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A Supercomputer In a 19th Century Church Is 'World's Most Beautiful Data Center' (vice.com)

Posted by BeauHD on Tuesday January 15, 2019 @07:03PM from the beauty-is-in-the-eye-of-the-beholder dept.

"Motherboard spoke to the Barcelona Supercomputing Center about how it outfitted a deconsecrated 19th century chapel to host the MareNostrum 4 -- the 25th most powerful supercomputer in the world," writes Slashdot reader dmoberhaus. From the report: Heralded as the "most beautiful data center in the world," the MareNostrum supercomputer came online in 2005, but was originally hosted in a different building at the university. Meaning "our sea" in Latin, the original MareNostrum was capable of performing 42.35 teraflops -- 42.35 trillion operations per second -- making it one of the most powerful supercomputers in Europe at the time. Yet the MareNostrum rightly became known for its aesthetics as much as its computing power. According to Gemma Maspoch, head of communications for Barcelona Supercomputing Center, which oversees the MareNostrum facility, the decision to place the computer in a giant glass box inside a chapel was ultimately for practical reasons.

"We were in need of hundreds of square meters without columns and the capacity to support 44.5 tons of weight," Maspoch told me in an email. "At the time there was not much available space at the university and the only room that satisfied our requirements was the Torre Girona chapel. We did not doubt it for a moment and we installed a supercomputer in it." According to Maspoch, the chapel required relatively few modifications to host the supercomputer, such as reinforcing the soil around the church so that it would hold the computer's weight and designing a glass box that would house the computer and help cool it. The supercomputer has been beefed up over the years. Most recently, the fourth iteration came online in 2017 "with a peak computing capacity of 11 thousand trillion operations per second (11.15 petaflops)," reports Motherboard. "MareNostrum 4 is spread over 48 server racks comprising a total of 3,456 nodes. A node consists of two Intel chips, each of which has 24 processors."

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Well (Score:2, Insightful)

by Monopropolis on

At least something useful has been done with a church.

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I like this! (Score:4, Insightful)

by TigerPlish ( 174064 ) on Tuesday January 15, 2019 @07:16PM (#57969600)

On the one hand, clever use of an unused building.
On the other, I am disappointed. A carved wood facade for that glass cage would've done wonders to integrate it visually. And find a way to make pews work to hold gear.
And on one foot, what, no organ?! =o(
My plan was to turn a brit phone box (the red kind) into a rack. Put in four posts and use it as a home server rack. But alas, time went on, and I don't need a rack anymore. Not even for audio. My cinema's half rack currently is half empty now because progress. One receiver, one bluray, one very tiny cable box and apple tv.. I have one shelf holding an unused dvd player because I can't stand to see empty slots in a rack, dammit.
Huh. Maybe I should put the atv there, in that shelf where the unused dvd player is. All alone, a little tiny atv in a shelf meant to take a 50 pound amp. Black on black, nearly invisible. o.O

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Re: (Score:2)

by mentil ( 1748130 )

My plan was to turn a brit phone box (the red kind) into a rack.
I had a plan for hosting a virtual world inside a British police box. It's more spacious on the inside than the outside. I even came up with the cute backronym 'BOX' - British Otherworldly Xperience. Original, eh?

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Does it (Score:5, Funny)

by ArchieBunker ( 132337 ) on Tuesday January 15, 2019 @07:20PM (#57969612) Homepage

run TempleOS?

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What? (Score:3)

by Opportunist ( 166417 ) on Tuesday January 15, 2019 @07:26PM (#57969638)

10 comments in and still nothing about the Papal Mainframe?

This ain't the /. I used to know.

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Re: (Score:1)

by pgmrdlm ( 1642279 )

Wish I had mod points, definitely agree and would have modded up

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Re: (Score:2)

by your\_mother\_sews\_soc ( 528221 )

the original MareNostrum was capable of performing 42.35 teraflops -- 42.35 trillion operations per second

And no mention of *terafllops* either? Big difference between operations per second and **floating point operations per second**.

