Overview of the Redis NoSQL solution

Main deck

François Cerbelle <francois@redislabs.com>

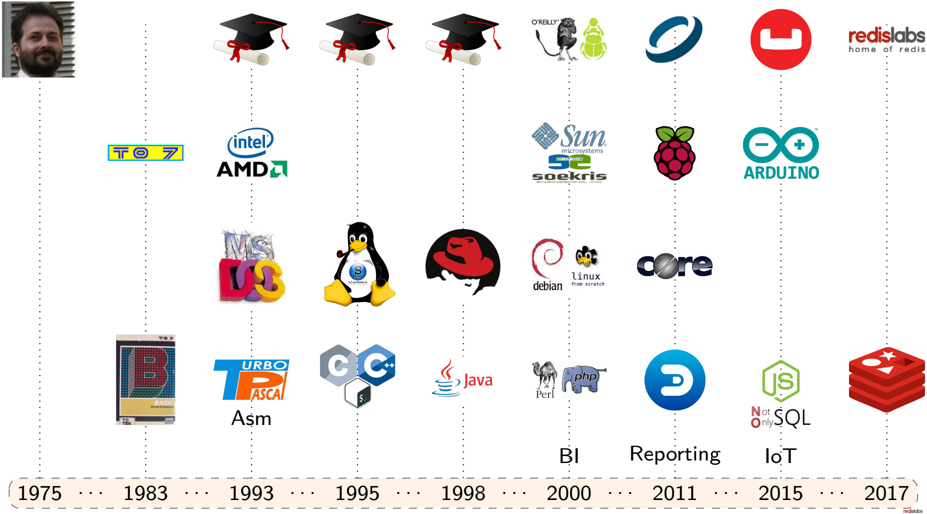
RedisLabs Inc.

October 23, 2017 à 17:54

Introduction

About me

About me



Asm

Not Only SQL

BI

Reporting

IoT

1975 · · · 1983 · · · 1993 · · · 1995 · · · 1998 · · · 2000 · · · 2011 · · · 2015 · · · 2017

About me: Business card

```
{
    "type" : "Business card",
    "name" : "François Cerbelle",
    "email" : "francois@redislabs.com",
    "mobile" : "+33782997266",
    "twitter" : "@fcerbelle",
    "blog" : "http://fcerbell.github.io/",
    "github" : "fcerbell",
    "linkedin" : "fcerbell",
    "youtube" : "FrancoisCerbelle",
    "homepage" : "http://www.cerbelle.net/redmine"
}
```

