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UEFI/BIOS PRACTICE

a) Installing a new OS from a bootable USB drive

Step 1: Prepare the USB Drive

- Obtain a USB flash drive with sufficient storage capacity (usually 8GB or more).
- Connect the USB drive to your computer.

Step 2: Download the OS Image

- Download the ISO file of the operating system you want to install. You can usually get this from the official website of the OS provider.

Step 3: Create a Bootable USB Drive

- Download and install a tool like Rufus (for Windows) or Etcher (for Mac and Linux).
- Run the tool and select the USB drive you connected.
- Choose the OS ISO file you downloaded as the source.
- Click "Start" or "Write" to create the bootable USB drive. This process may take some time.

Step 4: Change Boot Order

- Restart your computer.
- During the boot-up process, press the key (e.g., F2, F12, ESC, or Delete) to access the BIOS or UEFI settings. The key varies by computer manufacturer.
- In the BIOS/UEFI settings, locate the "Boot" or "Boot Order" section.
- Set the USB drive as the first boot device. This ensures your computer boots from the USB drive.

Step 5: Boot from USB

- Save your BIOS/UEFI settings and exit.
- Your computer will now boot from the USB drive. Follow the on-screen instructions to start the OS installation process.

Step 6: Install the OS

- The OS installation process will vary depending on the OS you're installing. Follow the installation wizard's instructions carefully.
- You may need to select the installation language, time zone, partition the hard drive, and enter product keys or user information.

Step 7: Complete the Installation

- Once the installation is complete, your computer may automatically restart.
- If it doesn't, remove the USB drive and restart your computer.
- Your new operating system should now be installed and ready to use.

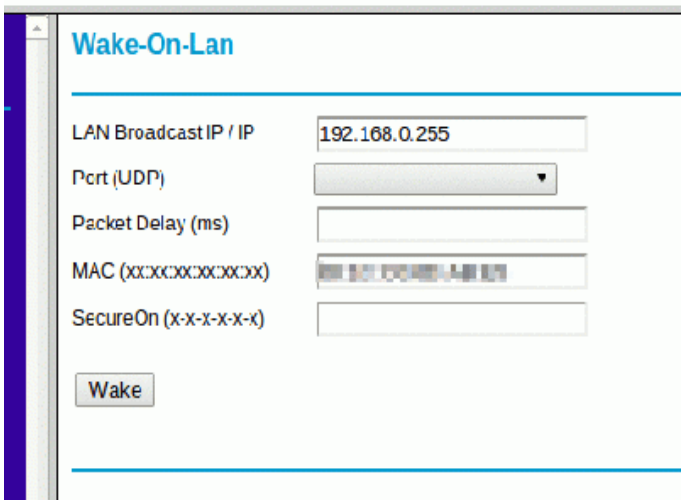
b) What is WOL used for and how to configure it a Windows environment...

Wake-on-LAN (WoL) is a computer networking standard that allows a computer to be turned on or awakened from sleep mode by a network message. It is useful for remotely connecting to a computer that is asleep, in sleep mode, or even completely disconnected. WoL is implemented using a specially designed frame called a magic packet, which is sent to all computers in a network, among them the computer to be awakened. The magic packet contains the MAC address of the destination computer.To configure WoL in a Windows environment, follow these steps:

1. Enable WoL in the BIOS/UEFI: Most WoL hardware functionally is typically blocked by default and needs to be enabled in using the system BIOS/UEFI. Each manufacturer will have unique steps, so what you see below cannot accurately describe your installation. If these instructions do not help, find out your BIOS manufacturer and check their website for a user guide on how to enter the BIOS and find the WoL function.
- Enter the BIOS instead of booting into your operating system.

- Find the WoL setting, which is usually located in the Power Management or Advanced tab.
- Turn on the WoL setting and save the changes.

