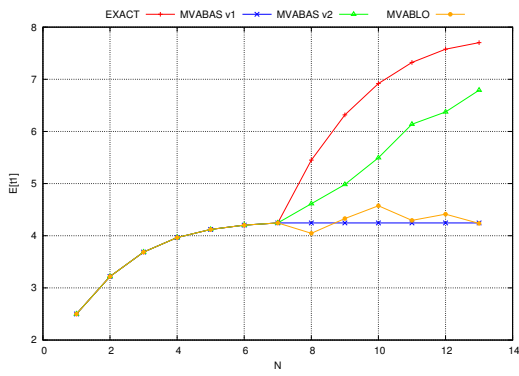
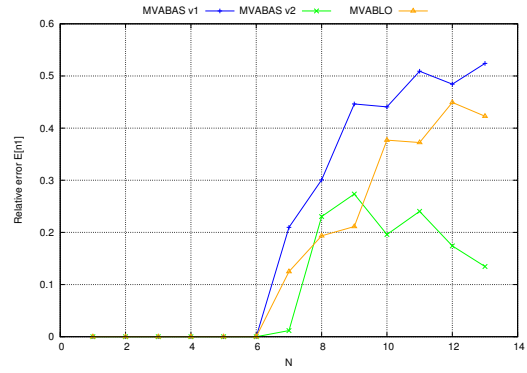
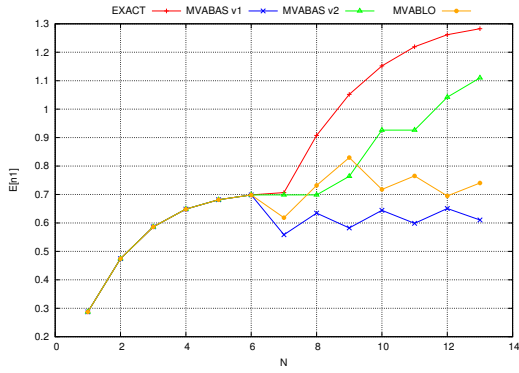
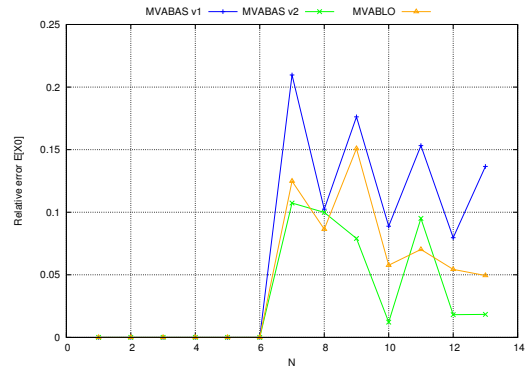
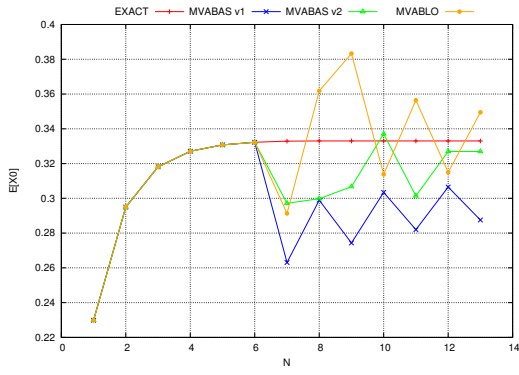
Network 33			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.026	0.030	0.012
e_m	0.0048	0.0008	0.0055
e_M	0.044	0.088	0.023
err_M	0.198	0.358	0.138

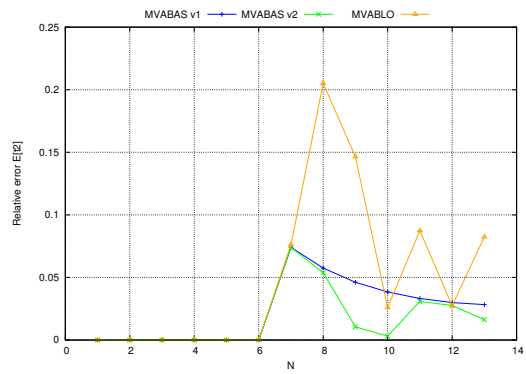
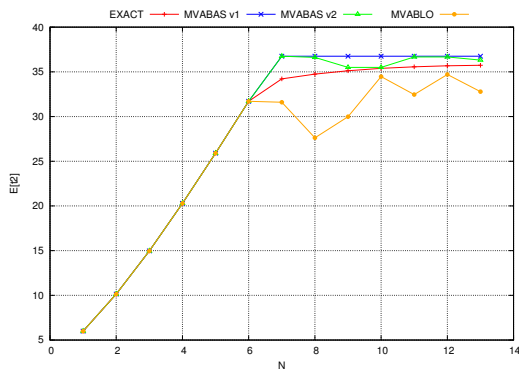
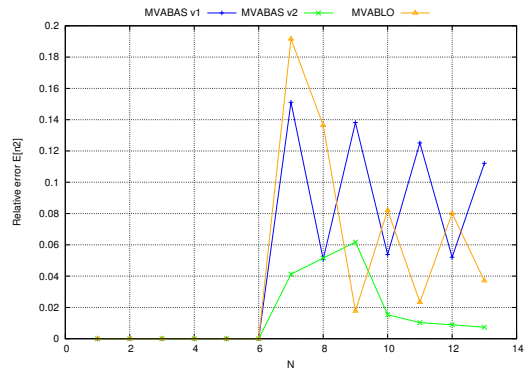
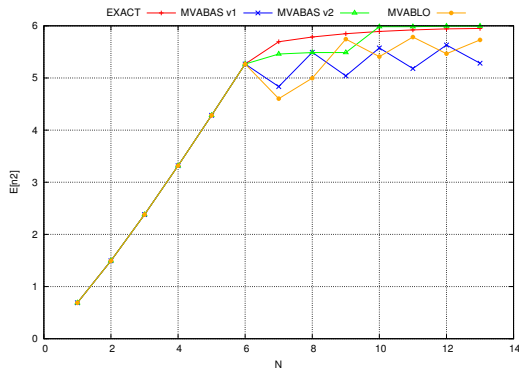
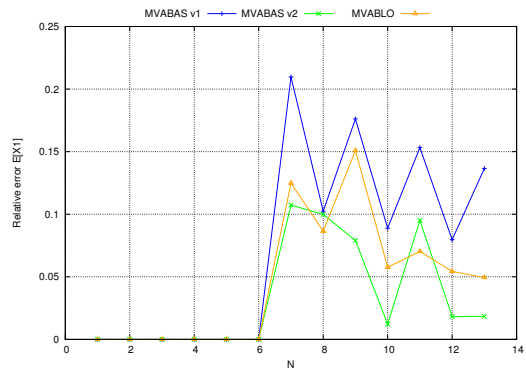
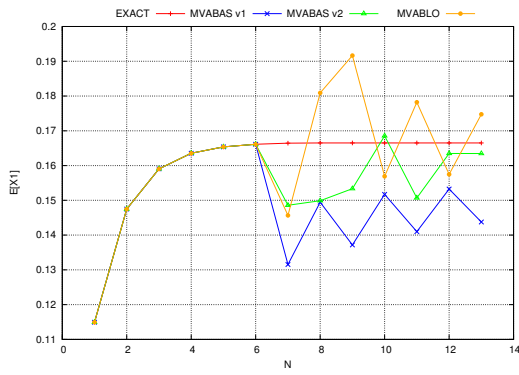
Network 34

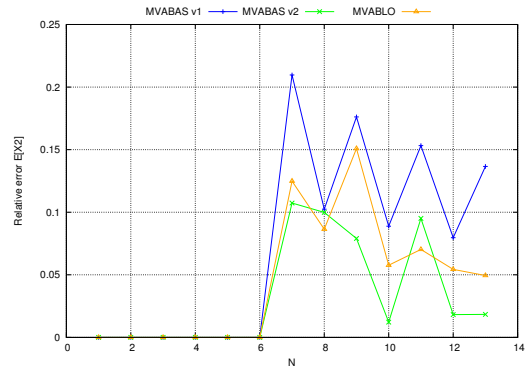
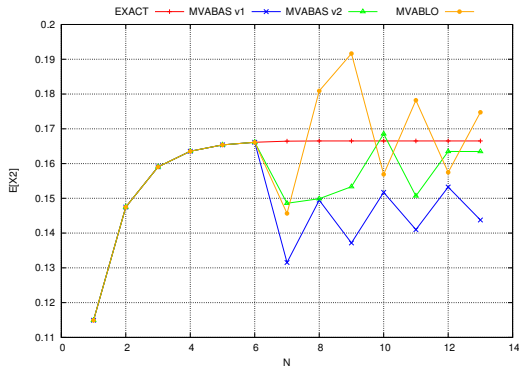
	B	$E[t_s]$
Queue 0	8	0.1
Queue 1	7	2.5
Queue 2	6	6.0

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







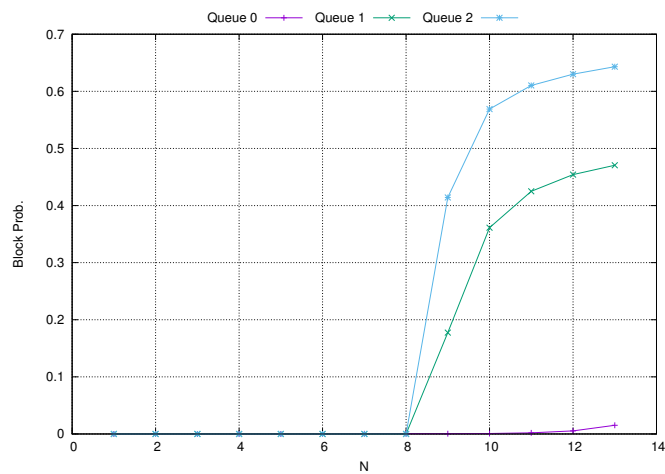


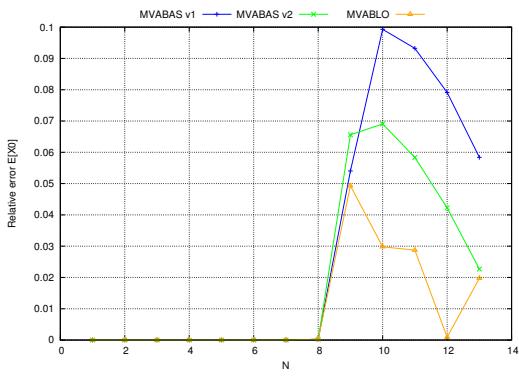
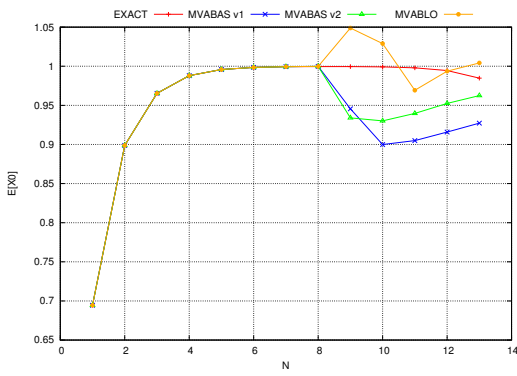
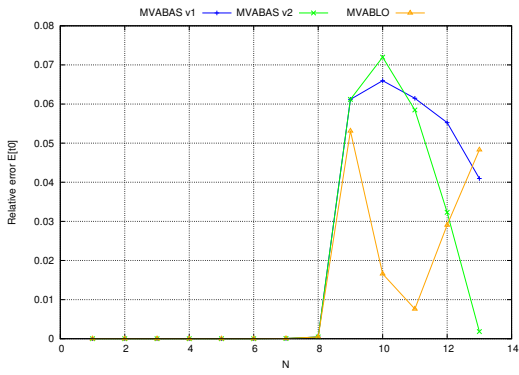
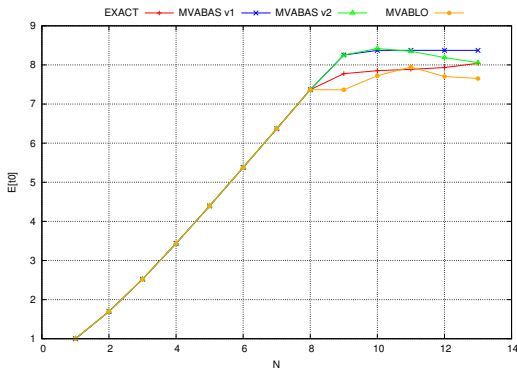
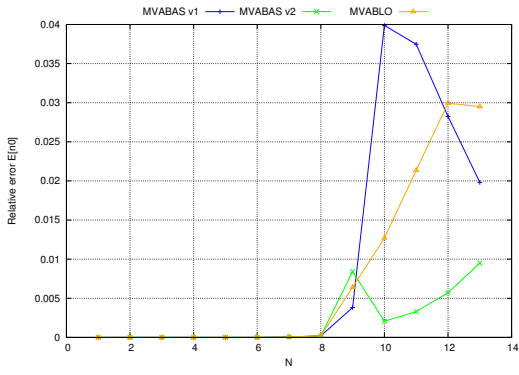
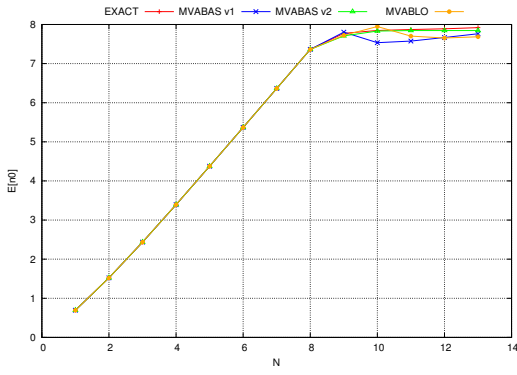
Network 34			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.157	0.063	0.126
e_m	0.023	0.015	0.043
e_M	0.436	0.164	0.294
err_M	2.396	0.701	2.392

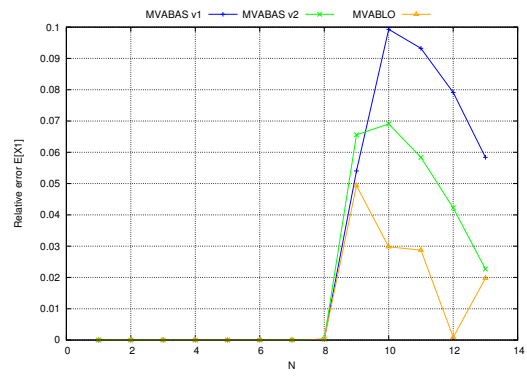
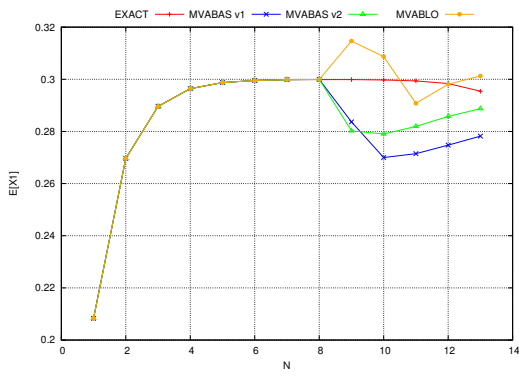
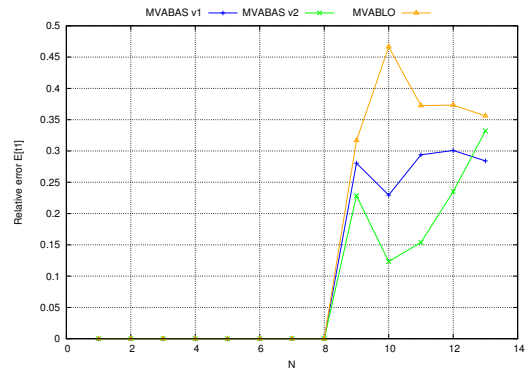
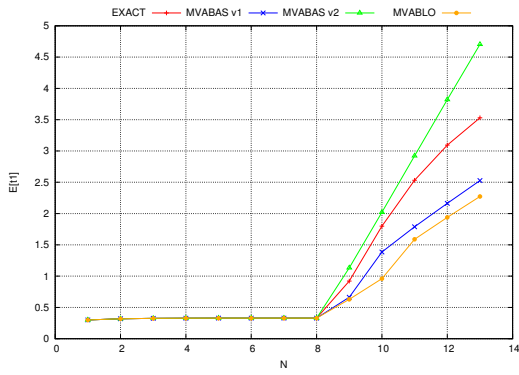
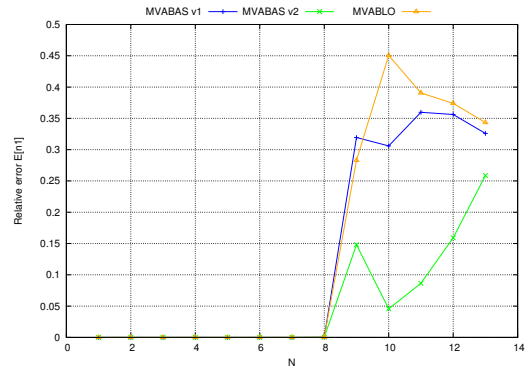
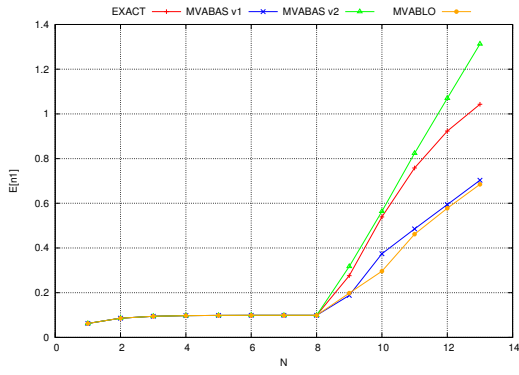
Network 35

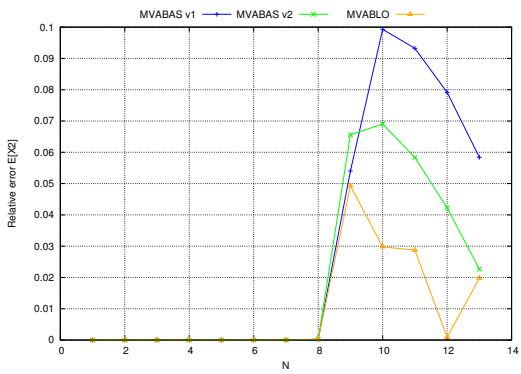
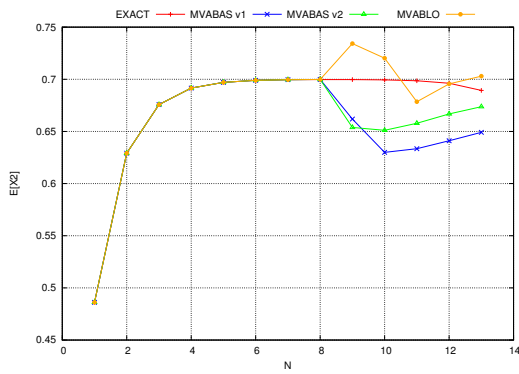
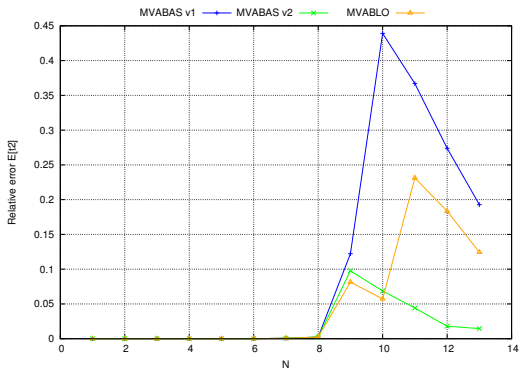
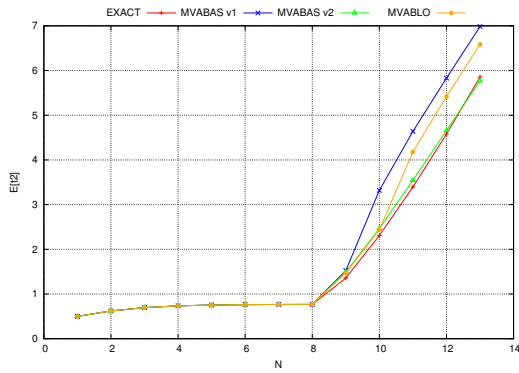
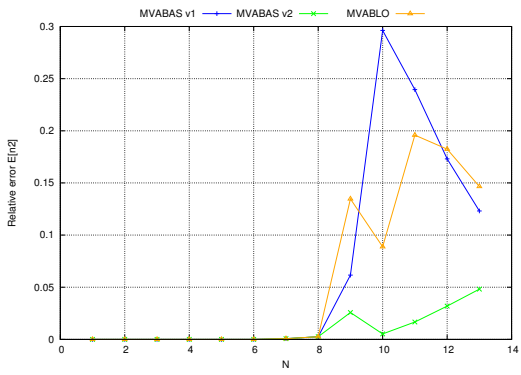
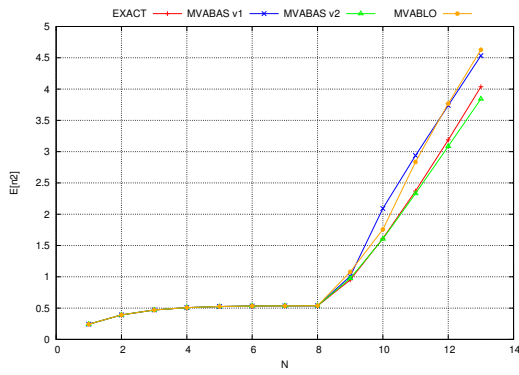
	B	$E[t_s]$
Queue 0	8	1.0
Queue 1	7	0.3
Queue 2	6	0.5

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







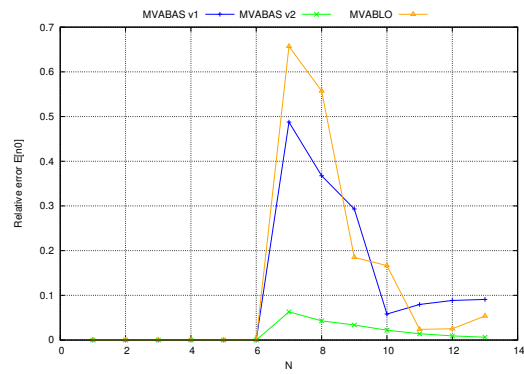
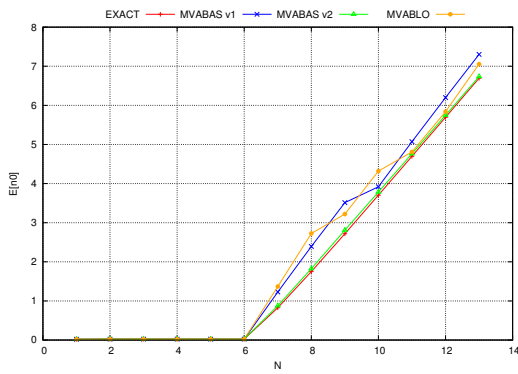
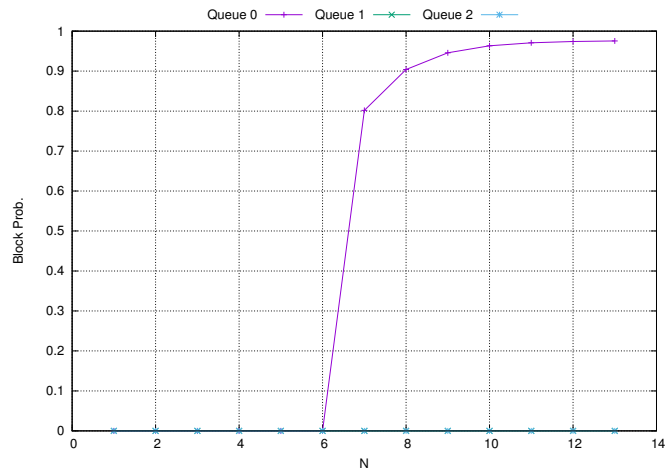


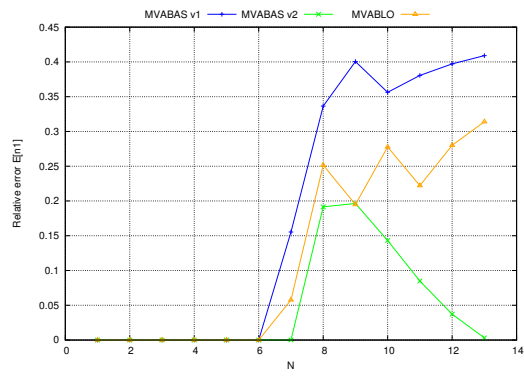
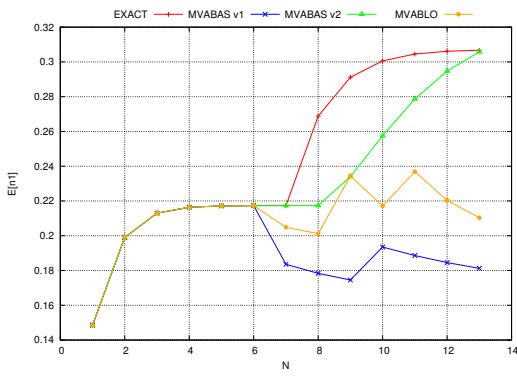
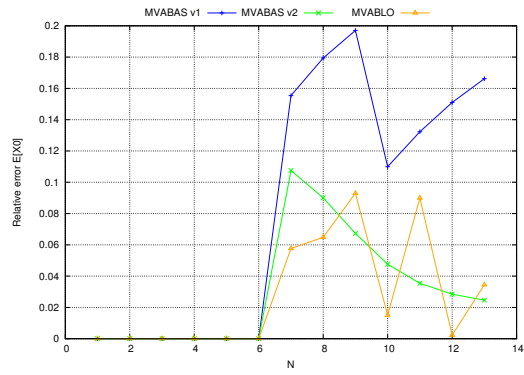
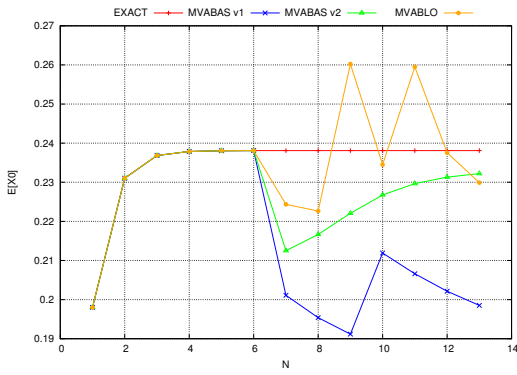
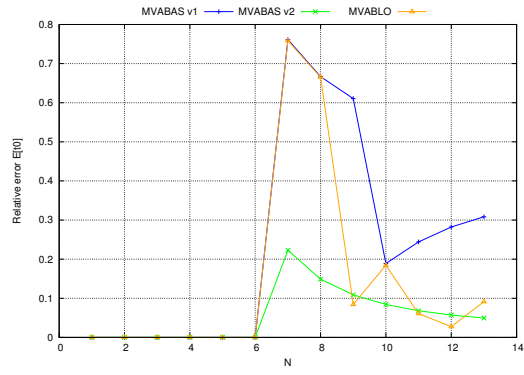
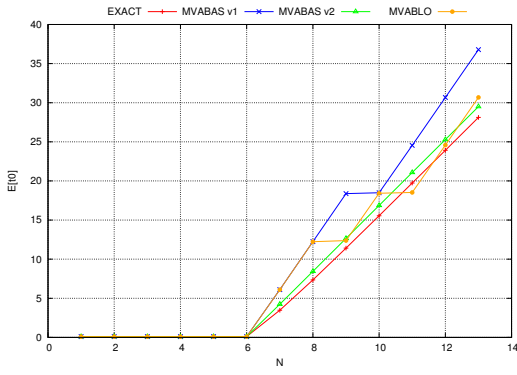
Network 35			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.059	0.027	0.049
e_m	0.0099	0.0022	0.0077
e_M	0.128	0.082	0.145
err_M	0.439	0.332	0.466

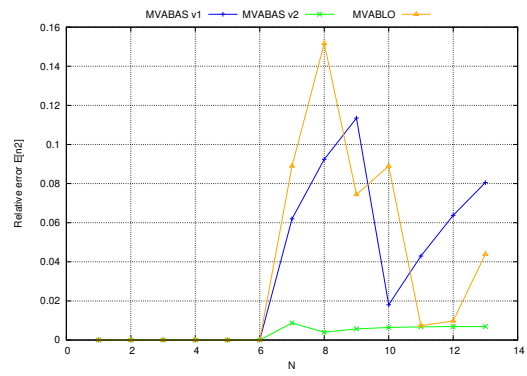
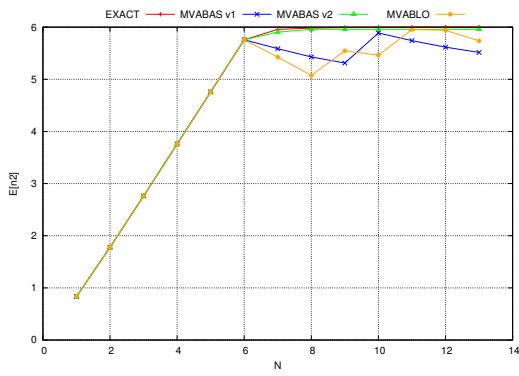
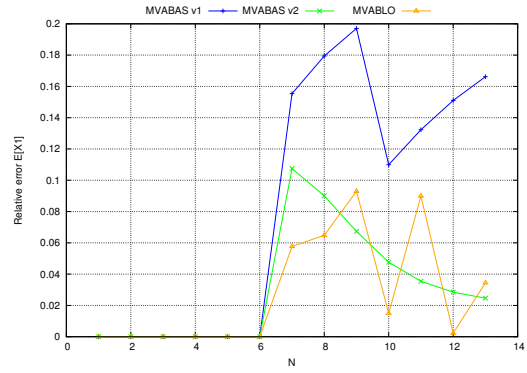
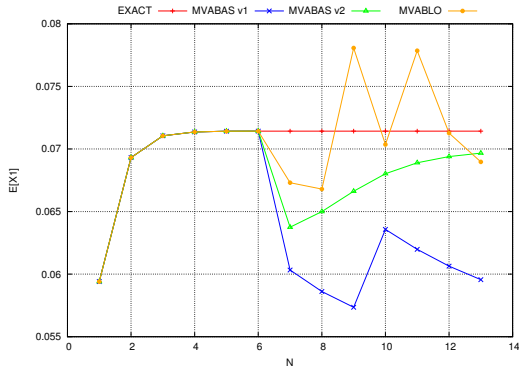
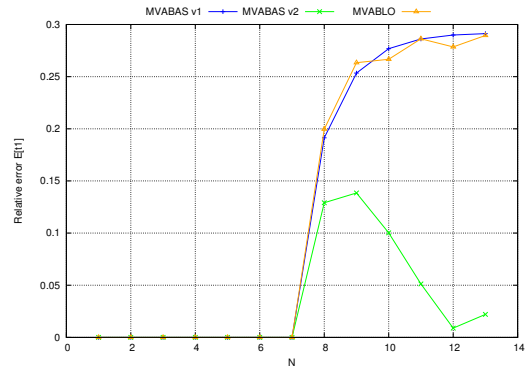
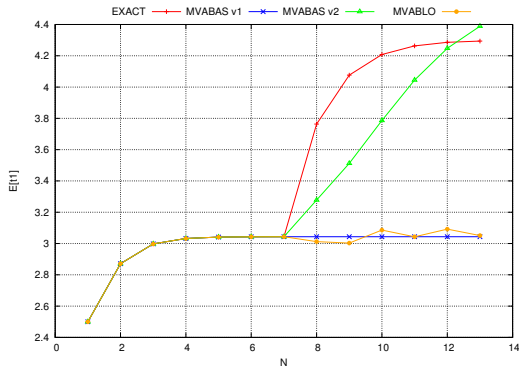
Network 36

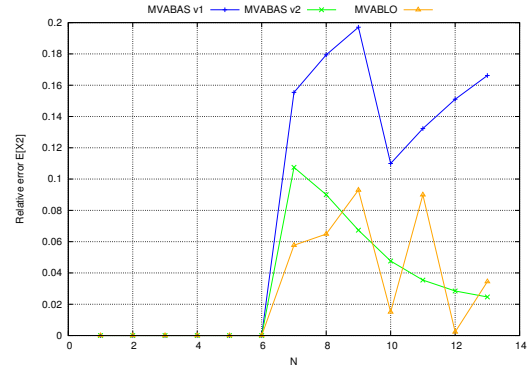
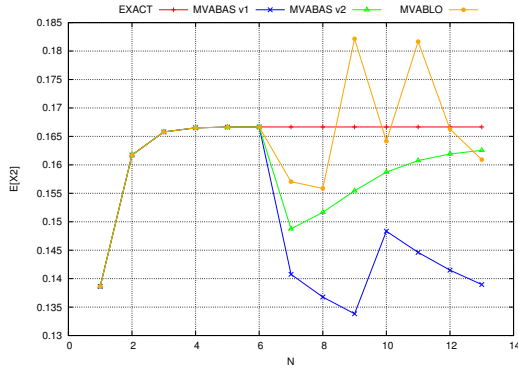
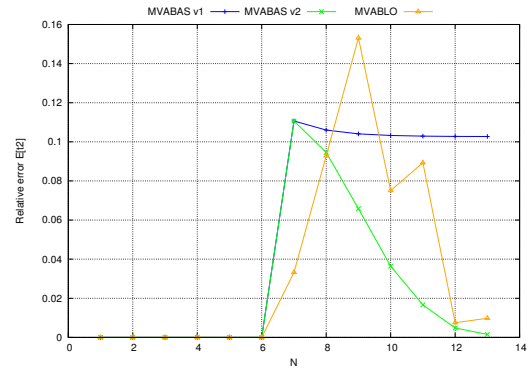
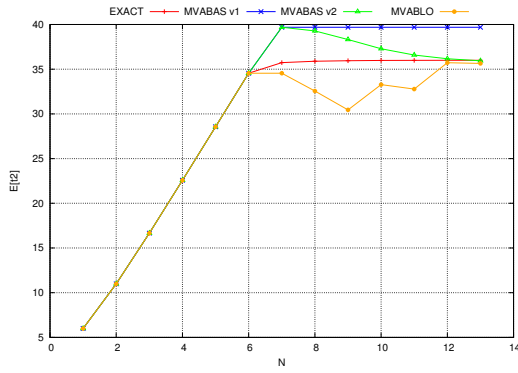
	B	$E[t_s]$
Queue 0	8	0.1
Queue 1	7	2.5
Queue 2	6	6.0

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







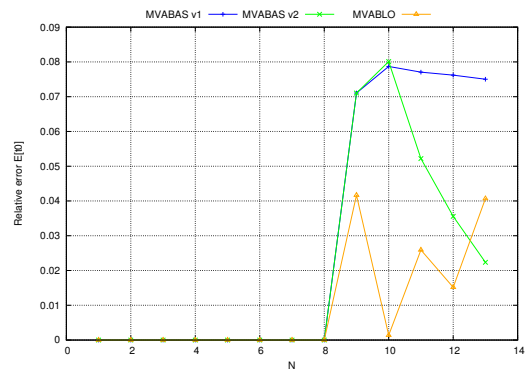
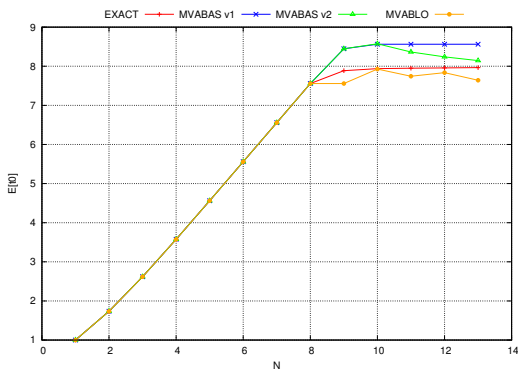
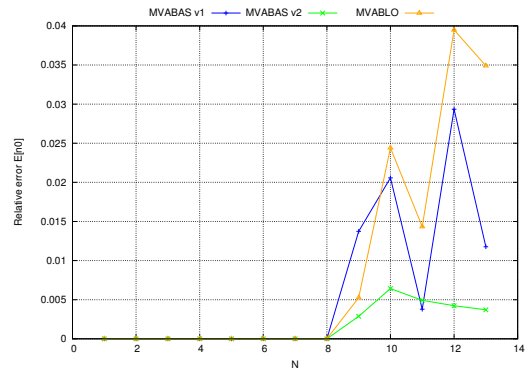
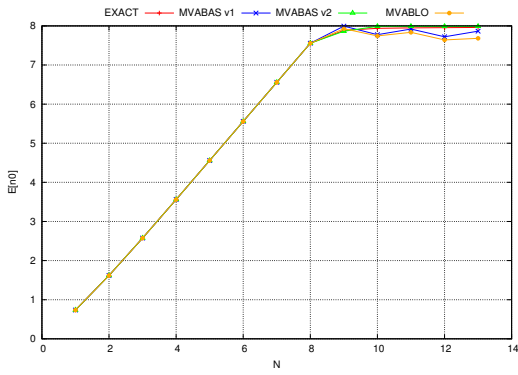
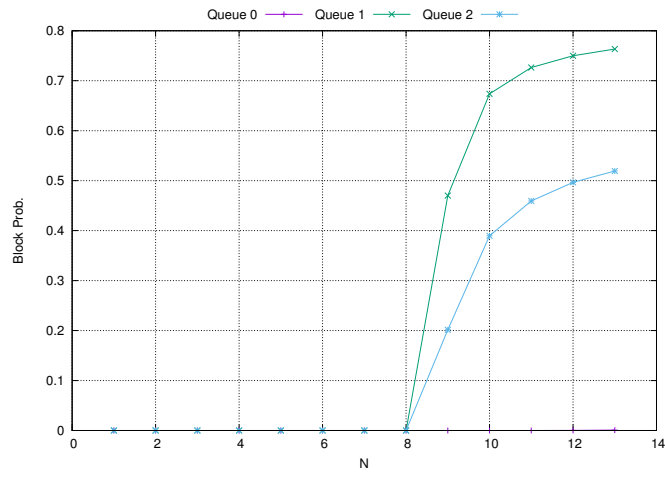


