

以智慧儲存解決方案，加速實現智慧製造願景 Double-barreled Solution™ - Building Bridges to the Cloud

Apacer 宇瞻科技 垂直市場應用處

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Size and market impact of AIoT/IIoT

Impact on global economy

Services and ecosystems

Infrastructure

Sensors and devices

IoT market by 2020

\$ 110bn

Morgan Stanley (2015):
\$90 billion to \$110 billion by 2020

CAGR until 2020

7.3%

Global IIoT Market report: global IIoT market to grow at a CAGR of 7.3% until 2020

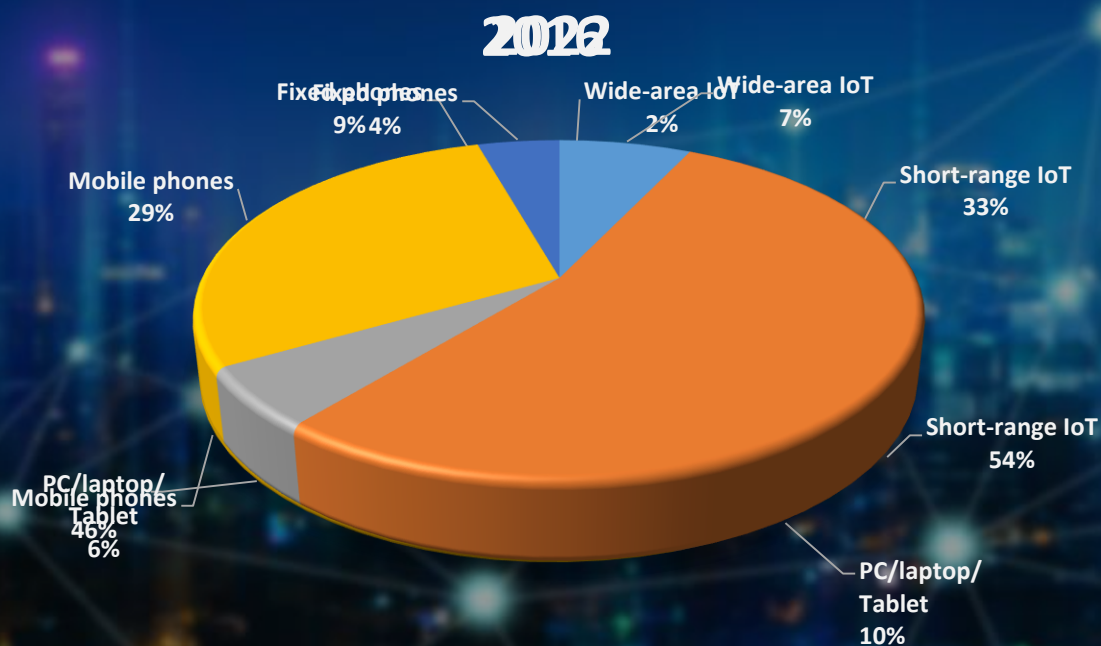
Impact on global economy by 2030

\$ 14.2tn

Accenture estimates the IIoT could add \$14.2 trillion to the global economy by 2030

Source: The Industrial Internet of Things (IIoT): innovation, benefits, and barriers.

Why do you need the Double-barreled Solution™?



