



PowerPanel[®] Business Edition USER MANUAL

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CyberPower® PowerPanel® Business Edition

USER'S MANUAL

PowerPanel® Business Edition provides power management Services. PowerPanel Business Edition consists of **Agent** and **Slave**. Agent provides a service to monitor status and configure the Battery Backup. It records status of the Battery Backup and power events, and generates actions in response to events. Slave provides a service to establish the communication with Agent and generates actions according to the notification from Agent when a power event occurs.

An overview of the software capabilities is listed below:

- Monitor the Battery Backup status and view the Battery Backup information.
- View the Power System information and configure Power System location.
- Configure the Battery Backup settings and perform diagnostics.
- Configure protected system and view the summary.
- Configure action settings for different events.
- View the logs and configure logging options.
- Manage scheduled shutdown and restart settings.
- Change the authentication username and password.
- Connect to the system from remote computer.

The screenshot displays the PowerPanel Business Edition Agent interface. The top header shows 'PowerPanel Business Edition Agent on DVRD30[192.168.20.39]' and the CyberPower logo. A left sidebar contains navigation options: Battery Backup (selected), Protected System, Actions, Logging, Schedule, Authentication, Help, and Logout. The main content area is titled 'Battery Backup' and includes a 'Status' section with a help icon. Below this are three tables: 'Input', 'Output', and 'Battery', each with a 'Status' field and several data rows. A 'System' section is also present at the bottom.

Input	
Status	Normal
Voltage	109.0 V
Frequency	60.0 Hz

Output	
Status	Normal
Voltage	108.0 V
Load	0 %

Battery	
Status	Fully Charged
Capacity	100 %
Remaining Runtime	30 min.

System	
Status	Normal
Temperature	29 °C / 84 °F

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MONITOR THE BATTERY BACKUP STATUS AND VIEW THE BATTERY BACKUP INFORMATION [AGENT ONLY]

- Battery Backup status monitoring
- View Battery Backup information

Battery Backup status monitoring

The Battery Backup Status page displays the Battery Backup status. The Status page is the default logon page of PowerPanel Business Edition Agent. The Battery Backup Status page displays four types of data about the Battery Backup as follows:

- Utility, see **Input**.
- Battery Backup output, see **Output**.
- Battery status, see **Battery**
- Battery Backup status, see **System**

Input

- **Status:** Displays the present status of utility power supplied to the Battery Backup.
 - **Normal:** Utility voltage and frequency is in normal range.
 - **Blackout:** There is no utility power.
 - **Over Voltage:** Utility voltage is above normal range. The Battery Backup will switch to battery supplied power.
 - **Under Voltage:** Utility is below normal range. Battery Backup will switch to battery supplied power.
 - ***Frequency Failure:** Frequency of utility power is out of range.
 - **Unknown:** This is an abnormal status.
- **Voltage:** The present voltage of utility supplied power.
- **Frequency:** The present frequency of utility supplied power.

Output

- **Status:** Displays the present status of the output power supplied to the connected equipment.
 - **Normal:** The Battery Backup output is in normal range.
 - ***Bypass:** The Battery Backup is in bypass mode and continues supplying utility power to the connected equipment.
 - ***No Output:** There is no output from the Battery Backup.
 - ***Short Circuit:** The Battery Backup will stop its output or shutdown immediately due to a short circuit.
 - **Boost:** The present input voltage of utility power is too low. The Battery Backup will increase output voltage to normal range.

- ***Buck**: The present input voltage of utility power is too high. The Battery Backup will decrease output voltage to normal range.
- **Overload**: The present load exceeds the maximum load the Battery Backup can support.
- **Unknown**: This is an abnormal status.
- **Voltage**: The present power voltage the Battery Backup is supplying to the connected equipment.
- **Frequency**: The present power frequency the Battery Backup is supplying to the connected equipment.
- **Load**: The power being supplied by Battery Backup, as a percentage of the total load capacity. For some models, it may show information about the loading watt.
- ***Outlet number**: Displays the present status of outlet number.
 - **On**: This outlet is on and will supply power.
 - **Off**: This outlet is off and will not supply power.
 - **On Pending**: This outlet is on pending an action such as a scheduled event.
 - **Off Pending**: This outlet is off pending an action such as a scheduled event.

Battery

- **Status**: Displays the present status of the battery packs.
 - **Fully Charged**: There is 100% battery capacity remaining.
 - **Discharging**: The Battery Backup is supplying battery power because of a utility power failure, battery test, or utility power abnormality.
 - **Charging**: The batteries are being charged.
 - ***Warning**: The display shows warning state when the batteries capacity is lower than 80%.
 - **Capacity Critical Low**: The capacity of the batteries is very low and the Battery Backup may shutdown immediately.
 - ***Battery Replacement Needed**: The lifetime of batteries has expired. You should replace the batteries as soon as possible.
 - ***Not Present**: There are no batteries detected.
 - **Testing**: The Battery Backup is performing a diagnostic test. You may go to the Battery Backup Diagnostics page to see the results.
 - **Unknown**: This is an abnormal status.
- **Voltage**: The present voltage supplied by the batteries.
- **Remaining Runtime**: The amount of time that the Battery Backup can supply power to the load.
- ***Remaining Charge Time**: The remaining time the battery packs required to be fully charged.
- **Capacity**: The present capacity of the Battery Backup batteries, as a percentage of full charge.
- ***External Batteries**: The number of external battery cabinets.