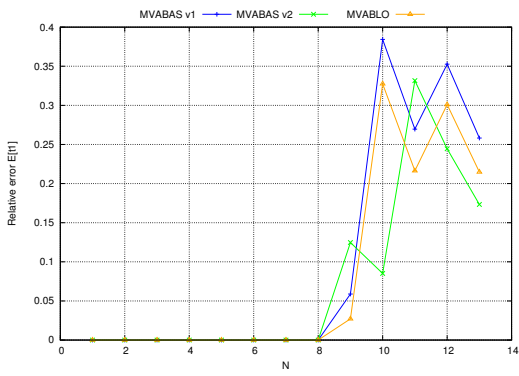
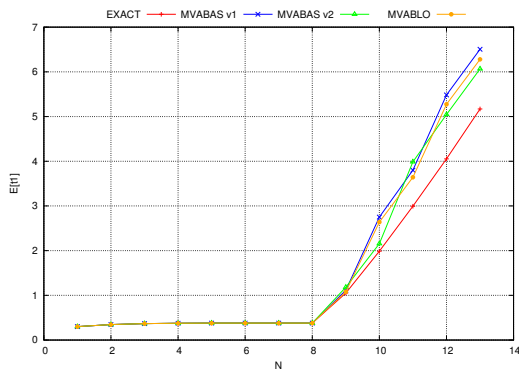
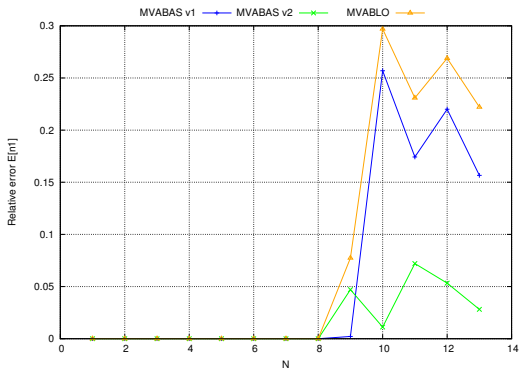
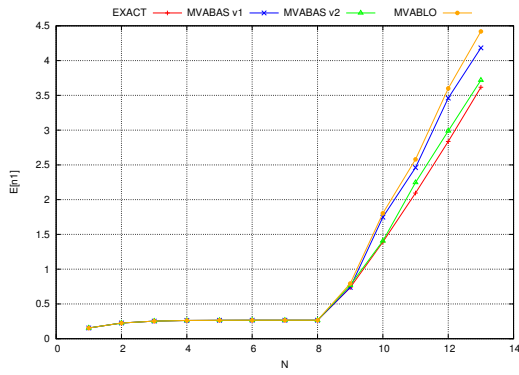
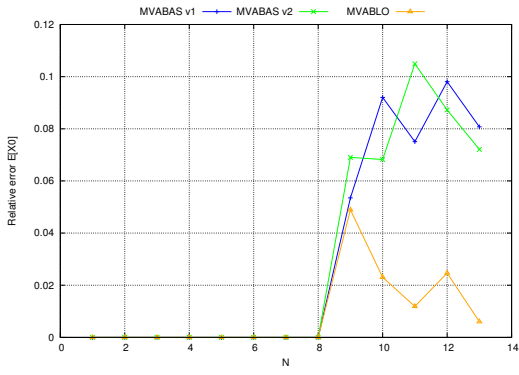
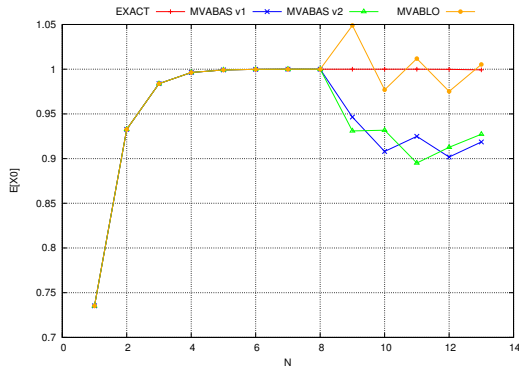
Network 36			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.111	0.030	0.074
e_m	0.036	0.003	0.027
e_M	0.235	0.056	0.143
err_M	0.761	0.222	0.758

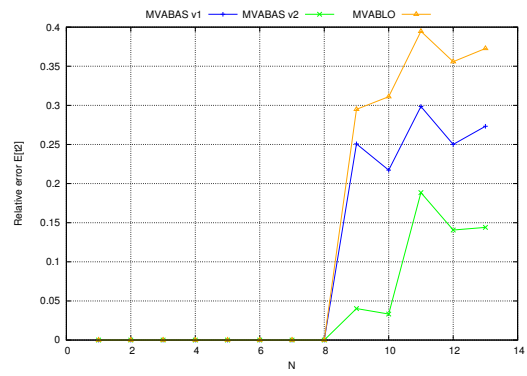
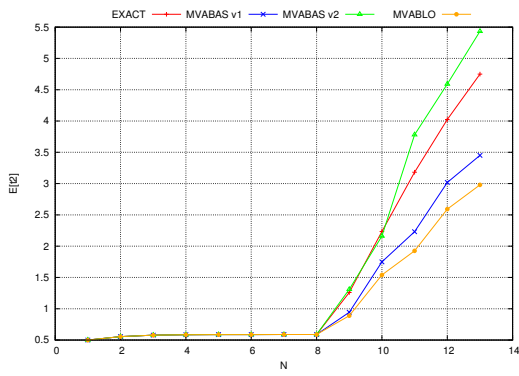
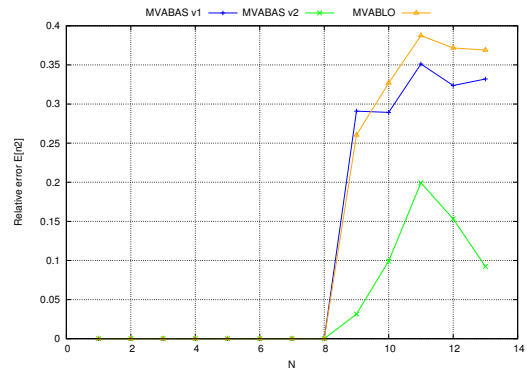
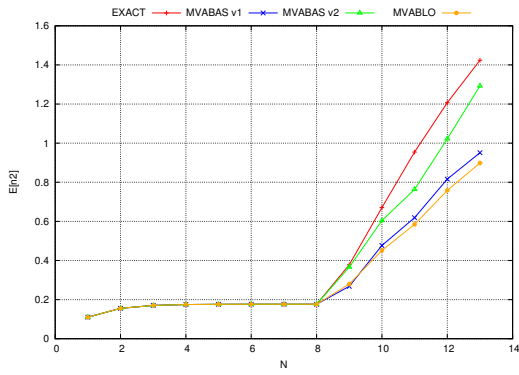
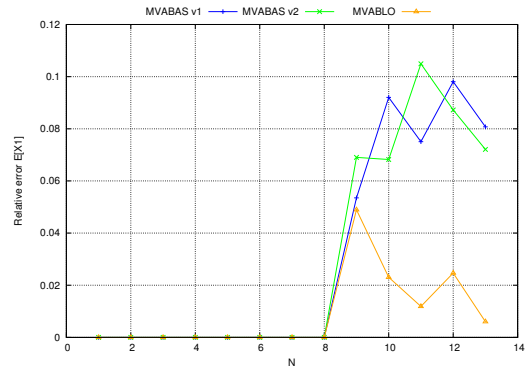
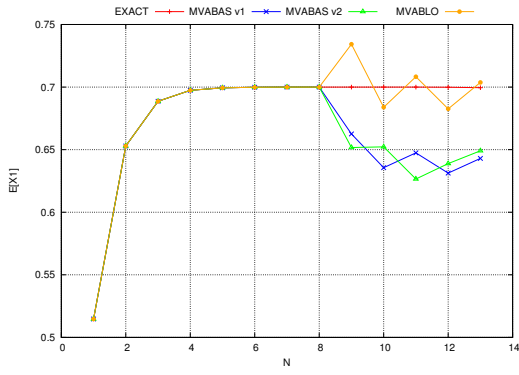
Network 37

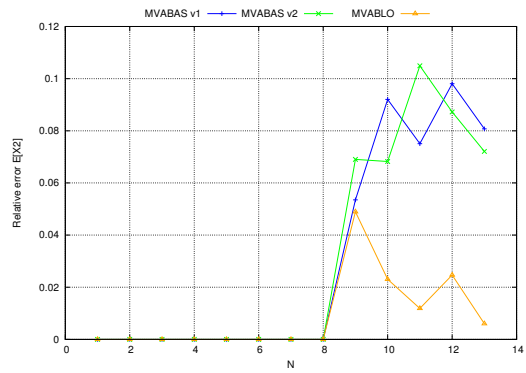
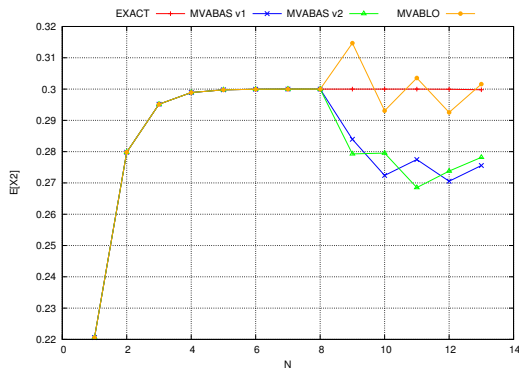
	B	$E[t_s]$
Queue 0	8	1.0
Queue 1	7	0.3
Queue 2	6	0.5

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







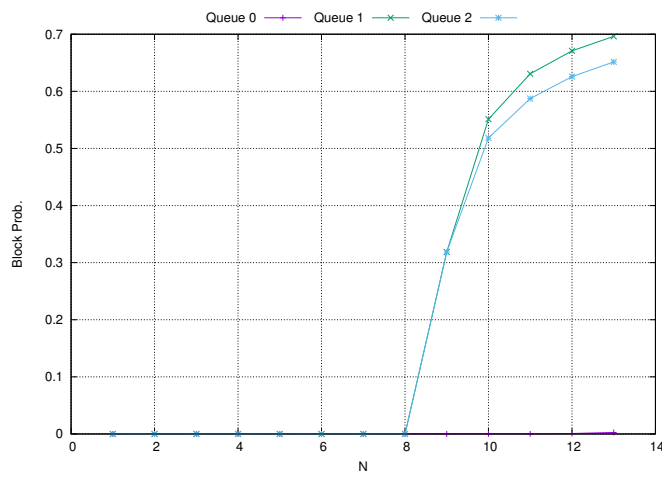


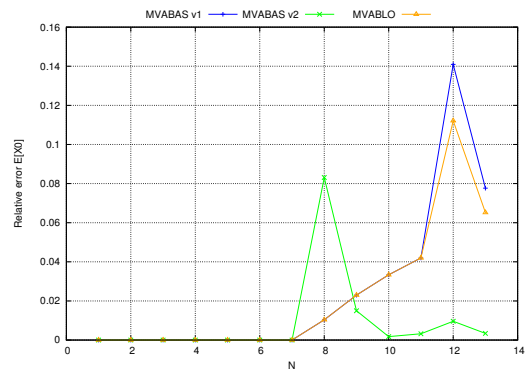
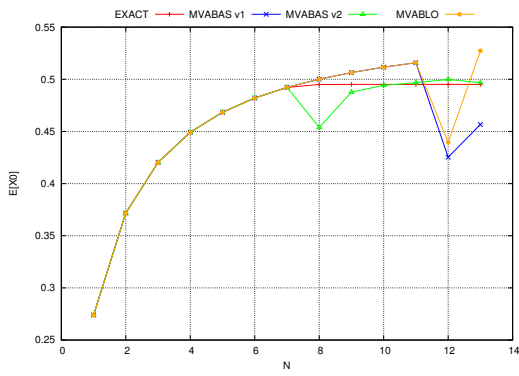
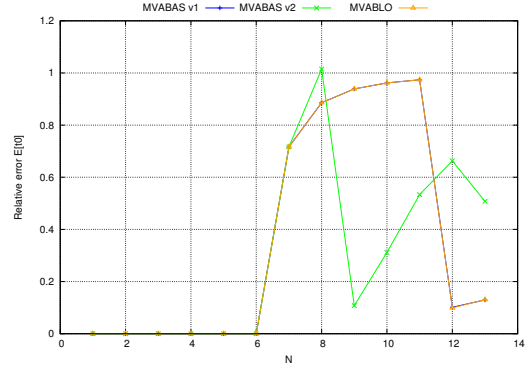
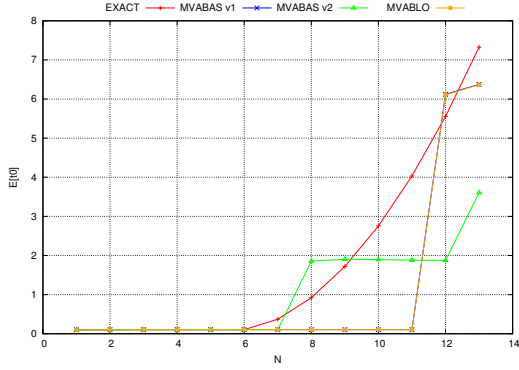
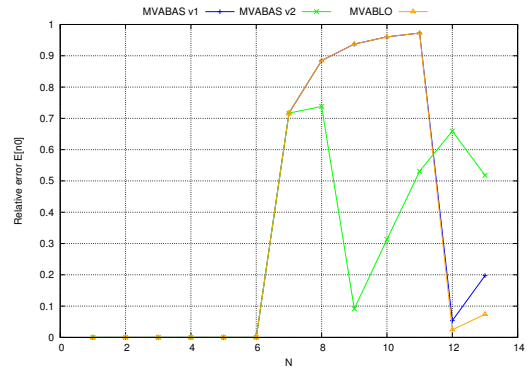
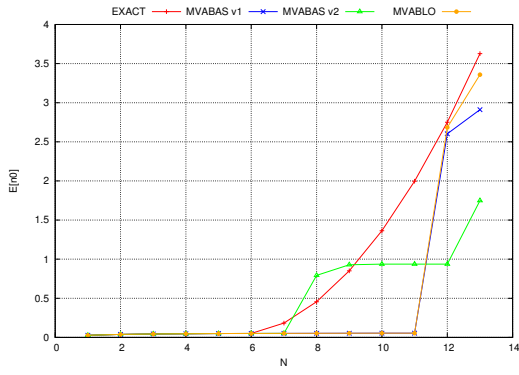
Network 37			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.056	0.032	0.053
e_m	0.006	0.001	0.008
e_M	0.122	0.073	0.133
err_M	0.384	0.331	0.394

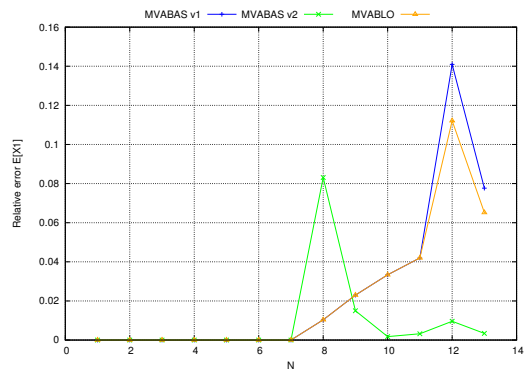
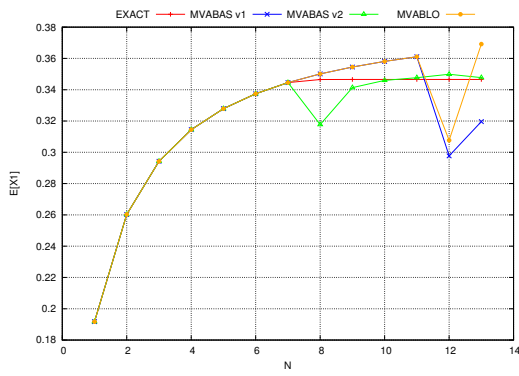
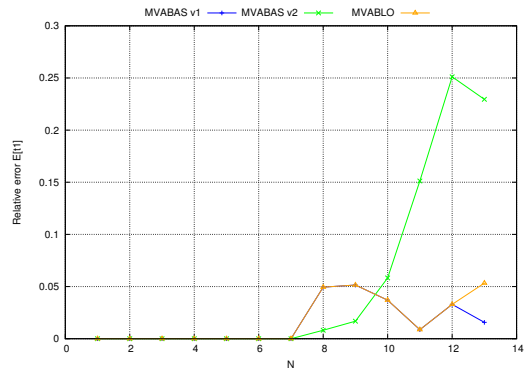
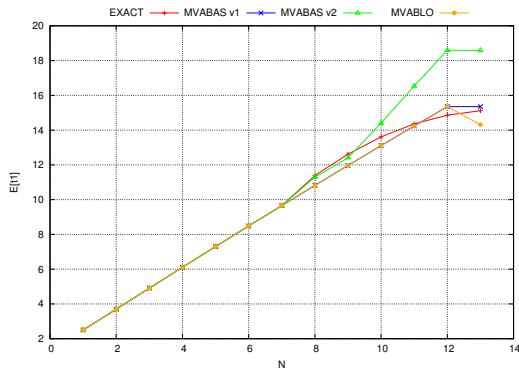
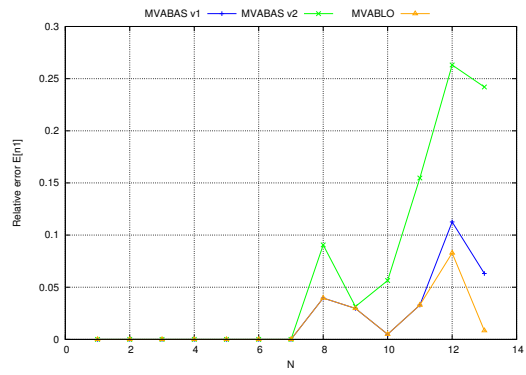
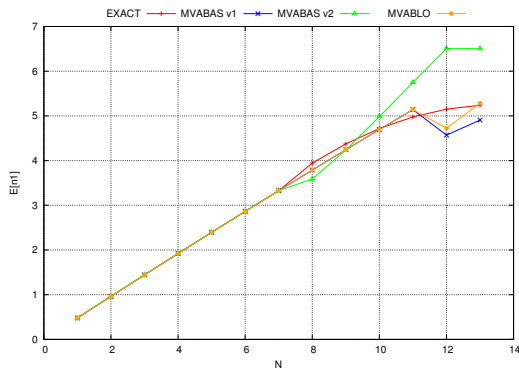
Network 38

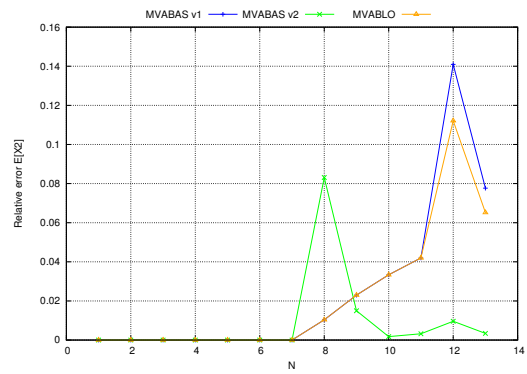
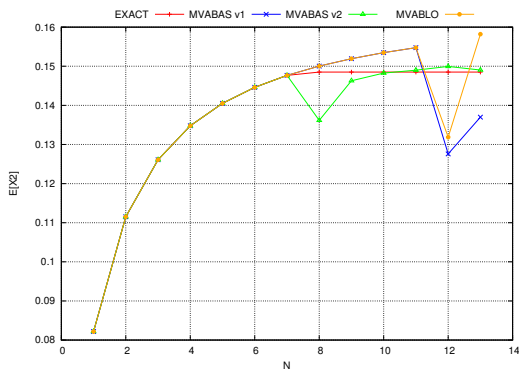
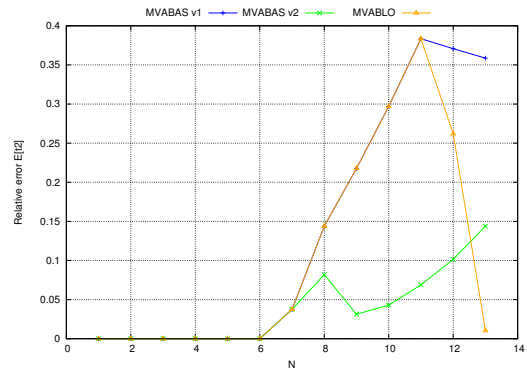
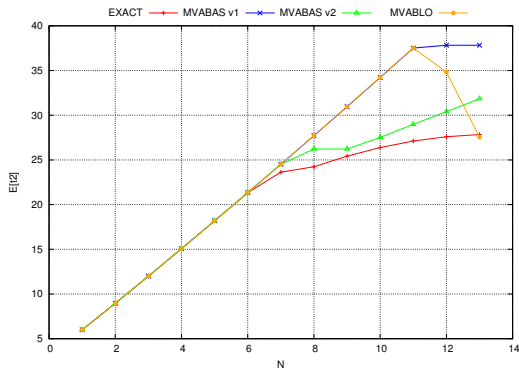
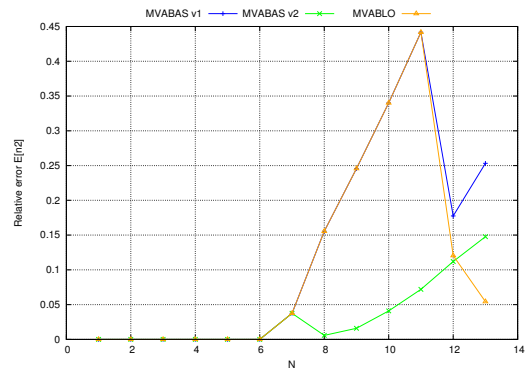
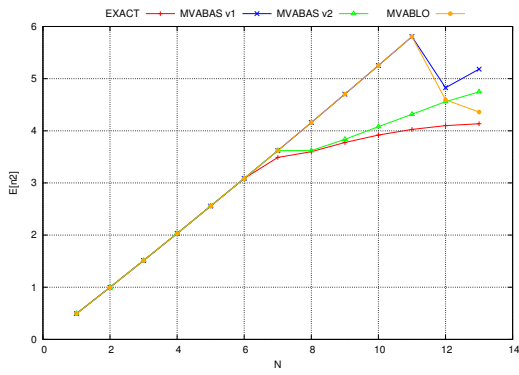
	B	$E[t_s]$
Queue 0	8	0.1
Queue 1	7	2.5
Queue 2	6	6.0

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







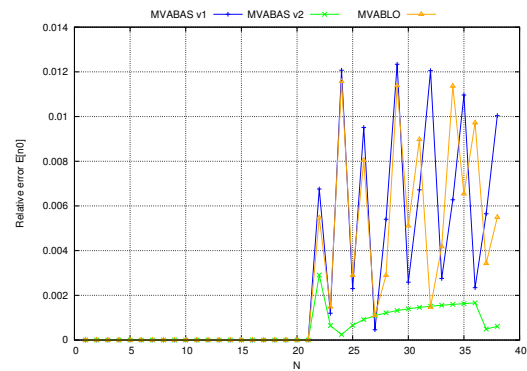
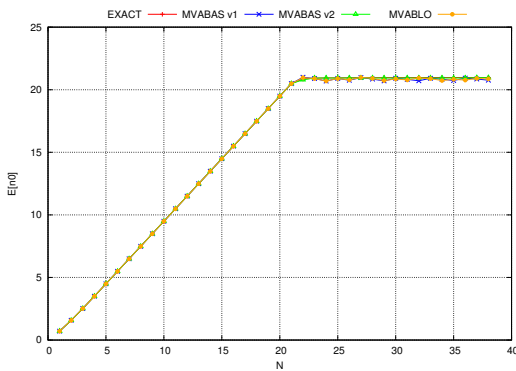
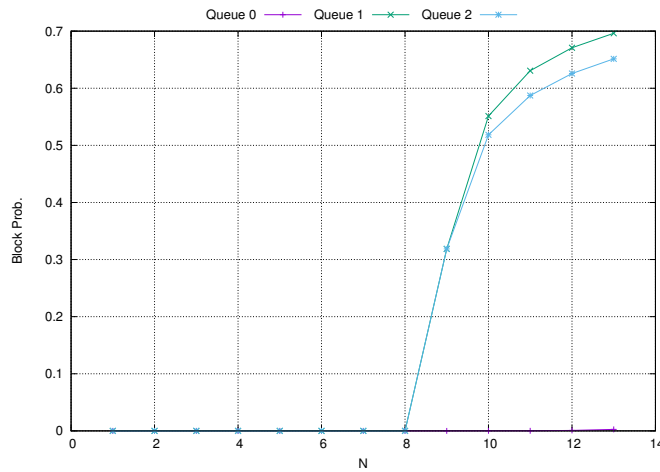


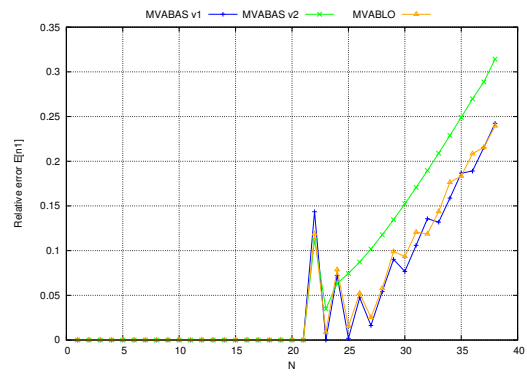
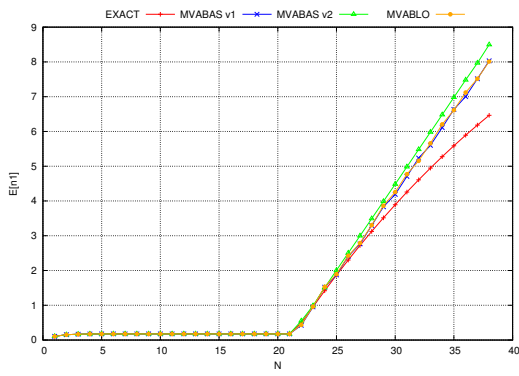
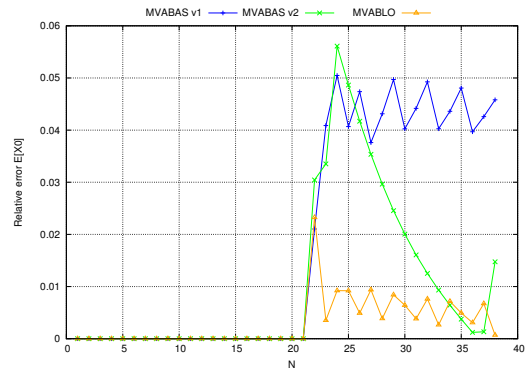
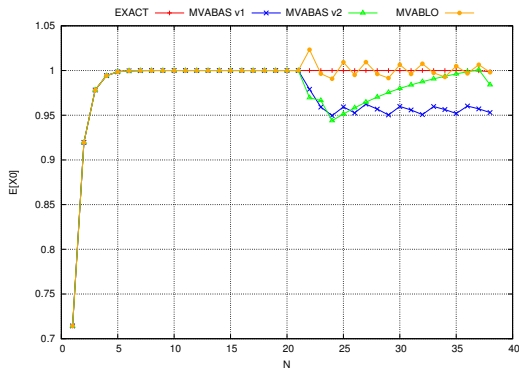
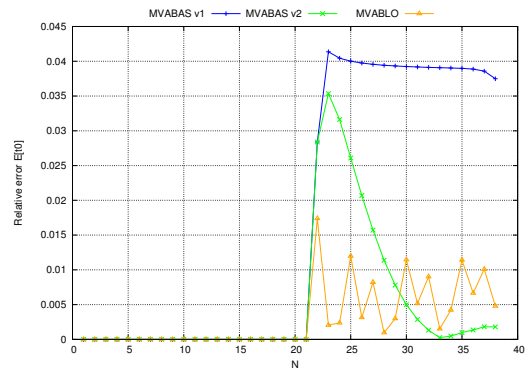
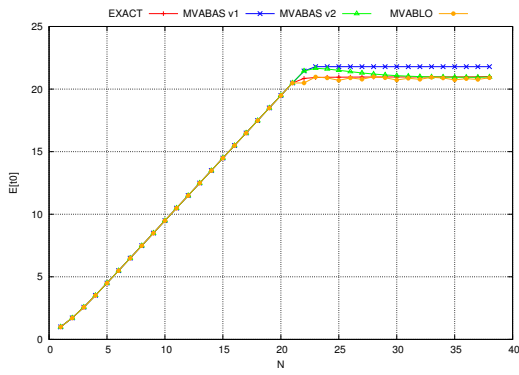
Network 38			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.122	0.087	0.113
e_m	0.0150	0.0089	0.01527
e_M	0.363	0.296	0.362
err_M	0.973	1.014	0.973

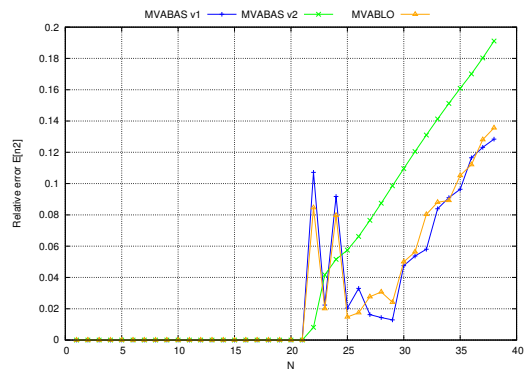
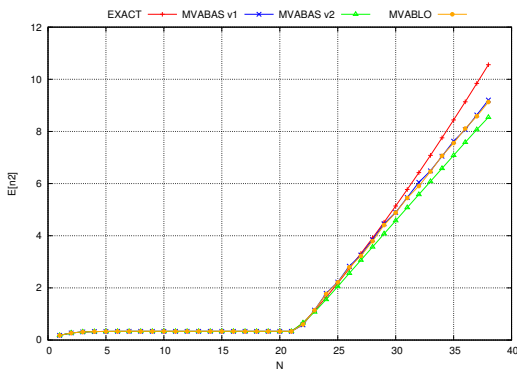
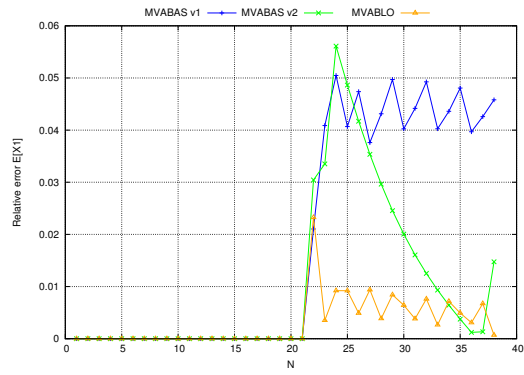
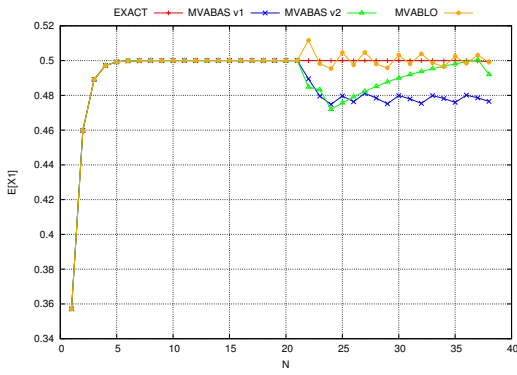
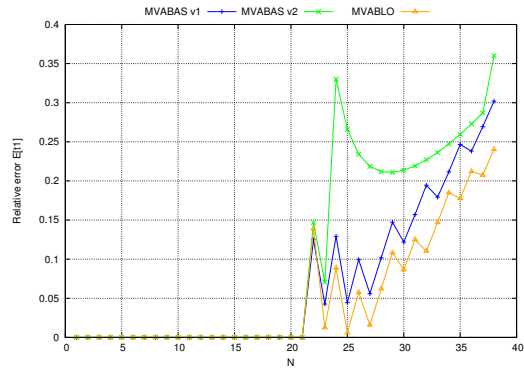
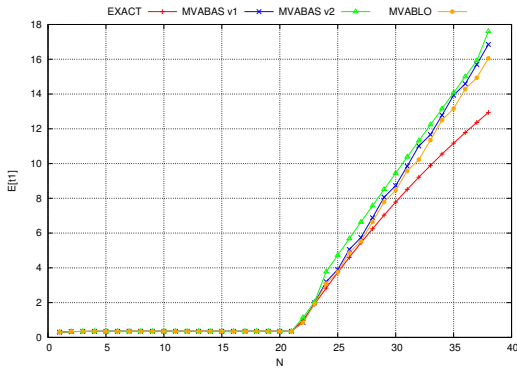
Network 39

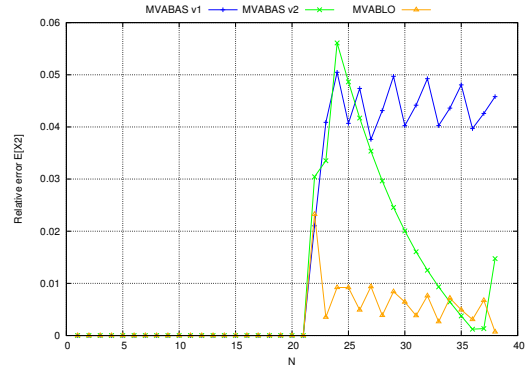
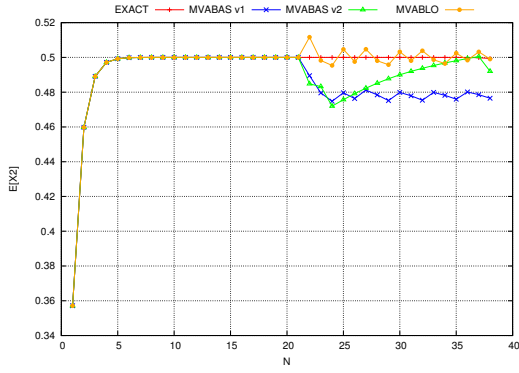
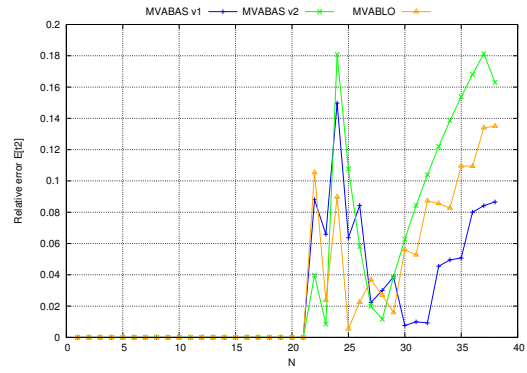
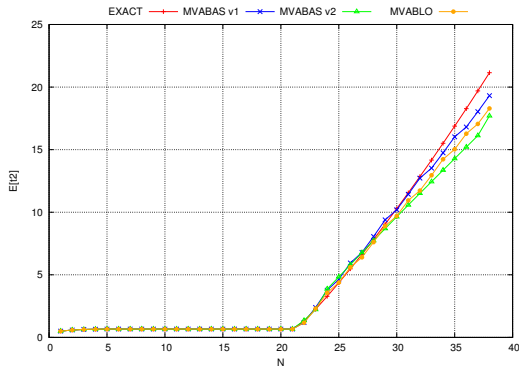
	B	$E[t_s]$
Queue 0	21	1.0
Queue 1	25	0.3
Queue 2	18	0.5