29bn

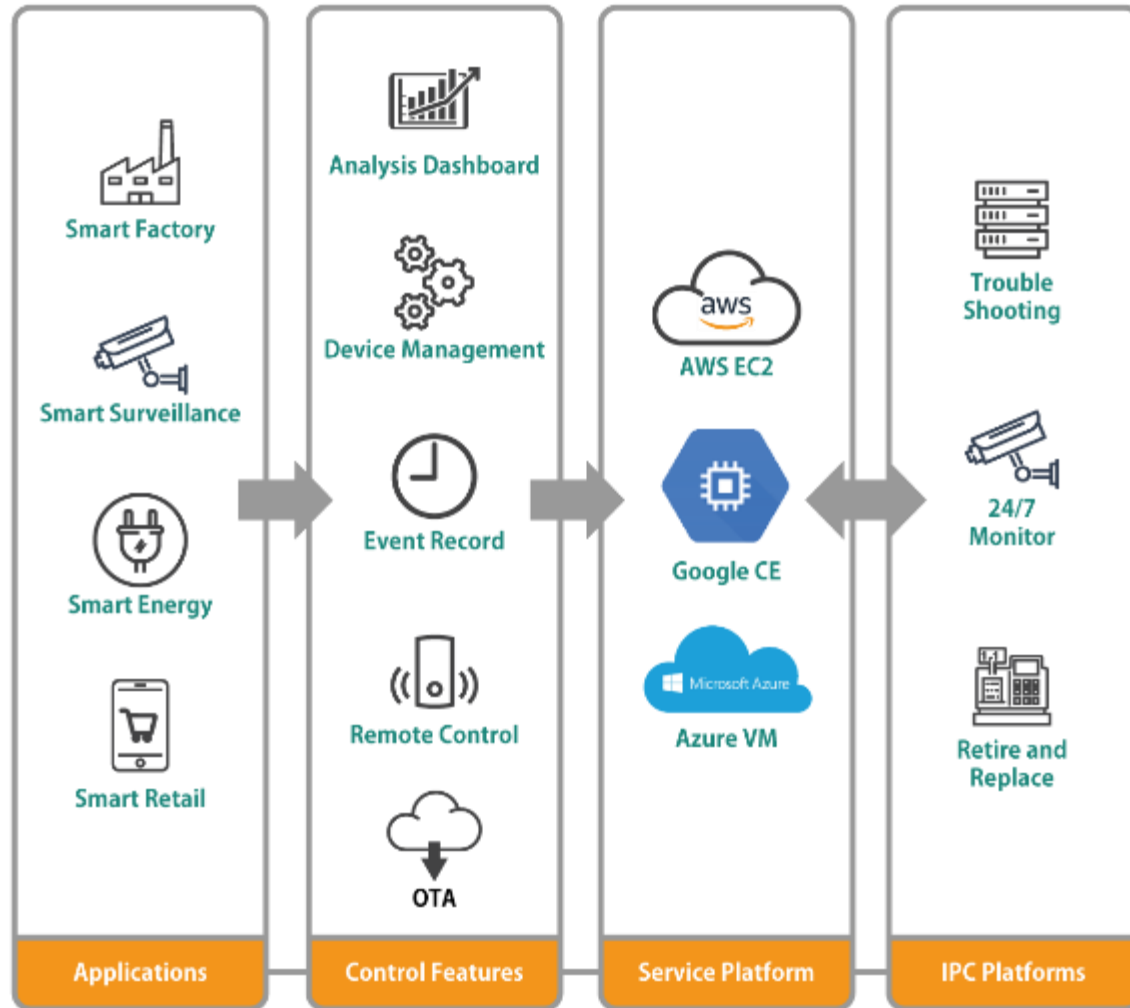
connected devices
by 2022

10%