System

- **Status:** Displays the present operating status of the Battery Backup.
 - **Normal:** The system status is normal.
 - ***Fault:** The system is in fault state due to an internal malfunction.
 - ***Overheat:** The temperature exceeds the normal temperature threshold.
 - **Unknown:** This is an abnormal status.
- ***Temperature:** The present internal operating temperature of the Battery Backup case.

View Battery Backup Information

Information

The Battery Backup Information page shows a summary of information about the Battery Backup as follows:

- **UPS Model:** The model name of the Battery Backup.
- **Hardware Version:** The hardware version of the Battery Backup.
- ***Serial Number:** The serial number of the Battery Backup.
- **UPS Type:** The type of the Battery Backup. It may be 「On Line」 or 「Line Interactive」.
- **V.A:** The Volt-Amp specification of the Battery Backup.
- **Power:** The maximum power supplied by the Battery Backup (Watts).
- ***Maximum Current:** The maximum output current of the Battery Backup (Amps).
- **Voltage:** The output voltage of the Battery Backup (Volts).
- ***Frequency:** The output frequency of the Battery Backup (Hz).
- **Battery Replacement Date:** The date that the batteries were last replaced. The normal lifetime of the batteries is 3 years. You can click "reset" button to configure the replaced date. The replaced date only can be configured to the date before the day while you are configuring it.
- ***Standalone Outlets:** The number of standalone outlets.
- ***External Batteries:** The number of external battery cabinets.

**: These details may not be available on all models.*

VIEW THE POWER SYSTEM INFORMATION AND CONFIGURE POWER SYSTEM LOCATION [SLAVE ONLY]

- Introduction to Power System
- View Power System information
- Configure Power System address

Introduction to Power System

A Power System is the system that manages and controls the Battery Backup. The Power System supplies the power you need and other equipment need. If you connect the Battery Backup with a computer by serial or USB cable, that computer should be installed Power Panel Business Edition Agent to manage the Battery Backup. We call that a computer installed Agent with the Battery Backup is a Power System. If you connect the Battery Backup with a Power Management Unit (abbreviate to PMU, ex: SNMP card), the PMU with the Battery Backup is called a Power System.

View Power System information

The **Power System Information** page shows a summary of information about the Battery Backup connected to the Power System as follows:

- Battery Replacement Date: The date that the batteries were last replaced. The normal lifetime of the batteries is 3 years.
- UPS Model: The model name of the Battery Backup.
- Battery Backup Type: The type of the Battery Backup. It may be "On Line" or "Line Interactive".
- *Serial Number: The serial number of the Battery Backup.
- Hardware Version: The hardware version of the Battery Backup.
- *Standalone Outlets Numbers: The number of standalone outlets.
- Power: The maximum power supplied by the Battery Backup (Watts).
- *Maximum Rating Current: The maximum output current of the Battery Backup (Amps).
- Voltage: The output voltage of the Battery Backup (Volts).
- *Frequency: The output frequency of the Battery Backup (Hz).
- V.A: The Volt-Amp specification of the Battery Backup.
- *External Batteries: The number of external battery cabinets.

**: These details may not be available on all models.*

Configure Power System address

The Power System Location page lets you configure the power system address and view the connection state of Power System.

According to your Power System type, you may need to type Agent's address or PMU's address in the Address field. When the address is configured, you will see the connection state of **Power System**. **Power System** is the system connected to the Battery Backup directly. The **Power System Information** page is available only when the connection state is connected. Remember to setup the same phase key in **Security** section as described on **Protected System Identification** Help Page. If the phase key is different from Power System and Slave, Slave will not have ability to communicate with Power System.

POWER SYSTEM LOCATION

- **Address:** Displays the power system address. You can click Setup button to configure the power system address. Normally, power system address is the Agent or PMU address. You can link to Agent or PMU directly by click the hyper link showed here. If the status is unreachable, it could be fail to open due to wrong address.
- **Status:** Displays the status about the communication with Power System. You can click Reconnect button to verify the current status about the communication with Power System.
 - connected: Slave is connected with Power System. Slave can obtain information about Battery Backup from Power System.
 - unreachable: Slave can't connect with Power System. It may due to the wrong **phase key**, the wrong address, or the network connection problem.

Note: After you configured the address, you need to wait for negotiation for 5~20 seconds (depends on response time).

CONFIGURE THE BATTERY BACKUP SETTINGS AND PERFORM DIAGNOSTICS [AGENT ONLY]

- Configure the Battery Backup
- Run Diagnostics on the Battery Backup

Configure the Battery Backup

The Battery Backup Configuration page allows you to configure Input, Output, Battery, and System for the Battery Backup.

Input

- ***Conditions to use battery power:** Sets the thresholds to use battery power according to utility power voltage and utility power frequency. If the threshold settings below are met, the Battery Backup will use battery power.
Note: This setting comes into effect after restarting Battery Backup.
 - **Utility voltage is below a voltage or above another voltage:** Sets the low voltage and high voltage threshold. Beyond the thresholds the Battery Backup will supply battery power.
 - **Utility frequency is below a frequency or above another frequency:** Sets the low frequency and high frequency threshold. Beyond the thresholds the Battery Backup will supply battery power.
- ***Condition to bypass:** Sets the threshold to enter bypass mode according to utility power voltage.
 - **Utility voltage is below a voltage or above another voltage:** Sets the low voltage and high voltage threshold. Beyond the thresholds the Battery Backup will switch to bypass mode.