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







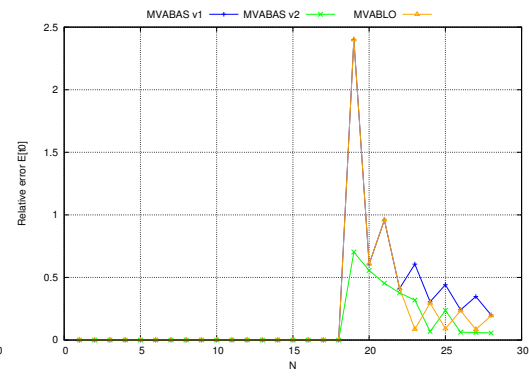
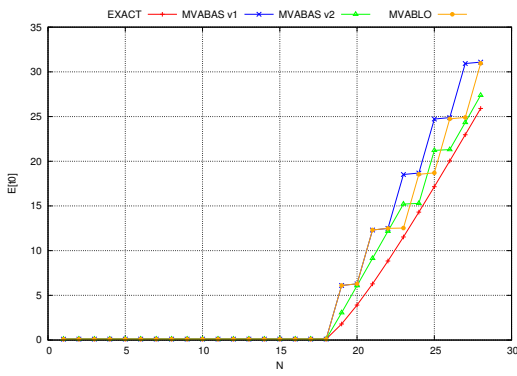
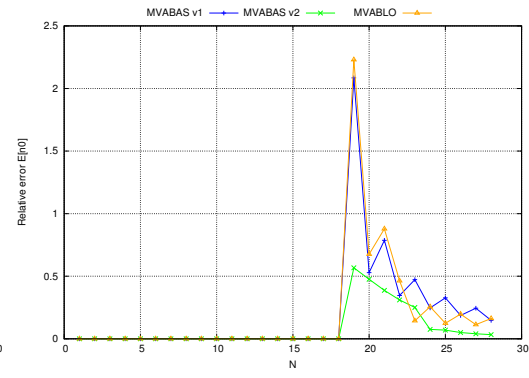
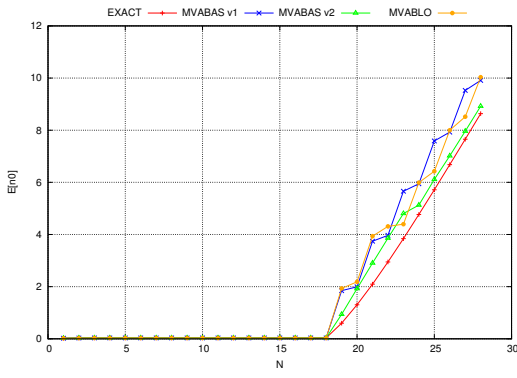
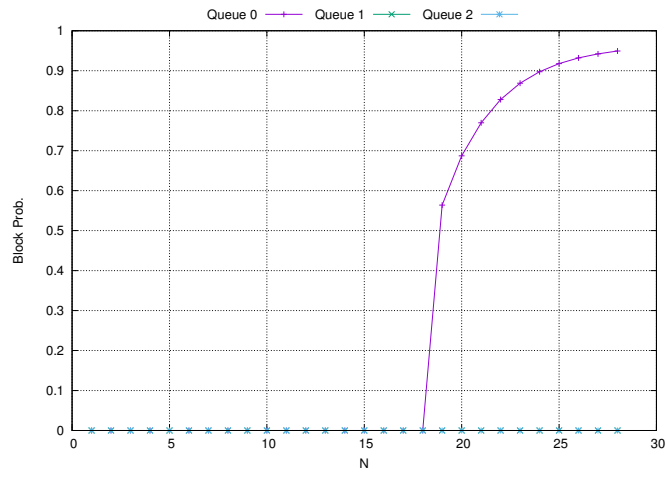


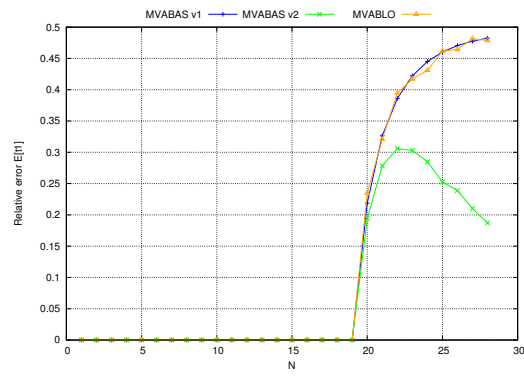
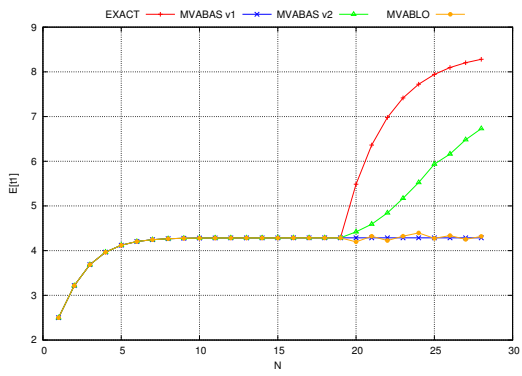
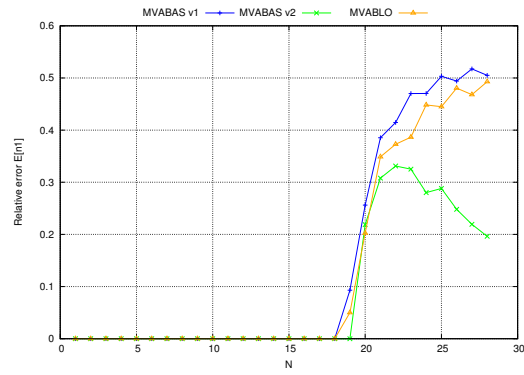
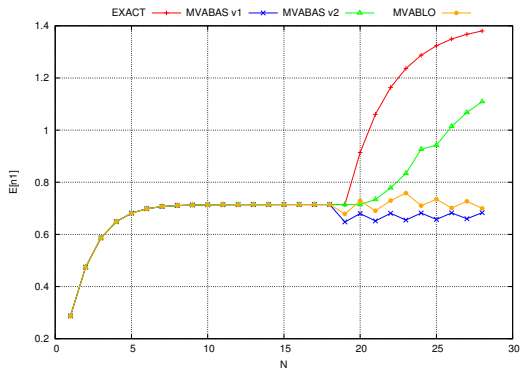
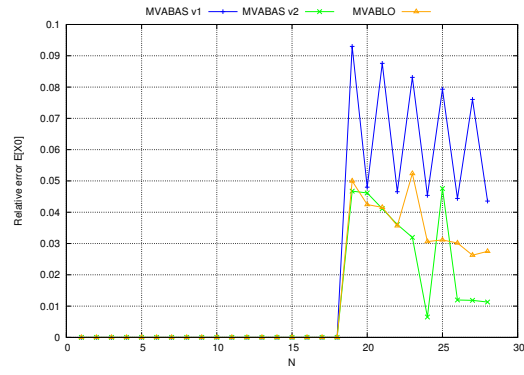
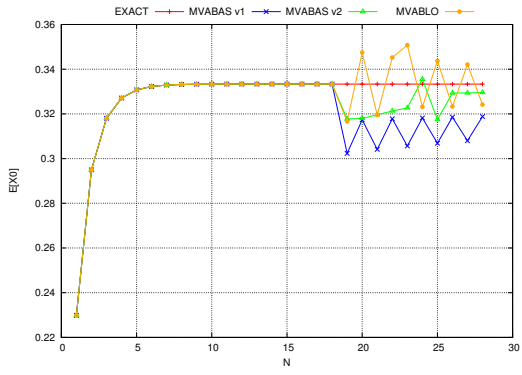
Network 39			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.027	0.034	0.019
e_m	0.0028	0.0005	0.0026
e_M	0.070	0.105	0.052
err_M	0.302	0.360	0.240

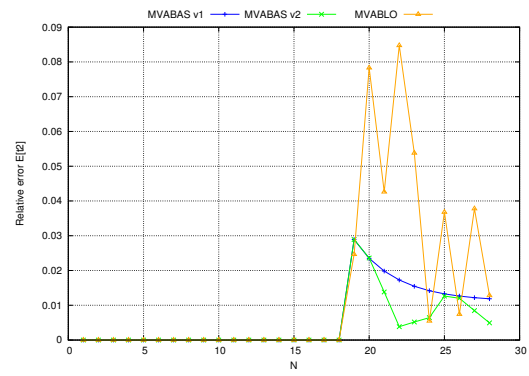
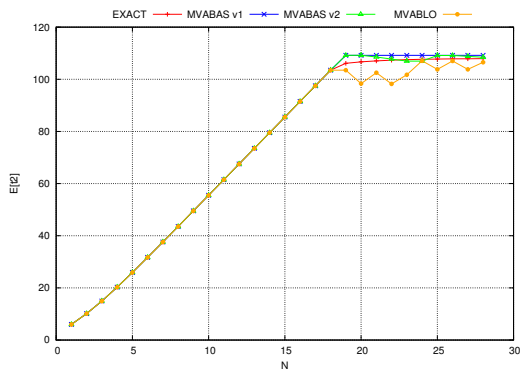
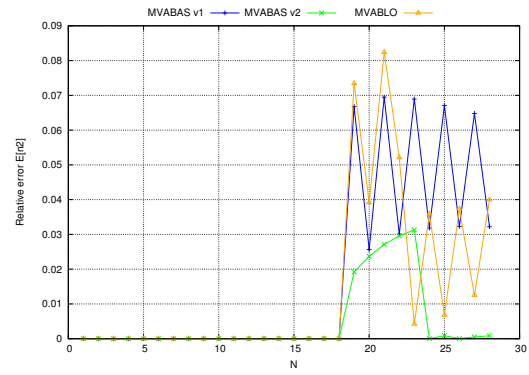
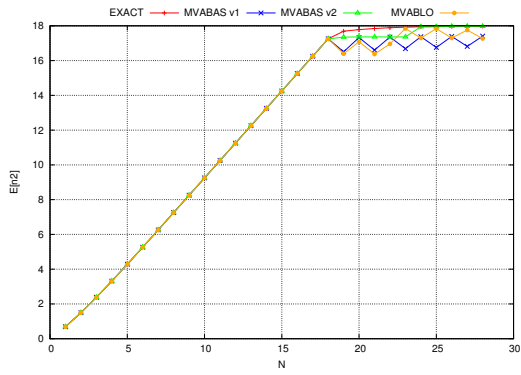
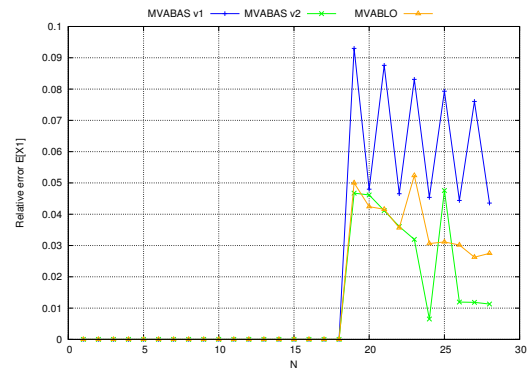
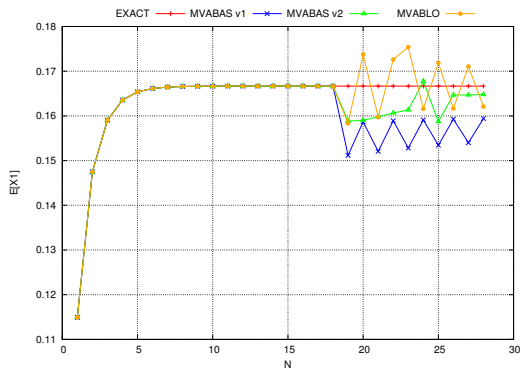
Network 40

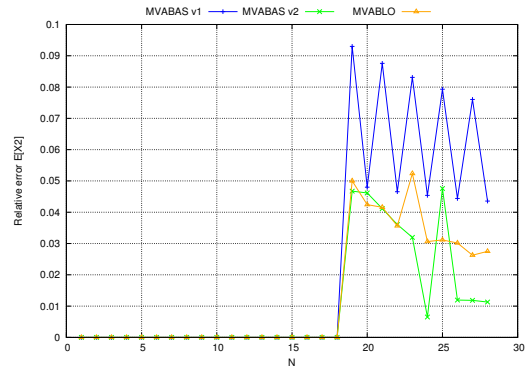
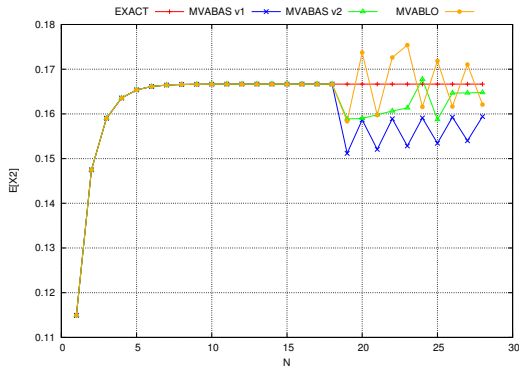
	B	$E[t_s]$
Queue 0	21	0.1
Queue 1	25	2.5
Queue 2	18	6.0

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







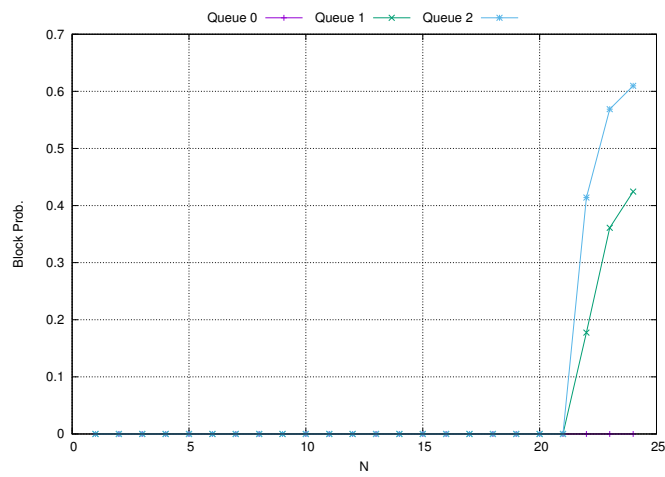


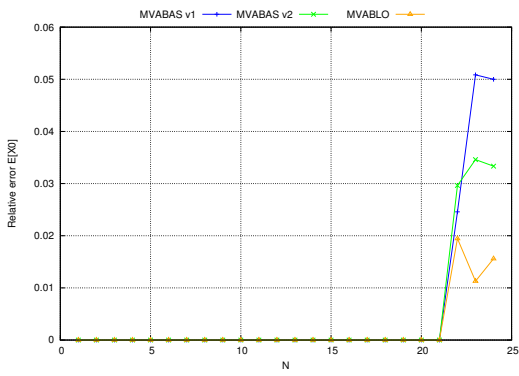
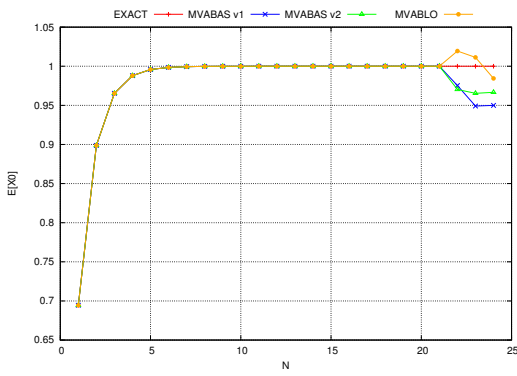
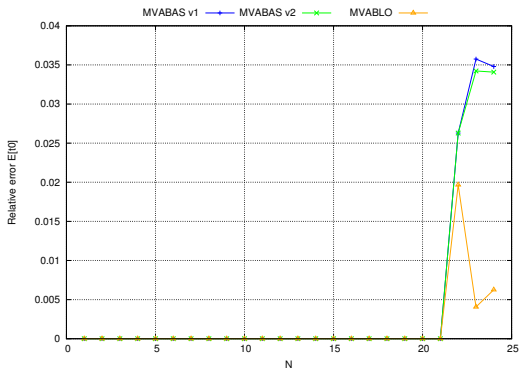
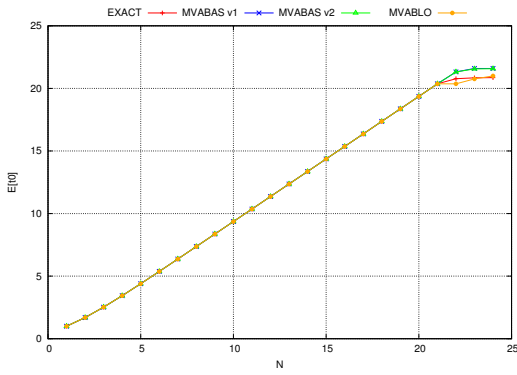
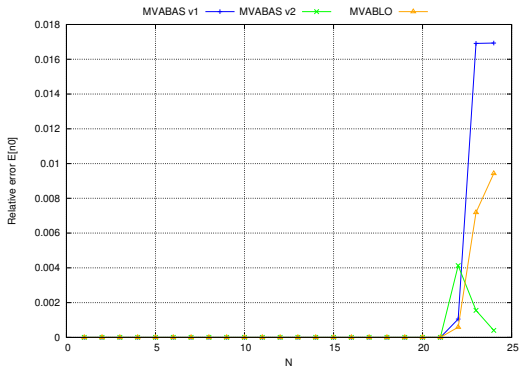
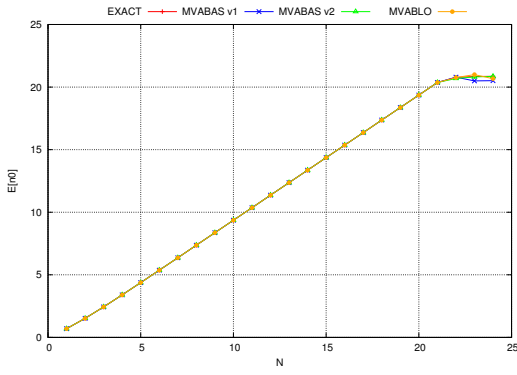
Network 40			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.088	0.043	0.078
e_m	0.006	0.004	0.013
e_M	0.232	0.103	0.191
err_M	2.401	0.702	2.400

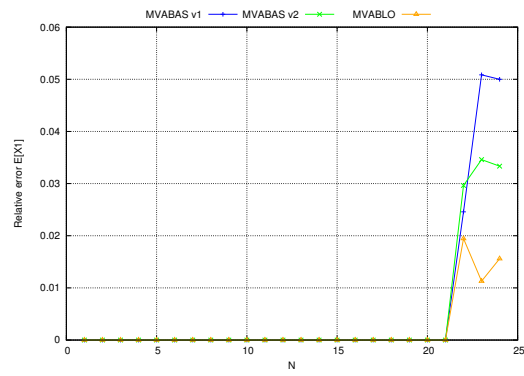
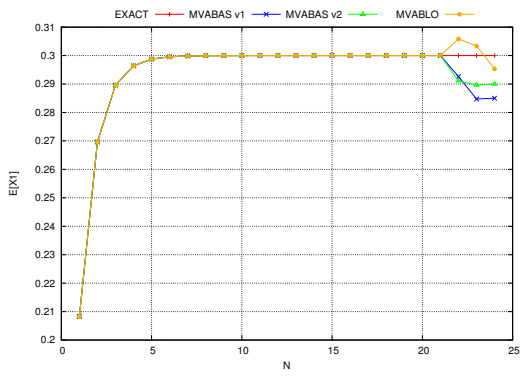
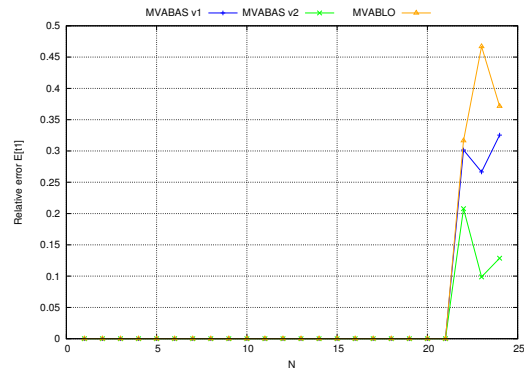
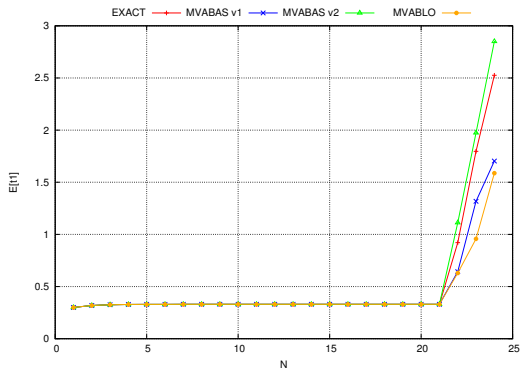
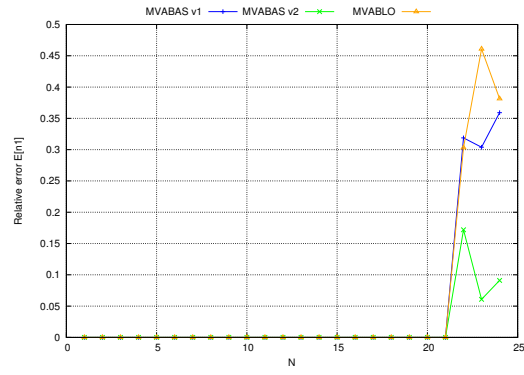
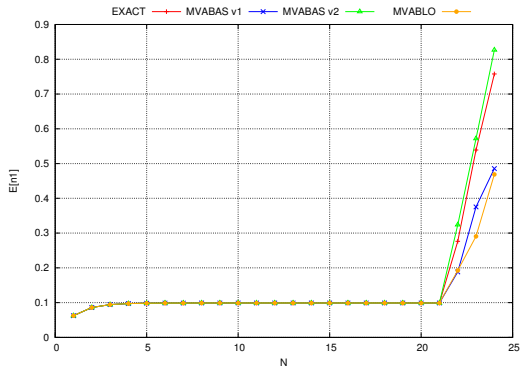
Network 41

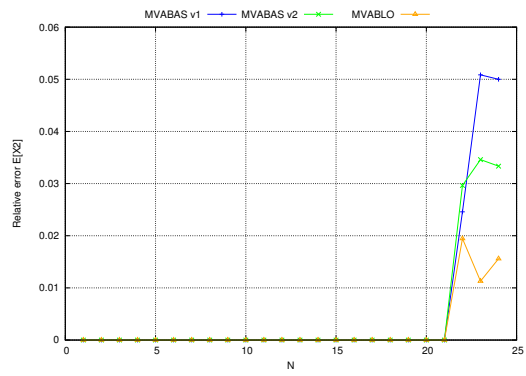
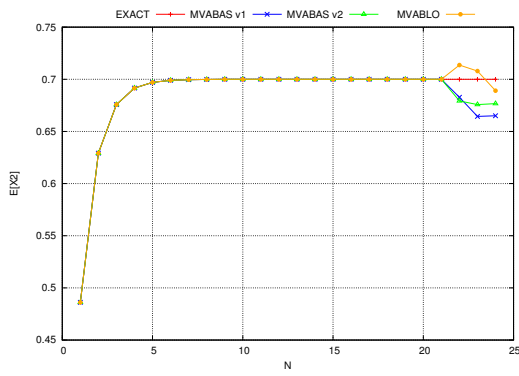
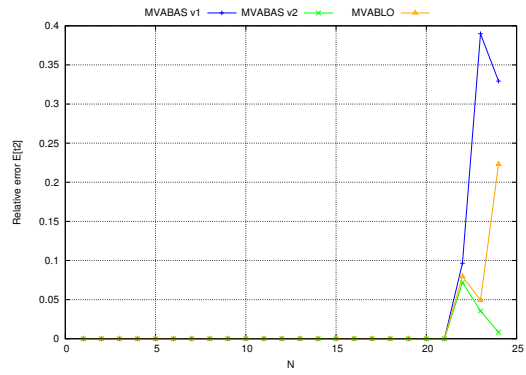
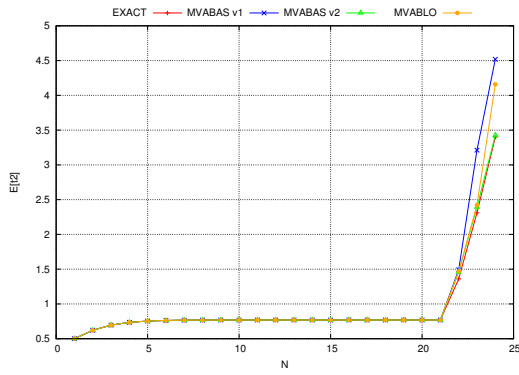
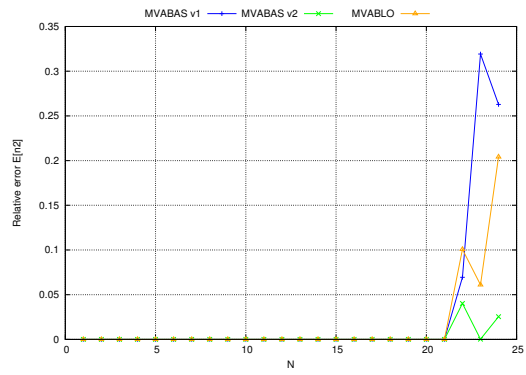
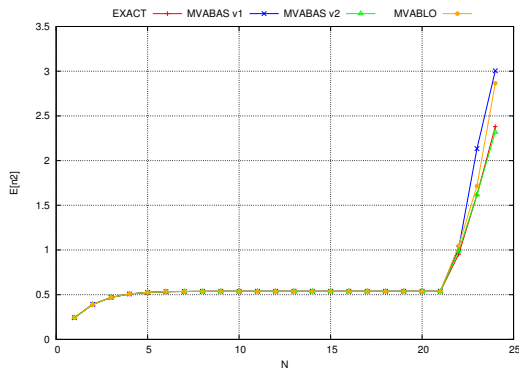
	B	$E[t_s]$
Queue 0	21	1.0
Queue 1	25	0.3
Queue 2	18	0.5

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







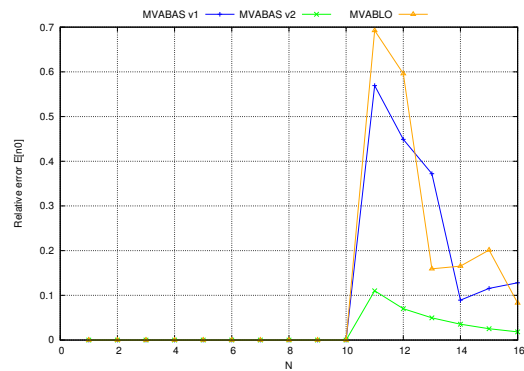
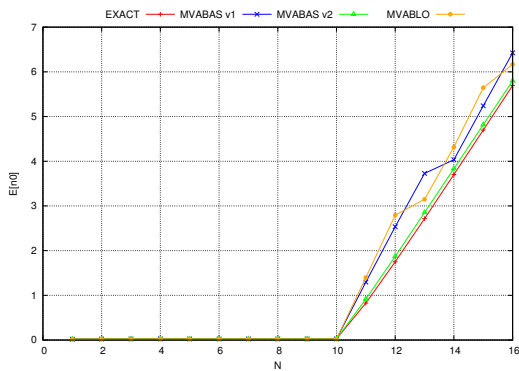
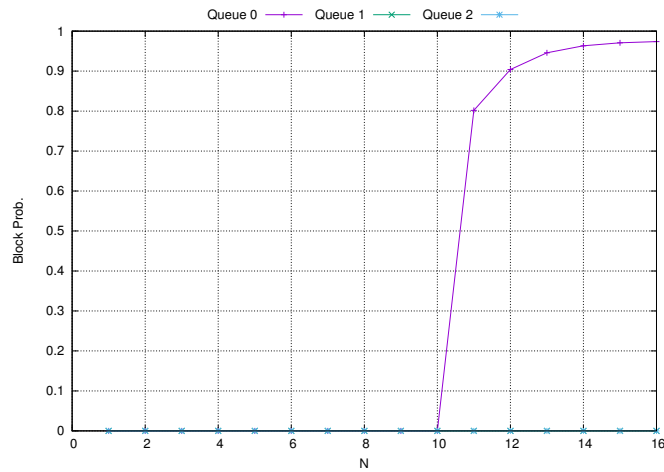


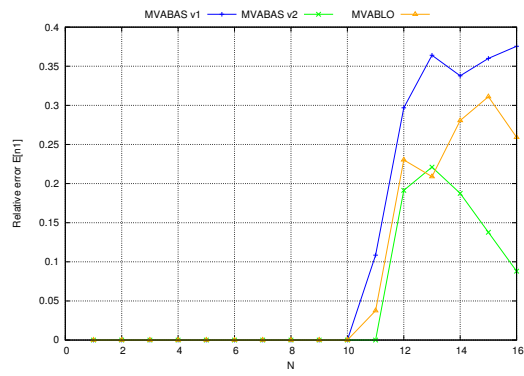
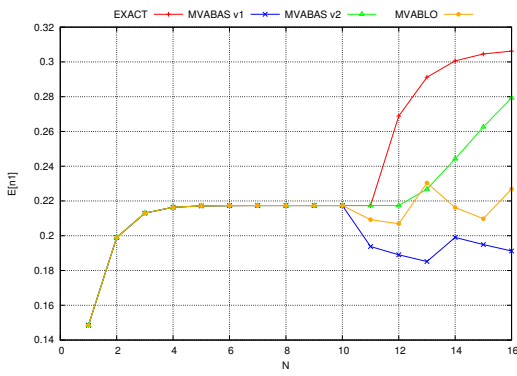
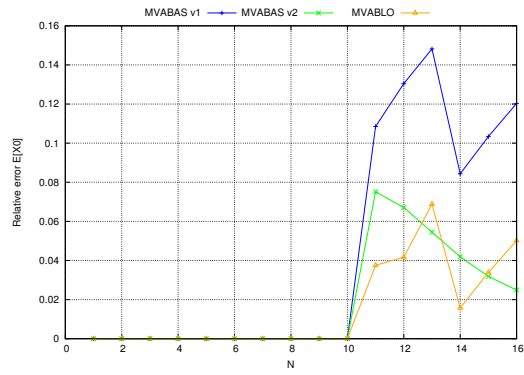
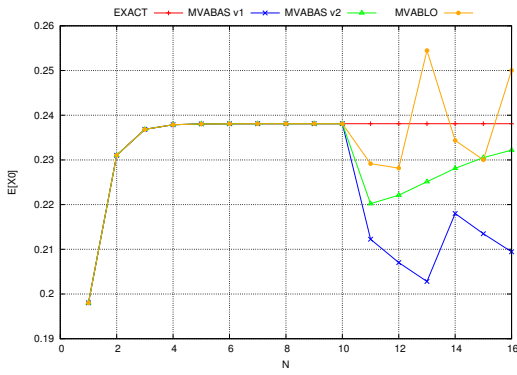
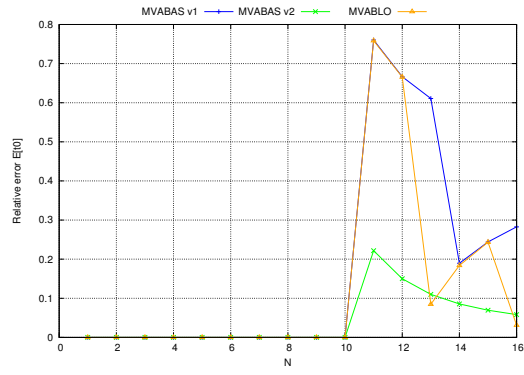
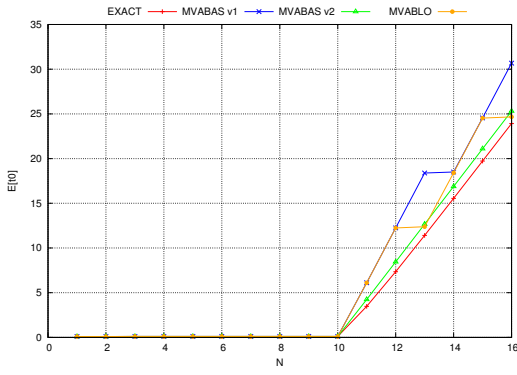
Network 41			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.017	0.006	0.014
e_m	0.0014	0.0002	0.0007
e_M	0.040	0.018	0.048
err_M	0.389	0.207	0.466

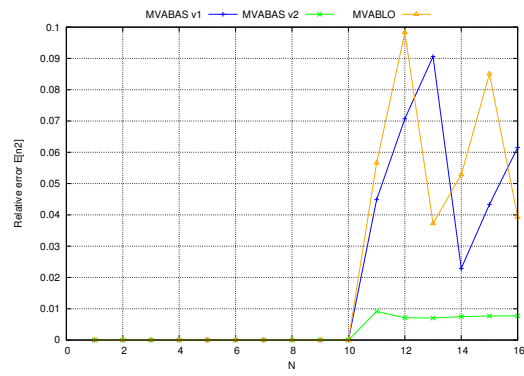
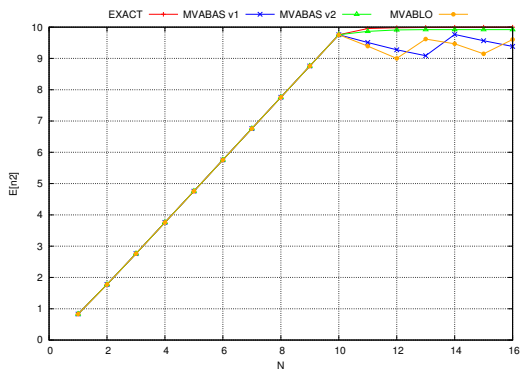
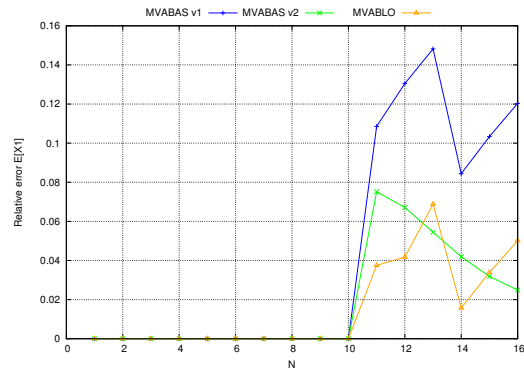
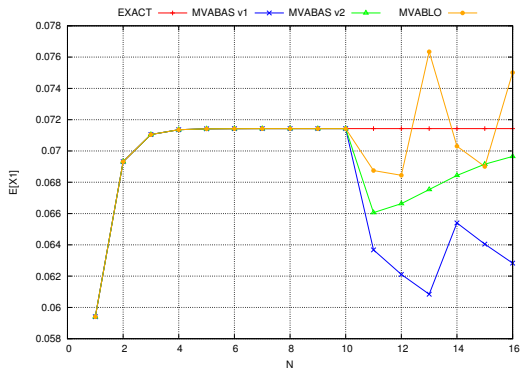
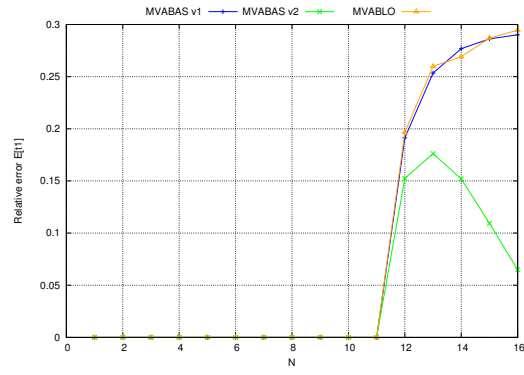
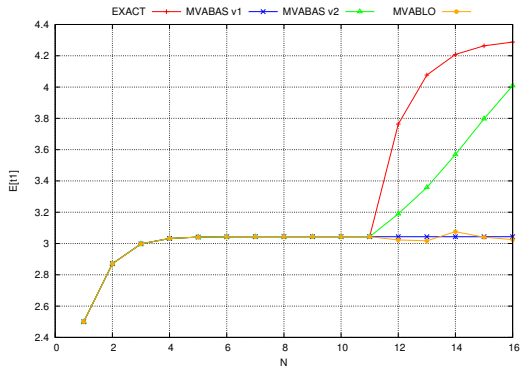
Network 42

