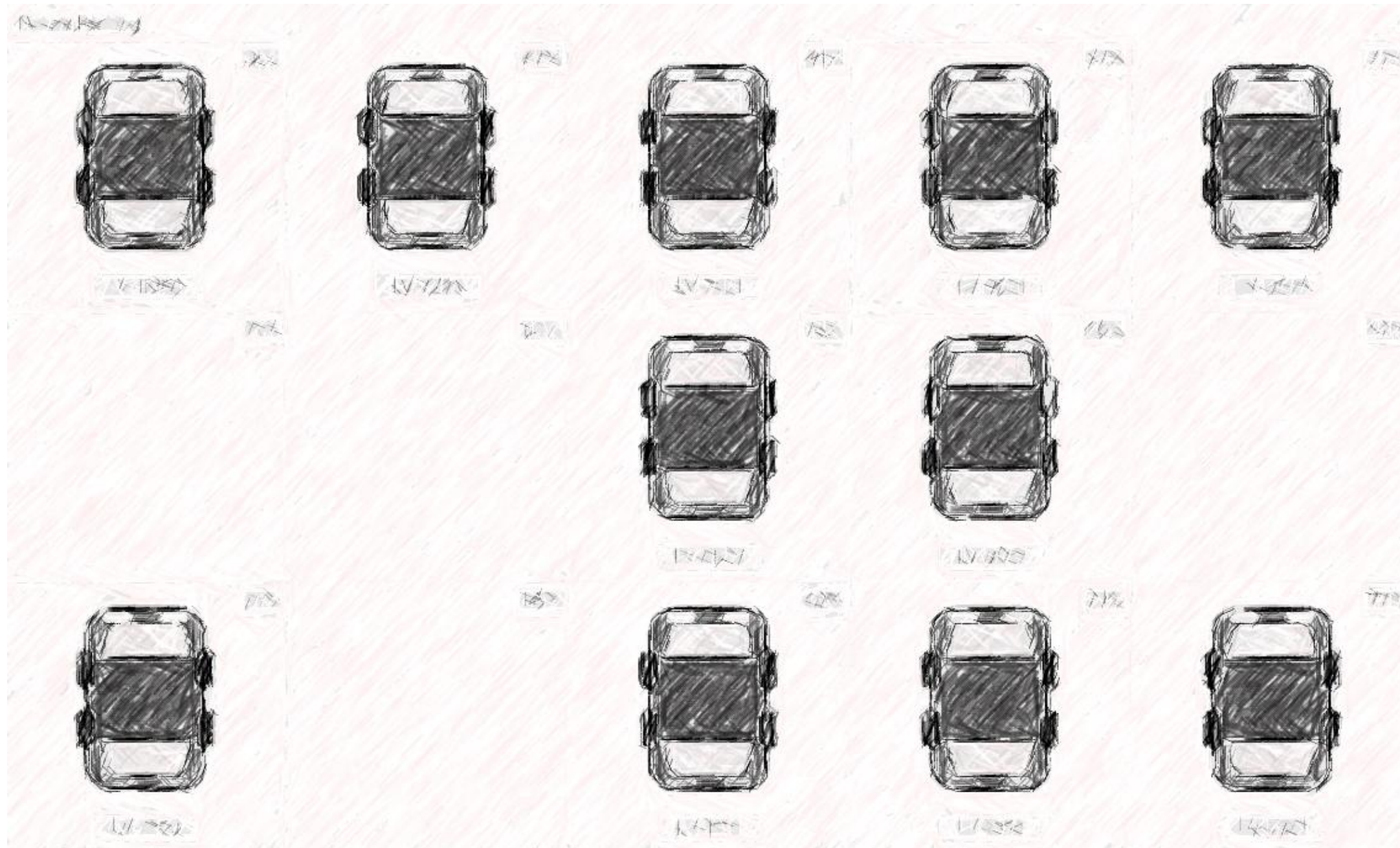


Developing a widget



ZABBIX
SUMMIT²⁶

OCTOBER 7 ■ 9, 2026

RIGA ■ LATVIA

Andrejs Verza

Position

Senior Software Developer