Output

- ***The Battery Backup supplies a voltage:** Sets the output power voltage supplied to the connected equipment. For some models, like the Paragon Tower Battery Backup and the Professional Rack Mount Battery Backup, this setting comes into effect after restarting the Battery Backup. For Paragon Tower Battery Backup model, it is configurable only if the Battery Backup is in bypass mode.
- ***The Battery Backup supplies power of a voltage during battery mode:** Sets the output power voltage supplied to the connected equipment during battery mode.
- ***Outlet number:** Sets the standalone outlet's turn on/off parameters.
 - **Turn off if battery capacity is below a percentage:** Sets the low limit of battery capacity to turn off this outlet.

- **Turn off when utility power fails for minutes:** Sets how long the utility power is off before turning off this outlet. The valid value is 0-120.
- **Turn on when utility power restores for minutes:** Sets how long the utility power has restored before turning on this outlet. The valid value is 0-120.
- ***Enter bypass mode once the Battery Backup is overloaded:** If you enable this option, the Battery Backup will supply utility power directly to the load when there is an overload condition. Otherwise, the Battery Backup will shutdown. An overload occurs when the load is over 110%.
- ***Enter bypass mode when the Battery Backup turns off:** If you enable this option, the Battery Backup supply utility power directly to the load when the Battery Backup turns off. Otherwise, the Battery Backup will shutdown.
- ***Allow bypass even when utility power is out of range:** If you enable this option, even if utility power is out of range, the Battery Backup still enters bypass mode.
- ***Wake up the Battery Backup when utility power is restored:** If you enable this option, the Battery Backup will wake up when utility power is restored.
- ***The Battery Backup can start without utility power and supply battery power:** If you enable this option, the Battery Backup can start without utility power. After startup, the Battery Backup will supply battery power to the connected equipment.
- ***The Battery Backup will attempt to restore power from a short circuit condition:** If you enable this option, the Battery Backup will stop supplying power to the connected equipment when a short circuit occurs. The Battery Backup will attempt to restore power three times for 30 seconds and continues supplying power if the short circuit condition disappears, the Battery Backup will shutdown if short circuit condition remains. If you disable this option, the Battery Backup will stop supplying power and shutdown.
- ***Force rebooting of the Battery Backup when utility power is restored early:** If you enable this option, the Battery Backup will be forced to reboot when utility power is restored early in the following manner. When utility power fails, the connected computer may be asked to shutdown first and the Battery Backup may shutdown too after a specific delay time. If the utility power is restored earlier than this, the Battery Backup will stop supplying output power for 10 seconds once the delay time is up. This option is useful for you to ensure the connected computer will restart after a power failure shutdown.
- ***Restore power when the batteries have been charged for amount of minutes:** Sets time for recharging when the Battery Backup restores power. The batteries must be recharging for the amount of time to restore power. 0 minutes means the Battery Backup will restore power immediately.
Note: This setting is available only if **Wake up the Battery Backup when utility power is restored** is enabled.

- ***Restore power when the batteries have been charged to a percentage of battery capacity:** Sets how much battery capacity must be present for the Battery Backup to restore power. 0% means the Battery Backup will restore power immediately. **Note:** This setting is available only if **Wake up the Battery Backup when utility power is restored** is enabled.
- ***Output Frequency determination:** Sets the frequency of output power supplied to the connected equipment. You can choose only one of the following settings.
 - **Following utility frequency when it is within a tolerance:** Sets the utility frequency thresholds. If the utility frequency is out of range, the Battery Backup will supply power at a specific frequency.
 - **Fixed on a frequency:** Sets the frequency of output power to a constant value. This setting applies when the Battery Backup is in standby mode. Standby mode occurs when the Battery Backup is plugged into utility power and the Battery Backup is off.

Note: In general, you won't need to set this option in all cases. The wrong frequency settings may damage your connected equipment. When you set the frequency settings, you should ensure the selected frequency is acceptable for your connected equipment. Each time you try to change frequency settings, you will see an alert message and need to confirm the change. These complicated steps are to protect your connected equipment from the wrong frequency settings.

Battery

- ***Prohibit batteries discharging over than 4 hours:** If you enable this option, the Battery Backup will shutdown when it has discharged for 4 hours. Excessive discharging may shorten the life of batteries.
- ***The Battery Backup will shutdown to save energy after a power failure of 5 minutes:** If you enable this option, the Battery Backup will shutdown when a power failure occurs and the Battery Backup discharges for 5 minutes without a load present. Otherwise, the Battery Backup will keep discharging until battery capacity reaches 0%.
- ***Battery is critically low when the capacity is below a percentage:** Sets the critical low threshold of Battery capacity. When the Battery capacity is below this value, the Battery capacity is critical low event will occur.
- ***Perform a battery test:** Set a schedule for recurring battery tests. The battery test will verify the battery function supplies power when the Battery Backup is in battery mode.
Configuration options: [never][every week][every 2 weeks][every 3 weeks][every 4 weeks]
- ***The External Battery Cabinet has an amount of packs:** Sets the amount of external battery cabinet, it helps Battery Backup to evaluate Remaining Runtime more accurate.

System

- **The Battery Backup alarm is:** If you enable this option, the Battery Backup alarm will sound when it switches to battery mode.
Configuration options: [enabled][disabled]
- ***Overloaded warning when the load exceeds a percentage:** Sets the threshold for the overload warning. When the load exceeds the threshold, the Battery Backup will issue a warning and event output is overload will occur. This setting is available after the Battery Backup is restarted. Attention! Your computer may shutdown when the Battery Backup is restarting.