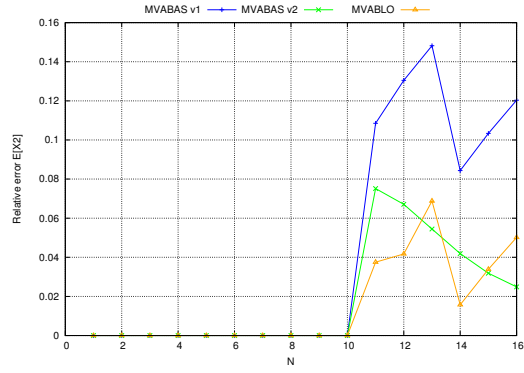
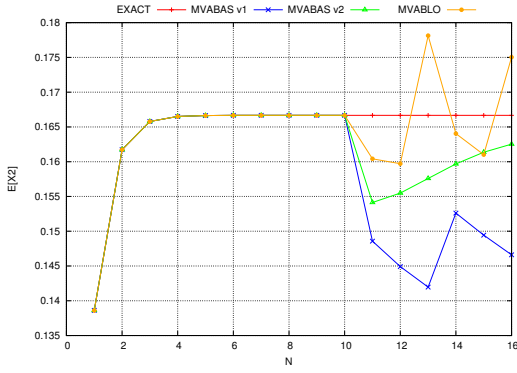
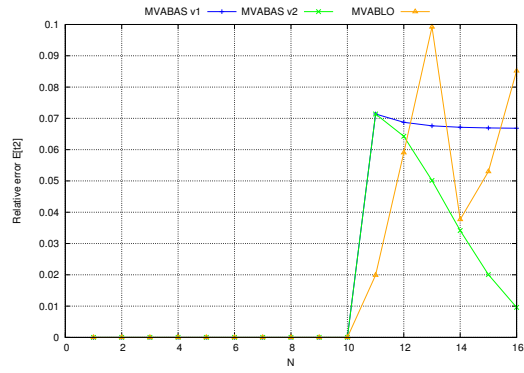
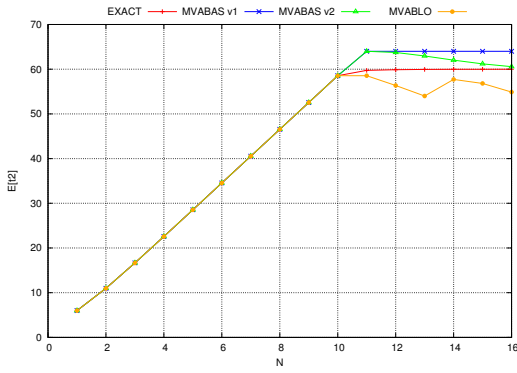
	B	$E[t_s]$
Queue 0	21	0.1
Queue 1	25	2.5
Queue 2	18	6.0

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







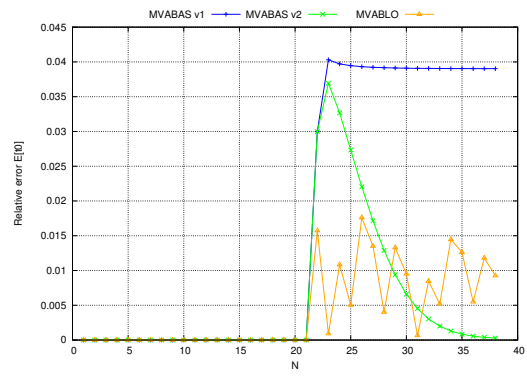
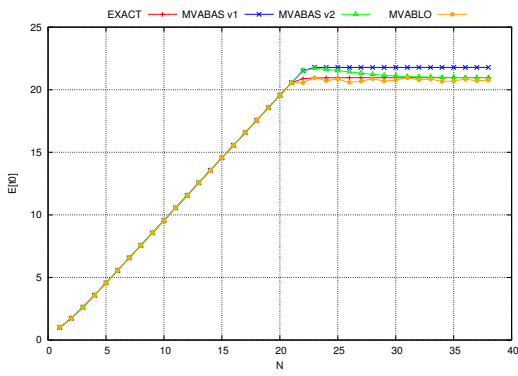
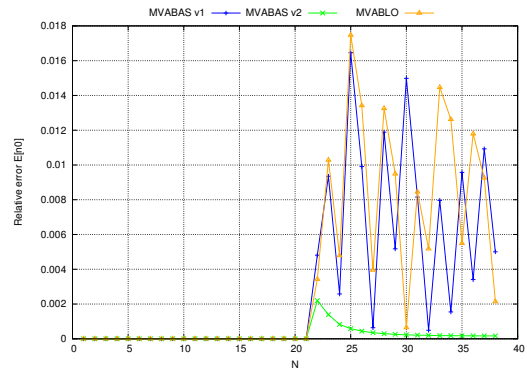
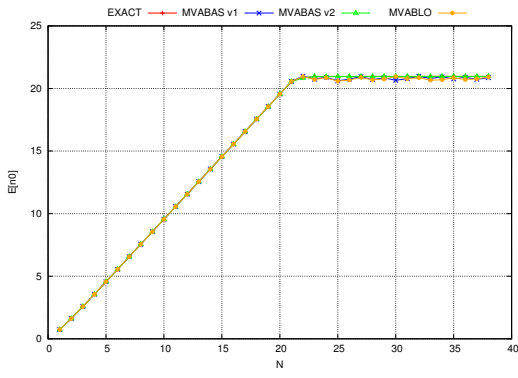
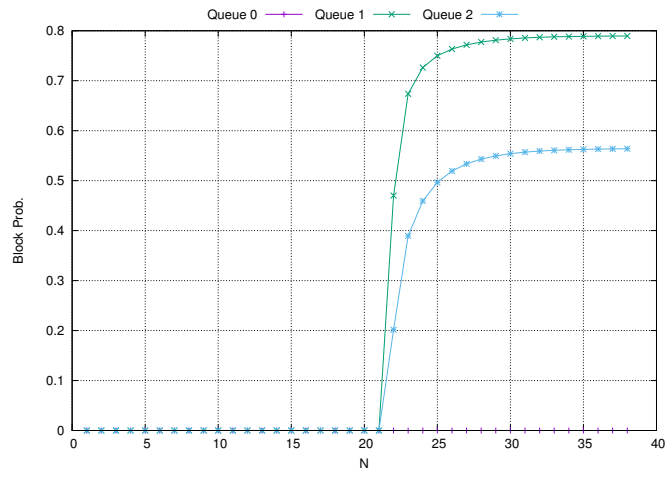


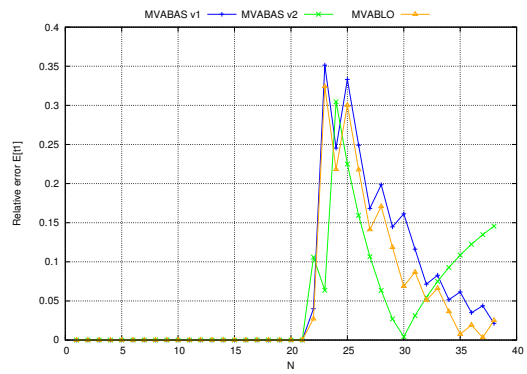
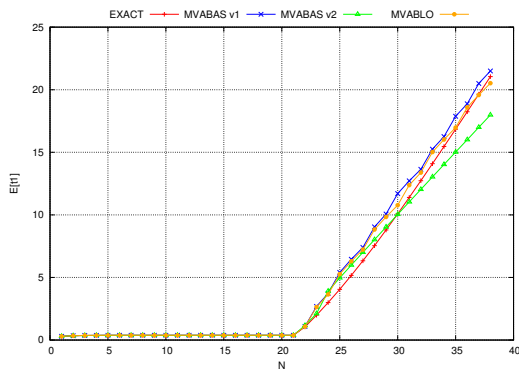
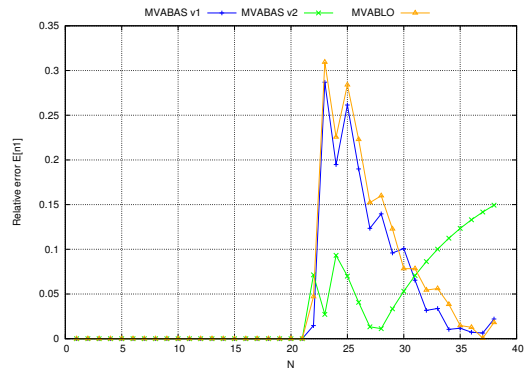
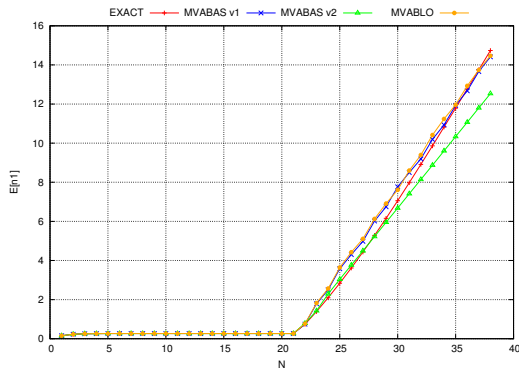
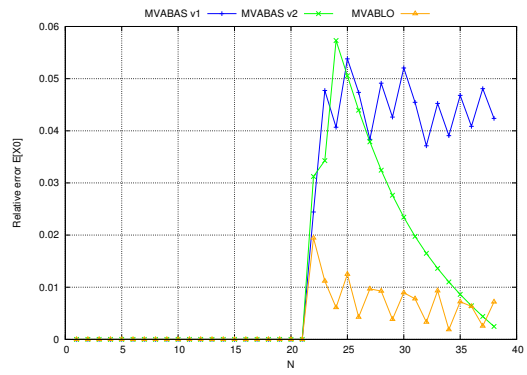
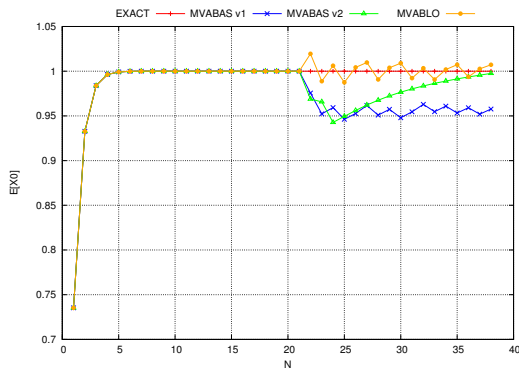
Network 42			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.072	0.025	0.055
e_m	0.020	0.002	0.015
e_M	0.172	0.051	0.122
err_M	0.760	0.221	0.758

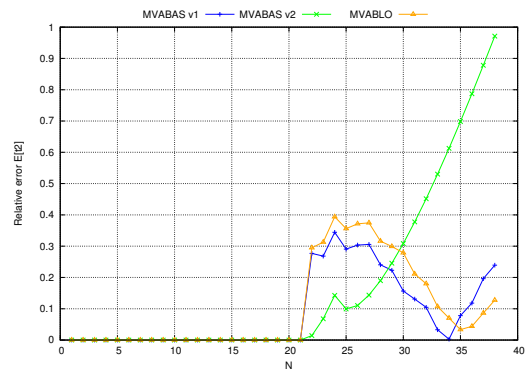
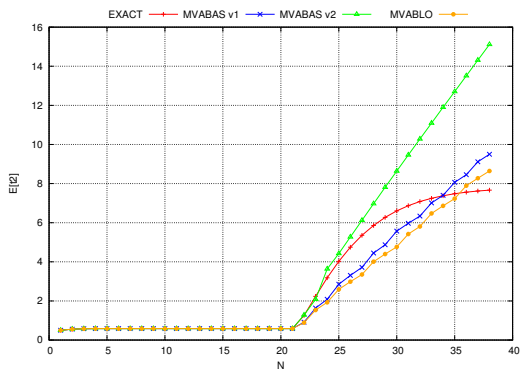
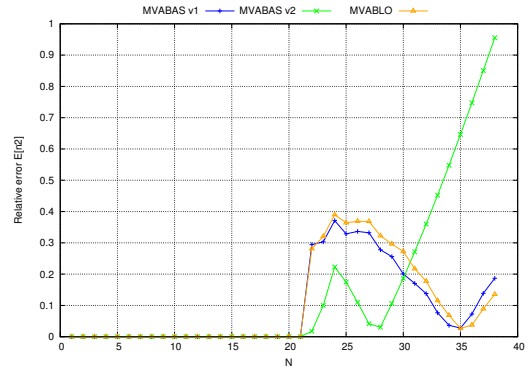
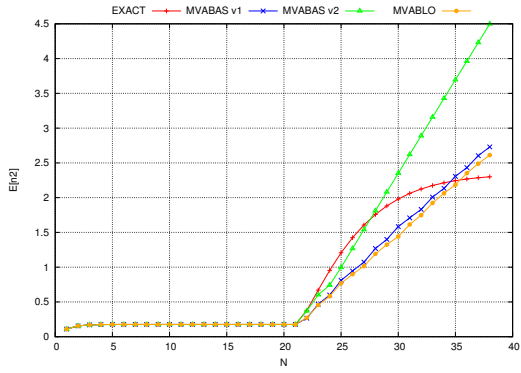
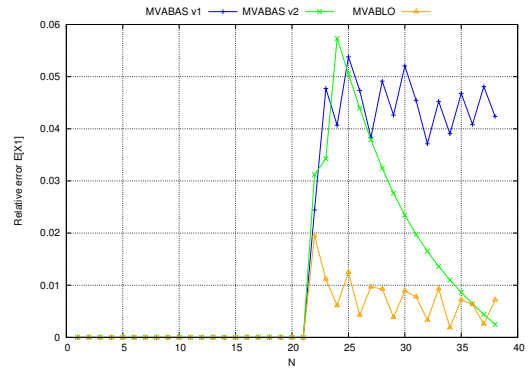
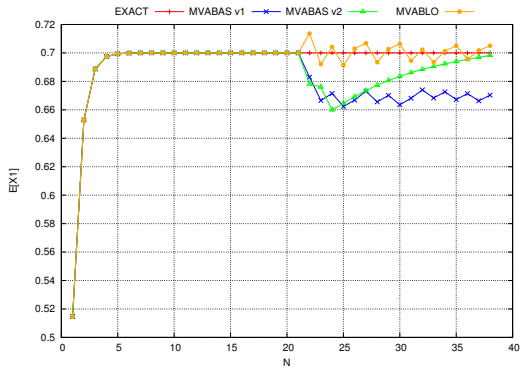
Network 43

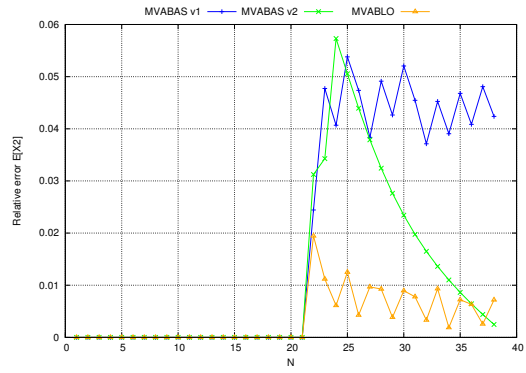
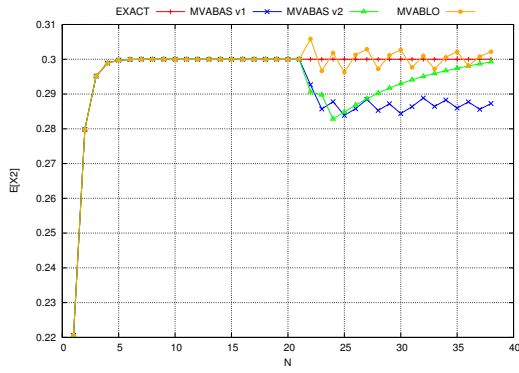
	B	$E[t_s]$
Queue 0	21	1.0
Queue 1	25	0.3
Queue 2	18	0.5

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







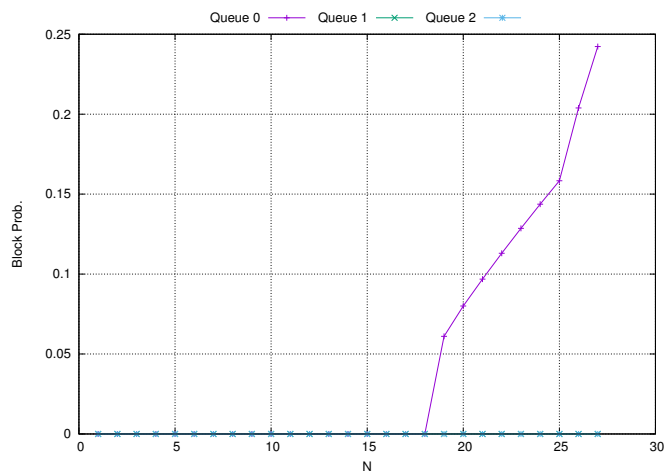


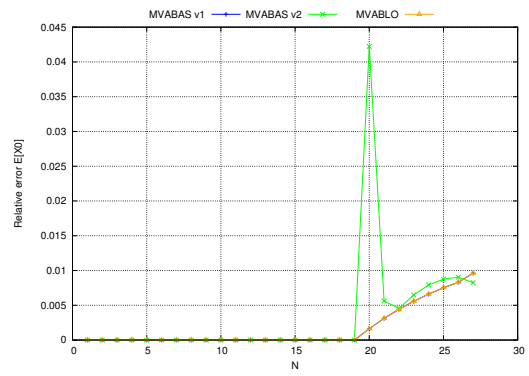
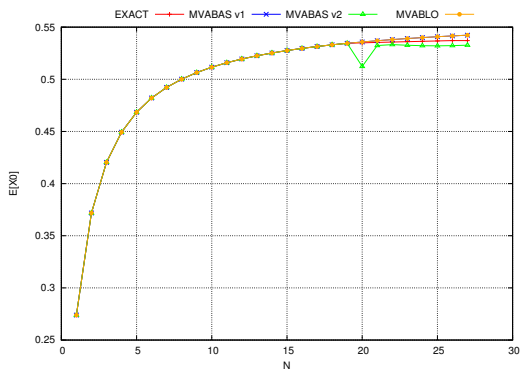
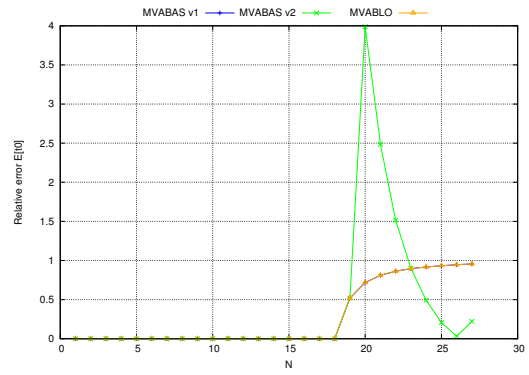
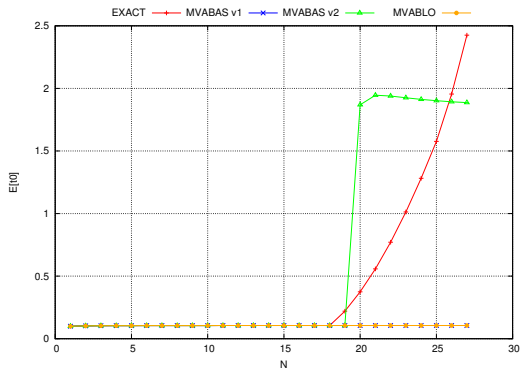
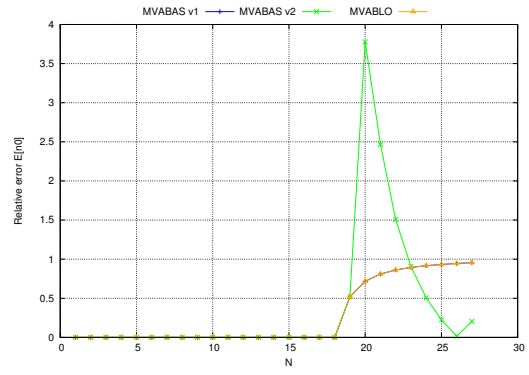
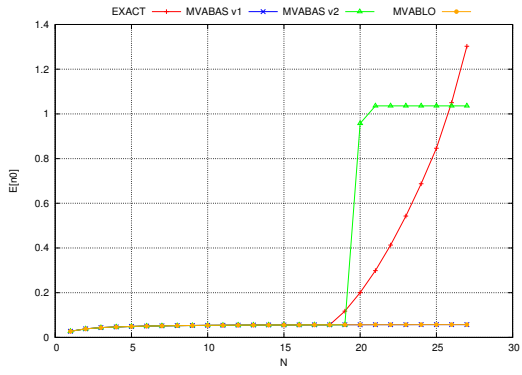
Network 43			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.040	0.049	0.035
e_m	0.0032	0.0002	0.0034
e_M	0.093	0.174	0.101
err_M	0.371	0.971	0.393

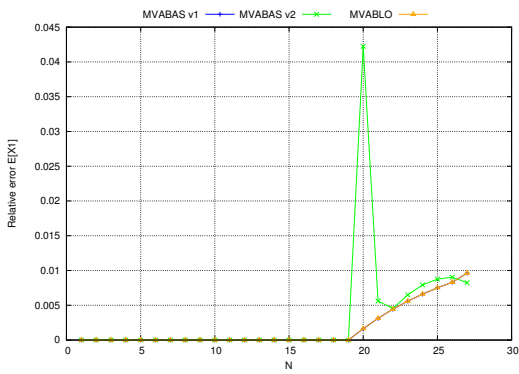
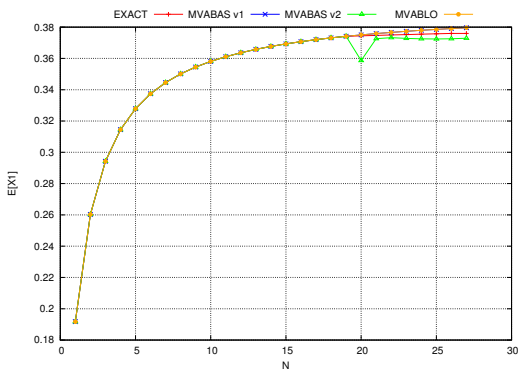
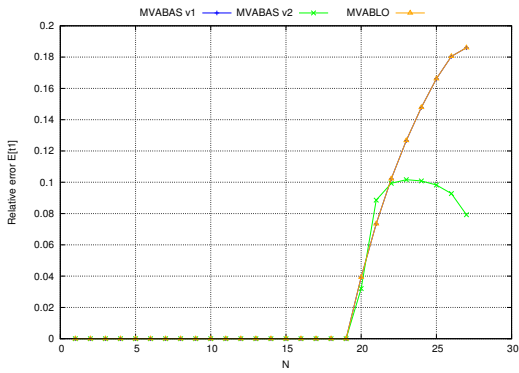
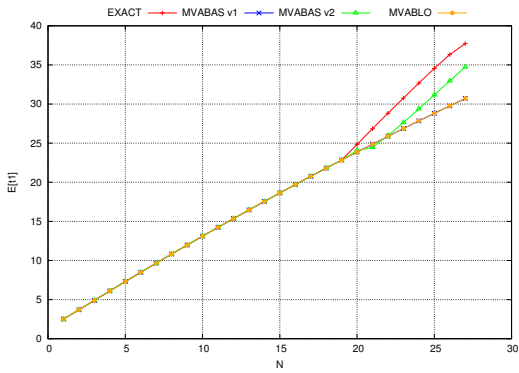
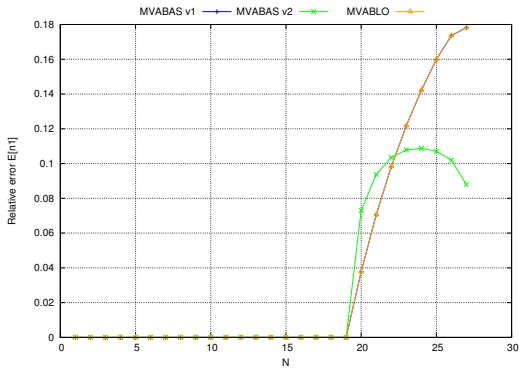
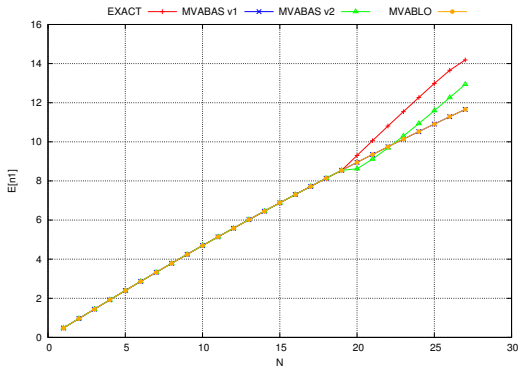
Network 44

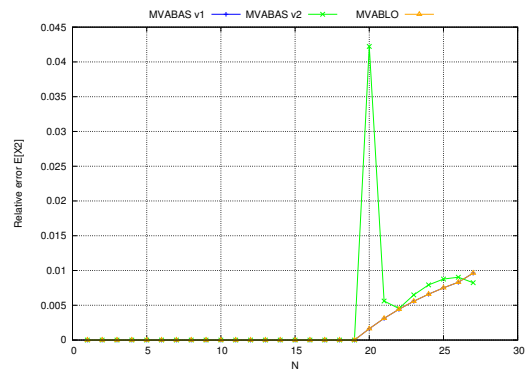
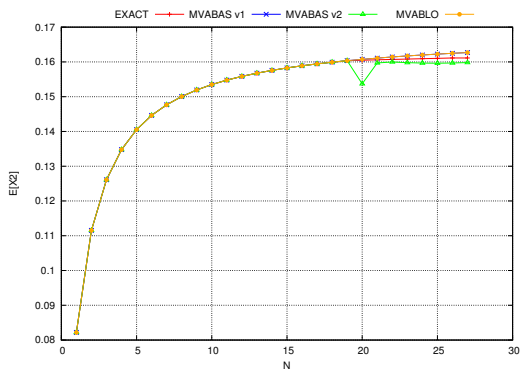
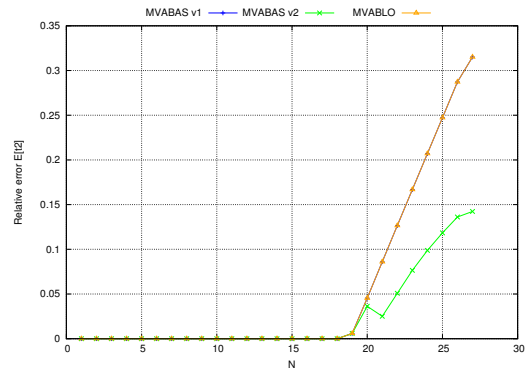
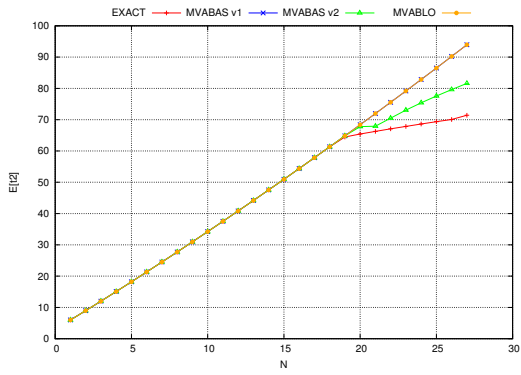
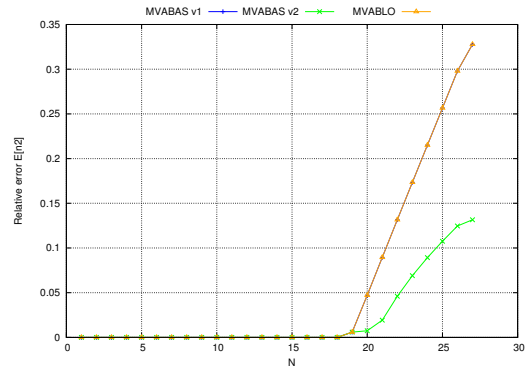
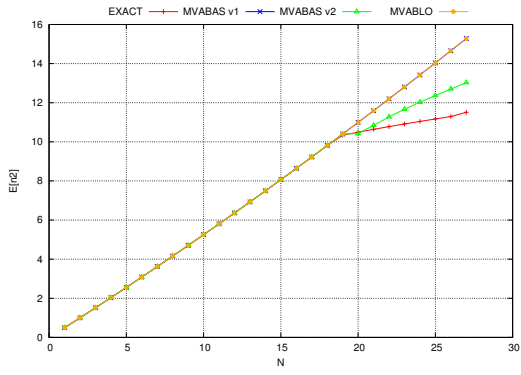
	B	$E[t_s]$
Queue 0	21	0.1
Queue 1	25	2.5
Queue 2	18	6.0

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







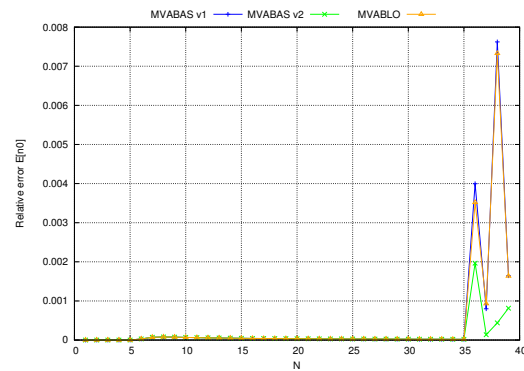
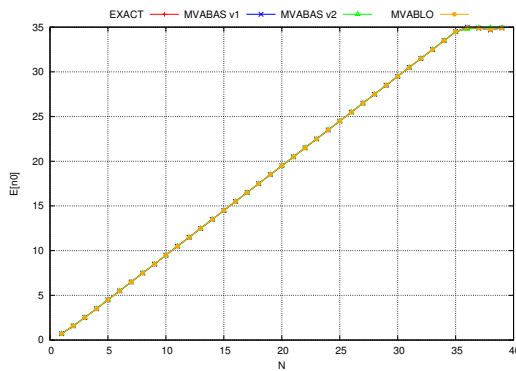
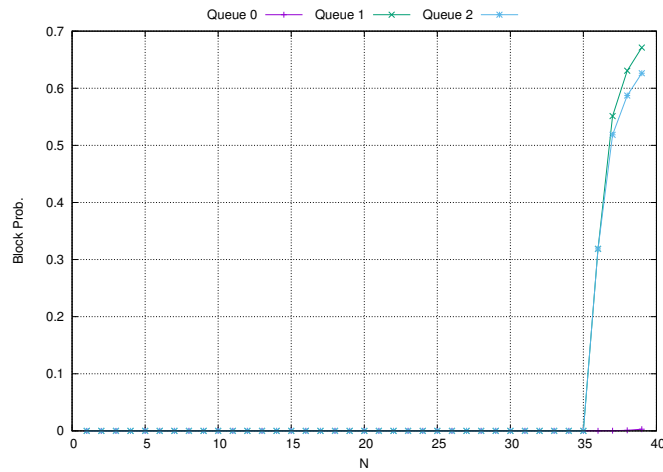


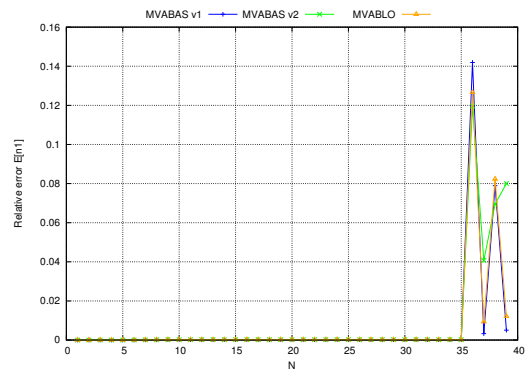
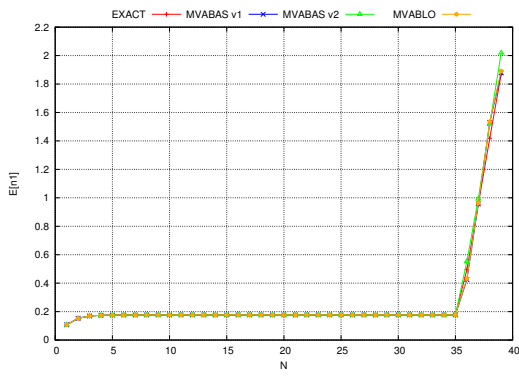
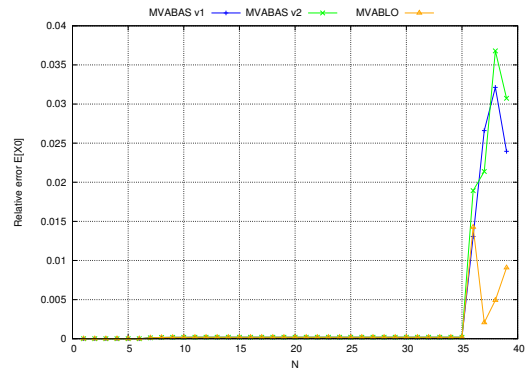
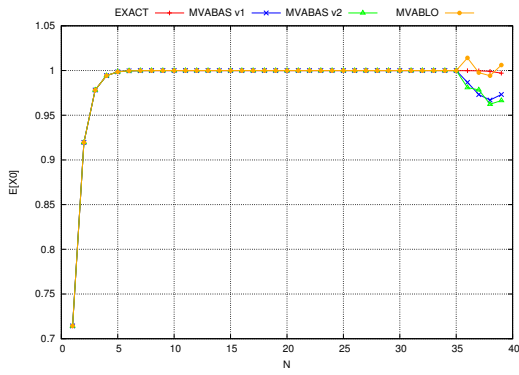
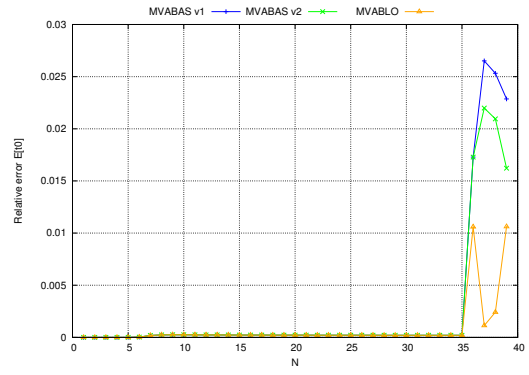
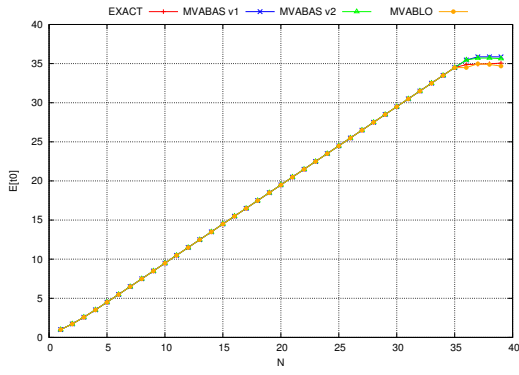
Network 44			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.083	0.096	0.083
e_m	0.0017	0.0034	0.0017
e_M	0.279	0.383	0.279
err_M	0.956	3.988	0.956

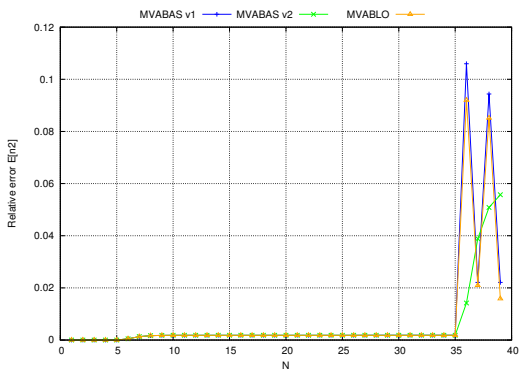
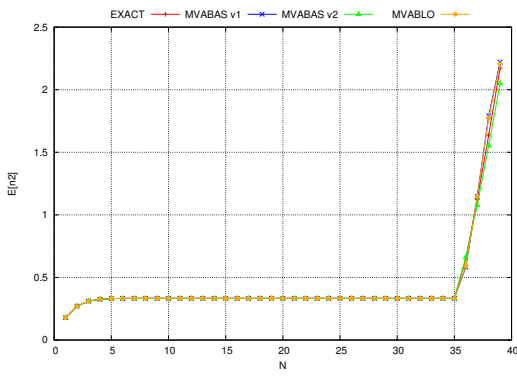
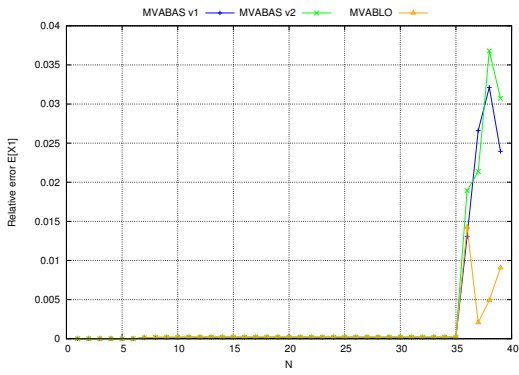
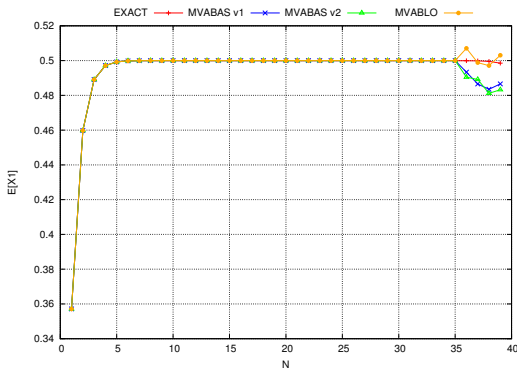
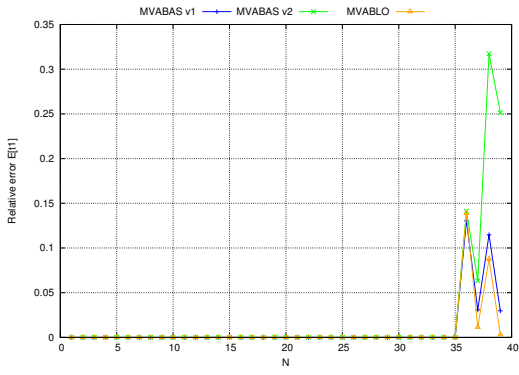
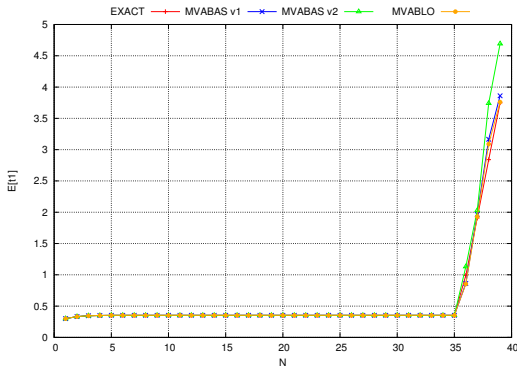
Network 45