6+ years in ZABBIX

Experience

Web and system development – 25 years

Passion

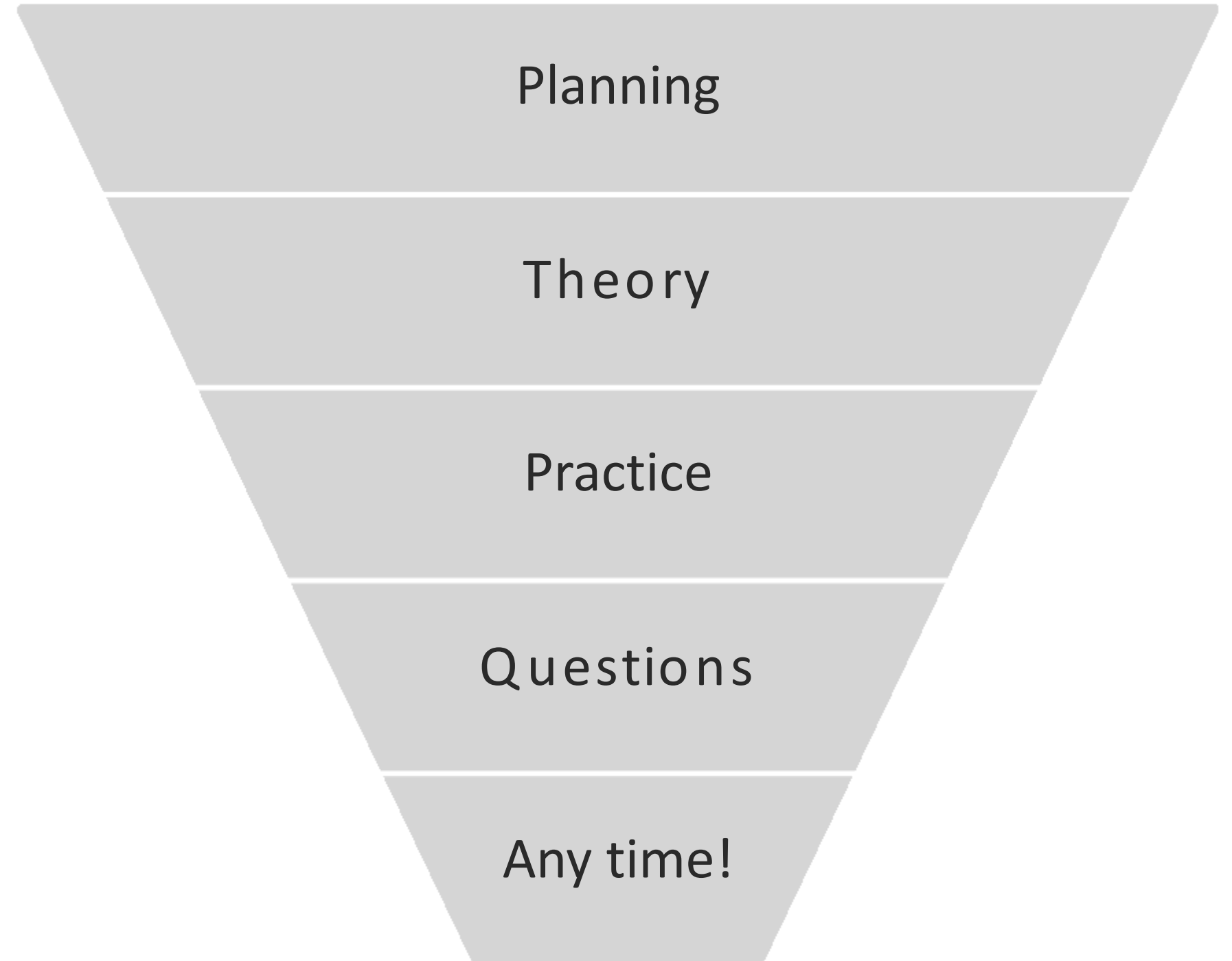
Code architecture and simplicity

The Plan



Watch!