Note: Not all configurations are available on all models.

Run Diagnostics on the Battery Backup

The Battery Backup Diagnostics page lets you view the last diagnostic results and you can perform a Battery Test and Runtime Calibration.

Battery Test

The Battery Backup will switch to battery mode to verify the batteries are good. Use **Battery Test** to initiate a quick battery test and view the date and result of the last test.

PERFORM A BATTERY TEST

1. Click the **Initiate** button, and you will hear beeping while the battery test is occurring.
2. **Battery Test** will report the result after the last test is finished and display as follows:

- Last Test Date: The date the last battery test was performed.
- Last Test Result:
 - Passed: The battery works normally.
 - None: The battery test has not been performed.
 - Failed: The Battery Backup test failed.

SUGGESTIONS IF THE BATTERY TEST FAILED.

- Clear Remaining runtime is insufficient event or Output is overloaded event and run another battery test.
- Replace the batteries if the battery test fails again.
- Contact CyberPower for assistance if the battery test fails after the batteries have been replaced.

RUNTIME CALIBRATION

The runtime calibration synchronizes the runtime estimate with the current load and battery capacity. When a runtime calibration initiates, Calibration is initiated event occurs. A runtime calibration will discharge the batteries. The batteries will be completely discharged after the calibration. The batteries will be recharged automatically following a calibration.

Note: Frequent calibration will shorten the life of batteries. We recommend one or two calibrations per year.

PERFORM A RUNTIME CALIBRATION

1. Click the Start button; this will initiate a runtime calibration.
2. Click the Stop button; this will stop the runtime calibration.
3. Runtime Calibration will display the result after a calibration finishes or you stop the calibration. The results will report as follows:

- Estimated Runtime: The estimated runtime of the batteries.
- Last Calibration Result: The result of the last runtime calibration.
 - Passed: Runtime calibration passed and the batteries are normal.
 - None: A runtime calibration has not been run.
 - Failed: The Battery Backup failed during the runtime calibration.
 - Cancelled: The runtime calibration was stopped...
- Last Calibration Date: The date the last runtime calibration was performed.

Note: A calibration process causes the batteries to completely discharge. If a utility power failure occurs during the calibration the Battery Backup will not support the connected equipment.

CONFIGURE PROTECTED SYSTEM AND VIEW THE SUMMARY

- Configure protected system identification
- Configure protected system connected equipment
- View the system summary

Configure protected system identification

The Protected System Identification page allows you to set the system information and security.

Information

- **Name:** The description or name of the system.
- **Contact:** Who to contact when there are problems with this system.
- **Location:** Where the system is located.
- **Powered by:** Indicate which Battery Backup outlet supplies the system power. You can see the outlet preview to verify whether the system is connected to the correct outlet. This option may show more outlets control according to the Battery Backup model type.

Security

- **Phase Key** [for Agent]: The phase key is used to create a secure channel between Agent and Slave. Thus the communication is reliable. You need to configure the same phase key in Agent and Slave. The phase key is hidden by default. You can click Display to show the phase key in plain code. The default phase key is "**powerpanel.encryption.key**".
- **Phase Key** [for Slave]: The phase key is used to create a secure channel between Power System and Slave. Thus the communication is reliable. You need to configure the same phase key in Power System and Slave. The phase key is hidden by default. You can click **Display** to show the phase key in plain code. The default phase key is "**powerpanel.encryption.key**".
 - If your Power System is PowerPanel Agent, you can login Agent's web page to find the phase key setting in **Security** section on **Protected System Identification** page.
 - If your Power System is PMU (more information in **View the Power System information and configure Power System location** page), you need to check the following community keys and make both of them are the same as the phase key. You can login SNMP management web page to configure and view them. The default SNMP community key is **public** in most cases.

- **SNMP-TRAP community key:** Find this setting on **Network->Trap Notification** page. Add a TrapReceiver and type Slave IP and community key to fill the fields.
- **SNMP-Request community key:** Find this setting on **Network->Access Control** page. Set the access control community key and it should have at least read permission.
Note: Because the SNMP community key is limited to 15 characters, thus you have to shorten the phase key setting to fit the limit.

Note: If you have firewall software installed, please configure the policy to let port 3052 (UDP/TCP) and port 8443 (UDP/TCP) are available. The communication between Agent and Slave can be established only when that ports are available.

Configure protected system connected equipment

The Protected System Equipment page allows you to set and view connected equipment. The connected equipment means all other equipment connected to the same Battery Backup as Agent. You can add, modify, or remove equipment by supplied equipment's name, location, and contact information. In the equipment list, you can view equipment you added and the remote Slave information. Whenever the Slave is connected to Agent, you will see the Slave information in the equipment list. You can't configure the Slave information directly in Agent.

Equipment

- **Name:** Displays the description or name of the equipment.
- **Contact:** Displays who to contact when there are problems with the equipment.
- **Location:** Displays where the equipment is located.
- **Powered by:** Indicate which Battery Backup outlet supplies the equipment power. You can see the outlet preview to verify whether the equipment is connected to the correct outlet. This option may show more outlets control according to the Battery Backup model type.

Configuration

- **Add equipment**
 1. Complete the text field for name, location, contact, and powered by which outlet.
 2. Click the **Add** button.
 3. The new equipment will be added to equipment list below.
 4. Click the **Cancel** button to cancel adding an equipment
- **Modify equipment**
 1. Select the equipment from the equipment list and click it.