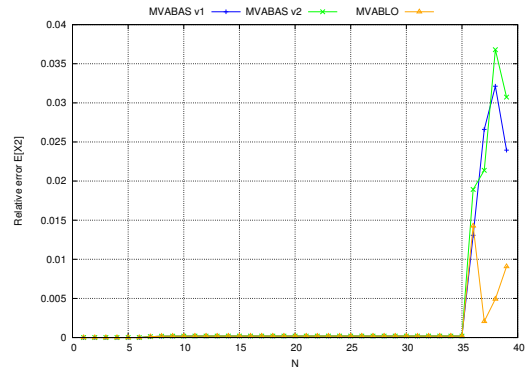
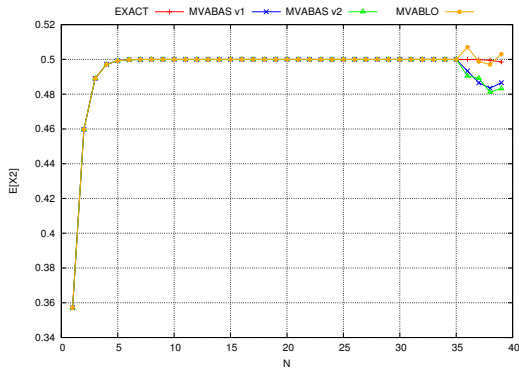
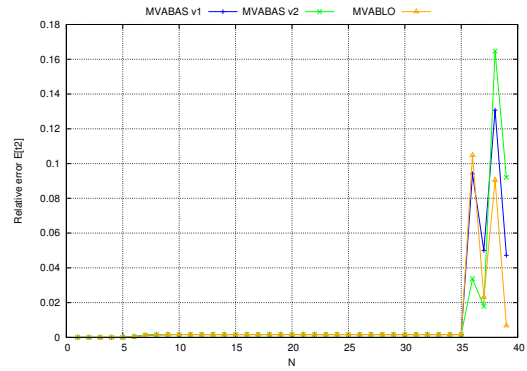
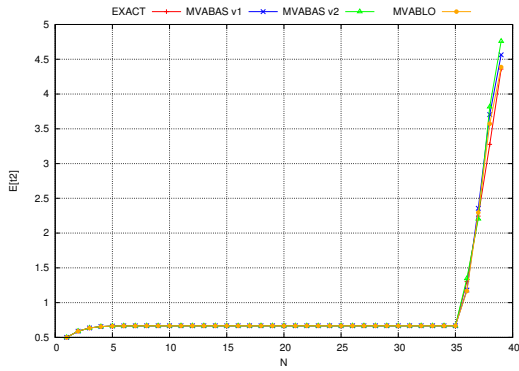
	B	$E[t_s]$
Queue 0	35	1.0
Queue 1	20	0.3
Queue 2	5	0.5

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







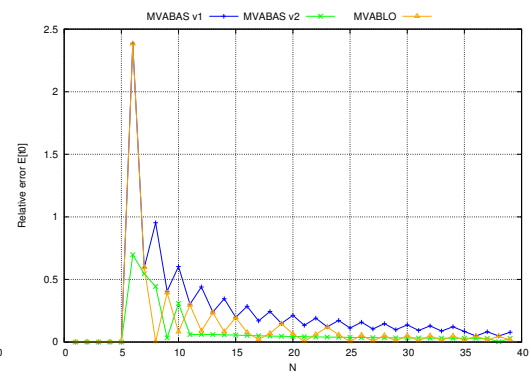
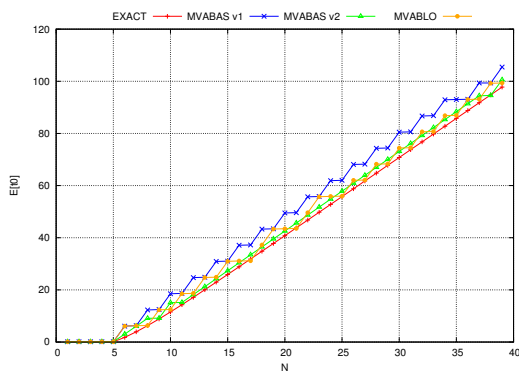
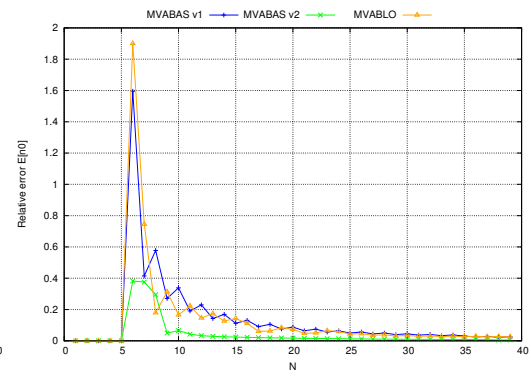
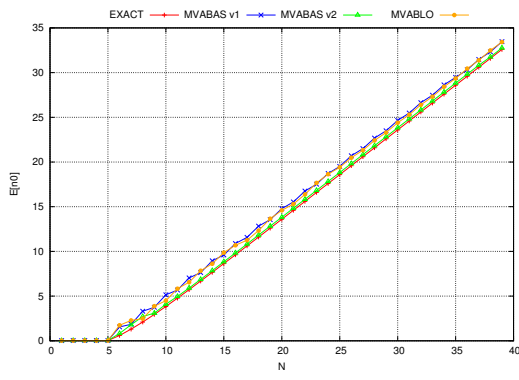
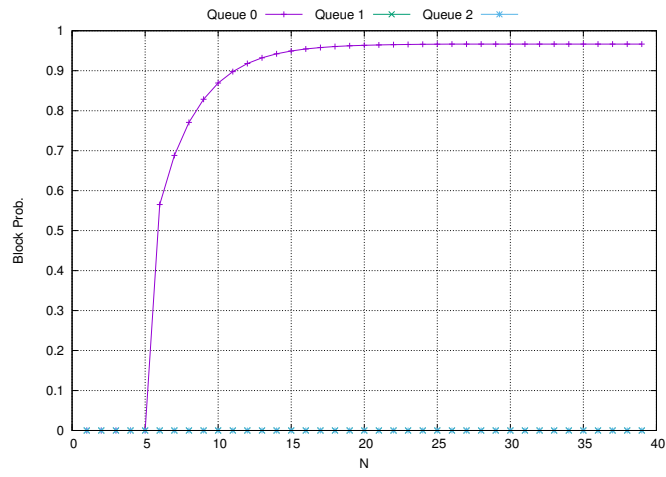


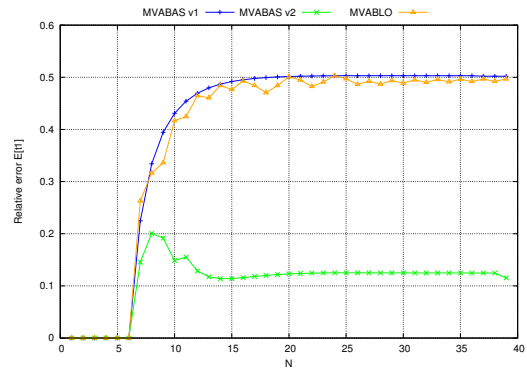
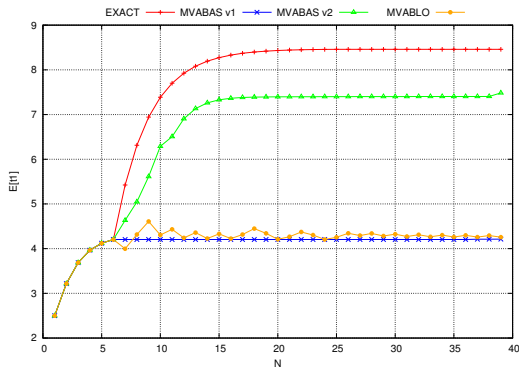
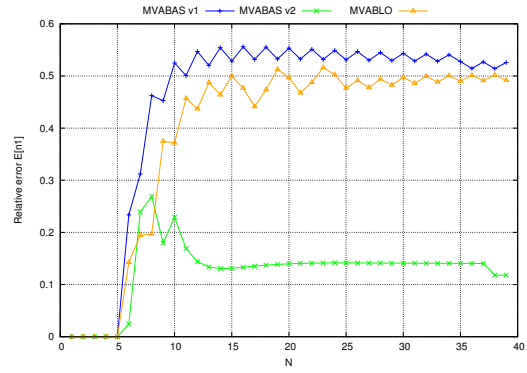
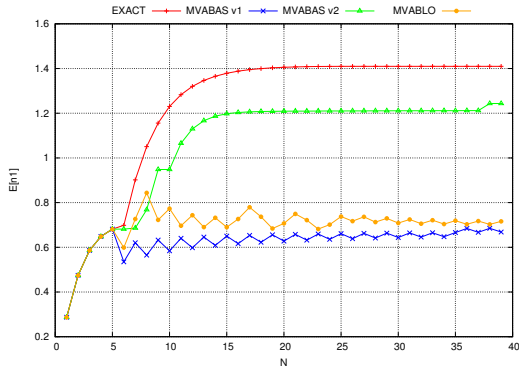
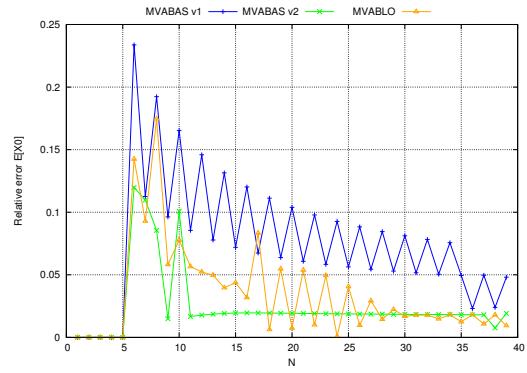
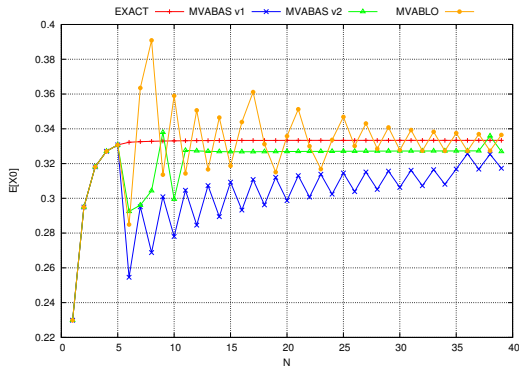
Network 45			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.0046	0.0059	0.0033
e_m	0.00038	0.00011	0.00037
e_M	0.009	0.019	0.006
err_M	0.141	0.317	0.138

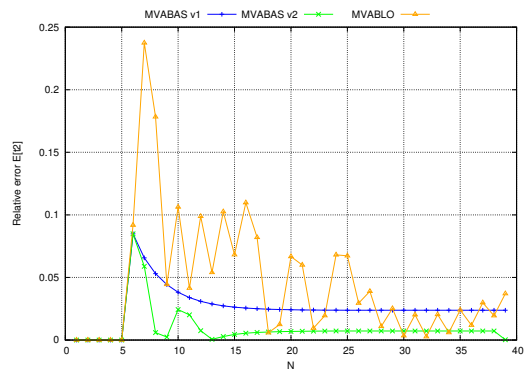
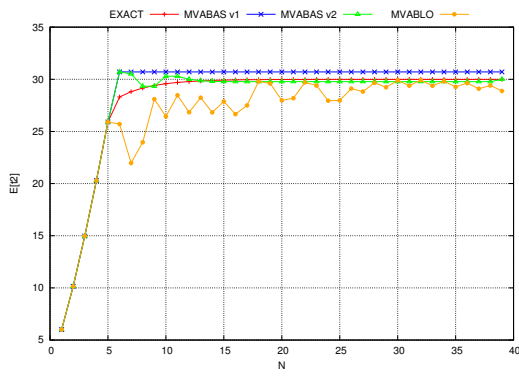
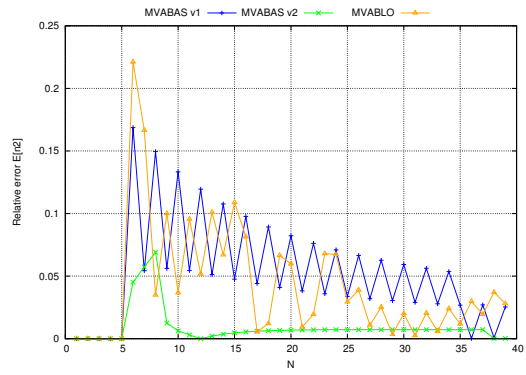
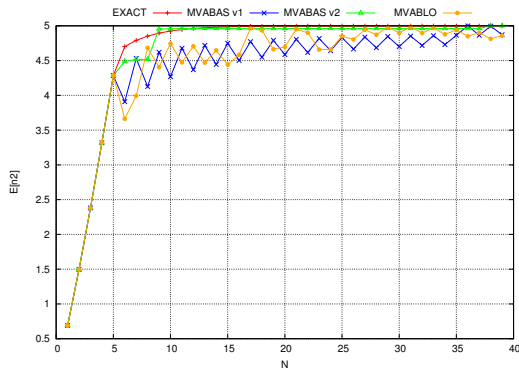
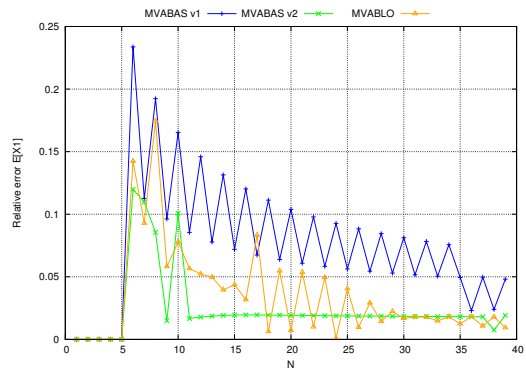
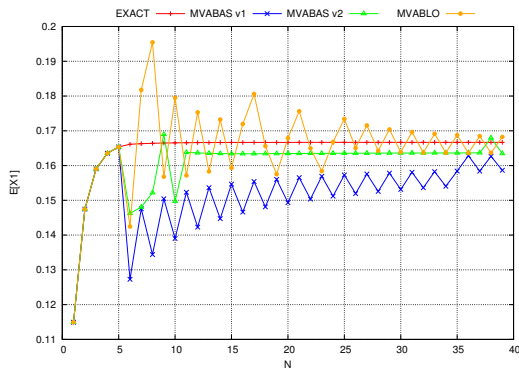
Network 46

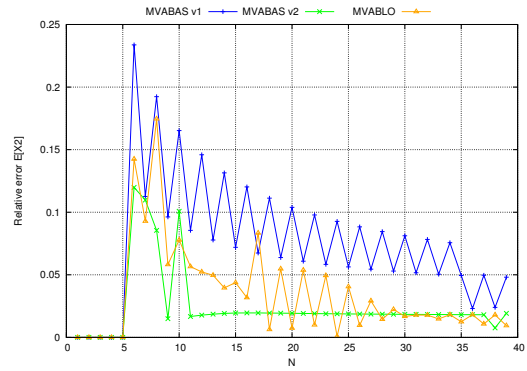
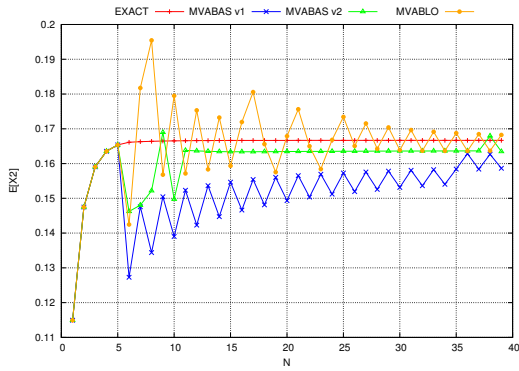
	B	$E[t_s]$
Queue 0	35	0.1
Queue 1	20	2.5
Queue 2	5	6.0

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







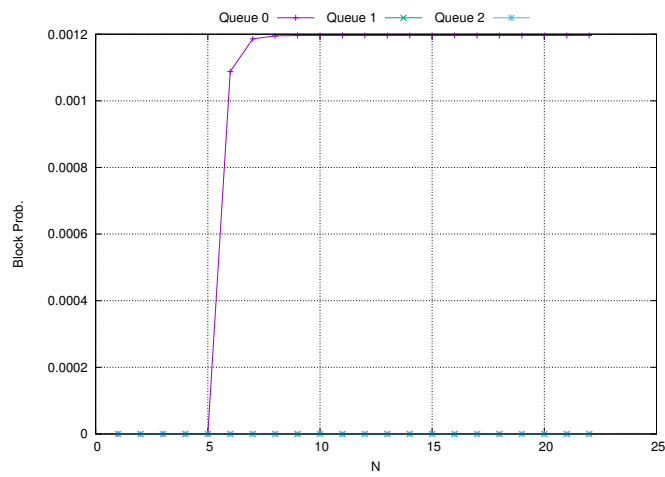


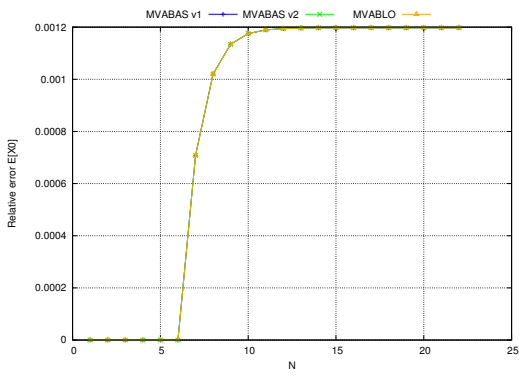
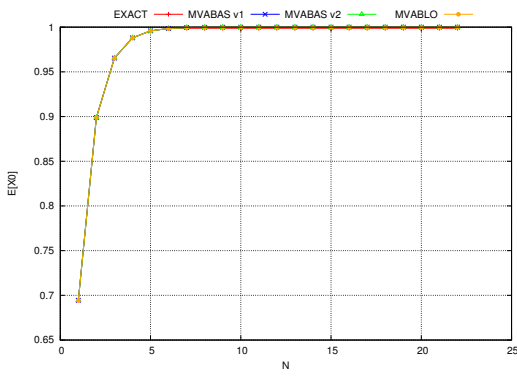
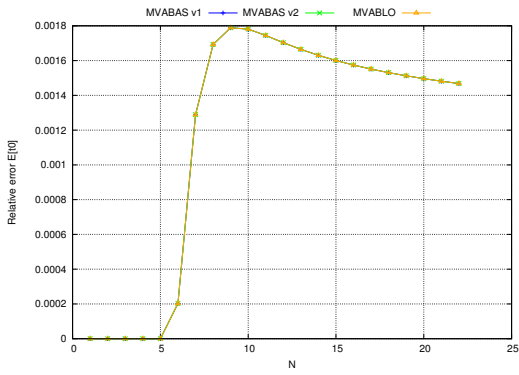
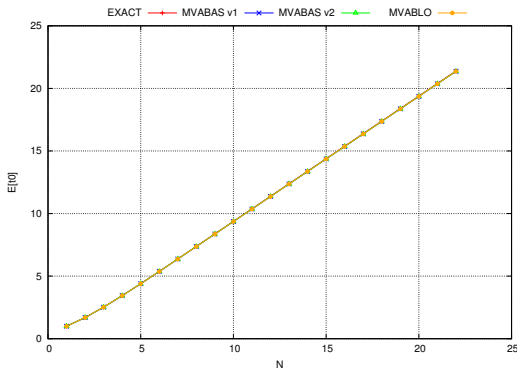
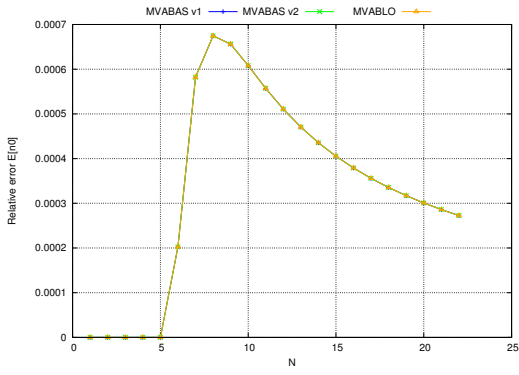
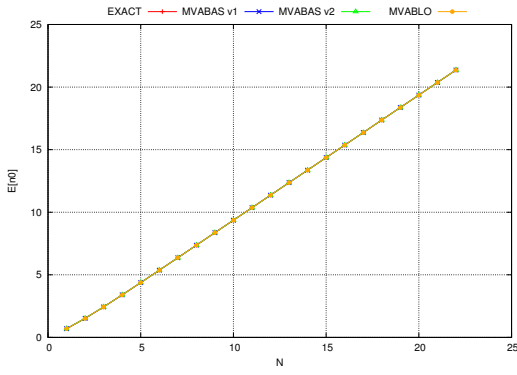
Network 46			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.171	0.050	0.139
e_m	0.025	0.009	0.034
e_M	0.448	0.127	0.395
err_M	2.387	0.697	2.382

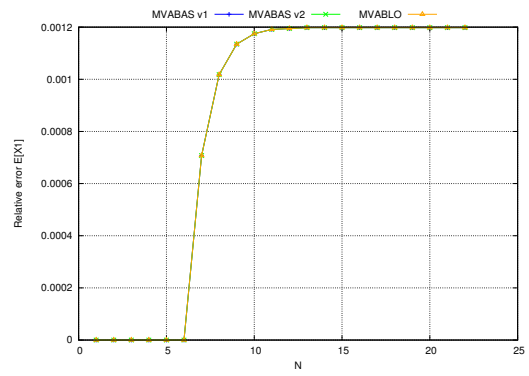
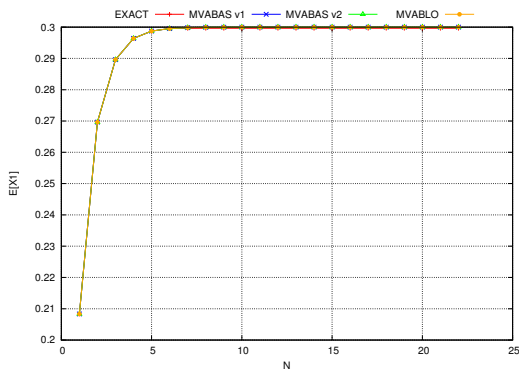
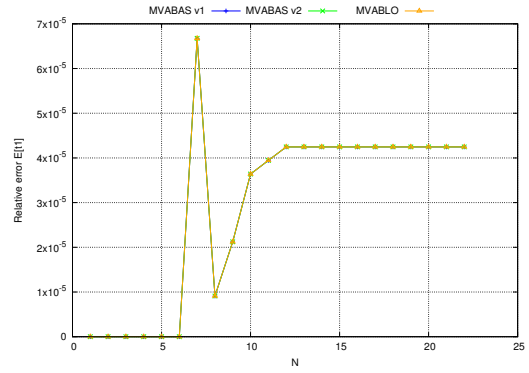
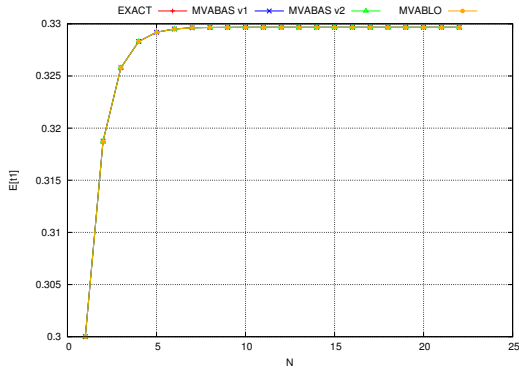
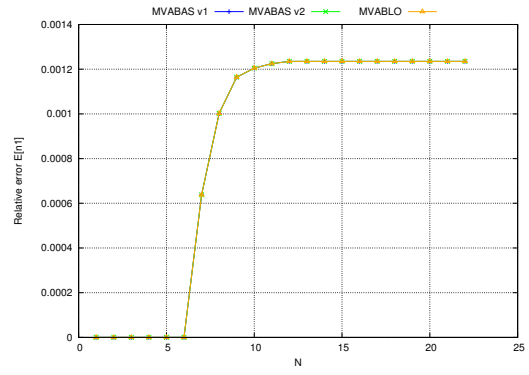
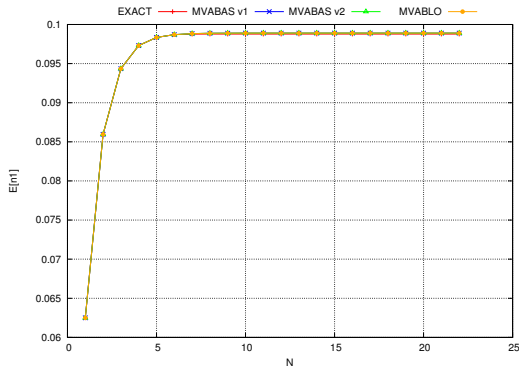
Network 47

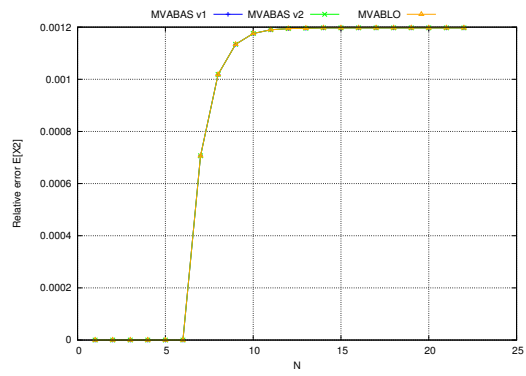
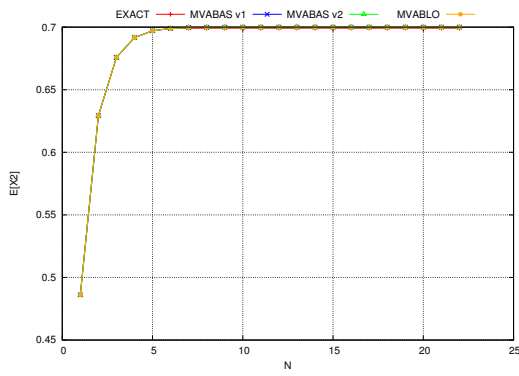
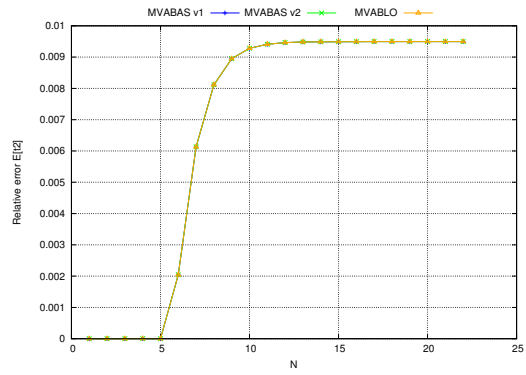
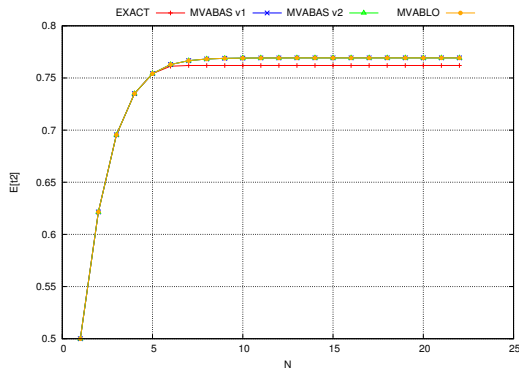
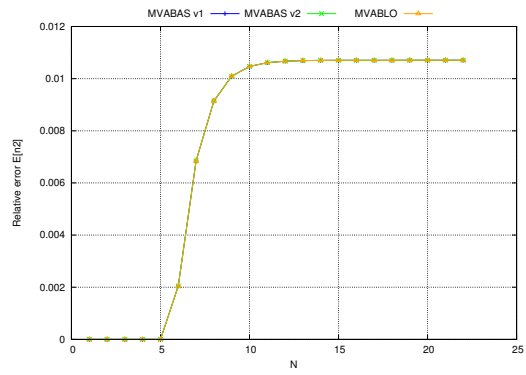
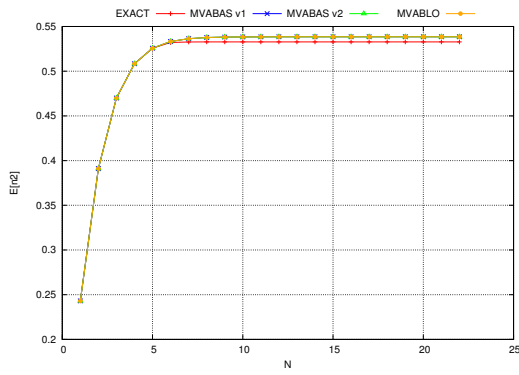
	B	$E[t_s]$
Queue 0	35	1.0
Queue 1	20	0.3
Queue 2	5	0.5

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







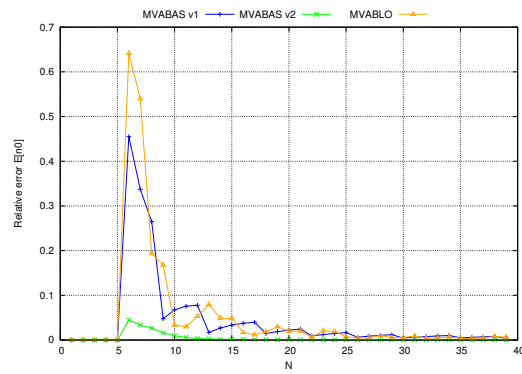
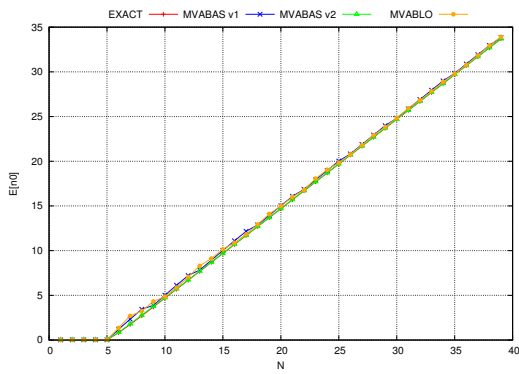
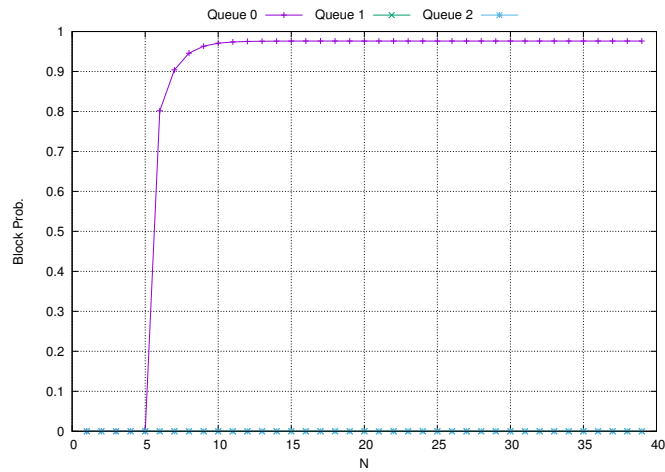


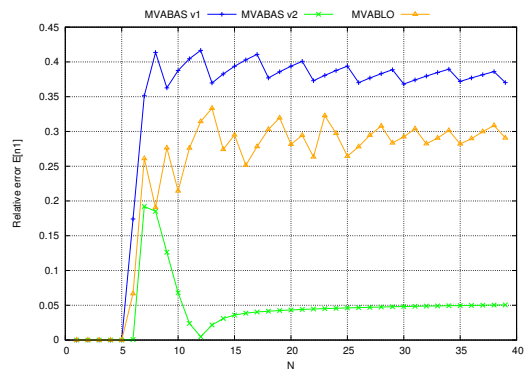
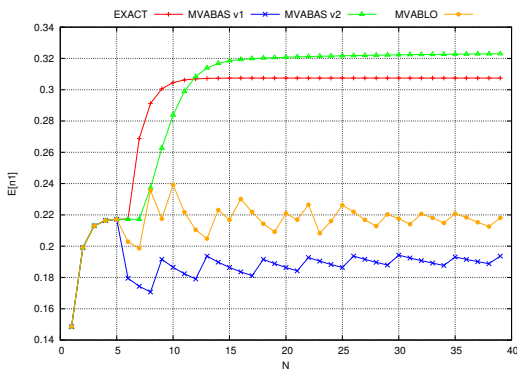
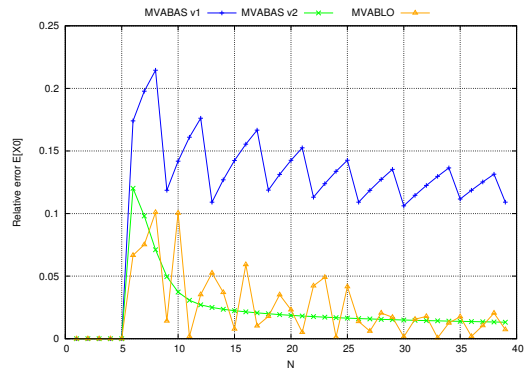
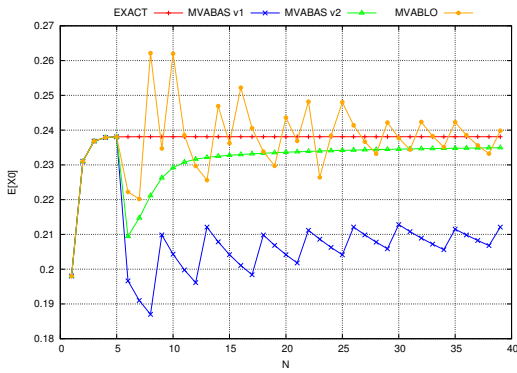
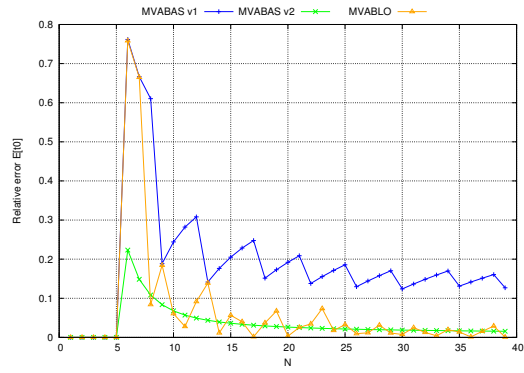
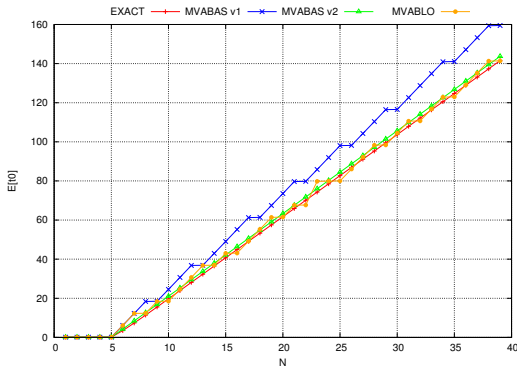
Network 47			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.0021	0.0021	0.0021
e_m	$2.90 \cdot 10^{-5}$	$2.90 \cdot 10^{-5}$	$2.90 \cdot 10^{-5}$
e_M	0.007	0.007	0.007
err_M	0.0107	0.0107	0.0107

