

DevFest

Develop Progressive Web Application on Angular 7



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What is Angular?

- ▶ Cross Platform
- ▶ Speed and Performance
- ▶ Productivity
- ▶ Full Development Story



What is PWA?



Progressive



Responsive



Network
Independent



App-Like



Fresh

PWA



Safe



Discoverable



Re-engageable

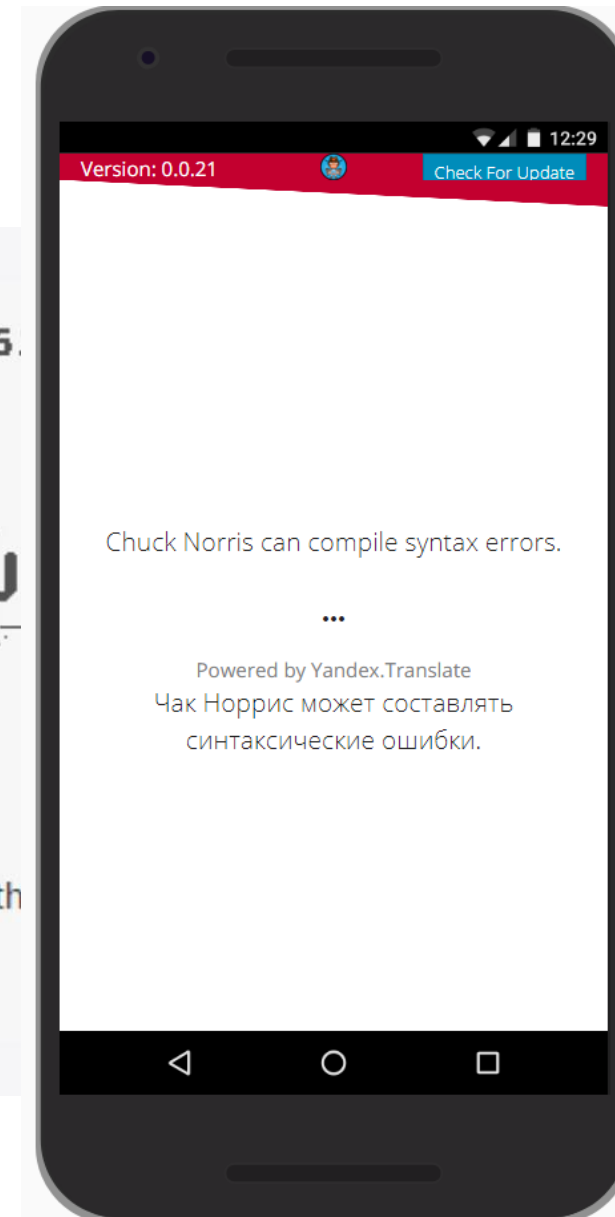


Installable



Linkable

What is PWA?



Lighthouse



Home - SHOP

Secure | https://shop.polymer-project.org

SHOP

Men's Outerwear

SHOP NOW

Elements Console Sources Audits >> 1

shop.polymer-project.org 9/26/2017, 4:59:10 P

Metric	Score
Progressive Web App	100
Performance	88
Accessibility	100
Best Practices	85

Progressive Web App 100

These audits validate the aspects of a Progressive Web App, as specified by the baseline [PWA Checklist](#).

0 failed audits

11 Passed Audits

Manual checks to verify

Performance 88

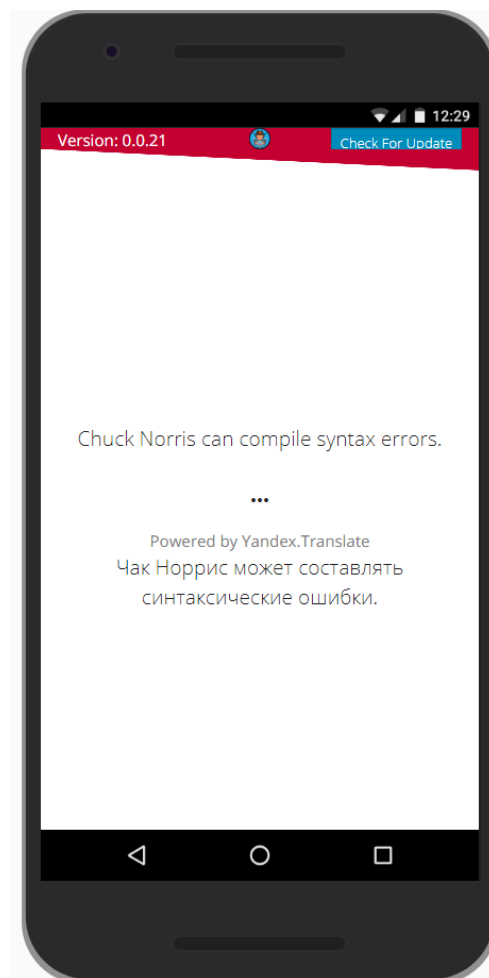
These encapsulate your app's performance.