2. The details of the equipment will be shown in the text field of name, location, contact, and powered by which outlet.
 3. Modify the details of the equipment in those text fields.
 4. Click the **Modify** button.
 5. The equipment information will be updated to equipment list below.
 6. Click the **Cancel** button to cancel modifying an equipment
- **Remove equipment**
 1. Select the equipment from the equipment list and click it.
 2. The details of the equipment will be shown in the text field of name, location, contact, and powered by which outlet.
 3. Click the **Remove** button.
 4. The equipment will be removed from the equipment list.
 5. Click the **Cancel** button to cancel removing an equipment

View the system summary

The Help About page identifies software and technical support summary.

Software Summary

- **Version:** The current version of Agent installed on the host.
- **Operating System:** The operating system of the host.

Technical Support

- **Official Web Site:** Accesses the Cyber Power Web Site.
- **Product Overview:** Finds information on Cyber Power products.
- **Contact:** Finds out how to contact Cyber Power for the service offering.

CONFIGURE ACTION SETTINGS FOR DIFFERENT EVENTS

- Configure Settings of Event Actions for Selected Events from the Event List.
- Configure Settings of Event Actions in the Event List in Quick Setting Mode.
- Configure Overall Action Settings.

Configure Settings of Event Actions for Selected Events

The Event Settings page displays a table listing all power events and separates them into three categories Information, Warning and Severe. This table shows the actions defined for each power event. The Event Setting page provides an interface that you can set actions for the selected event. It also includes a description and allows you to set the following:

- **Logging:** Records this power event.
- **Notification:** Sends a notification when this event occurs.
- **E-mail:** Sends an e-mail when this event occurs.
- **Command File:** Executes a command file when this event occurs.
- **Shutdown:** Initiates a shutdown sequence when this event occurs.

Overview event list [for Agent]

Name	Description
Severe	
Battery capacity is critically low	Battery capacity is critically low; the power could be lost immediately.
Battery Backup is faulty	Battery Backup malfunction, it could not work normally.
Communication lost in power problem	Communication with device has been lost when meets a power condition.
Warning	
Utility power failure	Utility power failure, battery power will be supplied.
Output is overloaded	Output is overloaded; power may no longer be supplied. You can set the threshold of output load in page Battery Backup → Configuration → System.
Bypass is	Output is overloaded in bypass mode.

overloaded	
Battery-test failure	The battery-test failed to provide battery power normally.
Batteries are not present	Batteries are not present; the Battery Backup cannot provide battery power in this condition.
Batteries need to be replaced	Batteries may not work well any more; they need to be replaced with new ones.
Communication lost	Communication with device has been lost.
Communication cannot establish	Communication cannot establish during startup.
Information	
Remaining runtime is insufficient	<p>This event will occur when the battery is fully charged and the remaining runtime is still less than sum of times set in the following categories:</p> <ul style="list-style-type: none"> • Event Utility power failure and Low Battery shutdown action delay time. • Event Shutdown is initiated command file execution time. • OS shutdown time. • All connected Slave OS shutdown time. • Plus an additional 30 seconds. <p>You need to unload some equipment connected to the Battery Backup to get more remaining runtime. Please make sure all connected equipment will have enough remaining runtime when power problem occurs.</p>
Shutdown initiated	Shutdown process initiated.
A schedule has initiated	<p>A schedule has initiated, the system could be shutdown. This event occurs when any one of following things happens:</p> <ul style="list-style-type: none"> • The schedule setup controlled outlet to Whole outlet. • The Battery Backup support standalone outlet control and the schedule setup controlled outlet to Outlet#1 or Outlet2 and enable Shutdown OS.
Enters bypass mode	Enters bypass mode for power supply, battery power will no longer be provided.

Leaves bypass mode	Leaves bypass mode and switch to line mode or battery mode, battery power will be used.
Battery-test is successful	The Battery test was successful, battery power is normal.
Battery-test initiated	The Battery test initiated to verify that battery power can be provided normally.
Battery is charging	The battery starts to charge, the battery capacity will increase.
Battery stopped charging	The battery stopped charging, the battery capacity will stop increasing.
Battery is discharging	The battery is being discharged, the battery capacity will decrease.
Battery stopped discharging	Battery stopped discharging; the battery capacity will stop decreasing.
Calibration initiated	Calibration was initiated; the battery runtime will be evaluated.
Calibration finished	Calibration finished, battery power no longer is used.
Calibration canceled	Calibration was canceled; the battery runtime evaluation was interrupted.
Output voltage is boosted	Output voltage is boosted from a lower level.
Output voltage is no longer be boosted	Output voltage is normal and the boost will stop.
Output voltage is bucked	Output voltage is bucked from a higher level.
Output voltage is no longer be bucked	Output voltage is normal and the buck will stop.
Battery capacity is normal	The battery capacity is normal and no longer critically low.
Battery Backup is no longer faulty	The battery backup is no longer faulty and is working normally.
Utility power has restored	Utility power has restored, no longer using battery power.

Output is no longer overloaded	Output is normal and no longer overloaded.
Bypass is no longer overloaded	Output is no longer overloaded in bypass mode.
Batteries have installed	The batteries have been installed, device can be used normally.
Remaining runtime is sufficient	Remaining runtime is sufficient to discharge. This event will occur when event "Remaining runtime is insufficient" is solved.
Communication resume	Communication with device has resumed.
Communication established	Communication established at startup.
Battery Backup monitored	The Battery Backup will start to be monitored.
Battery Backup monitoring stopped	The Battery Backup monitoring stopped. This event is only can be set in Logging action.