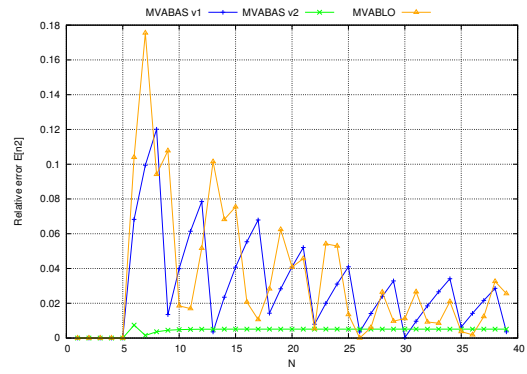
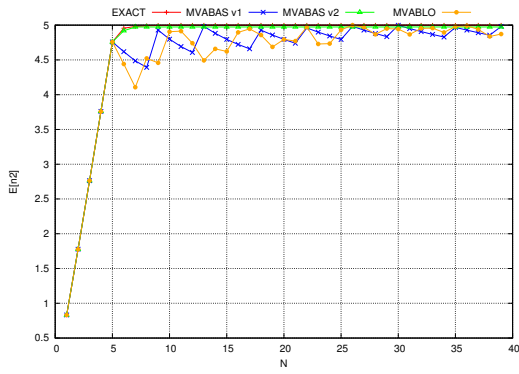
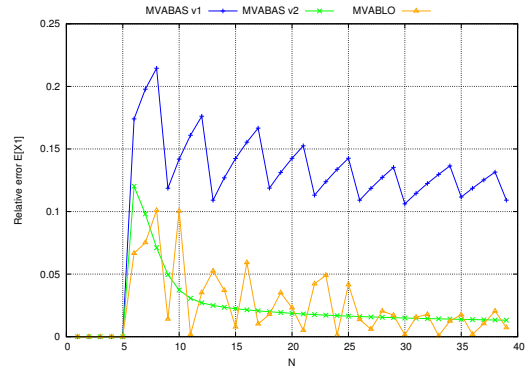
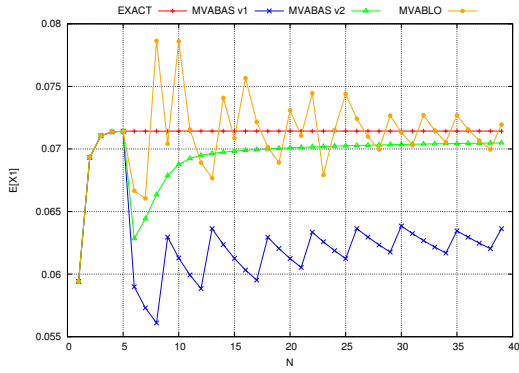
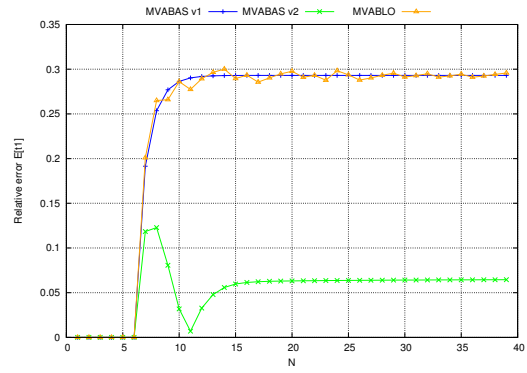
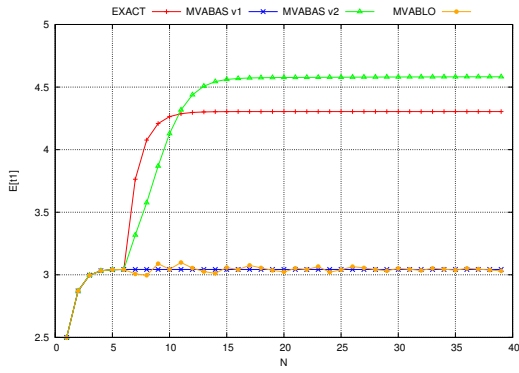
Network 48

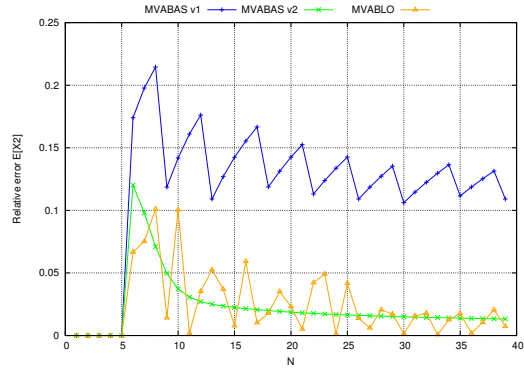
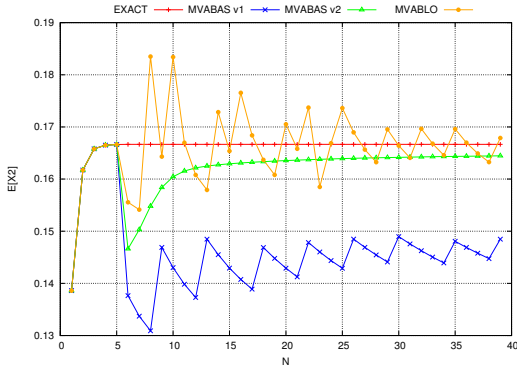
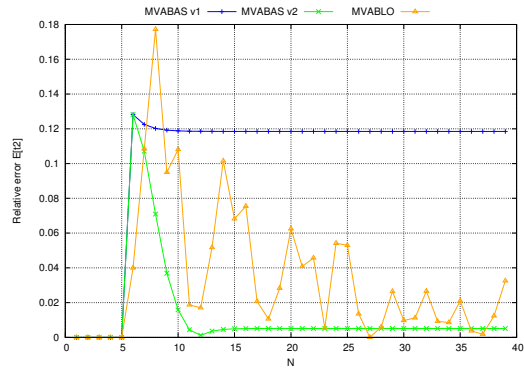
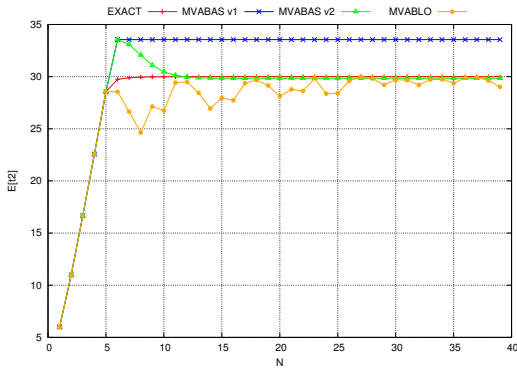
	B	$E[t_s]$
Queue 0	35	0.1
Queue 1	20	2.5
Queue 2	5	6.0

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







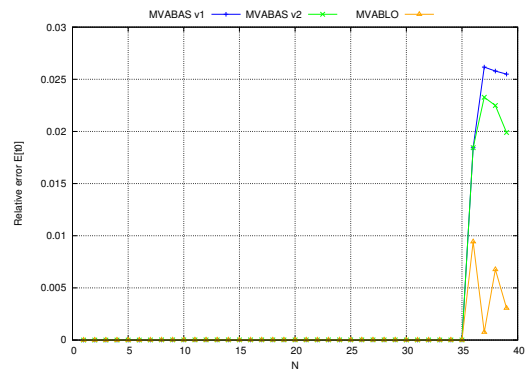
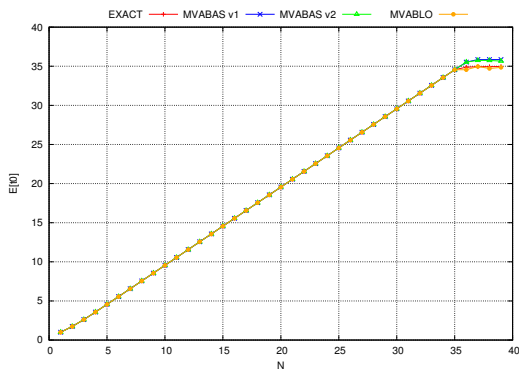
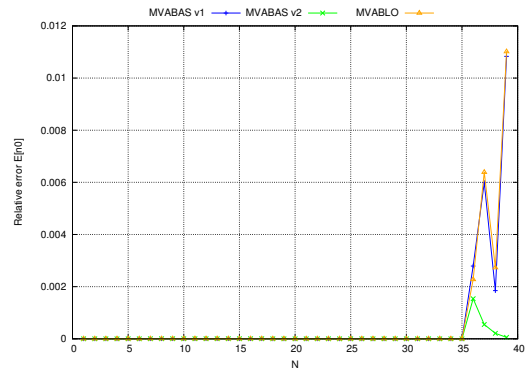
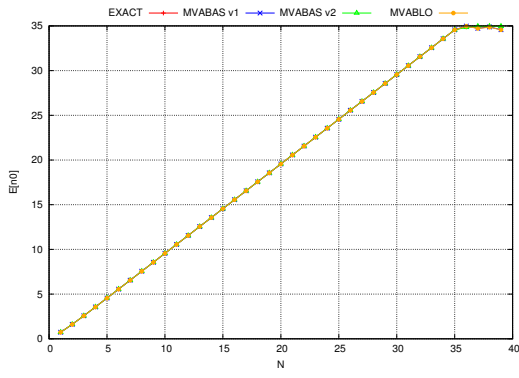
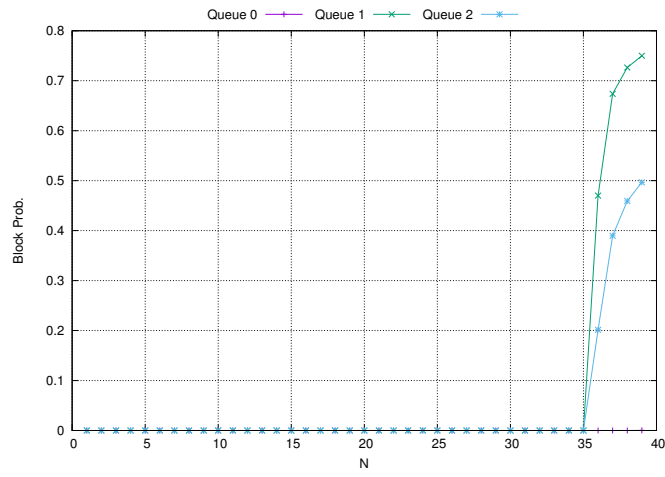


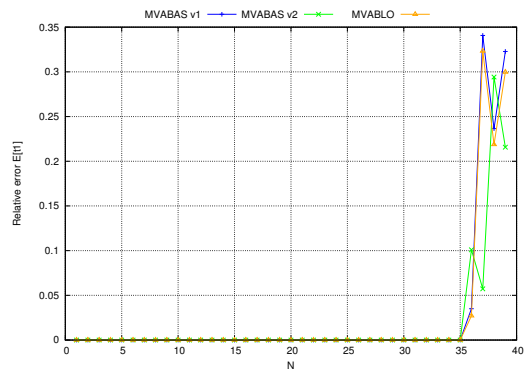
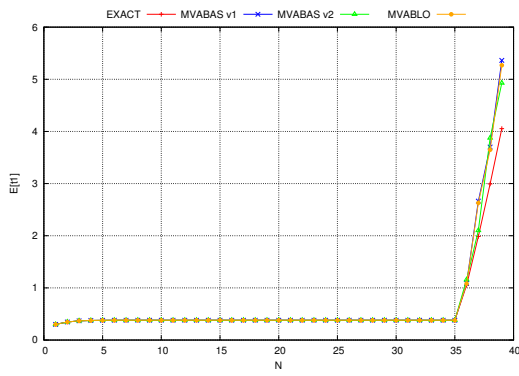
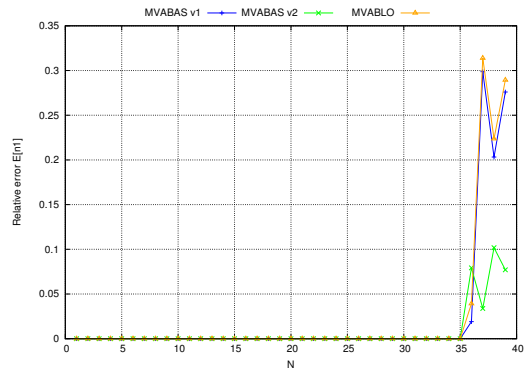
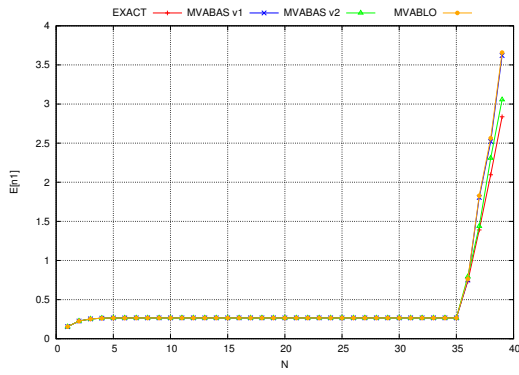
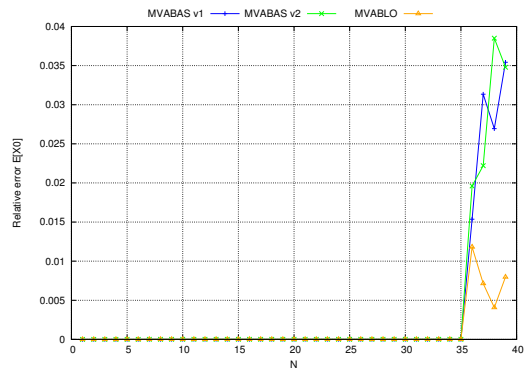
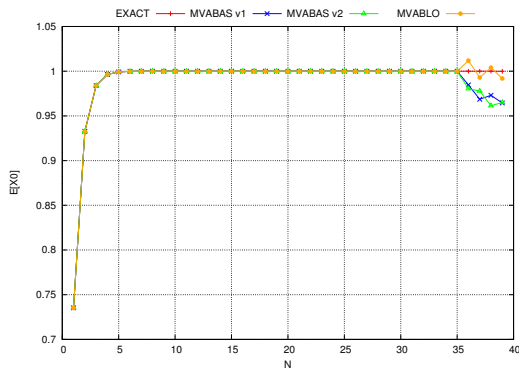
Network 48			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.144	0.025	0.083
e_m	0.029	0.004	0.024
e_M	0.329	0.053	0.243
err_M	0.761	0.223	0.758

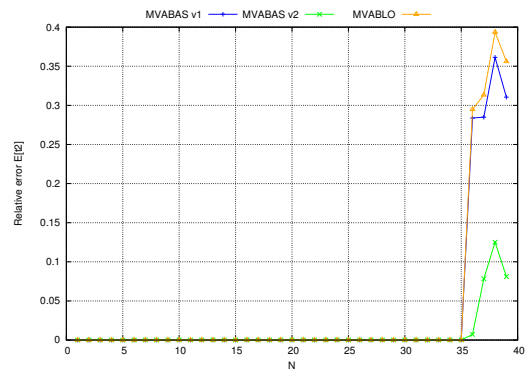
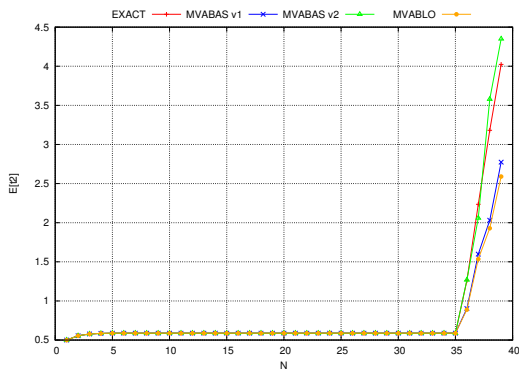
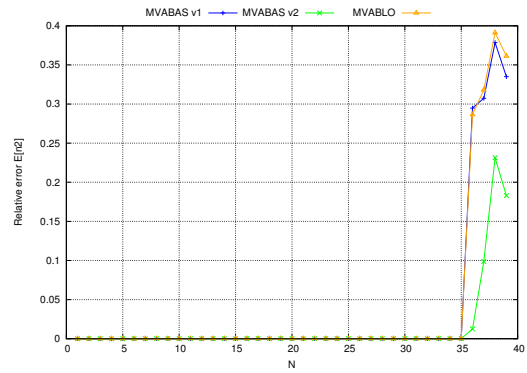
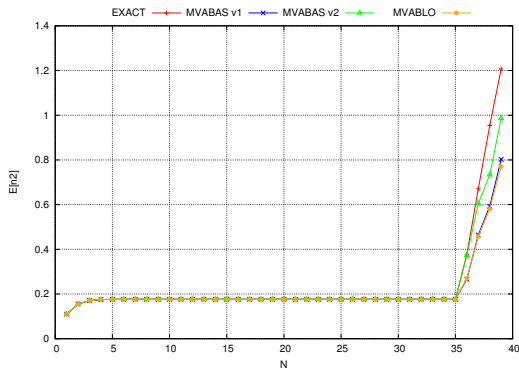
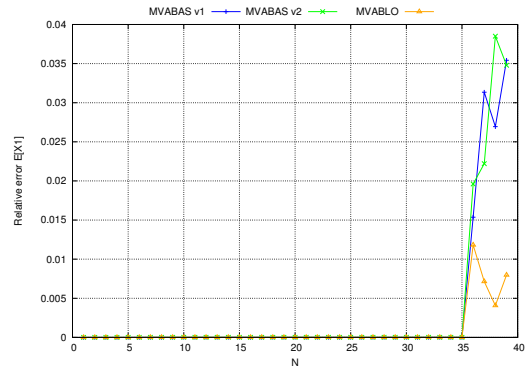
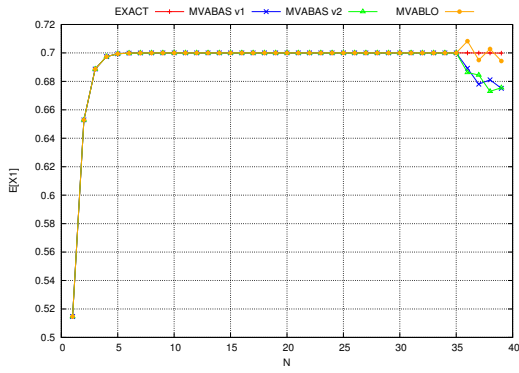
Network 49

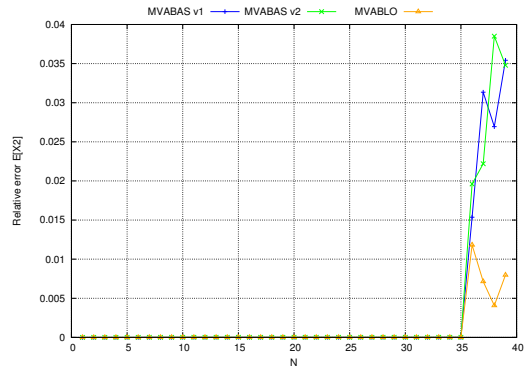
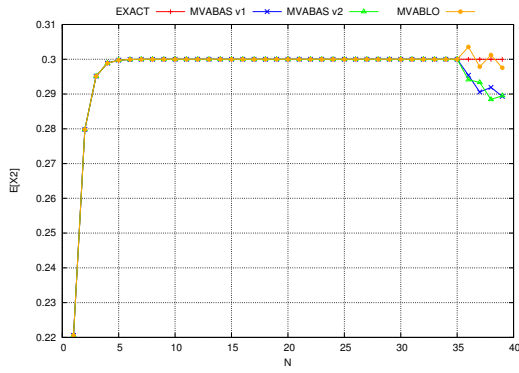
	B	$E[t_s]$
Queue 0	35	1.0
Queue 1	20	0.3
Queue 2	5	0.5

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







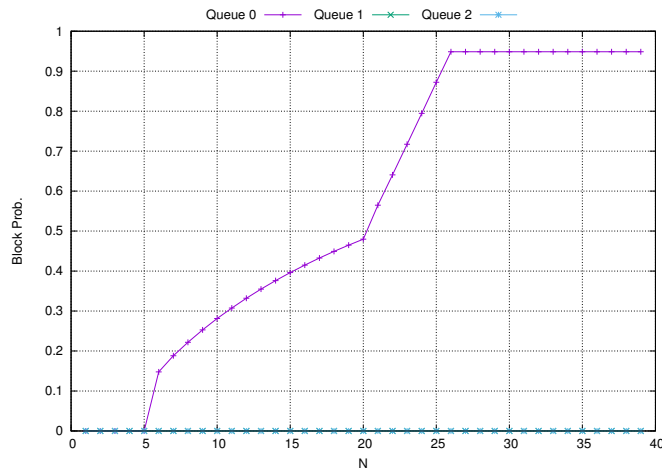


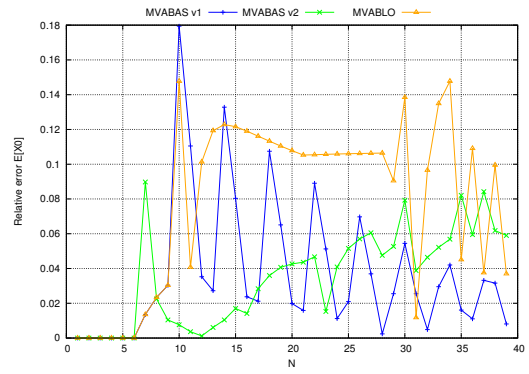
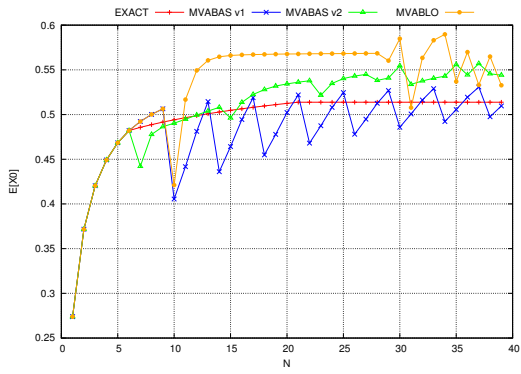
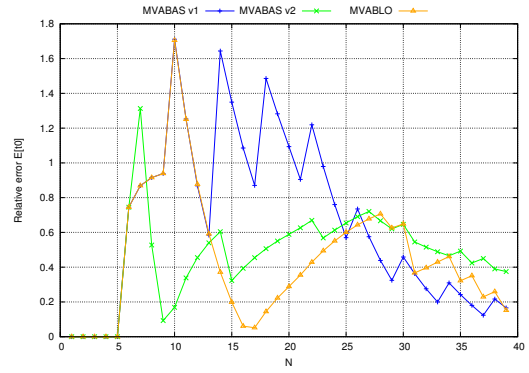
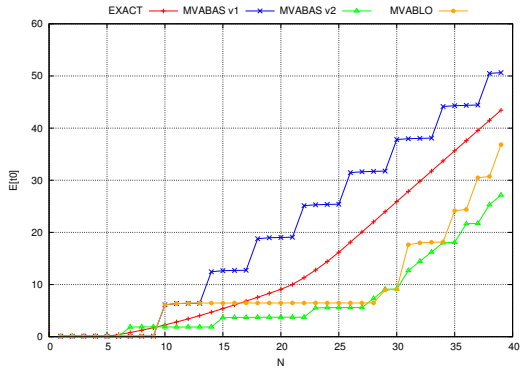
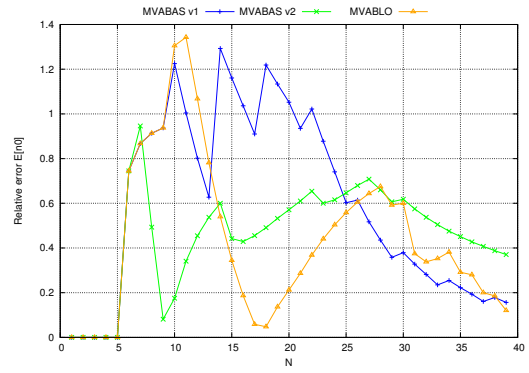
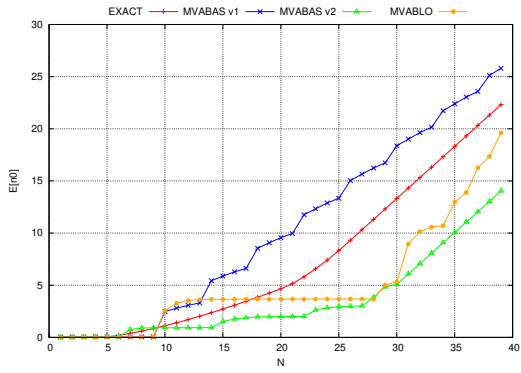
Network 49			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.0135	0.0063	0.01308
e_m	0.00055	6.14377343855e-05	0.00052
e_M	0.033	0.017	0.034
err_M	0.378	0.294	0.393

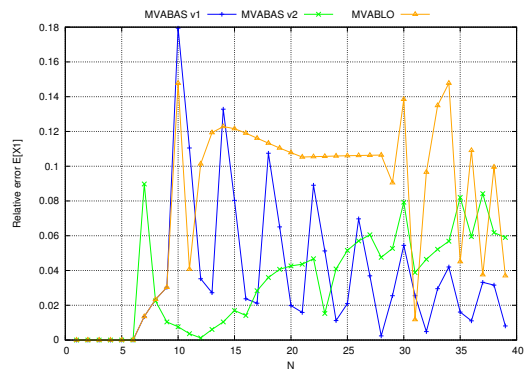
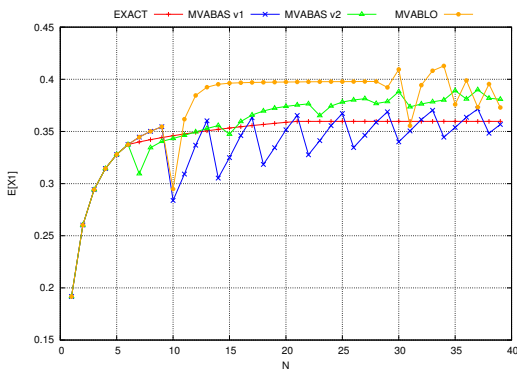
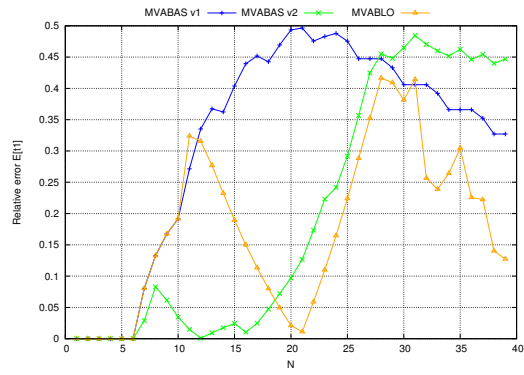
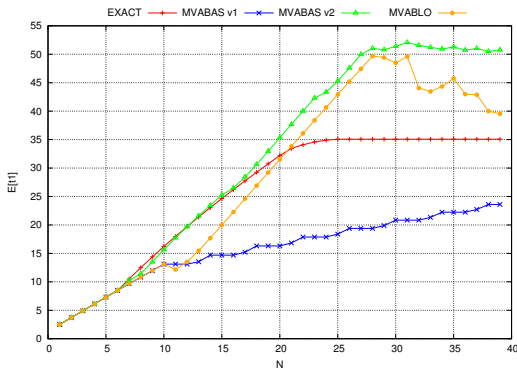
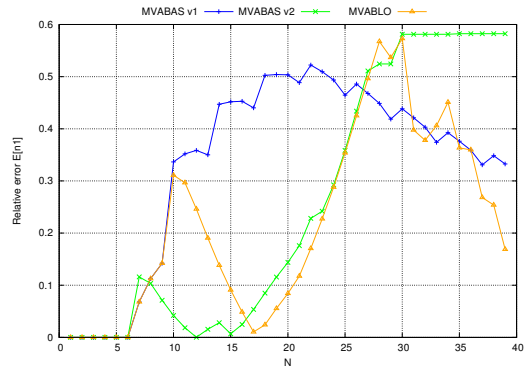
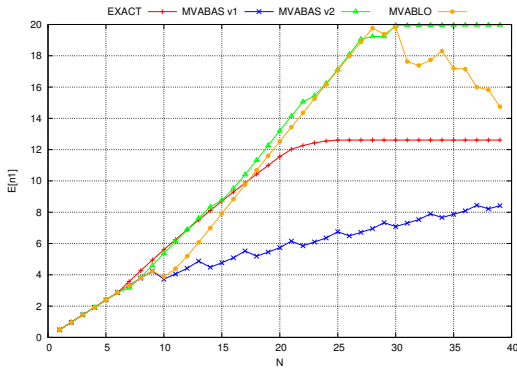
Network 50

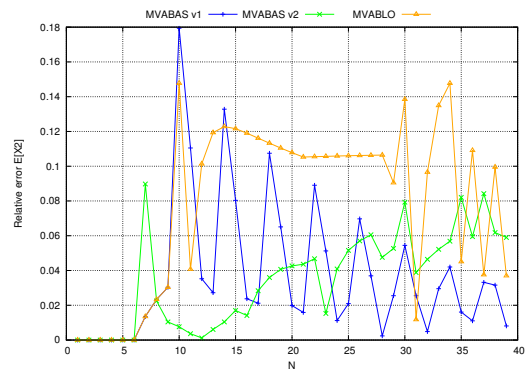
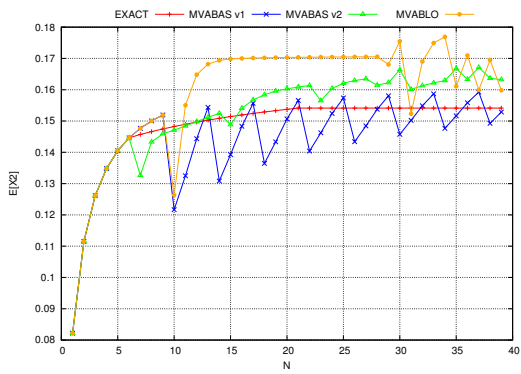
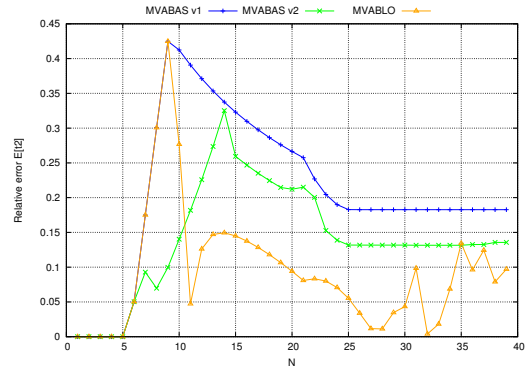
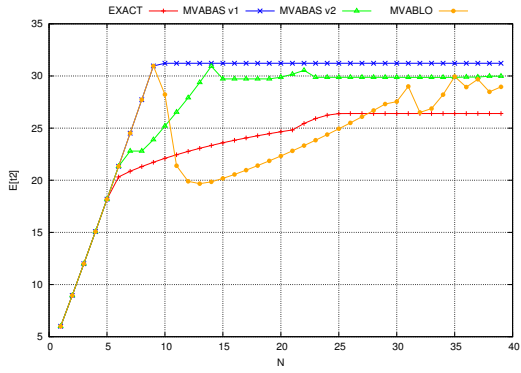
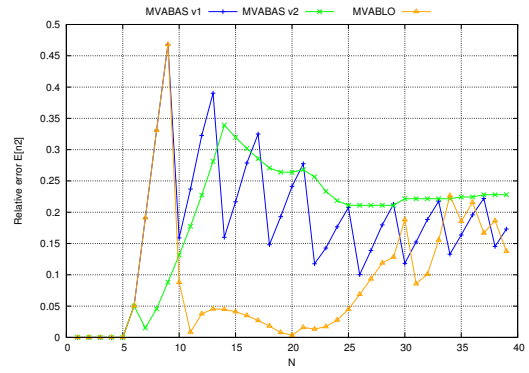
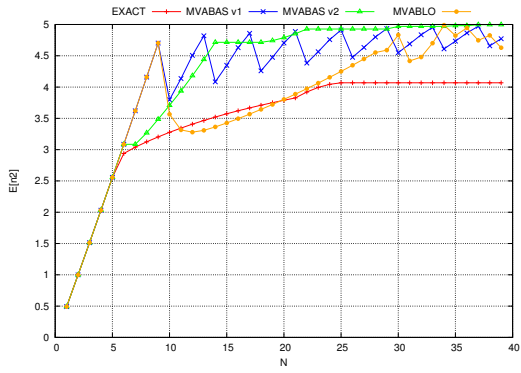
	B	$E[t_s]$
Queue 0	35	0.1
Queue 1	20	2.5
Queue 2	5	6.0

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







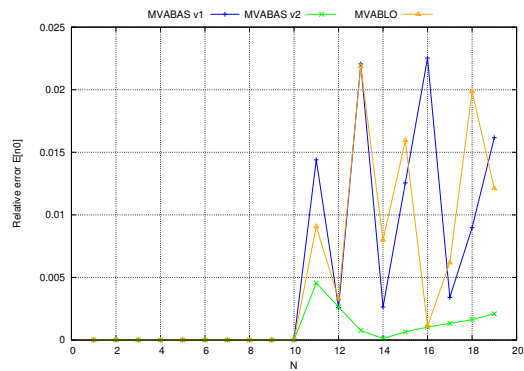
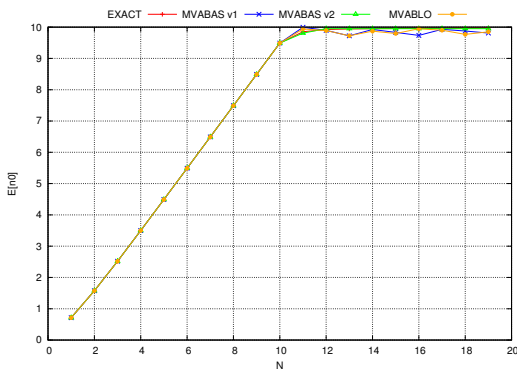
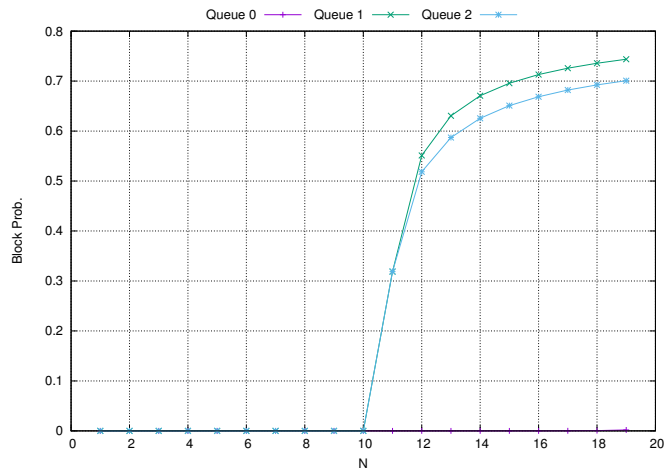


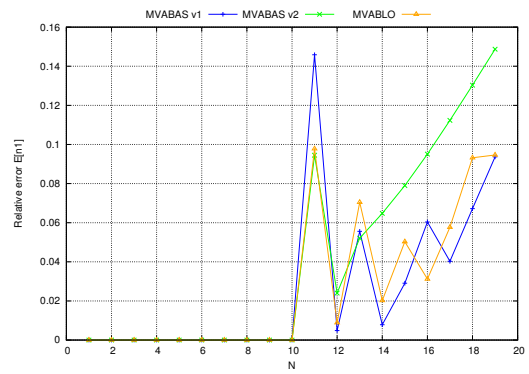
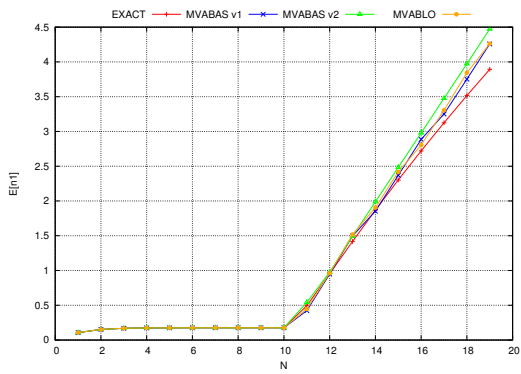
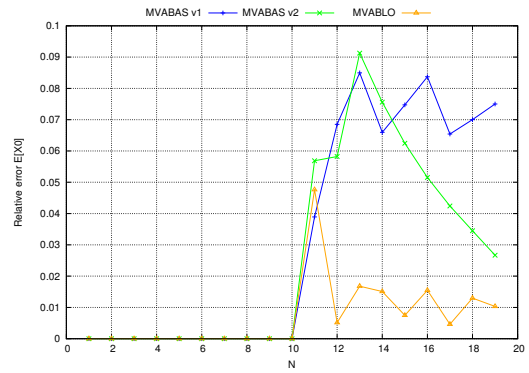
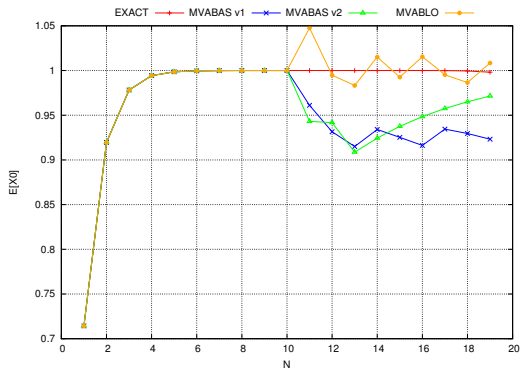
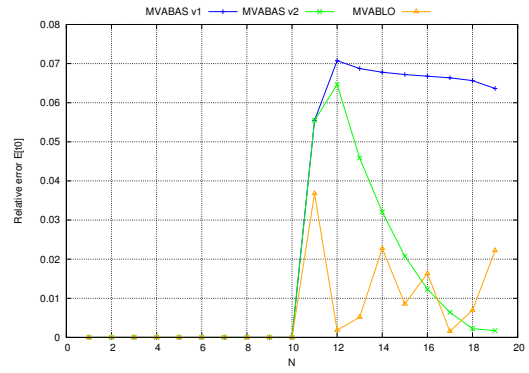
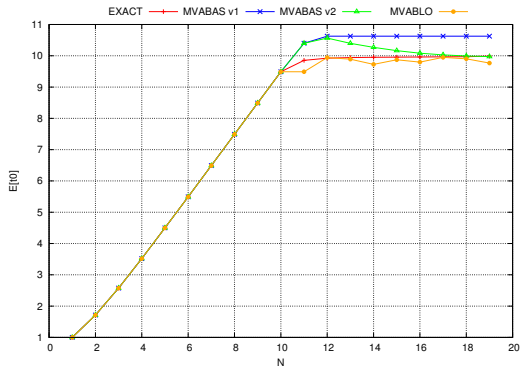
Network 50			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.268	0.201	0.191
e_m	0.037	0.035	0.079
e_M	0.659	0.467	0.459
err_M	1.711	1.313	1.704

