ŁOTWA SYSTEM

Will the power outage affect 5g base stations

Overview

How many base stations in China have a power outage?

In this paper, we closely examine the power outage events and the backup battery activities from a 1.5-year dataset of a branch of a major cellular service provider in China, including 4,206 base stations and more than 1.5 billion records on base stations and batteries.

Does BS load rate affect the power consumption of 5G networks?

the power consumption of AAU nearly linearly increases with the growth of BS load rate, while that of the BBU is quite stable at varying load rates. As the power consumption of 5G BSs is significantly higher than that of 4G BSs, we focus on the backup power allocation of 5G networks in this work.

Is there a mismatch between backup batteries and power outages?

Our real trace-driven data analysis clearly reveals that in the battery allocation strategy currently used in practice, there exists a mismatch between the supporting ability of backup batteries and the power outage situations in each base sta-tion. The mismatch can lead to serious problems in base sta-tions.

Can a base station predict a power outage?

Though each single power outage of one given base station is truly hard to predict precisely, the statistical long-term power outage trends (e.g., in every year) can have a very similar pattern (e.g., a base station built in cold area may suffer from several power outages due to the heavy snow every year).

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Optimal Backup Power Allocation for 5G Base Stations

Feb 18, 2022 · Power outage occurs on the power line between power grid and a VC, e.g., line a in Fig. 4.4 a is cut off. When such a power outage happens, it will cause all the BSs within the ...

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