Metrics

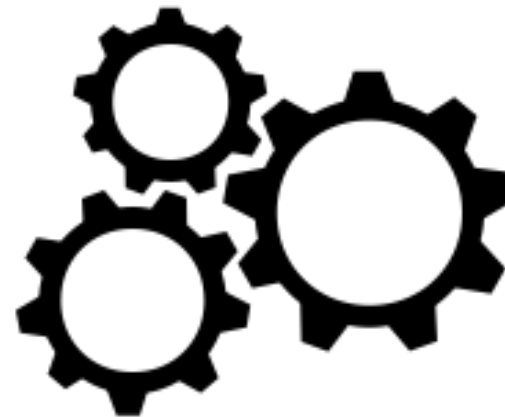
These metrics encapsulate your app's performance across a number of dimensions.

PWA. Key elements

App Shell



Service Worker

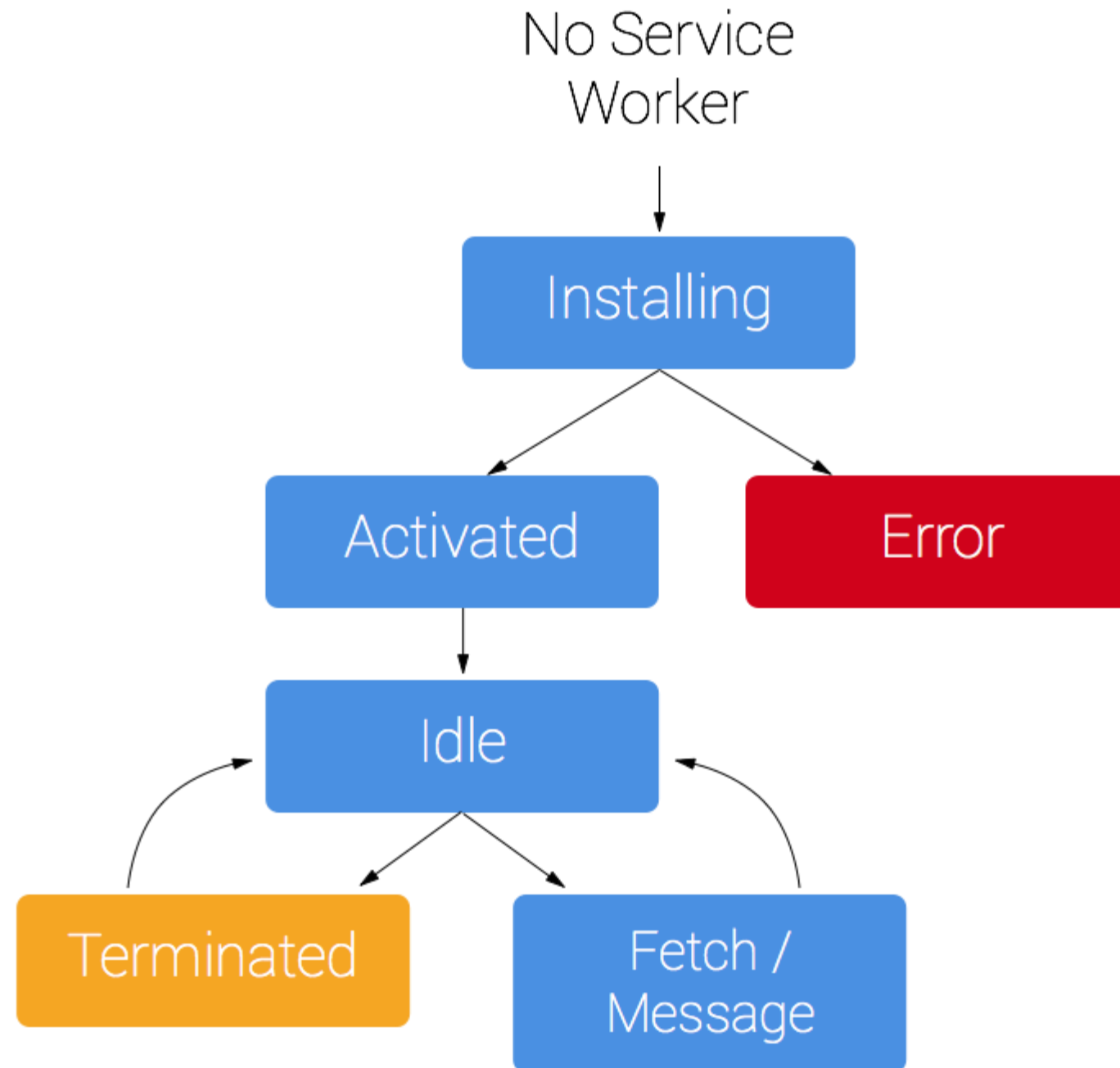


Manifest

```
"name": "chuckchuck",
"short_name": "chuckchuck",
"theme_color": "#1976d2",
"background_color": "#fafafa",
"display": "standalone",
"scope": "/",
"start_url": "/",
"icons": [
  {
    "src": "assets/icons/icon-72x72.png",
    "sizes": "72x72",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-96x96.png",
    "sizes": "96x96",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-128x128.png",
    "sizes": "128x128",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-144x144.png",
    "sizes": "144x144",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-152x152.png",
    "sizes": "152x152",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-192x192.png",
    "sizes": "192x192",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-384x384.png",
    "sizes": "384x384",
    "type": "image/png"
  },
  {
    "src": "assets/icons/icon-512x512.png",
    "sizes": "512x512",
    "type": "image/png"
  }
]
```

Service Worker

- ▶ Auto install and activating
- ▶ Fast response from cache
- ▶ Updates from server



Service Worker

IE	Edge *	Firefox	Chrome	Safari	iOS Safari *	Opera Mini *	Chrome for Android	UC Browser for Android	Samsung Internet
			49						
			63						
			68		11.2				
	17	62	69	11.1	11.4				4
11	18	63	70	12	12	all	70	11.8	7.2
		64	71	TP					
		65	72						
			73						

Installation

- ▶ Auto offer installation
- ▶ “beforeinstallprompt” event