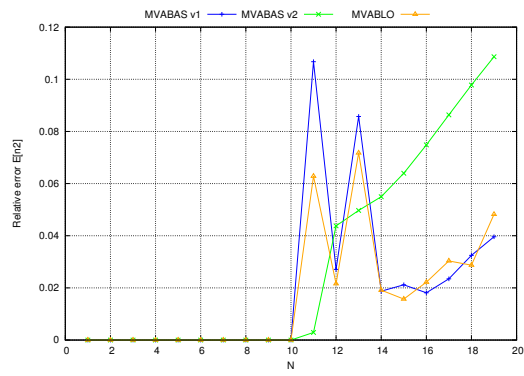
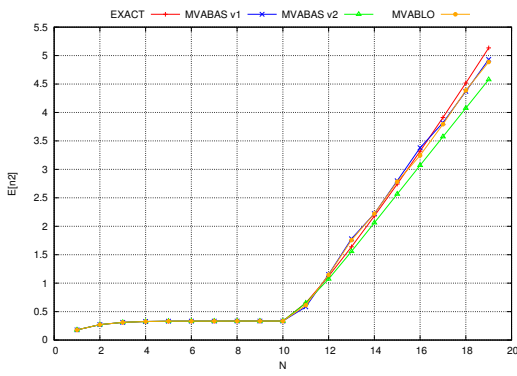
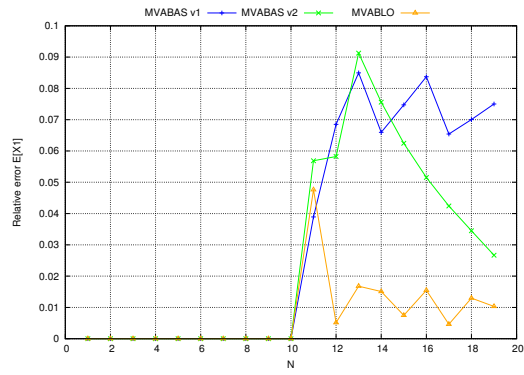
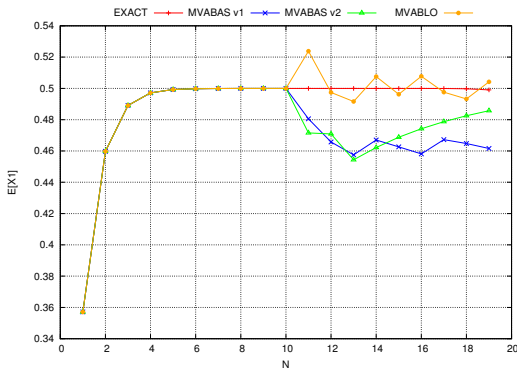
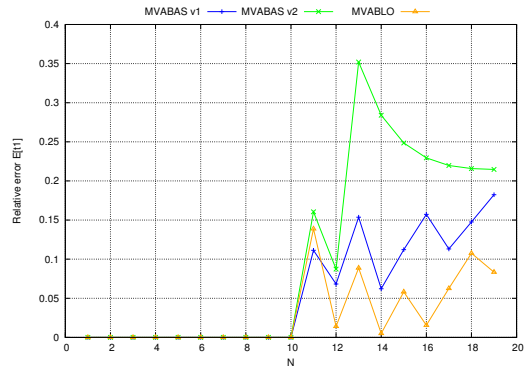
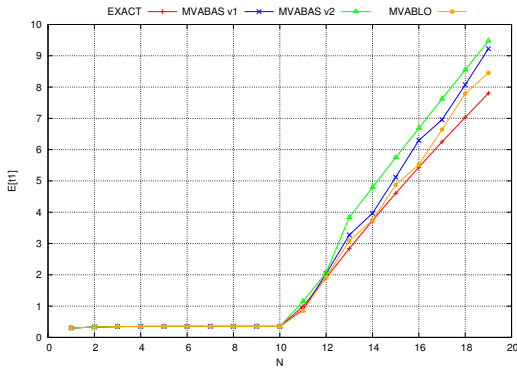
Network 51

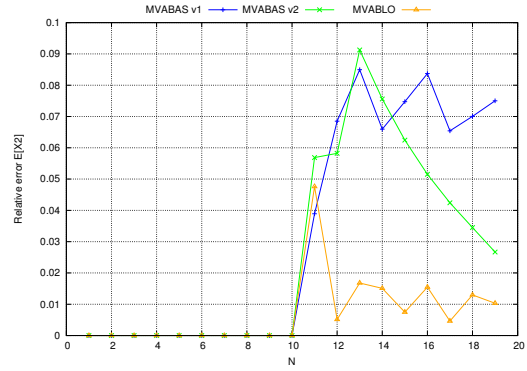
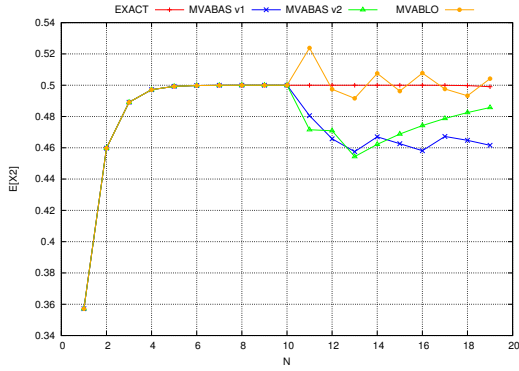
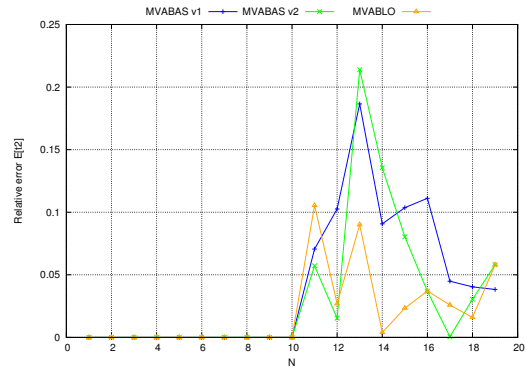
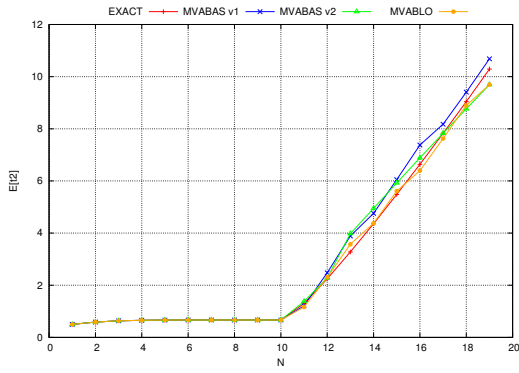
	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.3
Queue 2	10	0.5

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







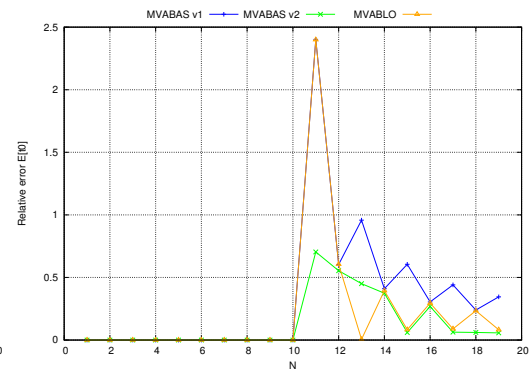
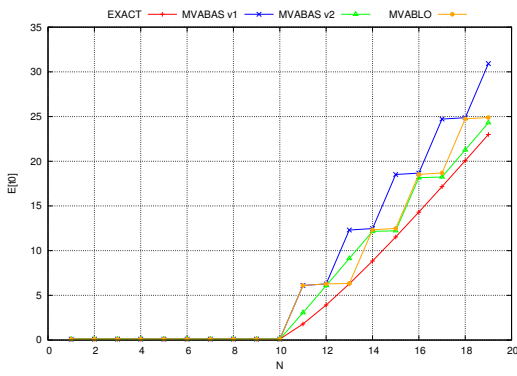
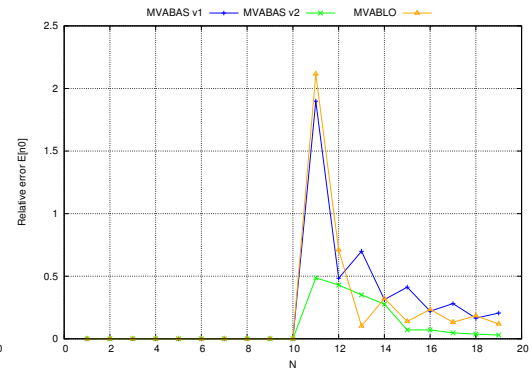
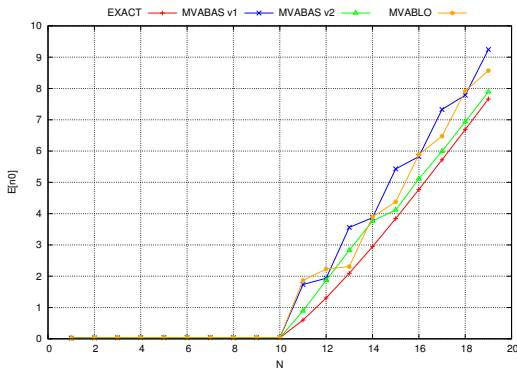
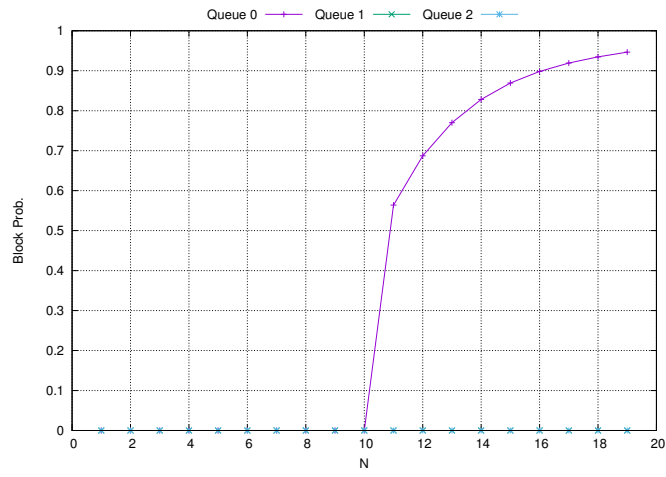


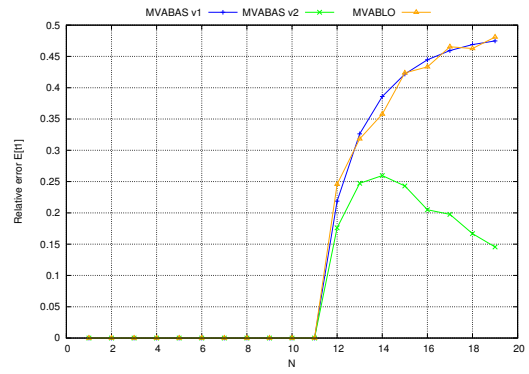
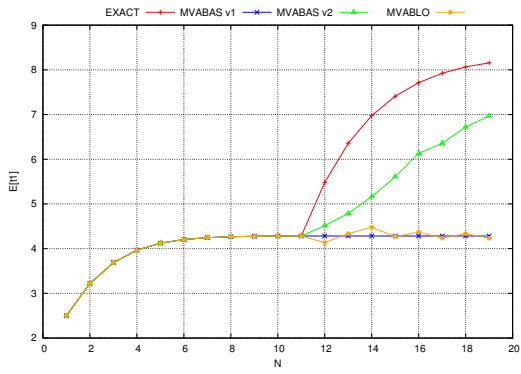
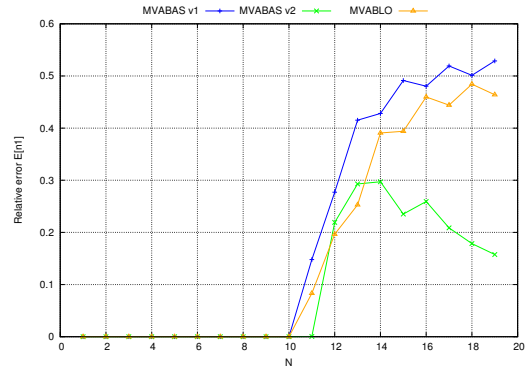
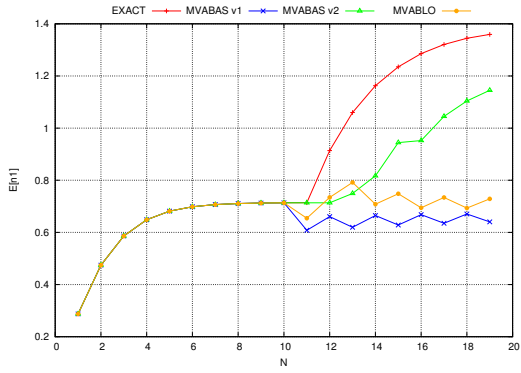
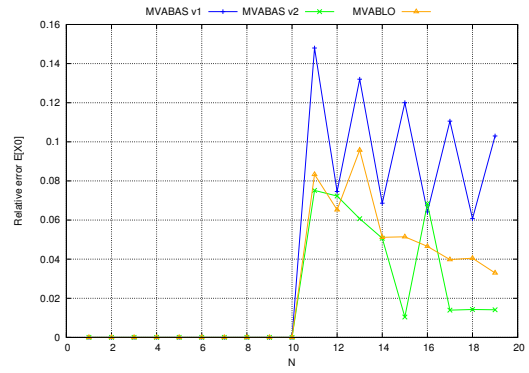
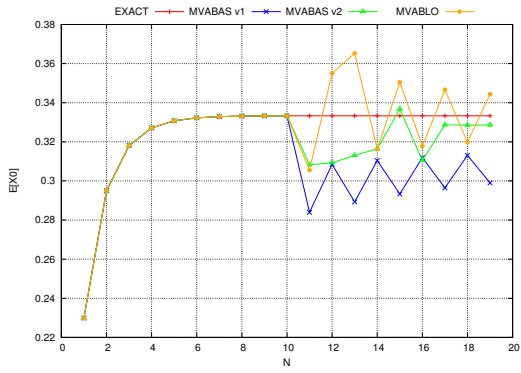
Network 51			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.031	0.033	0.014
e_m	0.0055	0.0007	0.0051
e_M	0.058	0.105	0.030
err_M	0.186	0.351	0.138

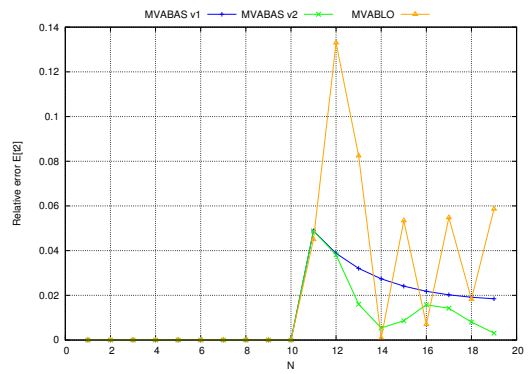
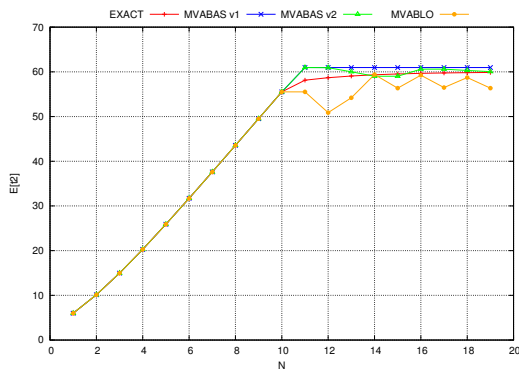
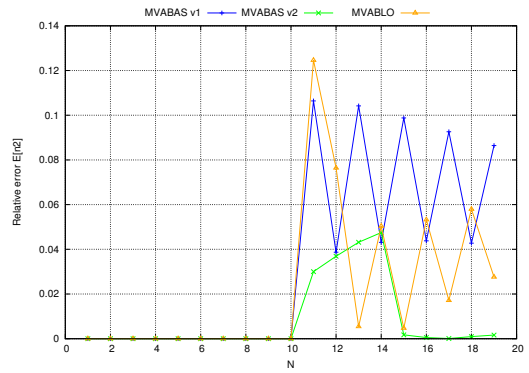
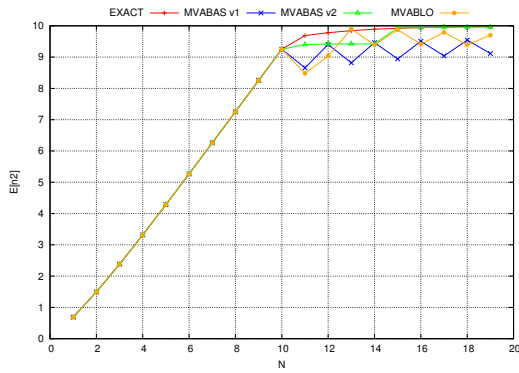
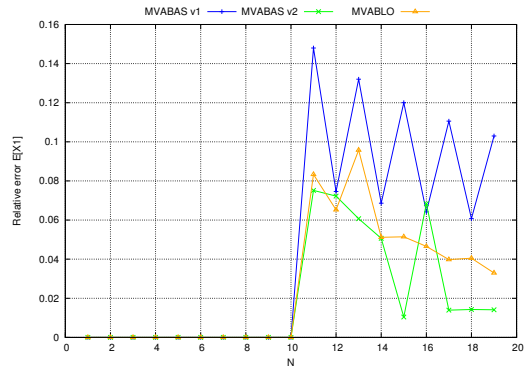
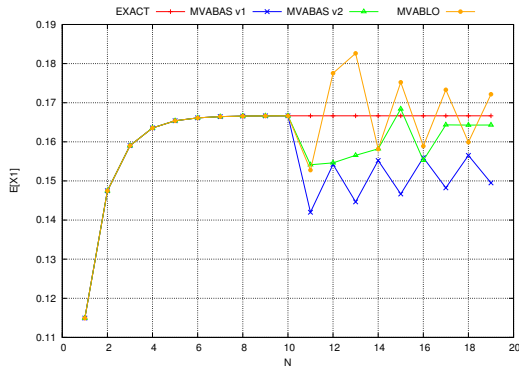
Network 52

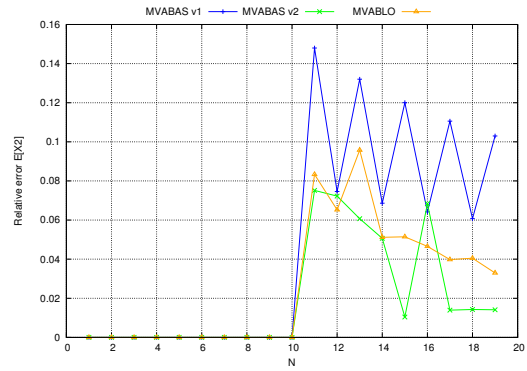
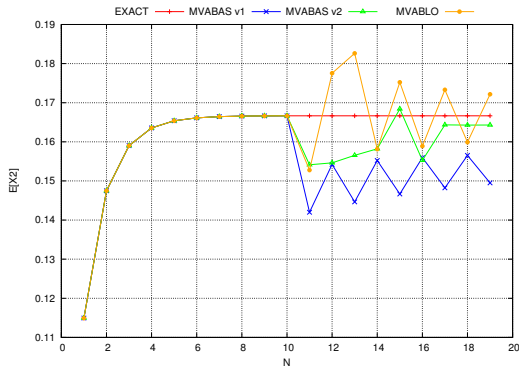
	B	$E[t_s]$
Queue 0	10	0.1
Queue 1	10	2.5
Queue 2	10	6.0

P		
0	0.5	0.5
1.0	0	0
1.0	0	0







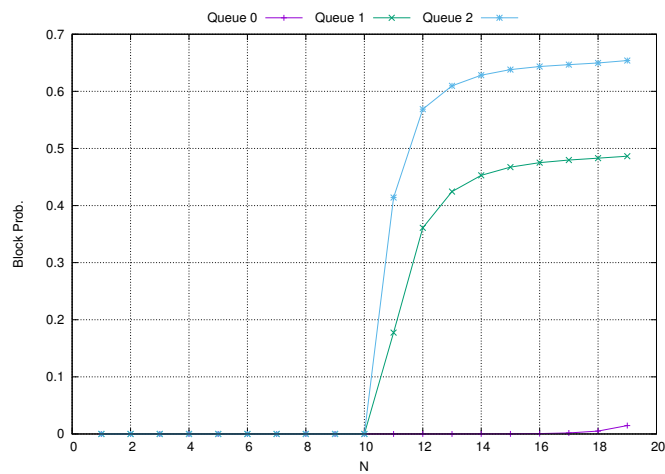


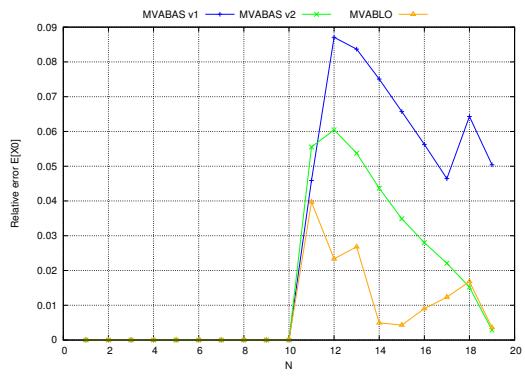
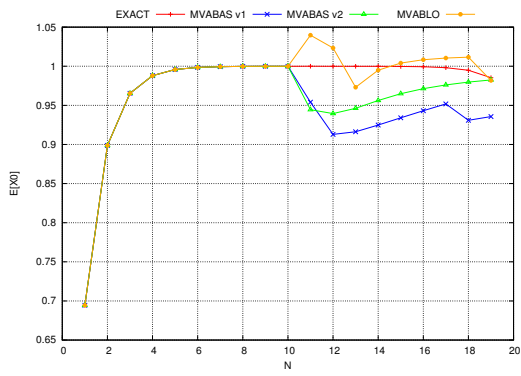
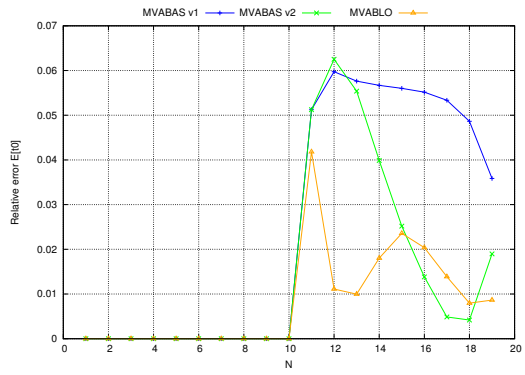
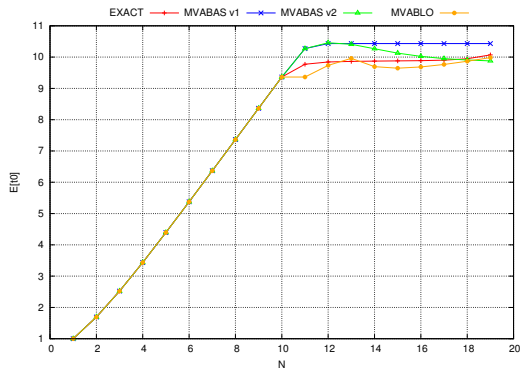
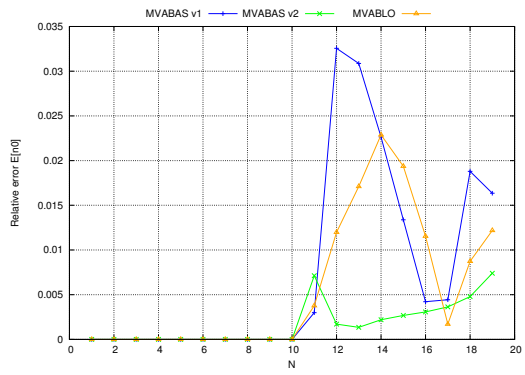
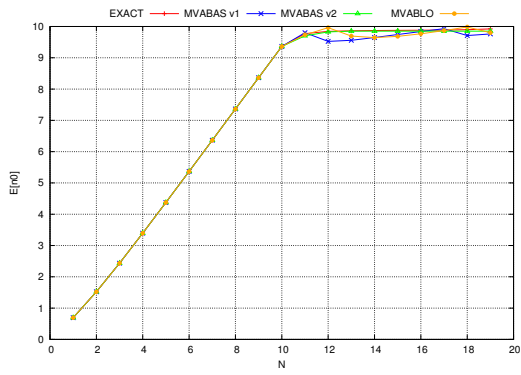
Network 52			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.125	0.054	0.099
e_m	0.013	0.008	0.021
e_M	0.332	0.136	0.220
err_M	2.402	0.703	2.399

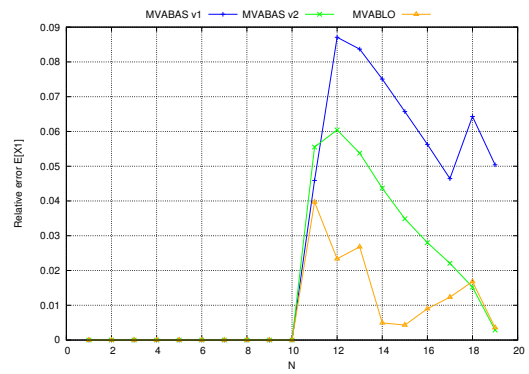
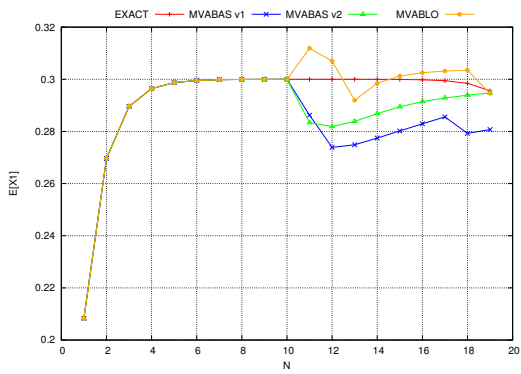
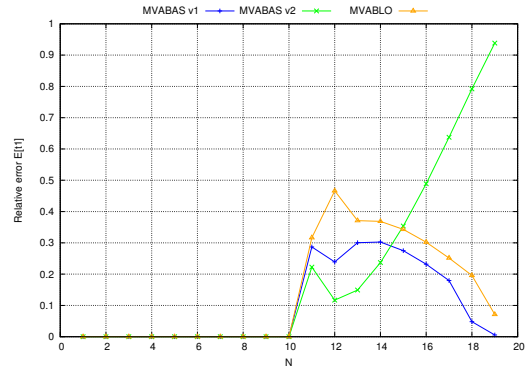
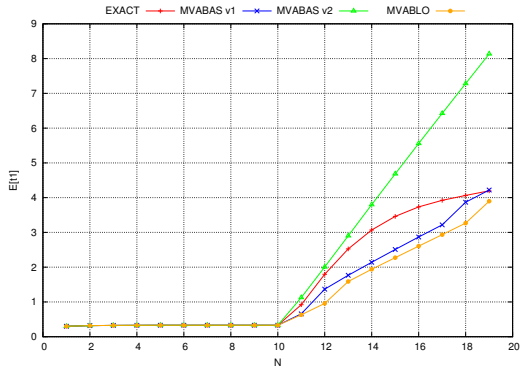
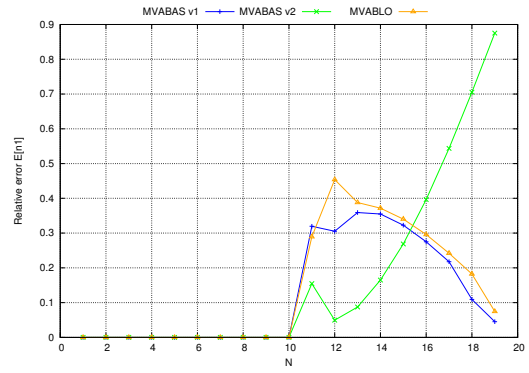
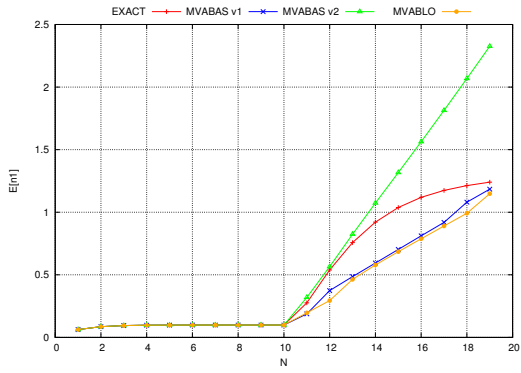
Network 53

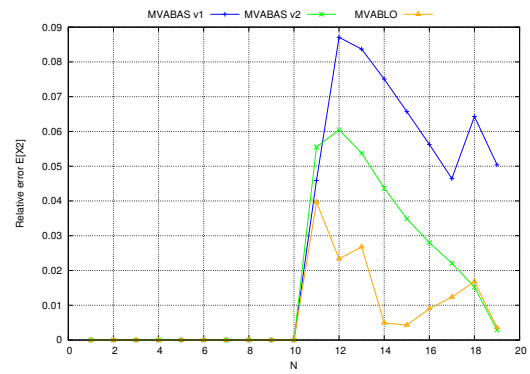
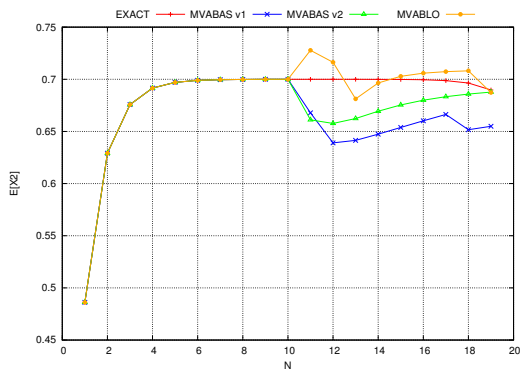
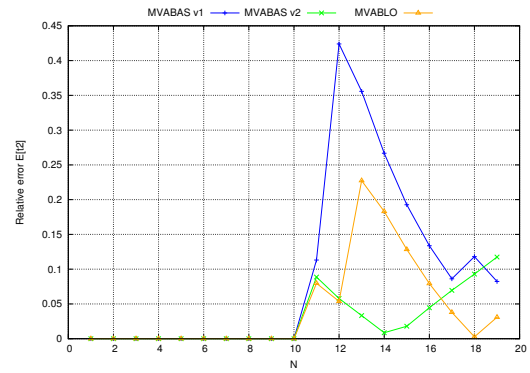
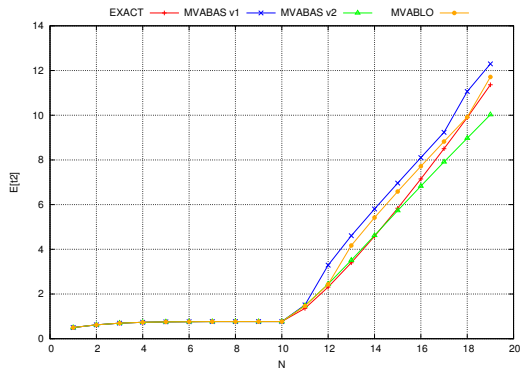
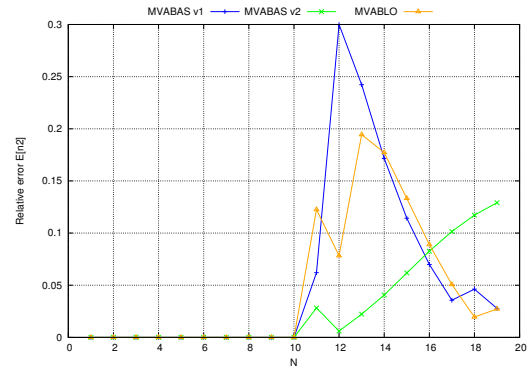
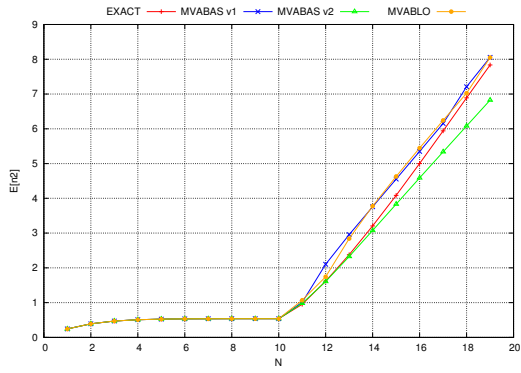
	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.3
Queue 2	10	0.5

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







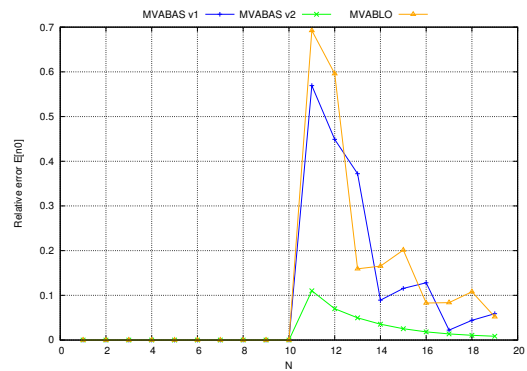
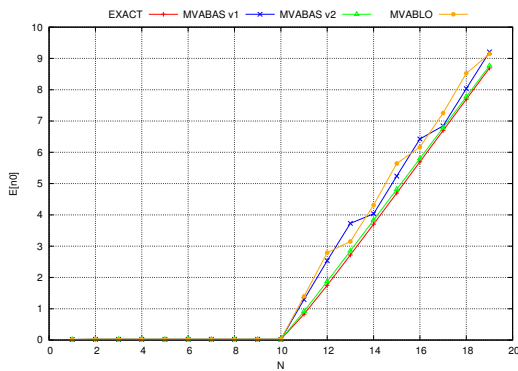
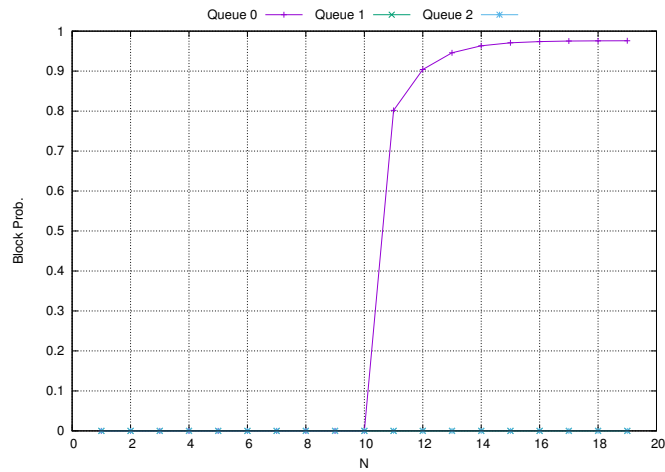