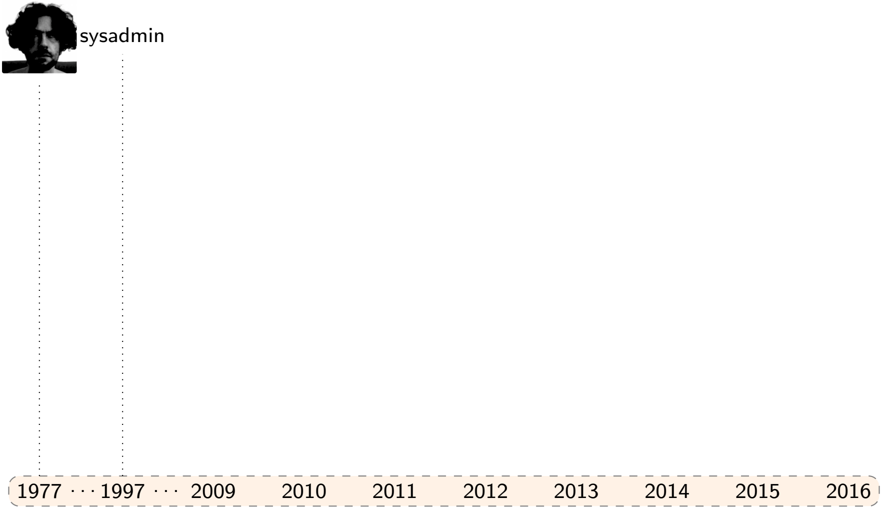
Redis community

About Antirez

Antirez history

1977 · · · 1997 · · · 2009 2010 2011 2012 2013 2014 2015 2016

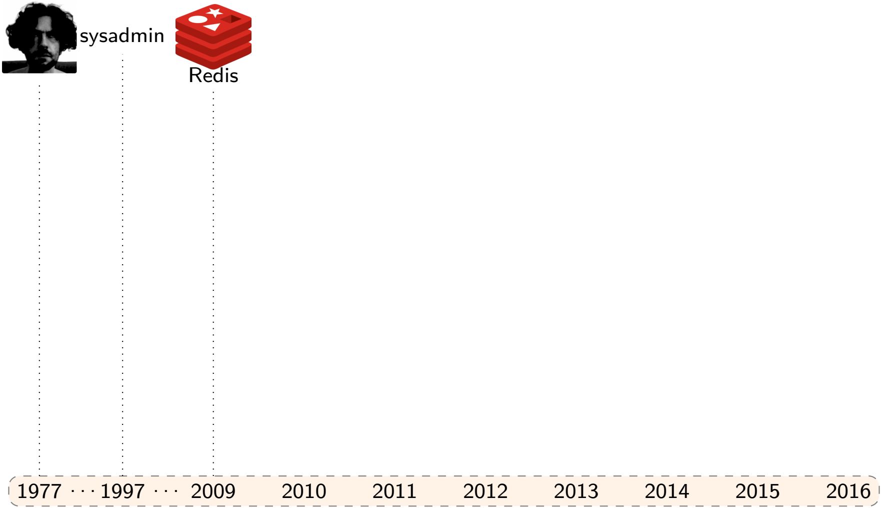
Antirez history



sysadmin

1977 · · · 1997 · · · 2009 2010 2011 2012 2013 2014 2015 2016

Antirez history

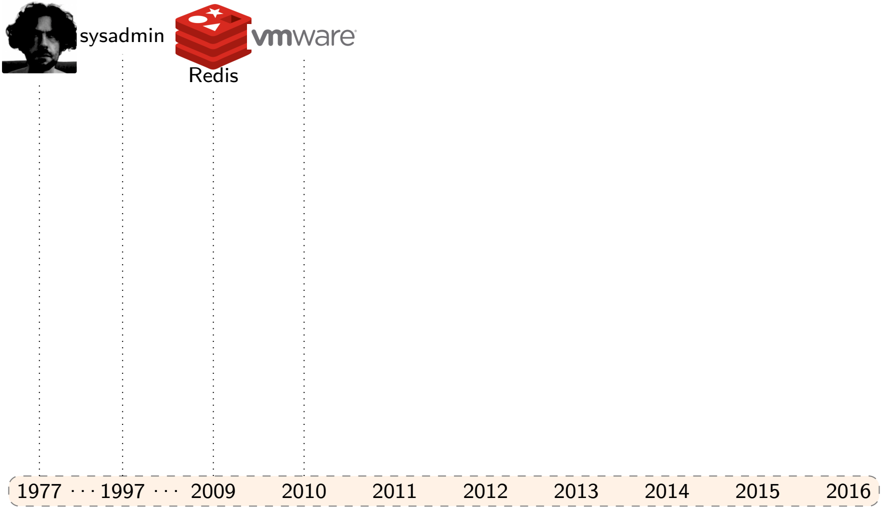


sysadmin

Redis

1977 · · · 1997 · · · 2009 2010 2011 2012 2013 2014 2015 2016

Antirez history



sysadmin

Redis

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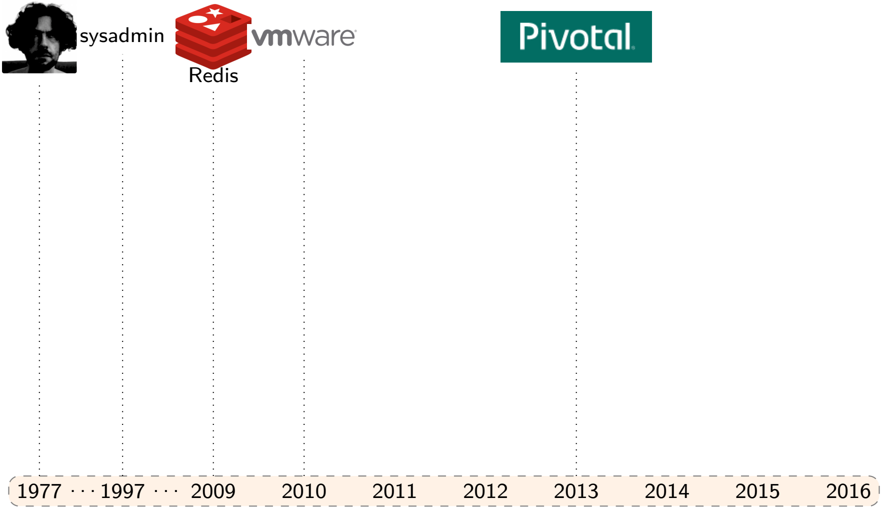
Antirez history