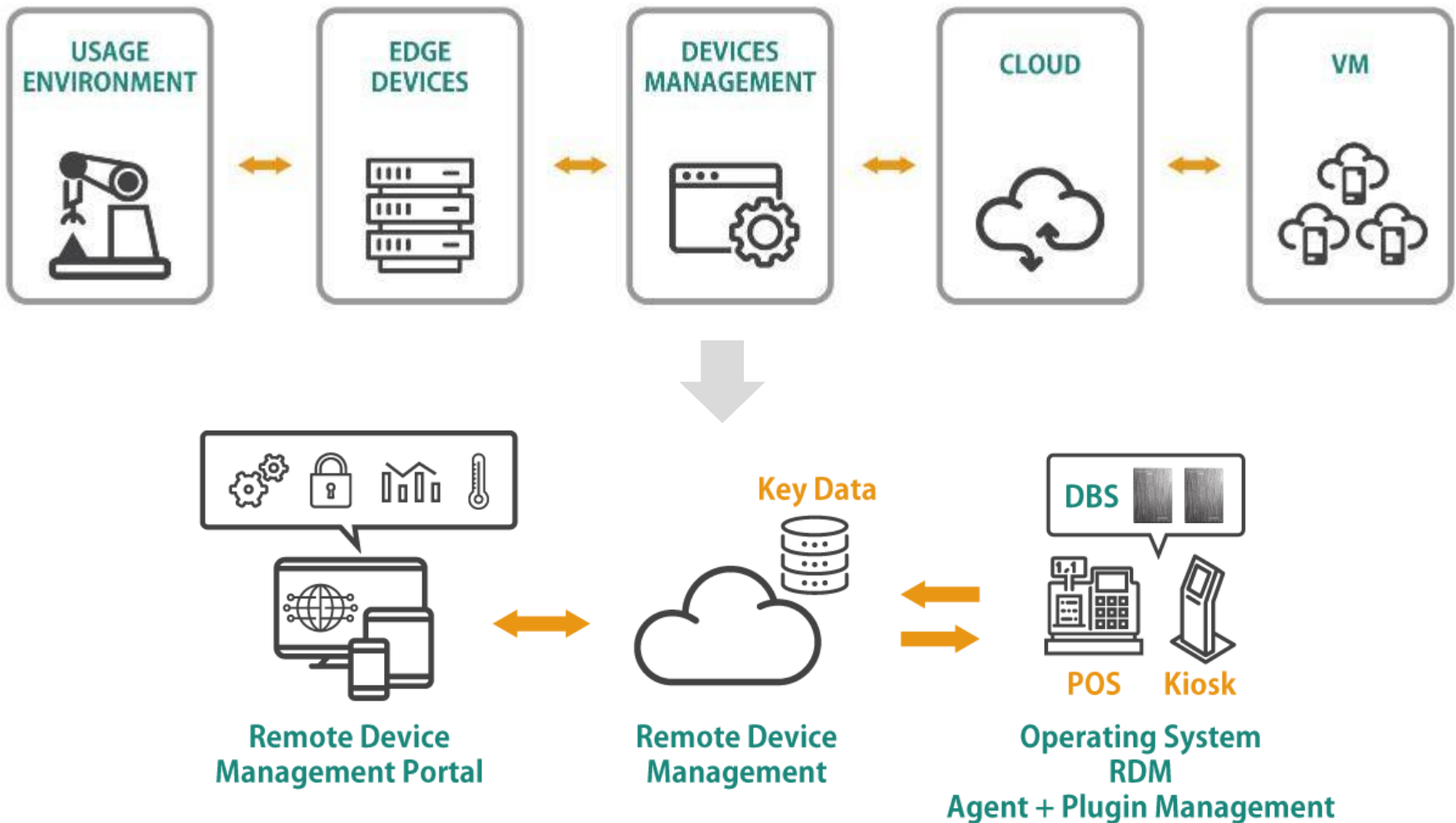
GAGR

Source: Ericsson, Internet of Things forecast.