An hour of on-screen coding



Technical

Everything's on screen

Learn widgets in 9 steps.

JavaScript, mostly

Almost pure JavaScript, including Zabbix API

Download the code

<https://github.com/verzabbix/parking>

The Legend

The car parking monitoring

Concept

Simple square car park

Multi-level car park

Observing occupancy

The sensors report spots being occupied

The Staff

Monitors free parking time exceeded.

Plan data collection

- Host discovery / Templates / User macros
- Reusability
- Convenience

Host prototype

Host

Tags 2

Macros

Inventory

Encryption

* Host name

{#NAME} {#ROW}-{#COLUMN}

Visible name

{#NAME} {#ROW}-{#COLUMN}

Templates

Name	Action
My parking spot	Unlink

type here to search

Select

* Host groups

Discovered hosts X

type here to search

Select

Group prototypes

{#GROUP}

Remove

Add

Interfaces

Inherit

Custom

Create enabled

☒

Discover

☒

Discovery rule

Discovery rule

Preprocessing

LLD macros

Filters

Overrides

* Name

Parking spots

Type

Script

* Key

parking.spots

Parameters

Name	Value	
columns	{ \$COLUMNS }	Remove
group	{ \$GROUP }	Remove
name	{ \$NAME }	Remove
rows	{ \$ROWS }	Remove

Add

* Script

const params = JSON.parse(value);...

JavaScript

```

1 const params = JSON.parse(value);
2
3 const result = [];
4
5 for (row = 1; row <= params.rows; row++) {
6   for (column = 1; column <= params.columns; column++) {
7     result.push({
8       '#GROUP': params.group,
9       '#NAME': params.name,
10      '#ROW': row,
11      '#COLUMN': column
12    });
13   }
14 }
15
16 return JSON.stringify(result);

```

Parking for too long?



The Problem

	Dashboards
	Monitoring
	Problems
	Hosts
	Latest data
	Maps
	Discovery
	APM
	Services
	Inventory
	Reports
	Data collection
	Alerts
	Users
	Administration
	Subscriptions
	Integrations
	Help