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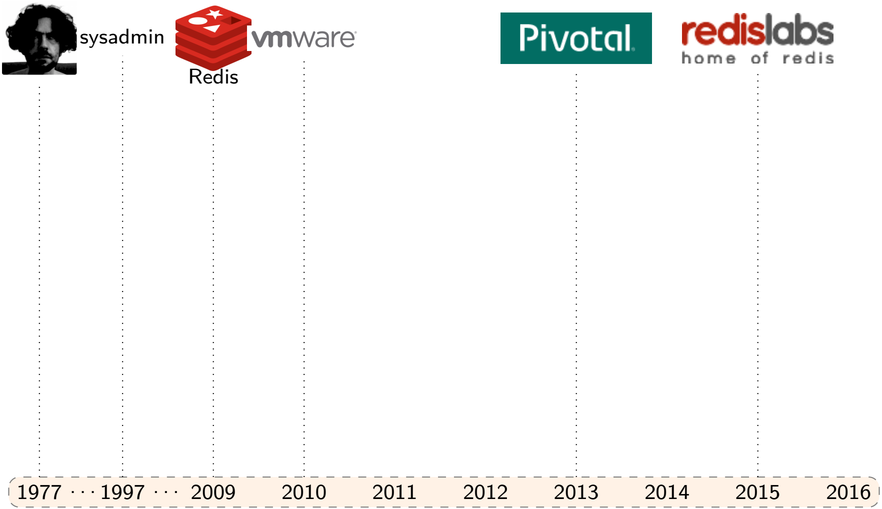


sysadmin

Redis

1977 · · · 1997 · · · 2009 2010 2011 2012 2013 2014 2015 2016

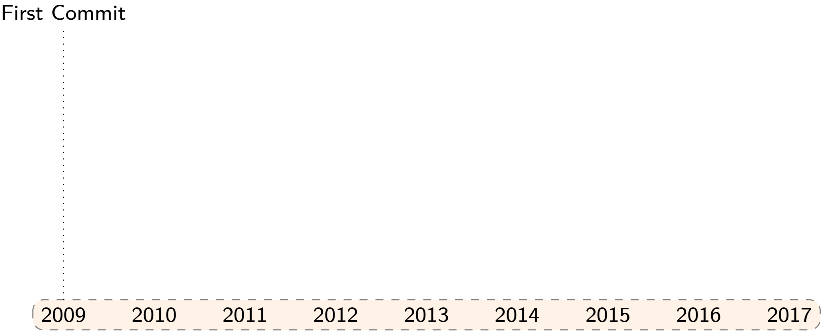
About Antirez: Business card

```
{
    "type" : "Business card",
    "name" : "Salvatore 'Antirez' Sanfilippo",
    "email" : "antirez@gmail.com",
    "twitter" : "@antirez",
    "blog" : "http://antirez.com",
    "oldblog" : "http://oldblog.antirez.com",
    "github" : "antirez",
    "homepage" : "http://www.invece.org/"
}
```