IPC industry cloud service architecture



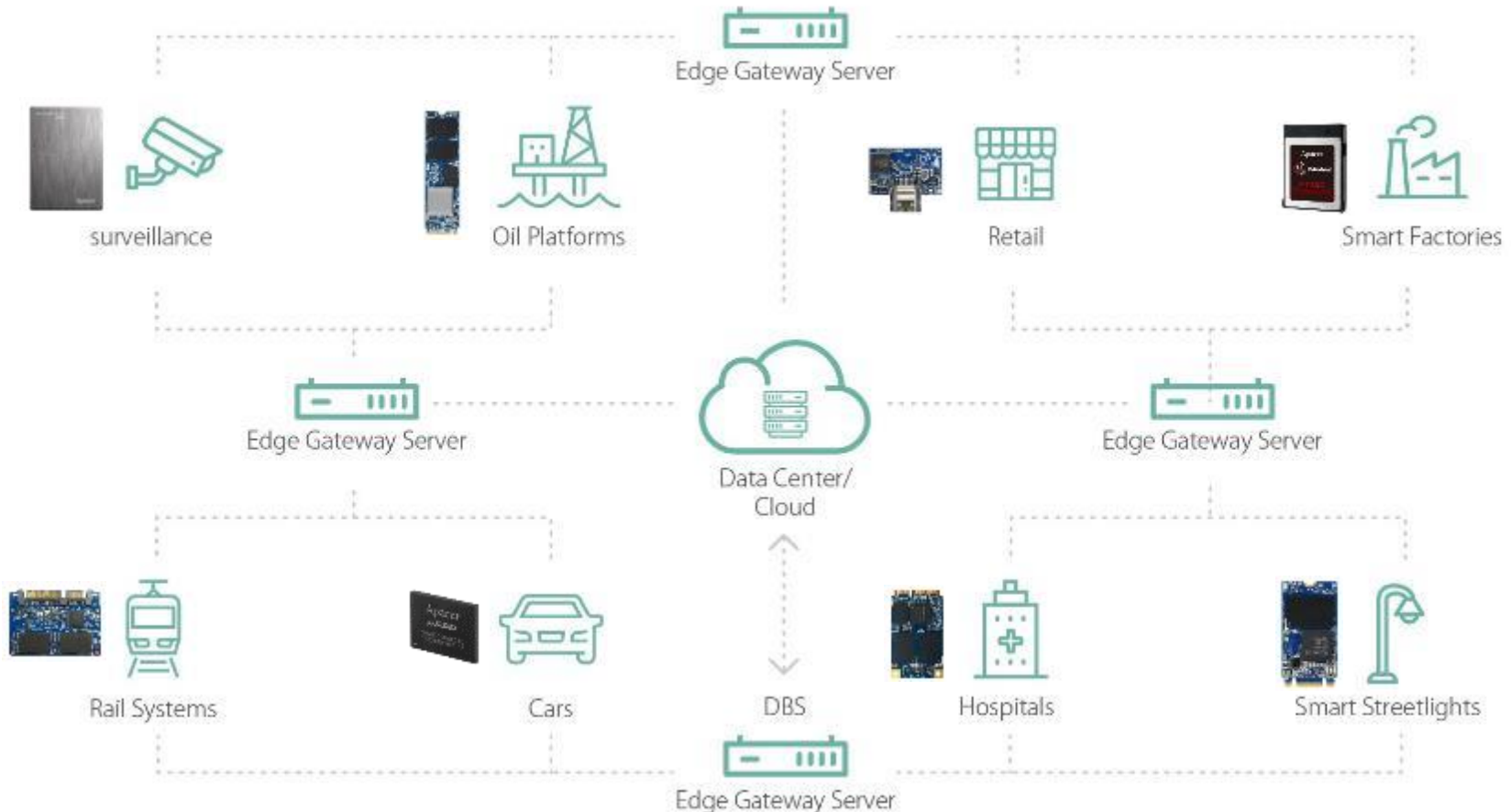
IPC industry cloud service architecture



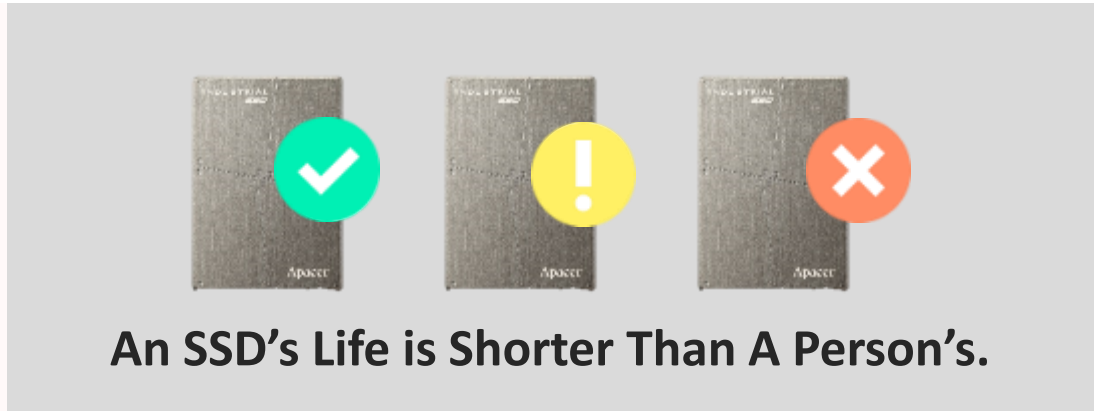
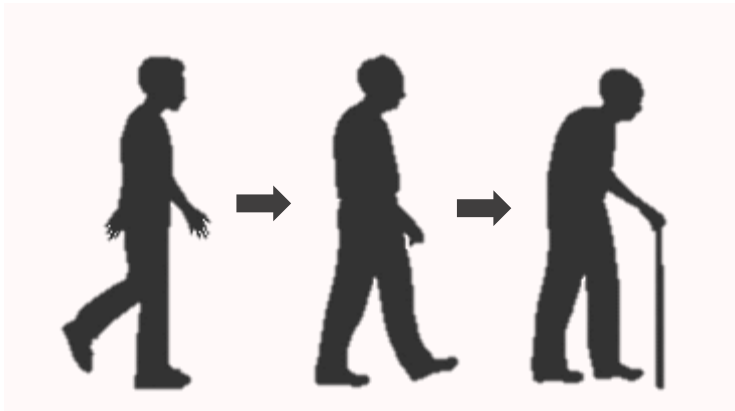
Building Bridges to the Cloud