Overview event list [for Slave]

Name	Description
Severe	
Shutdown asked by Agent	Agent asks for shutdown. There may be some problem in Power System.
Warning	
Communication can't establish with Agent	The communication with Agent has been lost.
Communication lost with Agent in power problem	The communication with Agent has been lost after power problem occurred.
Information	
Communication established with Agent	Communication with Agent is established.

Configure Settings of Event Actions in Quick Setting Mode

You can configure the actions enabled or disabled in event list. There is only one step to do. Click the top-right Quick Setting Mode icon. Then you can enable or disable each setting of event actions by checking or unchecking the check box. Each setting will come into effect immediately when you check or uncheck these check boxes, it will be efficient to setup lots of settings of event actions enabled or disabled in the mean time. You can click the top-right View mode icon to back to view event list.

Configure Settings of Event Actions for the Selected Event

You can configure the actions taken for individual events on this page. The detail will tell you what the event is and what actions can be configured:

- **Description:**
 - Detailed description about this event.
- **Event Logging:**
 - Records the event in the log when this event occurs.
- **Notification:**
 - Send a notification when this event occurs.
 - **Send a notification after this event has occurred for a specific time:** Sets the time delay before sending notifications. (0 means immediately)
 - **Notification will repeat when this event occurs:** If you enable this option, the notification will be sent repeatedly according to repeat rate.
 - The rate at which notification will repeat: Sets the repeat rate to send notifications.
 - **Recipients**
 - **Local users:** If you enable this option, all users who have accounts to use this computer will receive a notification when the event occurs.
 - **Domain users:** If you enable this option, all users in the same domain will receive a notification when the event occurs.
 - **Users who are accessing this computer which installed Agent:** If you enable this option, all users who are accessing this system will receive a notification when the event occurs.
 - **Users who are configured as Notification Receivers:** If you enable this option, users in the Notification Receivers will receive a notification when the event occurs.

Note: In Windows Vista, the notification function is limited. PowerPanel Business Edition only can send notification to **Local users** and **Users who are configured as Notification Receivers** in Windows Vista. It means that even if you configured some notification

receivers which are not belong to local users, those notification receivers will not receive the notification.

- **E-mail:**
 - **Send an e-mail when this event occurs:** If you enable this option, users configured as E-mail Receivers will receive an e-mail when the event occurs.
 - **Send an e-mail after this event has occurred for a specific time:** Sets the time delay before sending e-mail. (0 means immediately)
 - **Send an e-mail repeatedly when this event occurs:** If you enable this option, the e-mail will be sent repeatedly according to repeat rate.
 - **The rate at which e-mail will repeat:** Sets the repeat rate to send e-mail.

Note: Remember to configure E-mail settings to make sure sending email is available.

- **Command File:**
 - **Execute a command file when this event occurs:** If you enable this option, the selected command file will execute when this event occurs. If you have selected a command file which does not exist right now, system will show a note to notify this.
 - **Execute a command file after this event has occurred for a specific time:** Sets the delay time to execute the command file. (0 means immediately)
 - **Command execution will repeat when this event occurs:** If you enable this option, command file will execute repeatedly according to the repeat rate.
 - **The rate at which command execution will repeat:** Sets the repeat rate to execute the command file.
 - **Select command file:** Sets which command file you want to execute when the event occurs. You can write some shell script in this command file. Command files must be saved in the "extcmd" directory which is in the PowerPanel Business Edition installation directory. The system will search that directory and check if there are supported file types. If there are supported file types, those files will be shown in the command file list box. The current supported file type are *.bat and *.cmd files ("bat" extension file is supported on Win95, Win98, and WinMe. "cmd" extension file is supported on WinNT, Win2000, WinXP, and Win2003.)
 - **The approximate uptime for the selected file to complete:** Sets the estimated execution time of that command file. This time is used by the Battery Backup to delay shutdown or hibernation.

- **Shutdown Sequence:**
 - **Initiate a shutdown sequence for this event:** If you enable this option, the Battery Backup will initiate a shutdown sequence when the event occurs.
 - **Initiate a shutdown sequence when this event occurs for a specific time:** Sets the delay time to initiate the shutdown sequence. (0 means immediately)

Note: These functions may not be available on all models

ADVANCE - CONFIGURE IN WILD APPLY MODE

If you want to apply one event setting to other events, you will need to open wild apply mode by click top-right icon.

- **this event:** Apply the setting to this event. This is default setting.
- **severity events:** Apply the setting to same severity level events. It may be information, warning, or severe level.
- **all events:** Apply the setting to all events.

Configure Overall Action Settings

The Action Settings page allows you to configure detailed settings such as OS Shutdown, E-mail, E-mail Receivers and Notification Receivers for some actions.

- **Shutdown**
 - **The approximate time for OS shutdown to complete:** Sets the estimated shutdown time of the OS. The time is used by the Battery Backup to delay shutdown Battery Backup itself.
 - **The shutdown type is:** Sets which shutdown type you want to use. "Hibernate" will be invisible if your system doesn't support hibernation. You can enable/disable hibernation function in Windows Control Panel → Power Options → Hibernate tab. If your system doesn't support hibernation, that "Hibernate" tab will be invisible.
Configuration Options: [Shutdown][Hibernate]

Note: When OS shutdown event occurs, if there are any unnamed files to be saved, those files will be saved automatically to folder named "Auto Saved" in My Documents for each logged in user.

