Database: ServerEquipmentStatistic

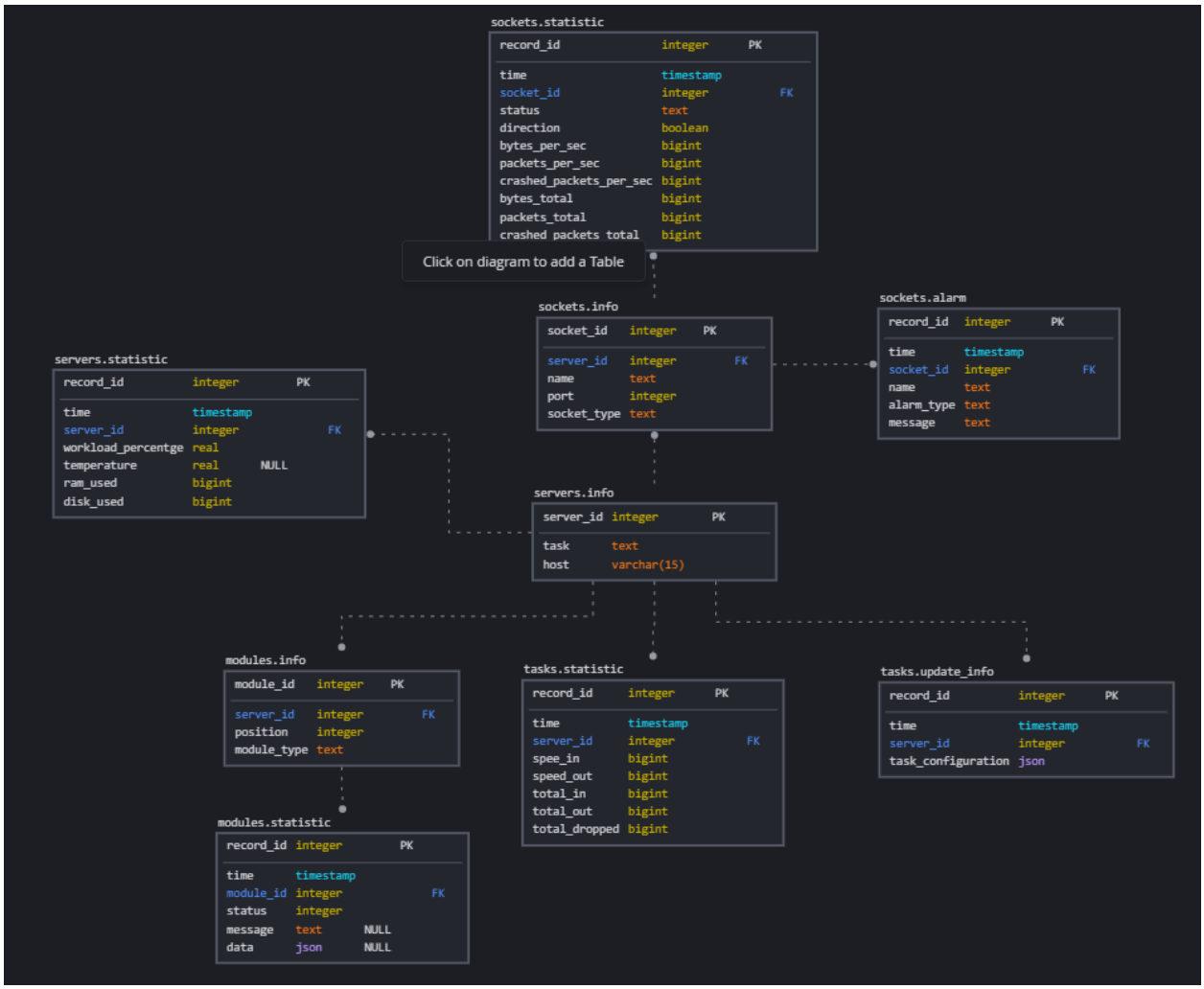

Table SERVERS.INFO

Information about servers

Cardinality: One-to-many

Columns (3)

№	Name	Type	Description	Logical constrains
1	server_id (PK)	int	Server ID	NOT NULL
2	task	text	Task description	
3	host	varchar(15)	Host of socket	