Edge-to-cloud software:

Users can monitor SMART info of every SSD via web or smartphone (iOS & Android).



Where does data live? **In your storage (SSD).**



Data is the core around which the system revolves.

Building Bridges to the Cloud

Which **RISK** is acceptable?

OS Crash



Data Loss

SMART
Retail/ Factory / Surveillance

- Account mismatch
- Downtime
- Corrupted frames

What solves all these problems?

Double-barreled Solution™

Apacer

How can Double-barreled Solution™
help you reduce risk?

Building Bridges to the Cloud



Double-barreled Solution™

Step 1

CoreAnalyzer2 – Know your application

Choose the most suitable F/W and SSD



Step 2

SSDWidget 2.0 – Monitor your SSD Status

Anticipate and mitigate SSD failures remotely



Longer Lifetime, No Downtime

How does it work?



Improving on CoreAnalyzer1, the functionality of CoreAnalyzer2 is enhanced with new features:

Host Behavior

- Total counts of **STANDBY/ FLUSH/ TRIM** command
- Total counts of **idle** time

Access Behavior

- Workload distribution

Operation Behavior

- Total average erase count
- Total power cycle count
- Thermal history

Operation Behavior



Why do we need to monitor SSDs remotely?

Identify potential failures in advance

Data reliability concerns

Reduce manpower & maintenance costs

SSDWidget 2.0

Disk Information -

The screenshot displays the SSDWidget 2.0 interface. At the top, it features the Apacer logo and the tagline 'The Most Reliable Storage For Industries'. Below this is a navigation bar with tabs for 'Drive Info', 'SMART', 'Test Tool', 'Dynamic Workload', 'Core Analyzer', 'Remote Monitor', and 'Setting'. The 'Drive Info' tab is active, showing a dashboard with six key metrics: Capacity Usage (66.32GB Used, 52.62GB Free), Health Status (Good), 4K Alignment (Good), SSD P/E Cycle (5, 3000), Temperature (40°C / 104°F), and Estimated Lifetime (99%). To the right, a detailed 'Drive Info' section shows the selected drive as 'Disk0 128GB SATA Flash Drive'. Below this, a 'Model' section lists specifications: Model Name (128GB SATA Flash Drive), Serial Number (D0117429500000000312), Firmware Version (SFDM104B), Flash Type (MLC), Transfer Mode (SATA 6.0Gbps), and Drive Status (Normal Mode). A 'Support Feature' section lists S.M.A.R.T. (NCQ), TRIM, Security, and LBA4B. On the far right, a 'Workload' section shows usage statistics: Today (4.1MB), Daily (107.32MB), Week (4.1MB), and Total (284.5GB). The interface is dark-themed with green and red accents.

SSDWidget 2.0 The Most Reliable Storage For Industries. Apacer

Drive Info SMART Test Tool Dynamic Workload Core Analyzer Remote Monitor Setting

Capacity Usage
Used: 66.32GB
Free: 52.62GB

Health Status

4K Alignment

SSD P/E Cycle
5
3000

Temperature
40°C / 104°F

Estimated Lifetime
99%

Drive Info
Disk0 128GB SATA Flash Drive

Model
Model Name: 128GB SATA Flash Drive
Serial Number: D0117429500000000312
Firmware Version: SFDM104B
Flash Type: MLC
Transfer Mode: SATA 6.0Gbps
Drive Status: Normal Mode