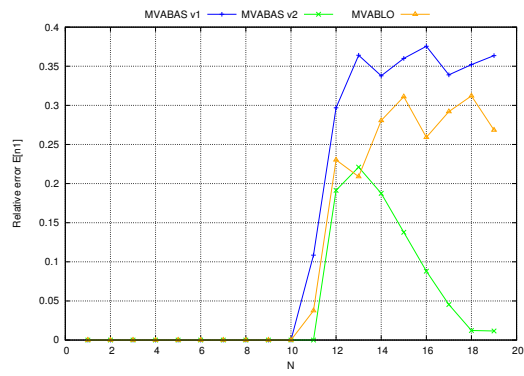
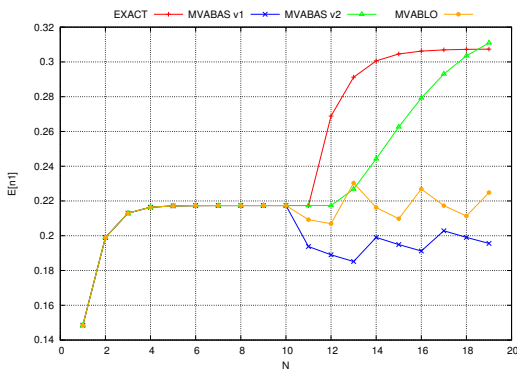
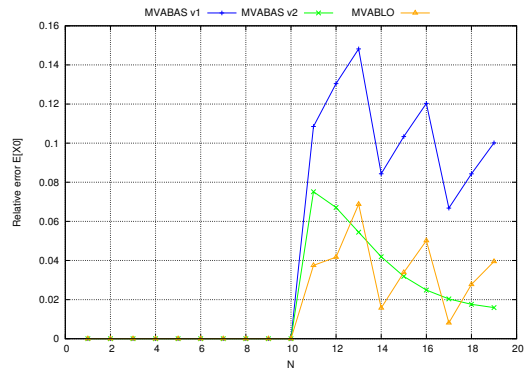
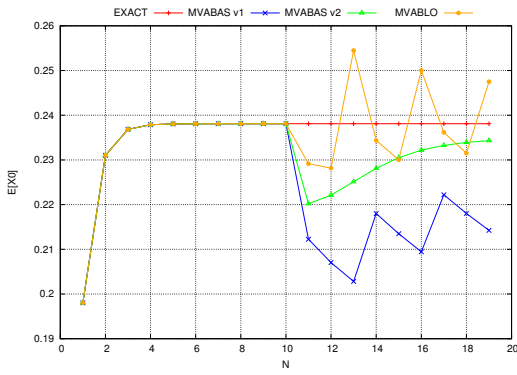
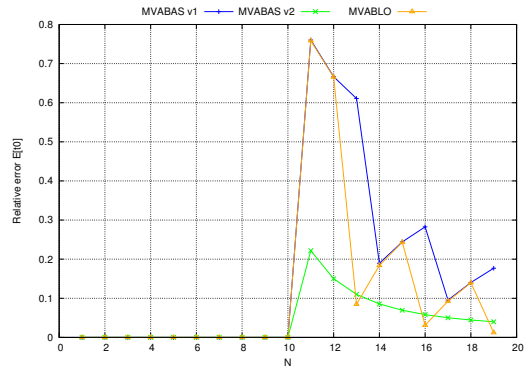
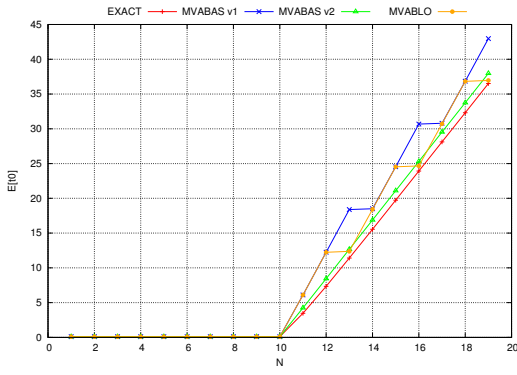
Network 53			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.054	0.055	0.045
e_m	0.007	0.001	0.005
e_M	0.121	0.207	0.141
err_M	0.423	0.938	0.466

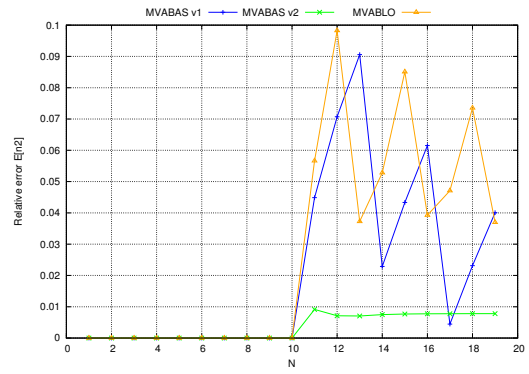
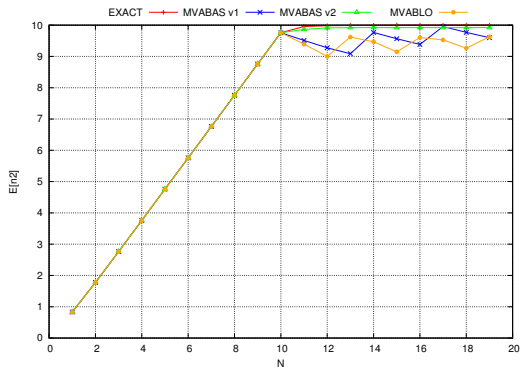
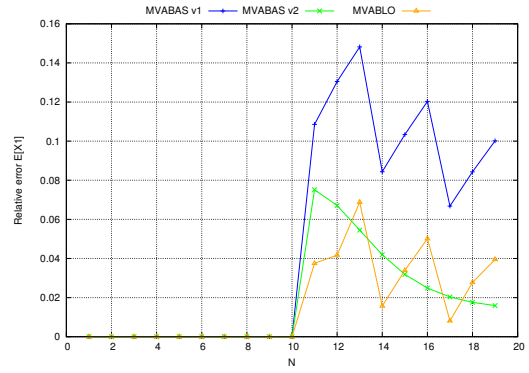
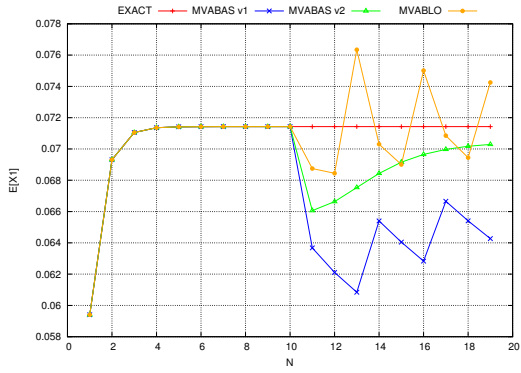
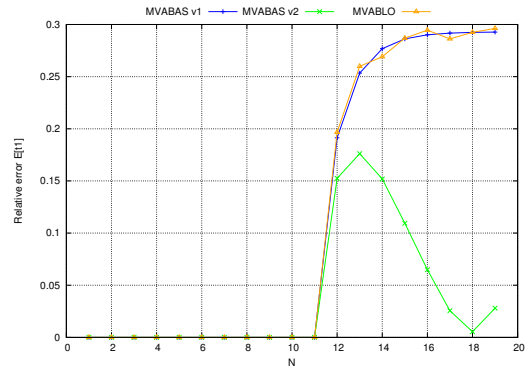
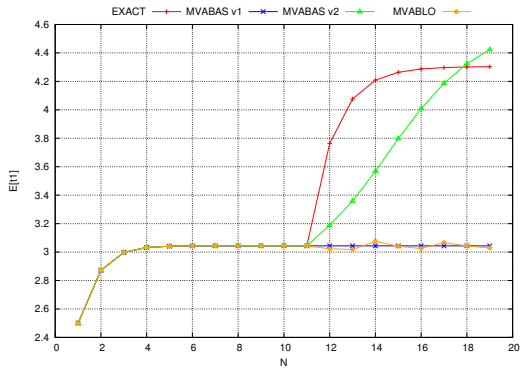
Network 54

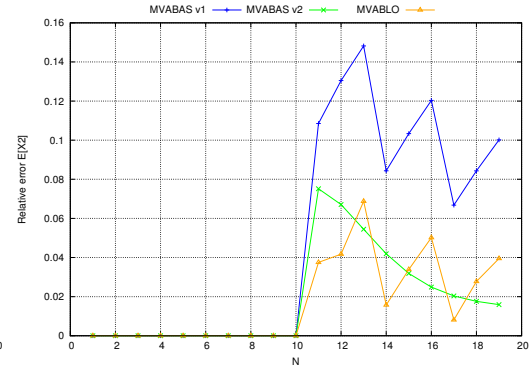
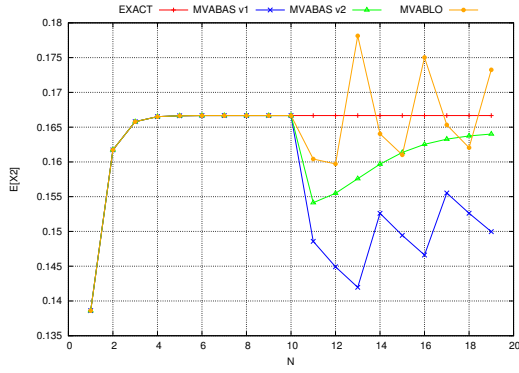
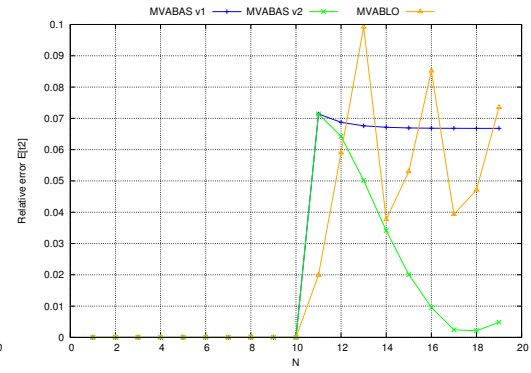
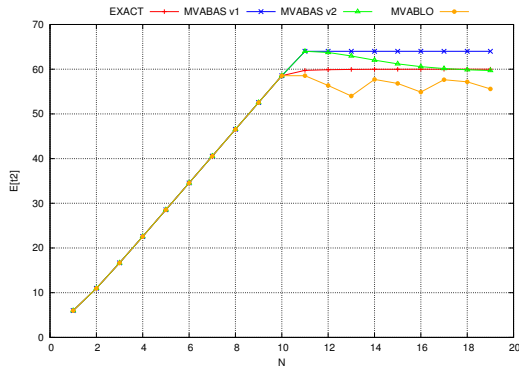
	B	$E[t_s]$
Queue 0	10	0.1
Queue 1	10	2.5
Queue 2	10	6.0

P		
0	0.3	0.7
1.0	0	0
1.0	0	0







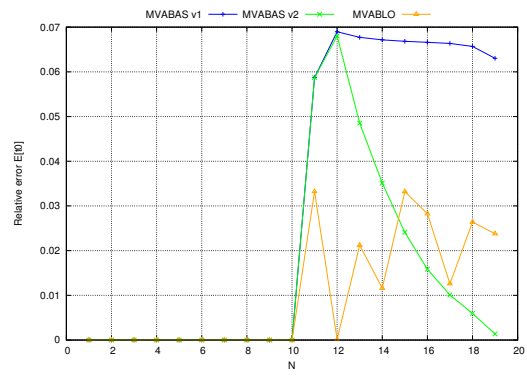
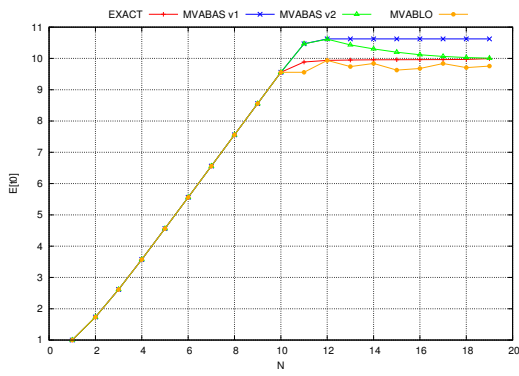
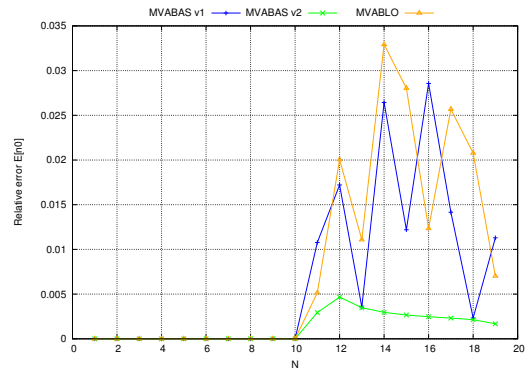
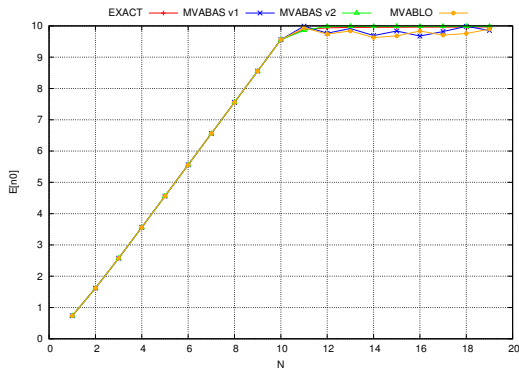
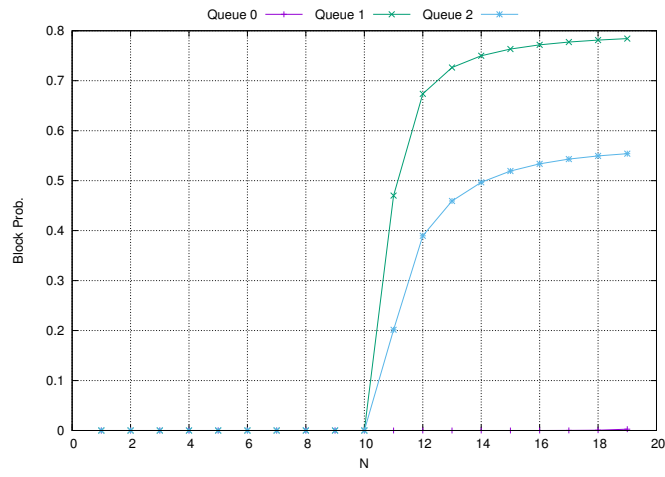


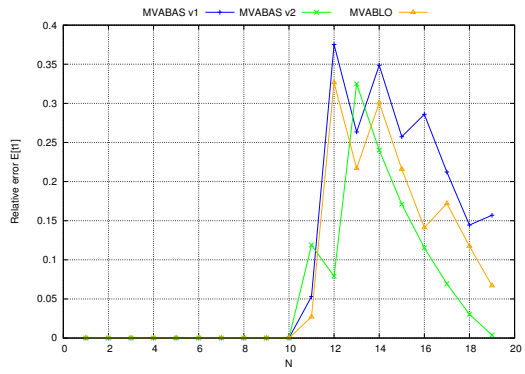
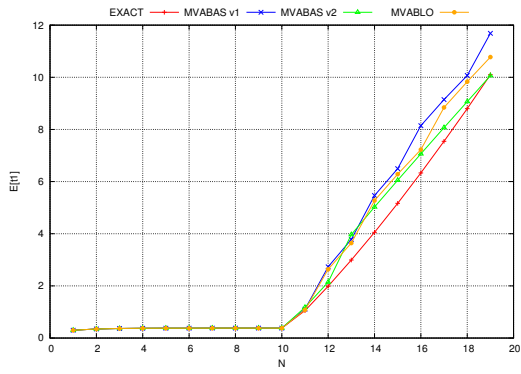
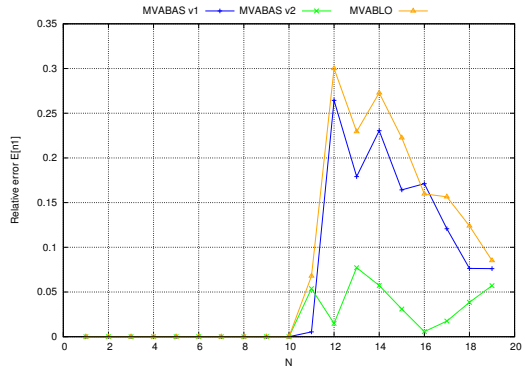
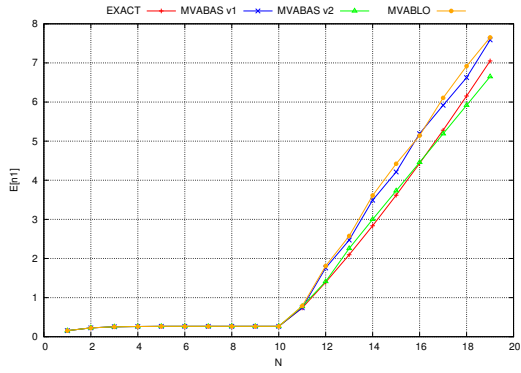
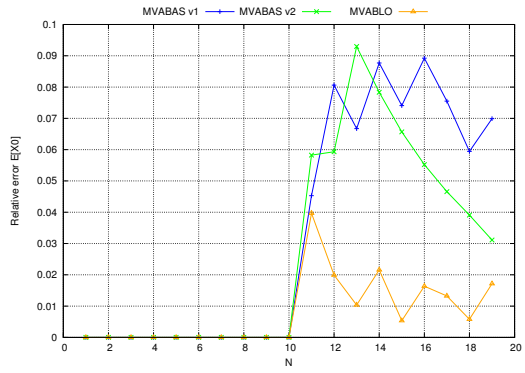
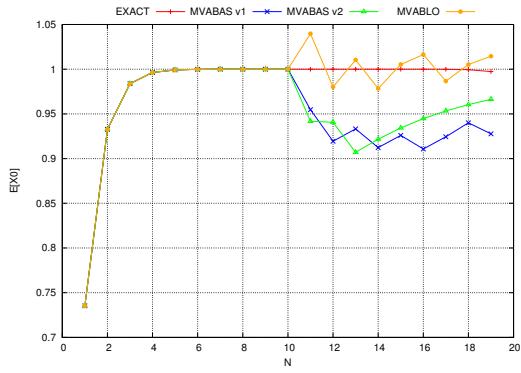
Network 54			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.081	0.024	0.062
e_m	0.021	0.003	0.017
e_M	0.166	0.047	0.116
err_M	0.760	0.221	0.758

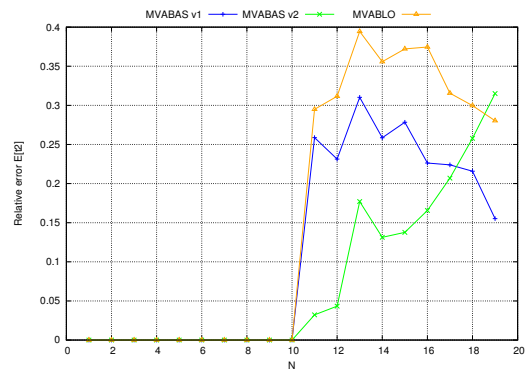
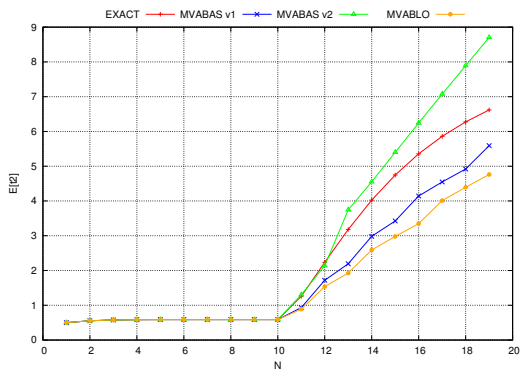
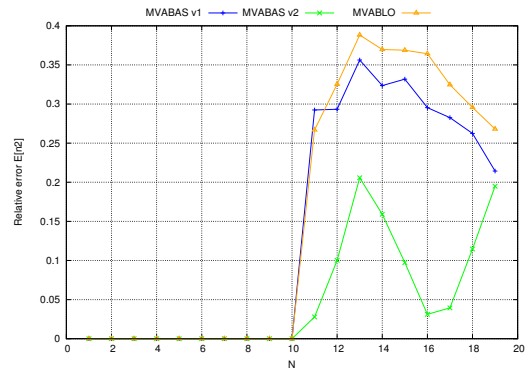
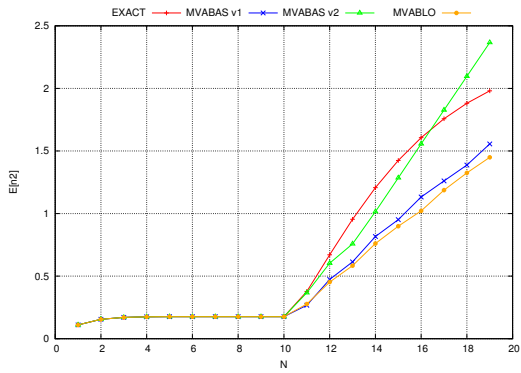
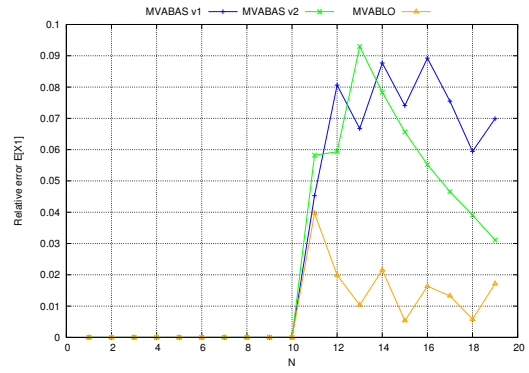
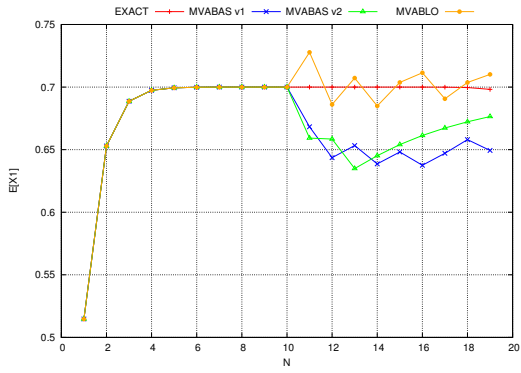
Network 55

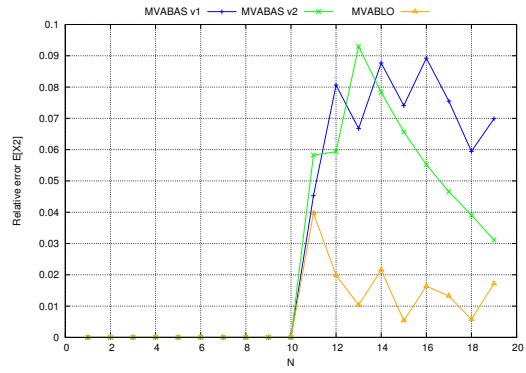
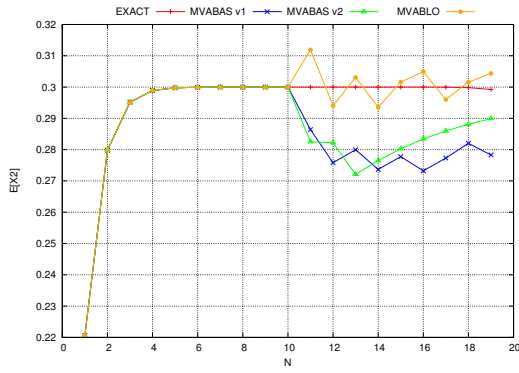
	B	$E[t_s]$
Queue 0	10	1.0
Queue 1	10	0.3
Queue 2	10	0.5

P		
0	0.7	0.3
1.0	0	0
1.0	0	0







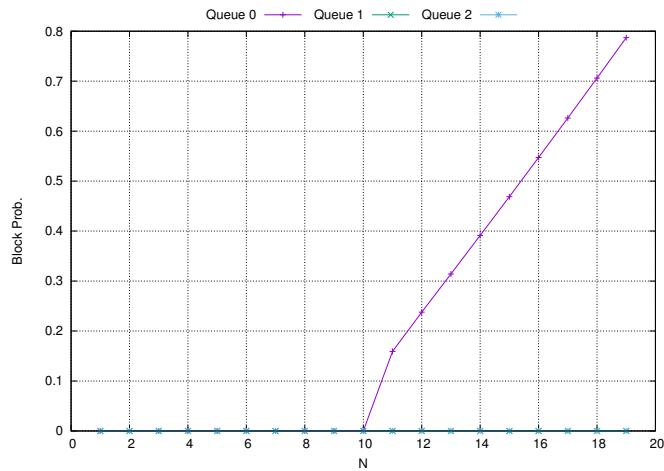


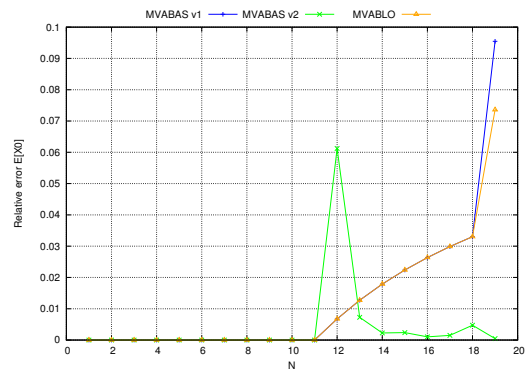
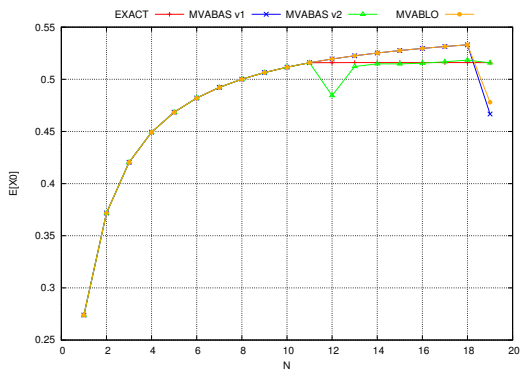
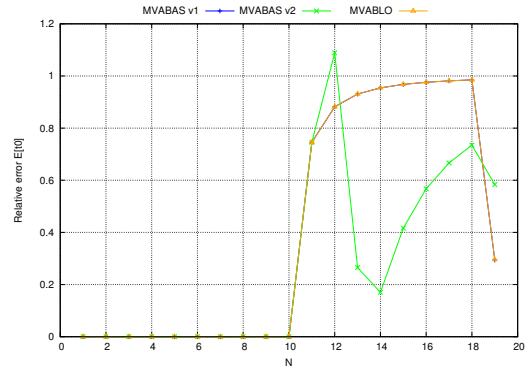
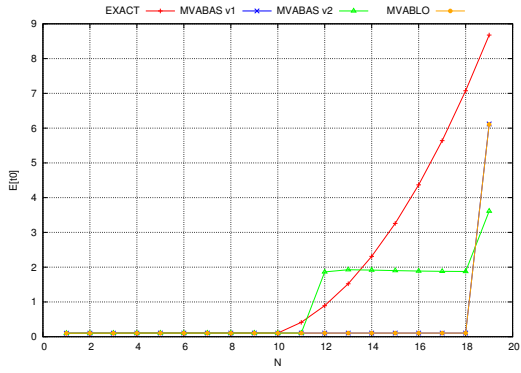
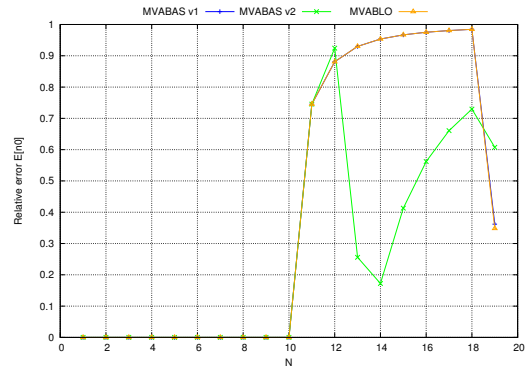
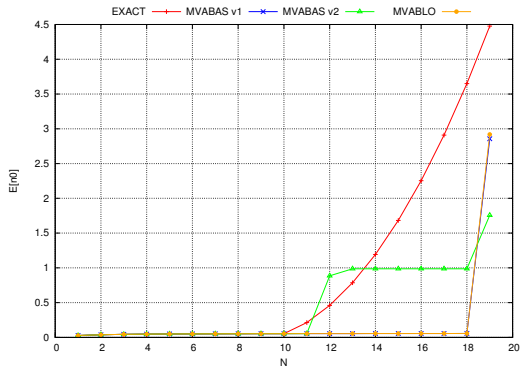
Network 55			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.063	0.034	0.058
e_m	0.006	0.001	0.007
e_M	0.139	0.077	0.157
err_M	0.375	0.324	0.394

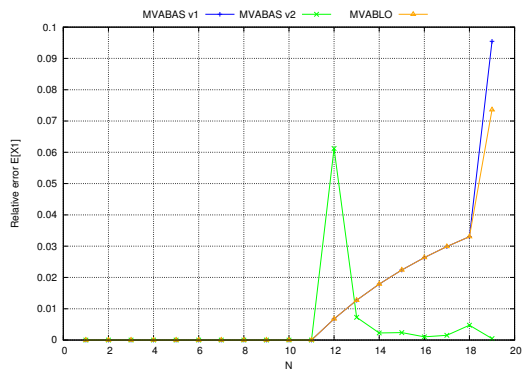
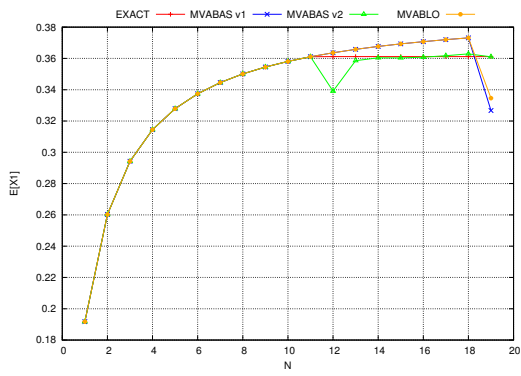
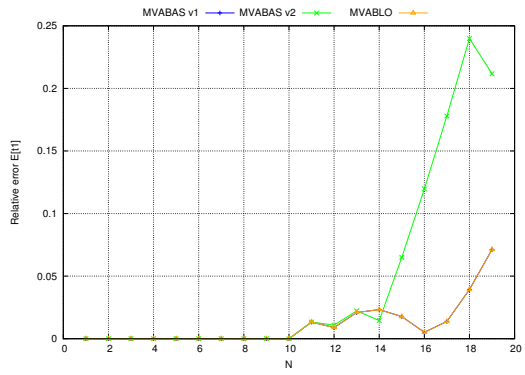
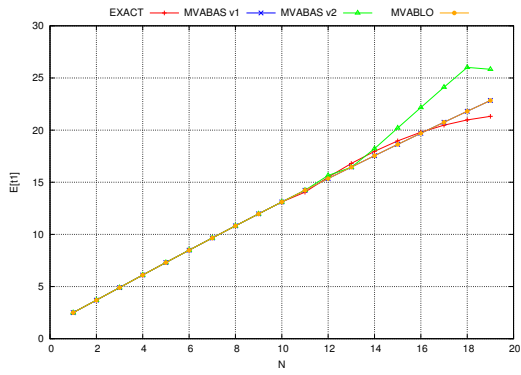
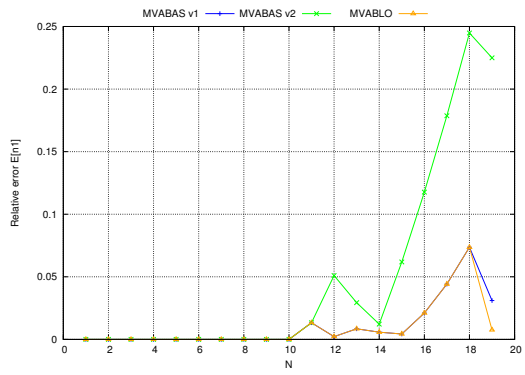
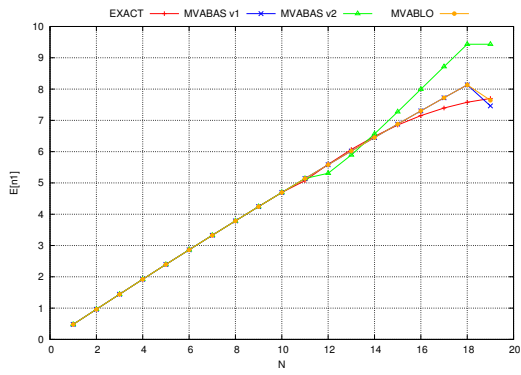
Network 56

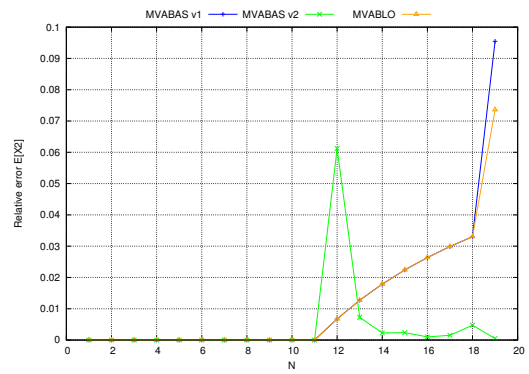
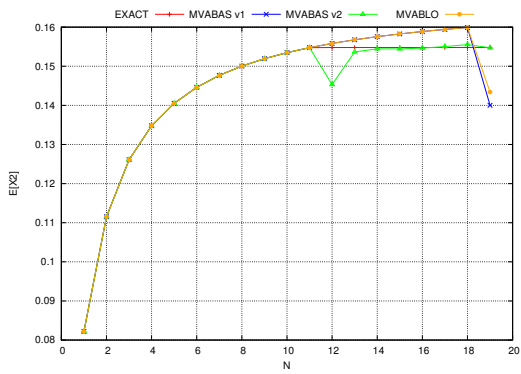
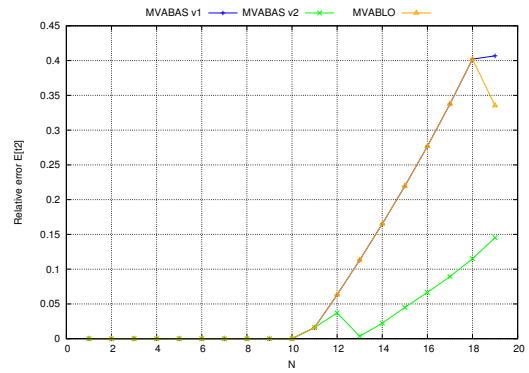
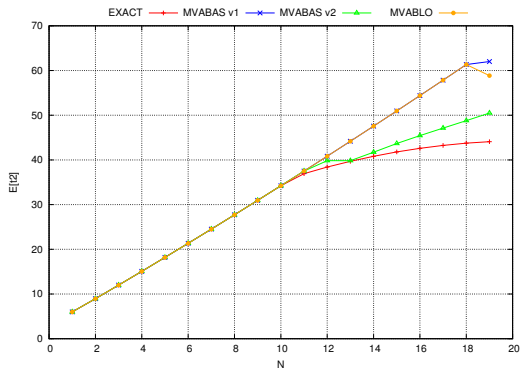
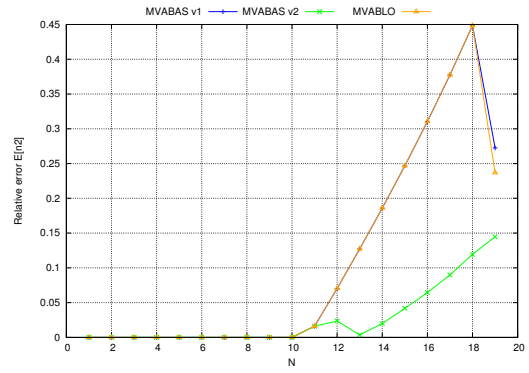
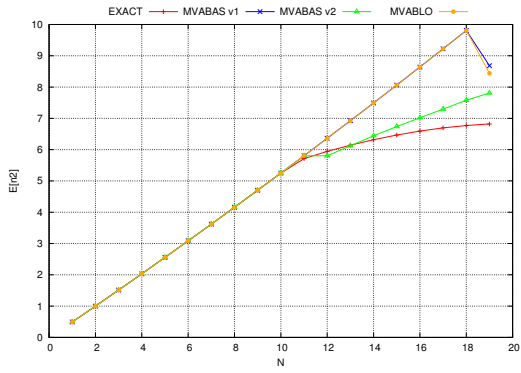
	B	$E[t_s]$
Queue 0	10	0.1
Queue 1	10	2.5
Queue 2	10	6.0

P		
0	0.7	0.3
1.0	0	0
1.0	0	0









Network 56			
	MVABAS v1	MVABAS v2	MVABLO
\bar{e}	0.121	0.078	0.119
e_m	0.0107	0.0042	0.0094
e_M	0.409	0.275	0.408
err_M	0.985	1.088	0.985

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