Redis community

About Redis

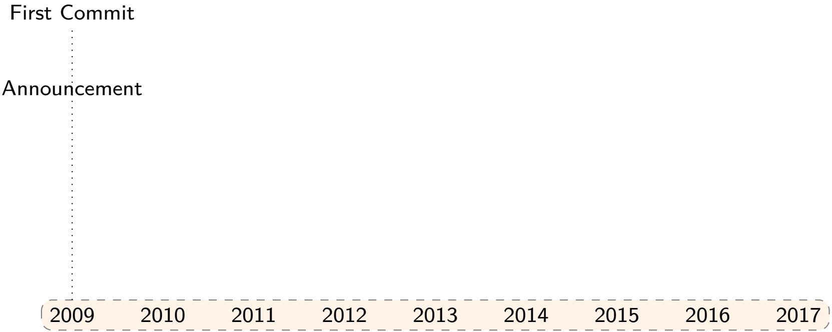
Redis history



First Commit

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history

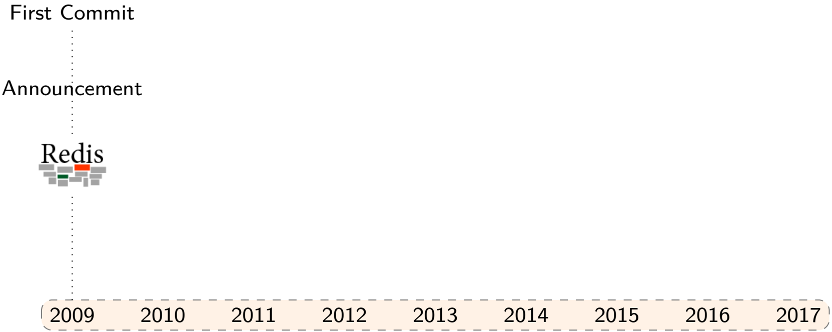


First Commit

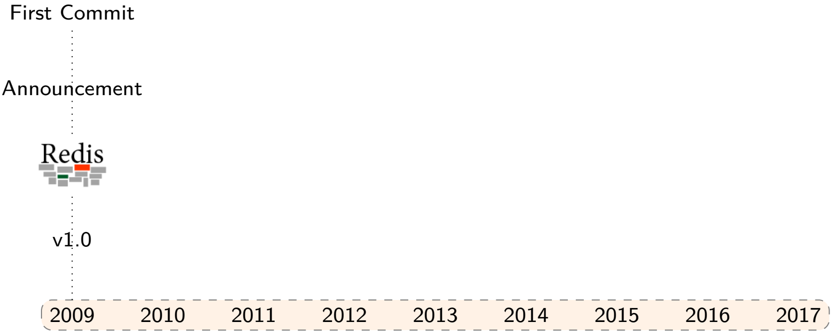
Announcement

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



Redis history



First Commit

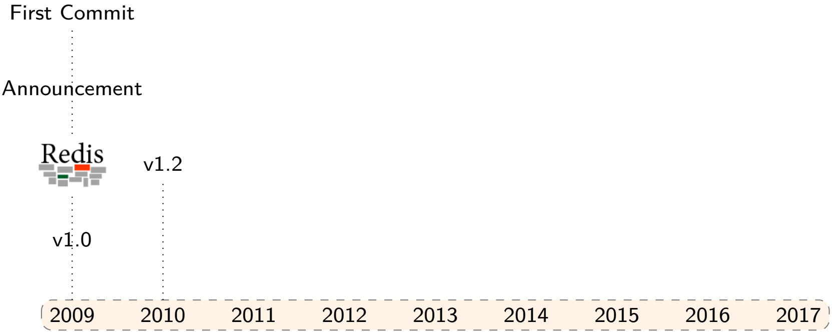
Announcement

Redis

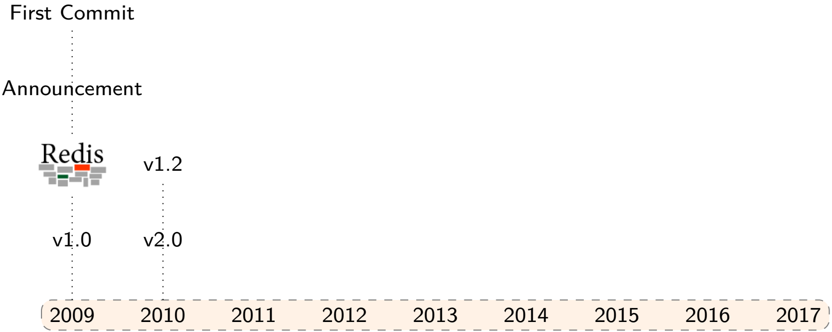
v1.0

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



Redis history



First Commit

Announcement

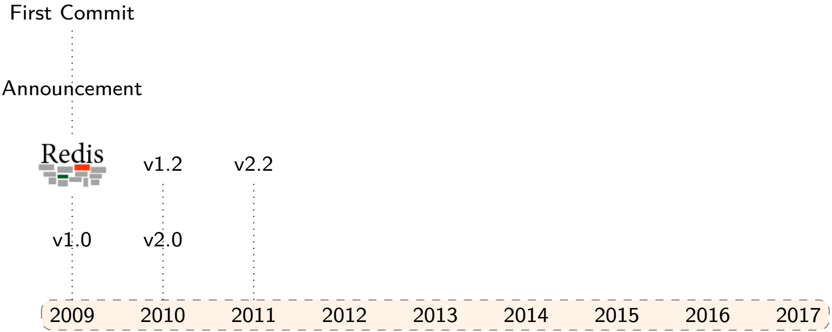
v1.2

v1.0

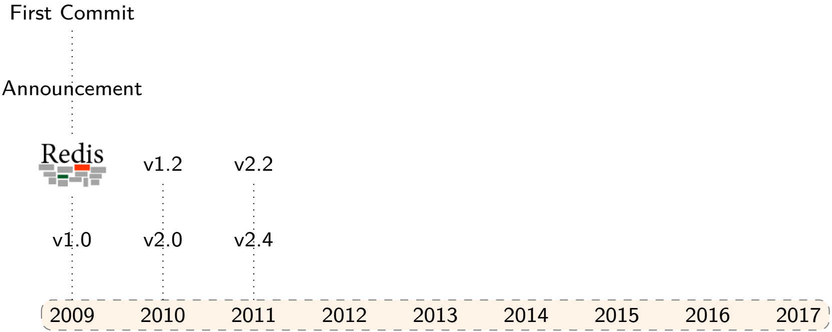
v2.0

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



Redis history



First Commit

Announcement

v1.0

v1.2

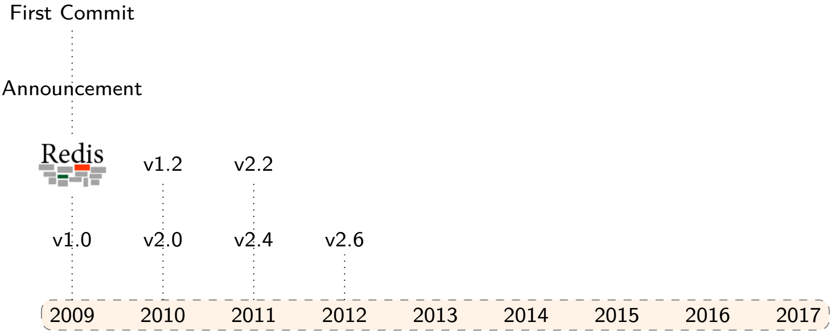
v2.0

v2.2

v2.4

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



First Commit

Announcement

v1.0

v1.2

v2.0

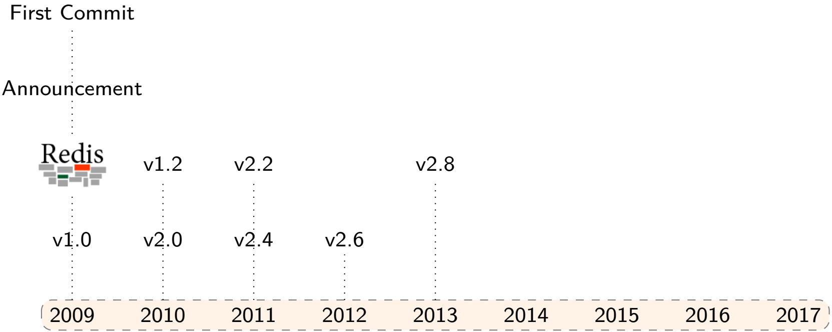
v2.2

v2.4

v2.6

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