2. Enable WoL in the network adapter properties: Further configuration from the OS is required in some cases, for example via the Device Manager network card properties on Windows operating systems. Newer versions of Microsoft Windows integrate WoL functionality into the Device Manager. This is available in the Power Management tab of each network device's driver properties. For full support of a device's WoL capabilities (such as the ability to wake from an ACPI S5 power off state), installation of the full driver is required.
3. Send the magic packet: To wake up the computer, you need to send a magic packet to the computer's MAC address. You can use a WoL client software or a command-line tool to send the magic packet. The client software usually requires the MAC address of the target computer and the IP address of the router. The command-line tool requires the MAC address and the broadcast address of the network.
   In summary, to configure WoL in a Windows environment, you need to enable WoL in the BIOS/UEFI, enable WoL in the network adapter properties, and send the magic packet to the computer's MAC address



c) How to settle a desktop computer to switch on automatically after AC power loss.

To settle a desktop computer to switch on automatically after AC power loss, you need to configure the BIOS settings. Here are the steps to do it:

1. Power on your computer and press the key to enter the BIOS setup utility. The key to enter the BIOS depends on the computer manufacturer. Watch for a message in tiny print along the bottom edge of the screen when it first turns on.

2. Inside the BIOS menu, look under the “Advanced” or “ACPI” or “Power Management Setup” menus for a setting named “Restore on AC/Power Loss” or “AC Power Recovery” or “After Power Loss.” The “Restore on AC/Power Loss” setting can be found under different places inside the BIOS setup, according to the computer manufacturer.

3. Set the “Restore on AC/Power Loss” setting to “Power On.”

4. Save and exit from BIOS settings. The menu on the screen will give you the function key combination to do this.

Note: Some older PCs lack this functionality. If your computer does not have this setting, you can use a UPS (Uninterruptible Power Supply) that has a built-in auto-restart feature.

Additionally, some motherboard manufacturers offer the auto power-on feature through software in the BIOS. This method has the advantage of not requiring disassembly of the computer to enable. All OnLogic computers have the ability to set auto-power on using this method. It’s a simple process that is outlined for all their units on their support site.

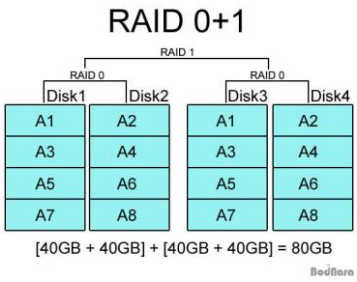
In summary, to settle a desktop computer to switch on automatically after AC power loss, you need to enter the BIOS setup utility, look for the “Restore on AC/Power Loss” setting, set it to “Power On,” and save and exit from BIOS settings.

d) How to setup RAID 0 or 1 in a HP proliant GEN 10 mini-server?

Here are the steps to set up RAID 0 or 1 in an HP Proliant Gen 10 mini-server:

1. Power on the server and press the F10 key to enter the BIOS setup utility.
2. Go to the "Advanced" or "ACPI" or "Power Management Setup" menu and look for the "Restore on AC/Power Loss" or "AC Power Recovery" or "After Power Loss" setting. Set it to "Power On."
3. Save and exit from BIOS settings.
4. During the startup, press F10 to access the Intelligent Provisioning tool.
5. Select "Customize the RAID" and use the Smart Array Controller tool to configure the RAID.
6. Choose the RAID level you want to set up. RAID 0 uses the entire drive capacity to store data, while RAID 1 duplicates data to a second drive for fault tolerance.
7. Configure the disks accordingly and save your settings.
8. Exit the Intelligent Provisioning tool and proceed with the OS installation.

.In summary, to set up RAID 0 or 1 in an HP Proliant Gen 10 mini-server, you need to enter the BIOS setup utility, configure the "Restore on AC/Power Loss" setting, access the Intelligent Provisioning tool during startup, select "Customize the RAID," choose the RAID level, configure the disks, and save your settings.



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