- **E-mail**
 - **The address of SMTP server is:** Sets the SMTP server address according to your SMTP configuration.
 - **The sender name is and the sender address is:** Sets the sender information for the e-mail.

- **SMTP server requires validation:** If you enable this option, the e-mail will be sent using the credentials you supply. If you enable this option, complete the account and password field. Please verify whether or not your SMTP server requires validation.
Account: Sets the account to access the SMTP server. The account must be a valid user for the SMTP server.
Password: Sets the password for the account.
- **SMTP server requires a secure connection (SSL):** If you enable this option, the e-mail will be sent through a secure connection (SSL).
- **XMPP Instant Messenger**

The XMPP (Extensible Messaging and Presence Protocol) is an open protocol for instant messaging. You can set the configuration to receive instant message when event occurred. You may ask for your MIS to verify if there is any XMPP Instant Messenger server in your company. If there is no XMPP Instant Messenger server, you can use Google talk service which is built on XMPP. So you can download and install Google Talk software or login Gmail to receive event occurred notification by Google Talk. In the other hand, you can build your local network XMPP Instant Messenger server by downloading some open and free XMPP Instant Messenger server software, like [openfire](#). The more server software information can be found on [XMPP Instant Messenger servers list](#).

 - **The address of XMPP Instant Messenger server is:** Sets the XMPP server address according to your XMPP Server configuration.
 - **The service name is:** Sets the service name built on XMPP Instant Messenger server to support.
 - **The port is:** The port XMPP Instant Messenger used.
 - **User authorization**
 - **Account:** Sets the account to access the XMPP Instant Messenger server.
 - **Password:** Sets the password for the account.
 - **Template:** Google Talk: A Google Talk XMPP setting template. If you have a Google account, you can use this instant messenger service.
- **MSN (Windows Live Messenger)**

The MSN is an instant messaging client for Windows XP, Windows Server 2003, Windows Vista, and Windows Mobile.

 - User authorization
 - **Account:** Sets the account to access the Windows Live Messenger server.
 - **Password:** Sets the password for the account.
- **Add and Remove E-mail Receivers**
 - Add an e-mail receiver
 1. Complete the text field for name and address.
 2. Click the **Add** button.
 3. The new e-mail recipient will be added to e-mail receivers list below.

4. Click the **Cancel** button to cancel adding an e-mail receiver.
- Remove an e-mail receiver
 1. Select the e-mail receiver from the e-mail receivers list and click it.
 2. The details of that e-mail receiver will be shown in the text field of name and address.
 3. Click the **Remove** button.
 4. The e-mail receiver will be removed from the e-mail receivers list.
 5. Click the **Cancel** button to cancel removing the e-mail receiver.
- Test an e-mail receiver
 1. Select the e-mail receiver from the e-mail receivers list and click it or just complete the text field for name and address.
 2. Click the **Test** button.
 3. The e-mail receiver will receive a test e-mail.

Note: Address may not be blank.

- Add, Remove, and Test Notification Receivers
 - Add a notification receiver
 1. Complete the text field for name.
 2. Choose the type of notification.
 3. Click the **Add** button.
 4. The new notification receiver will be added to the notification receivers list below.
 5. Click the **Cancel** button anytime if you don't want to add a new notification receiver.
 - Remove a notification receiver
 1. Select the notification receiver from the notification receivers list and click it.
 2. The details of that notification receiver will be shown in the text field of name.
 3. Click the **Remove** button.
 4. The notification receiver will be removed from the notification receivers list.
 5. Click the **Cancel** button to cancel removing a notification receiver.
 - Test a notification receiver
 1. Select the notification receiver from the notification receivers list and click it or just complete the text field for name and choose the type.
 2. Click the **Test** button.
 3. The notification receiver will receive a test message.

Note: Name must be a computer name, ip address, XMPP Instant Messenger account, or MSN account. It may not be blank.

Note: Google®, Google® Talk, and Gmail™ are either registered trademarks or trademarks of Google® Corporation in the United States and/or other countries. Windows Live™ Messenger is either registered trademarks or trademarks of Microsoft® Corporation in the United States and/or other countries.

VIEW THE LOGS AND CONFIGURE LOGGING OPTIONS

Event Log

The Event Log page lets you view a log that records what and when power events occurred. You can analyze the logs to determine whether your system and the Battery Backup are operating correctly.

DISPLAY OPTION [AGENT ONLY]

The display option let you to decide the event logs you want to view.

- **Period:** Which period you want to view the event logs.
Configuration options: [All][A day][A week][A month][A year]
- **Coverage:** The coverage depends on the day you click on Calendar icon and period you selected to show which dates event logs occurred will be displayed.
- **Time:** The time event logs occurred. Decide what time event logs occurred will be displayed.
- **Weekday:** The weekday event logs occurred. Decide which weekday event logs occurred will be displayed.
Configuration options:
[Sunday][Monday][Tuesday][Wednesday][Thursday][Friday][Saturday]
- **Severity:** The event logs severity level. Decide which severity event log will be showed. And you also can decide which event logs will be displayed by selecting one of the events in the combo box.
Configuration options: [Severe][Warning][Information]

Status Record [Agent only]

The Status Record page lets you view a log that records the summary of the Battery Backup status. The status recording frequency is defined in Log Options --> Recording Interval option.