Support Feature
S.M.A.R.T.: NCQ
TRIM
Security
LBA4B

Workload
Today: 4.1MB
Daily: 107.32MB
Week: 4.1MB
Total: 284.5GB

SSDWidget 2.0

User Interface -

Supports *PCIe/SATA/SD/USB* products



Healthy



Warning

- Erase count reaches 95%
- Free blocks less than 30%



Alert

- Free blocks less than 10%

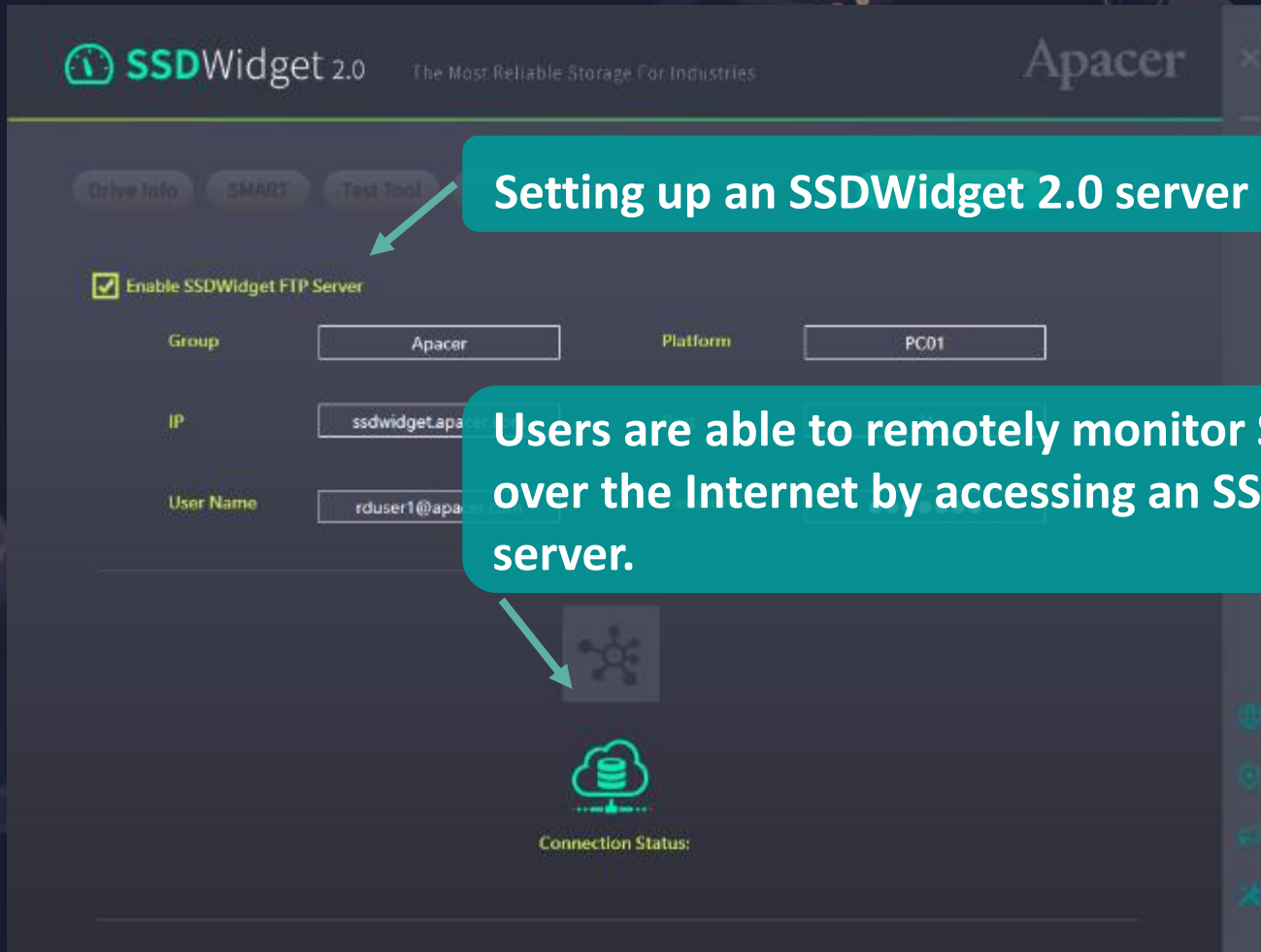
37°C / 98°F
Temperature

Estimated Lifetime

LBA48

SSDWidget 2.0

Remote Monitor -

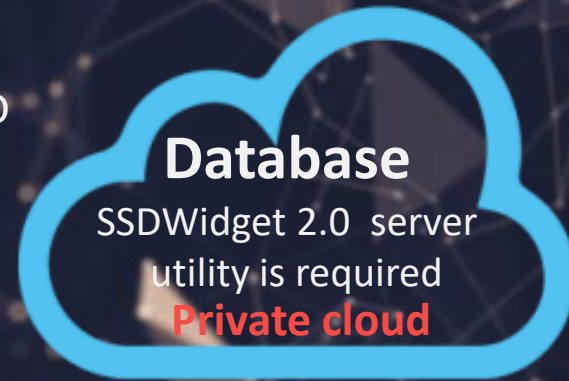


The screenshot displays the SSDWidget 2.0 web interface. At the top, the logo and tagline "The Most Reliable Storage For Industries" are visible. Below the navigation menu, there are three buttons: "Drive Info", "SMART", and "Test Tool". A teal callout box with an arrow pointing to the "Test Tool" button contains the text: "Setting up an SSDWidget 2.0 server is required." Below this, there is a checkbox labeled "Enable SSDWidget FTP Server" which is checked. Underneath, there are input fields for "Group" (containing "Apacer"), "Platform" (containing "PC01"), "IP" (containing "ssdwidget.apacer.com"), and "User Name" (containing "rduser1@apacer.com"). A second teal callout box with an arrow