☐	Host	Last check	Last value	Tags	Name ▲
☐	<u>My parking spot 1-1</u>	3s	Yes (1)	column: 1 row: 1	<u>Parking spot occupancy</u>
☐	<u>My parking spot 1-2</u>	1m 44s	Yes (1)	column: 2 row: 1	<u>Parking spot occupancy</u>
☐	<u>My parking spot 1-3</u>	28s	Yes (1)	column: 3 row: 1	<u>Parking spot occupancy</u>
☐	<u>My parking spot 1-4</u>	43s	Yes (1)	column: 4 row: 1	<u>Parking spot occupancy</u>
☐	<u>My parking spot 1-5</u>	53s	No (0)	column: 5 row: 1	<u>Parking spot occupancy</u>
☐	<u>My parking spot 2-1</u>	48s	Yes (1)	column: 1 row: 2	<u>Parking spot occupancy</u>
☐	<u>My parking spot 2-2</u>	13s	Yes (1)	column: 2 row: 2	<u>Parking spot occupancy</u>
☐	<u>My parking spot 2-3</u>	8s	Yes (1)	column: 3 row: 2	<u>Parking spot occupancy</u>
☐	<u>My parking spot 2-4</u>	2m 14s	Yes (1)	column: 4 row: 2	<u>Parking spot occupancy</u>
☐	<u>My parking spot 2-5</u>	2m 50s	Yes (1)	column: 5 row: 2	<u>Parking spot occupancy</u>
☐	<u>My parking spot 3-1</u>	1m 29s	Yes (1)	column: 1 row: 3	<u>Parking spot occupancy</u>
☐	<u>My parking spot 3-2</u>	1m 49s	Yes (1)	column: 2 row: 3	<u>Parking spot occupancy</u>
☐	<u>My parking spot 3-3</u>	23s	No (0)	column: 3 row: 3	<u>Parking spot occupancy</u>
☐	<u>My parking spot 3-4</u>	4m	Yes (1)	column: 4 row: 3	<u>Parking spot occupancy</u>
☐	<u>My parking spot 3-5</u>	18s	No (0)	column: 5 row: 3	<u>Parking spot occupancy</u>
☐	<u>My parking spot 1-1</u>	3s	LV-5766	column: 1 row: 1	<u>Vehicle license plate</u>
☐	<u>My parking spot 1-2</u>	1m 44s	LV-9330	column: 2 row: 1	<u>Vehicle license plate</u>
☐	<u>My parking spot 1-3</u>	28s	LV-5347	column: 3 row: 1	<u>Vehicle license plate</u>
☐	<u>My parking spot 1-4</u>	43s	LV-2383	column: 4 row: 1	<u>Vehicle license plate</u>
☐	<u>My parking spot 1-5</u>	53s		column: 5 row: 1	<u>Vehicle license plate</u>
☐	<u>My parking spot 2-1</u>	48s	LV-1650	column: 1 row: 2	<u>Vehicle license plate</u>
☐	<u>My parking spot 2-2</u>	13s	LV-8533	column: 2 row: 2	<u>Vehicle license plate</u>
☐	<u>My parking spot 2-3</u>	8s	LV-2451	column: 3 row: 2	<u>Vehicle license plate</u>
☐	<u>My parking spot 2-4</u>	2m 14s	LV-7507	column: 4 row: 2	<u>Vehicle license plate</u>
☐	<u>My parking spot 2-5</u>	2m 50s	LV-6437	column: 5 row: 2	<u>Vehicle license plate</u>
☐	<u>My parking spot 3-1</u>	1m 29s	LV-4095	column: 1 row: 3	<u>Vehicle license plate</u>
☐	<u>My parking spot 3-2</u>	1m 49s	LV-4480	column: 2 row: 3	<u>Vehicle license plate</u>
☐	<u>My parking spot 3-3</u>	23s		column: 3 row: 3	<u>Vehicle license plate</u>

Wish list

Spots

My parking spot 1-1

My parking spot 1-2

My parking spot 1-3

My parking spot 1-4

My parking spot 1-5

My parking spot 2-1

My parking spot 2-2

My parking spot 2-3

My parking spot 2-4

My parking spot 2-5

My parking spot 3-1

My parking spot 3-2

My parking spot 3-3

My parking spot 3-4

My parking spot 3-5

Selected spot occupancy

10-06 04:13 PM
10-06 04:25 PM
10-06 04:36 PM
10-06 04:48 PM
10-06 05:00 PM
10-06 05:11 PM

Selected spot history

Timestamp	Name	Value
2026-10-06 05:07:44 PM	My parking spot 1-1: Vehicle license plate	
2026-10-06 05:06:49 PM	My parking spot 1-1: Vehicle license plate	LV-8445
2026-10-06 05:06:33 PM	My parking spot 1-1: Vehicle license plate	LV-2294
2026-10-06 05:05:43 PM	My parking spot 1-1: Vehicle license plate	LV-3512
2026-10-06 05:05:27 PM	My parking spot 1-1: Vehicle license plate	LV-9558
2026-10-06 05:01:30 PM	My parking spot 1-1: Vehicle license plate	
2026-10-06 05:00:40 PM	Mv parking spot 1-1: Vehicle license plate	LV-2881

Total occupancy

10-06 04:16 PM
10-06 04:28 PM
10-06 04:40 PM
10-06 04:52 PM
10-06 05:05 PM

Future Parking

85% LV-9543	90% LV-5057	66%	77% LV-8747	90% LV-6819
80% LV-8458	72% LV-1262	83% LV-9351	76% LV-7211	78% LV-7322
75%	72% LV-9759	78% LV-4625	81%	74%

The Future Parking Widget

Let's go!



Thank you