First Commit

Announcement

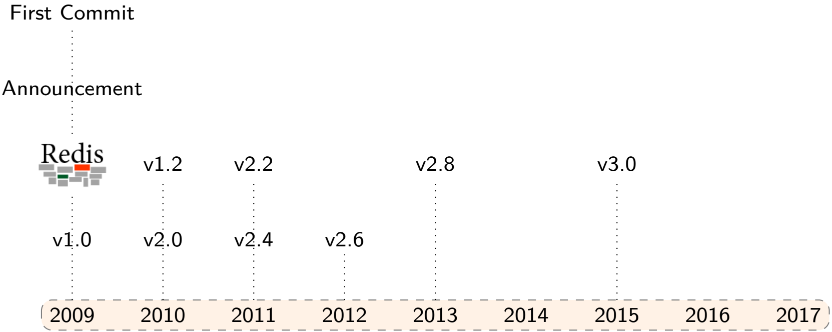
Redis

v1.2 v2.2 v2.8

v1.0 v2.0 v2.4 v2.6

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



First Commit

Announcement

v1.0

v1.2

v2.0

v2.2

v2.4

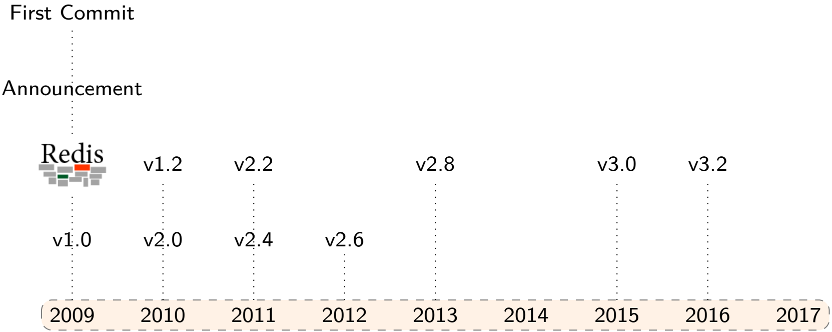
v2.6

v2.8

v3.0

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



First Commit

Announcement

Redis

v1.2

v2.2

v2.8

v3.0

v3.2

v1.0

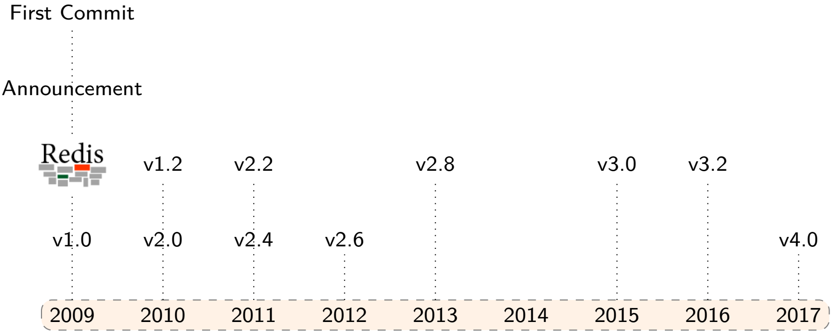
v2.0

v2.4

v2.6

2009 2010 2011 2012 2013 2014 2015 2016 2017

Redis history



First Commit

Announcement

Redis

v1.0

v1.2

v2.0

v2.2

v2.4

v2.6

v2.8

v3.0

v3.2

v4.0

2009 2010 2011 2012 2013 2014 2015 2016 2017

Semantic versionning

Remote dictionary server (Redis) version numbers are following the semantic versionning, with *major.minor.patchlevel*.

> *Semantic Versioning is a formal convention for specifying compatibility using a three-part version number: major version; minor version; and patch. The patch number is incremented for minor changes and bug fixes which do not change the software's Application Programming Interface (API). The minor version is incremented for releases which add new, but backward-compatible, API features, and the major version is incremented for API changes which are not backward-compatible. For example, software which relies on version 2.1.5 of an API is compatible with version 2.2.3, but not necessarily with 3.2.4.*
>
> — Wikipedia
>
> `https://en.wikipedia.org/wiki/Software_versioning#Degree_of_compatibility`

> *Given a version number MAJOR.MINOR.PATCH, increment :*
> *the MAJOR version when you make incompatible API changes,*
> *the MINOR version when you add functionality in a backwards-compatible manner, and*
> *the PATCH version when you make backwards-compatible bug fixes.*
> *Additional labels for pre-release and build metadata are available as extensions to the MAJOR.MINOR.PATCH format.*
>
> — SemVer.org
>
> `http://semver.org/`

Development and stable versions

The minor version number also represents the stability :
odd minor versions = development versions,
even minor version number = stable releases.