pointing to the "IP" field contains the text: "Users are able to remotely monitor SSD status over the Internet by accessing an SSDWidget 2.0 server." At the bottom of the interface, there is a "Connection Status" section with a server icon and a status indicator.

SSDWidget 2.0

Cloud Monitor -

Users can monitor SMART info of every SSD via web or smartphone (iOS & Android).



SMART info downloaded

SMART info uploaded



Apacer



Building Bridges to the Cloud – DBS Cloud Edition Dashboard



Dashboard

SSD

Event Log

OTA

Setting

Account

Overview

Device

Document

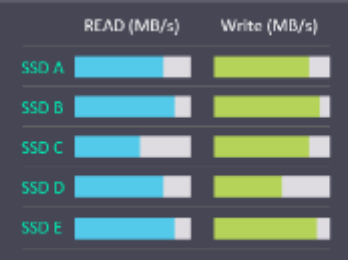
Five riskiest SSDs



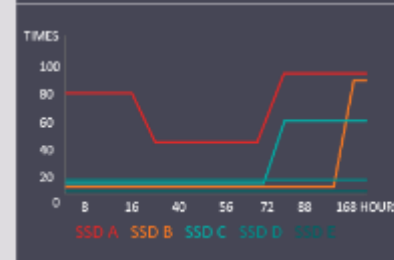
5 SSDs with temperature abnormalities



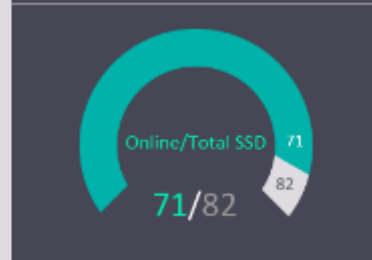
Highest workload SSD (Minutes/DATA (MB))



SSD Unexpected power cycle (Hour/Times)



Online/Total SSD



SELECT ACCOUNT

Ivan

SELECT GROUPS

All

SELECT STATUS

All

Keyword Search

All

STATUS	DEVICE NAME	F/W UPGRADE	OS RECOVERY	DRIVE OPTIMIZATION	COREANALYZER	GROUP NAME
●	SSD A	🔄	🔄	🔄	🔄	Apacer HQ
●	SSD B	🔄	🔄	🔄	🔄	Apacer HQ
●	SSD C	🔄	🔄	🔄	🔄	Apacer US
●	SSD D	🔄	🔄	🔄	🔄	Apacer EU
●	SSD E	🔄	🔄	🔄	🔄	Apacer EU