- **Time:** The time status was recorded.
- **Input Voltage:** The utility power voltage (Volts).
- **Output Voltage:** The Battery Backup output voltage (Volts).
- **Input Freq:** The frequency of the utility power (Hz).
- **Output Load:** The load of the Battery Backup at the recording interval (%).
- **Capacity:** The remaining capacity of batteries (%).

- **Runtime:** The remaining runtime of the Battery Backup (minutes).

DISPLAY OPTION

The display option let you to decide the status records you want to view.

- **Period:** Which period you want to view the status records.
Configuration options: [All][A day][A week][A month][A year]
- **Coverage:** The coverage depends on the day you click on Calendar icon and period you selected to show which dates status records occurred will be displayed.
- **Time:** The time status records occurred. Decide what time status records occurred will be displayed.
- **Weekday:** The weekday status records occurred. Decide which weekday status records occurred will be displayed.
Configuration options:
[Sunday][Monday][Tuesday][Wednesday][Thursday][Friday][Saturday]

Log Options

The Log Options page lets you configure options for the logs:

- Sets the expiration of **Event Log** and **Status Record** to remove old entries.
Configuration options: [never][1 day][1 week][2 weeks][1 month][3 months][6 months][1 year]
- Enable or disable **Status Record** (Default is enabled.)
- Define the **Recording Interval for Status Record**.
Configuration options: [1][2][3][5][10][20][30][60] minutes

Note: A smaller interval will result in a larger log file. A large log file may degrade system performance.

*Tip: You can use external database to store logging data instead of internal database that may avoid performance issue. More information about it please find the **Guide for Using External Database to Store Logging Data** document in the PowerPanel Business Edition installation directory >> doc.*

MANAGE SCHEDULED SHUTDOWN AND RESTART SETTINGS [AGENT ONLY]

The Schedule page lets you manage your shutdown schedules. An active (enabled) schedule will cause your system to shutdown or hibernate and then the Battery Backup will turn off for an amount of time. After the schedule expires, the Battery Backup will power on and cause your system to reboot or wake from hibernation.

Add, Modify and Remove a schedule

- Add a schedule
 1. Complete the schedule properties form.
 2. Click the **Add** button to add the schedule to the Schedule List.
- Modify a schedule
 1. Select a schedule you want to modify from the Schedule List.
 2. Click the selected schedule and its properties will be displayed in the Schedule Properties form.
 3. Change the setting you want to modify.
 4. Click the **Modify** button to apply the changes. The modified schedule will be shown in the Schedule List.
- Remove a schedule
 1. Choose and click the schedule in the Schedule List.
 2. Click the **Remove** button to remove the schedule immediately.

Schedule Properties

- **Active:** A scheduled shutdown will run if the schedule is active.
- **Type:** Sets the schedule frequency. The Shutdown Time and Restart Time will change format automatically according to specific settings.
Configuration Options: [Once][Daily][Weekly]
- **Shutdown Time:** Sets what time to perform a shutdown.
- **Enable Restart:** Enable auto restart of your computer.
- **Restart Time:** Sets what time to reboot your computer. It is dependent on Enable Restart.
- **Controlled Outlets:** Sets which outlet is controlled by this schedule. You can set system or equipment's name in Protected System Identification page, and when you choose the controlled outlets you will see the defined name of system or equipment showed near this option. It can be a small tip to indicate which system or equipment will be scheduled. This option may show more outlets control according to the Battery Backup model type.
Configuration Options: [Main][Outlet 1][Outlet 2]
- **Comments:** Add comments to the schedule.

SHUTDOWN SCHEDULE MESSAGES

Messages	Description
The maximum duration is 30 days.	Modify the Shutdown Time and Reboot Time . A schedule with duration over 30 days is not allowed.
Reboot time can't occur before the shutdown time.	Modify the Shutdown Time and Reboot Time .
The schedule will become shutdown-only.	
The schedule can't be configured before the current date and time.	Correct the shutdown time.
The deactivate schedule won't perform any shutdown.	This schedule will be listed in the Schedule List . It will carry into effect if active.
This schedule overlaps an existing schedule.	An overlapped schedule is now allowed. Check the properties and modify accordingly.

CHANGE THE AUTHENTICATION USERNAME AND PASSWORD

The **Authentication** page allows you to change the username or the password. The default username and password are "admin". You can change the username and the password at the same time or just change only the username or the password.

- **Detail Information**
 - Username: The username to login this system. If you leave **new username** blank, the username won't be changed.
 - Password: The password to login this system. If you leave both **passwords** blank, the password won't be changed
 - Confirm Password: Verifies the passwords are identical.
- **Steps to change username**
 1. Type the new username you want to set in **New Username**.
 2. The valid values for username are alphanumeric (0~9, a~z, and A~Z) and space character.
 3. Click **Apply** button.
- **Steps to change password**
 1. Type the old password in **Old Password** for permission checking.
 2. Type the new password you want to set in **New Password**.
 3. Retype the new password in **Confirm Password** to confirm it matches **New Password**.
 4. Click **Apply** button.

If you have no action for 10 minutes, the session will time out and you will have to log in again.

CONNECT TO THE SYSTEM FROM REMOTE COMPUTER

You can connect to the administrator system from remote computer as following steps.

- You need to know the administrator system host IP.
- Enter the host IP with port (3052) in the web explorer as the format: "http://hostip:3052/"
For example: http://192.168.1.1:3052/ is the right format.
- Login the system with the username and password.