WHAT WE CAN DO

Camera & Microphone <ul style="list-style-type: none"> AUDIO & VIDEO CAPTURE ✓ ADVANCED CAMERA CONTROLS ✓ RECORDING MEDIA ✓ REAL-TIME COMMUNICATION ✓ 	Native Behaviors <ul style="list-style-type: none"> LOCAL NOTIFICATIONS ✓ PUSH MESSAGES ✓ HOME SCREEN INSTALLATION ✓ FOREGROUND DETECTION ✓ PERMISSIONS ✓ 	Seamless Experience <ul style="list-style-type: none"> OFFLINE MODE ✓ BACKGROUND SYNC ✓ INTER-APP COMMUNICATION ✗ PAYMENTS ✓ CREDENTIALS ✓
Advertisement		
Surroundings <ul style="list-style-type: none"> BLUETOOTH ✓ USB ✓ NFC ✗ AMBIENT LIGHT ✗ 	Operating System <ul style="list-style-type: none"> OFFLINE STORAGE ✓ FILE ACCESS ✓ CONTACTS ✗ SMS ✗ STORAGE QUOTAS ✓ TASK SCHEDULING ✗ 	Location & Position <ul style="list-style-type: none"> GEOLOCATION ✓ GEOFENCING ✗ DEVICE POSITION ✓ DEVICE MOTION ✓ PROXIMITY SENSORS ✗
Device Features <ul style="list-style-type: none"> NETWORK TYPE & SPEED ✓ ONLINE STATE ✓ VIBRATION ✓ BATTERY STATUS ✓ DEVICE MEMORY ✓ 	Input <ul style="list-style-type: none"> TOUCH GESTURES ✓ SPEECH RECOGNITION ✓ CLIPBOARD (COPY & PASTE) ✓ POINTING DEVICE ADAPTATION ✓ 	Screen & Output <ul style="list-style-type: none"> VIRTUAL & AUGMENTED REALITY ✗ FULLSCREEN ✓ SCREEN ORIENTATION & LOCK ✓ WAKE LOCK ✗ PRESENTATION FEATURES ✓

Index DB

- ▶ Key-value pair NoSQL database
- ▶ Large scale storage (up to 20%–50% of hard drive capacity)
- ▶ Asynchronous
- ▶ Transactions

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			73						

GDG Astrakhan

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Q&A

Better ask **Google**™



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