Redis community

Community

Redis community: EMEA Redis Meetup groups

French Redis meetup groups

- France (polls and news) `https://www.meetup.com/Redis-France/`
- Paris (Meetups and Workshops) `https://www.meetup.com/Paris-Redis-Meetup/`
- Brussels (Meetups and Workshops) `https://www.meetup.com/Redis-Bruxelles/`
- Lille (Meetups and Workshops) `https://www.meetup.com/Redis-Lille/`
- Toulouse (Meetups and Workshops) `https://www.meetup.com/Redis-Toulouse/`
- Bordeaux (Meetups and Workshops) `https://www.meetup.com/Redis-Bordeaux/`
- Lyon (Meetups and Workshops) `https://www.meetup.com/Redis-Lyon/`

UK Redis meetup groups

- London (Meetups) `https://www.meetup.com/Redis-London/`

Redis community

Recognition

Redis

The RESP protocol

The RESP protocol

SET A 1

*3\\\\r\\\\n $3\\\\r\\\\n SET\\\\r\\\\n $1\\\\r\\\\n A\\\\r\\\\n $1\\\\r\\\\n 1\\\\r\\\\n

*3
$3
SET
$1
A
$1
1

The developers' corner

IoT embedded

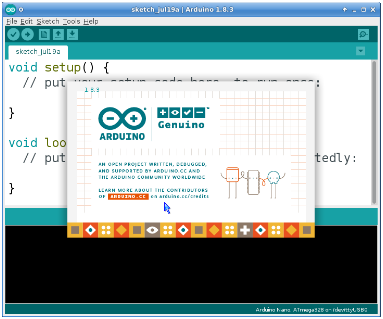
Lab : Arduino IDE Installation

Installation of the Arduino development environment with the relevant libraries.

1. Get the bits
2. Install the IDE and customizations
3. Add the ESP8266 card support

`https://goo.gl/iDoXwL`

NEVER EVER do something that is not explicitely described in the labs document or told by the trainer or you will get into trouble. DO NOT take shortcuts or test any exciting options.



```
void setup() {
  // put your setup code here, to run once:

}

void loo
  // put                                    tedly:

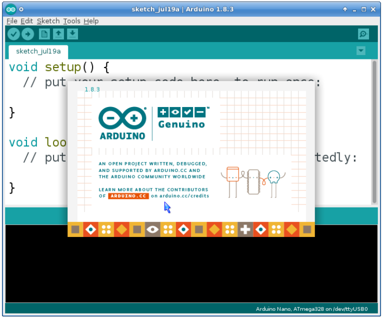
}
```

AN OPEN PROJECT WRITTEN, DEBUGGED, AND SUPPORTED BY ARDUINO.CC AND THE ARDUINO COMMUNITY WORLDWIDE

LEARN MORE ABOUT THE CONTRIBUTORS OF ARDUINO.CC on arduino.cc/credits

Arduino Nano, ATmega328 on /dev/ttyUSB0

Arduino IDE presentation



```
void setup() {
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Arduino Nano, ATmega328 on /dev/ttyUSB0

Lab : Project bootstraping

- Create a GitHub project
- Register your device in the Lab cluster
- Create a project from the template,
- Initialize git locally,
- Link local git repository to GitHub repository.

Lab : Connect to the redis instance and send/receive query

- (Re)Connect to Redis
- Send a simple Redis command to authenticate
- Send a simple Redis command
- Compile, upload, and execute
- Save and commit your code
- DEL, SET, TYPE, INCR and SET (Extra if finished early)

Lab : Use the library to generate RESP, RealTime with PubSub

- Add the sensor value to a Redis list
- Notify the listening consummer applications
- Save and commit your code
- Limit the notifications (Extra if finished early)

Lab : Use pipelining to boost the ops/sec and save bandwidth

- Enable Pipelining and show stats

What's next

I would like to thank :

- YOU for being here;
- My manager Gabe who trusted me and made this meetup possible;
- Itamar who helped me and asked me to deliver this meetup in Tel Aviv ;
- David who helped me a lot with the AngularJS visualization.

If you liked and if you want more fun meetups, please do the following :

- Twit about it with relevant hashtags,
- Create projects on GitHub and tell us,
- Write a blog post and tell us,
- Spread the word around you.

If you want to know more about *Redis Enterprise (Redis^e)*, you can subscribe to :

- Our webinars,
- Our twitter channel.