Table: SERVERS.STATISTIC

Statistic of servers

Cardinality: Many-to-one

Columns (7)

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Record id	surrogate
2	time	timestamp	Time of record	NOT NULL
3	server_id (FK)	int	Server ID	
4	workload_percentage	real	Workload	>= 0, NOT NULL
5	temperature	real	Server temperature	
6	ram_used	bigint	Used RAM (bytes)	>= 0, NOT NULL
7	disk_used	bigint	Used disk memory (bytes)	

Table: TASKS.UPDATE_INFO

Statistic of tasks updating

Cardinality: Many-to-one

Columns (4)

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Record id	surrogate
2	time	timestamp	Time of record	
3	server_id (FK)	int	Server ID	NOT NULL
4	task_configuration	json	Task configuration	

Indexes: server_id – For fast getting data about all updated for define server. Amount of reading operation is expected to be less than writing.

Table: TASKS.STATISTIC

Statistic of tasks

Cardinality: Many-to-one

Columns (8)

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Socket ID	surrogate
2	time	timestamp	Time of record	
3	server_id (FK)	int	Server ID	NOT NULL
4	speed_in	bigint	Speed of data receiving (bytes/sec)	>= 0
5	speed_out	bigint	Speed of data sending (bytes/sec)	
6	total_in	bigint	All bytes has been received	
7	total_out	bigint	All bytes has been sending	
8	total_dropped	bigint	All bytes has been dropped	

Table: MODULES.INFO

Information about tasks modules

Cardinality: One-to-many

Columns (4)

№	Name	Type	Description	Logical constrains
1	module_id (PK)	int	Module ID	surrogate
2	server_id (FK)	int	Server ID	NOT NULL
3	position	int	Module position in task	>= 0
4	module_type	text	Type of module	NOT NULL

Indexes:

- server_id, module_type – for fast getting data about all modules for define server and define module type. Amount of reading operation is expected to be less than writing.
- server_id-position – unique index for prevent existing several records with the same server ID and position.

Table: MODULES.STATISTIC

Modules statistic

Cardinality: Many-to-one

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Record id	surrogate
2	time	timestamp	Time of record	NOT NULL
3	module_id (FK)	int	Server ID	
4	status	int	Module status	
5	message	text	Message from module	
6	data	jsonb	Module statistic	

Table: SOCKETS.INFO

Information about sockets

Cardinality: One-to-many

Columns (5)

№	Name	Type	Description	Logical constrains
1	socket_id (PK)	int	Socket ID	surrogate
2	server_id (FK)	int	Server ID	NOT NULL
3	name	text	Name of socket	
4	port	int	Port of socket	>=0, NOT NULL
5	type	text	Type of socket	NOT NULL

Indexes:

- server_id, type – for fast getting data about all sockets for define server and define socket type. Amount of reading operation is expected to be less than writing.
- server_id-port – unique index for prevent existing several records with the same server ID and port.

Table: SOCKETS.ALARM

Cardinality: Many-to-one

Statistic of socket alarms

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Record ID	surrogate
2	socket_id (FK)	int	Socket ID	NOT NULL
3	time	timestamp	Time of record	
4	name	text	Alarm name	
5	alarm_type	text	Alarm type	
6	message	text	Alarm text	

Indexes:

- alarm_type – for fast getting data about all alarms for define socket type. Amount of reading operation is expected to be less than writing.

Table: SOCKET.STATISTIC

Sockets statistic

Cardinality: Many-to-one

Columns (11)

№	Name	Type	Description	Logical constrains
1	record_id (PK)	int	Record ID	surrogate
2	socket_id (FK)	int	Socket ID	NOT NULL
3	time	timestamp	Time of record	
4	status	text	Port status	
5	direction	Boolean	0 – in / 1 – out	
6	bytes_per_sec	bigint	Bytes amount per second	>= 0
7	packet_per_sec	bigint	Packets amount per second	
8	crashed_packet_per_sec	bigint	Crashed packets amount per second	
9	bytes_total	bigint	Bytes amount during the work	
10	packets_total	bigint	Packets amount during the work	
11	crashed_packet_total	bigint	Crashed packets amount during the work	