Building Bridges to the Cloud - Dashboard

DBS Cloud Edition



1. SSD operation behavior
2. SSD health status

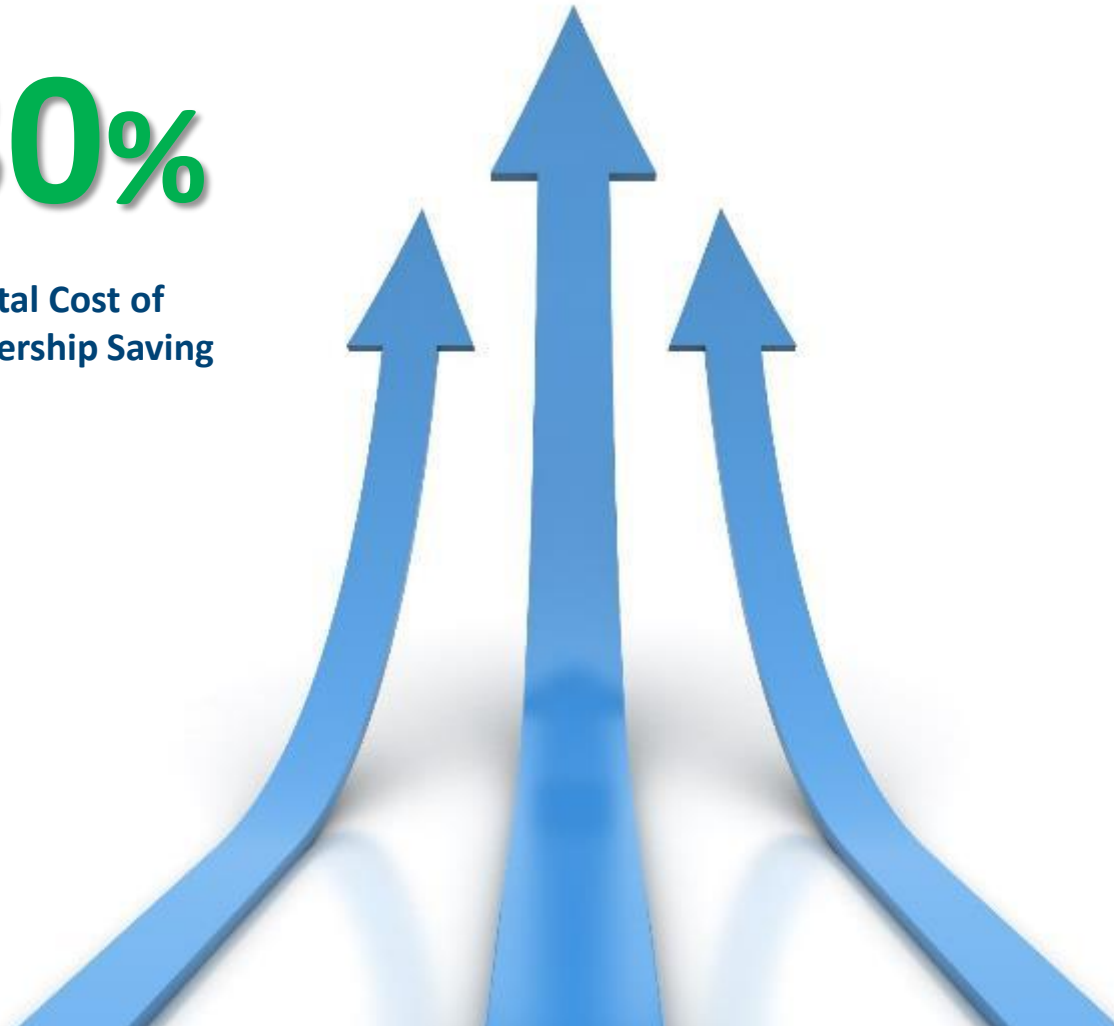
1. Firmware updates

1. Notifications
2. Real-time actions

Building Bridges to the Cloud

30%

Total Cost of
Ownership Saving



Double-barreled Solution™

1. Help you to develop SSD monitoring service
2. Anticipate and Mitigate Failures



**"If you want to go fast, go alone. If you want to go far, go together."
獨行者速，眾行者遠。**

If you want to go fast and far, Apacer will go with you.
宇瞻與您攜手，共創企業永續發展

Apacer

The Most
Reliable
Storage
For
Industries

Thank you!

industrial.apacer.com

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