- **Re: (Score:2)**  
by [Opportunist \( 166417 \)](#)  
That would require reading more than the headline, so not getting that is quite in-sync with what /. is. But not quipping on the headline is just ... sad.
- **Absolutely breathtaking (Score:2)**  
by [WaffleMonster \( 969671 \)](#)  
Personally I don't get the most beautiful data center thing. Was expecting it to be integrated into setting in some interesting way rather than literally just a box of racks in the middle of a room.  
Nevertheless was very impressed by lack of nylon cable ties. Velcro more than makes up for the initial disappointment.
- **Begs the question... (Score:3)**  
by [alaskana98 \( 1509139 \)](#) on Tuesday January 15, 2019 @08:01PM ([#57969786](#))  
"A node consists of two Intel chips, each of which has 24 processors." Not to be pedantic (OK, I'm going to be pedantic), but shouldn't this read "each of which has 24 cores"? Maybe the original wording is correct, and yes you could say that a core IS a processor, but I'm a bit OCD on terminology. :)

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- **Re: (Score:2)**  
by [godrik \( 1287354 \)](#)  
TFA says 24 processors as well. And you are right, it is clearly wrong. It is clearly 24 cores. My students would not get away with calling them processors :)
- [1 hidden comment](#)

- **Re: (Score:3)**  
by [PPH \( 736903 \)](#)  
But this *raises the question* of whether this is the proper usage of 'begs the question'.

- **Re: (Score:2)**  
by [grumpy\\_old\\_grandpa \( 2634187 \)](#)  
Are you begging the question...?

- **System 10 Commandments (Score:2)**  
by [Tablizer \( 95088 \)](#)
  1. Thou shalt not divide by zero.
  2. Thou shalt back up often.
  3. Thou shalt rotate backups.
  4. Thou shalt not ship beta versions to paying customers.
  5. Thou shalt not sign any Oracle contracts.
  6. Thou shalt include proper open source license files.
  7. Thou shalt not use systemd without a helmet and insurance.
  8. Thou shalt not duplicate duplication.
  9. Thou shalt check for stack overflows unless performance is absolutely paramount.
  10. Thou shalt not mention the orange mortal on Slashdot.
  11. Thou shalt check for

- [1 hidden comment](#)
- **Re: (Score:2)**  
by [mentil \( 1748130 \)](#)  
The 1010 COMMAND-prompt argUMENTS, you mean. Handed down on a stone punchcard from the sysadmin to the team lead, on mount ANSInai.

- **Internet Archive Headquarters (Score:2)**  
by [PeeAitchPee \( 712652 \)](#)  
Also check out the [Internet Archives headquarters](#) [atlasobscura.com] in San Francisco, set up in an old Christian Scientist church. Another interesting (if a little weird -- each current and former IAer gets their own personalized, terracotta warrior-style figurine) unused religious building re-purposed as a data center (and tech headquarters in this case).

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- **Scary (Score:3)**  
by [PPH \( 736903 \)](#) on Tuesday January 15, 2019 @09:45PM ([#57970204](#))  
Looks like just the sort of place that a James Bond villain/hacker would set up his operation to bring down the banking system.

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- **The Last Question (Score:2)**  
by [nastyphil \( 111738 \)](#)  
And AC said: "LET THERE BE LIGHT!" And there was light

- **Ping God (Score:2)**  
by [EnsilZah \( 575600 \)](#)  
Ping request could not find host God. Please check the name and try again.

- **Mare Nostrum... (Score:1)**  
by [taylormc \( 926607 \)](#)  
...is the name the Romans used for what we call the Mediterranean.

- **Other interesting machine rooms include: (Score:1)**  
by [AntisocialNetworker \( 5443888 \)](#)  
I once visited a customer who's installation was in a repurposed hotel on the Thames south bank. The machine room had gold-plated bathroom fittings!

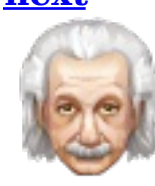
- **Internet Archive (Score:2)**  
by [fuzzywig \( 208937 \)](#)  
The Internet Archive's HQ is in an old church, and they keep (some of) their servers in the main room ([eg](#) [hyperallergic.com]).

- **One picture? (Score:2)**  
by [grumling \( 94709 \)](#)  
I guess the author really believes the old saying "One picture is worth 1000 words."  
No photo gallery?

- **Data Centre in a church (Score:1)**  
by [nikinannynoo \( 5737576 \)](#)  
Go and have a look at AQL in Leeds, England. They built a data centre in a disused church about 20 years ago.  
<https://en.wikipedia.org/wiki/...> [wikipedia.org] or <https://aql.com/> [aql.com]

- **Dan Brown's "Origin" (Score:1)**  
by [jupiterssj4 \( 801031 \)](#)  
This location features heavily in Dan Brown's "Origin" novel.

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