

Asus ASMB7-iKVM User Manual

Server managment board

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Summary of Contents for Asus ASMB7-iKVM

Page 1 ASMB7-iKVM Server Management Board...

<u>Page 2</u> Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

Page 3: Table Of Contents

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Page 6: Notices

Notices Federal Communications Commission Statement This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: • This device may not cause harmful interference, and • This device must accept any interference received including interference that may cause undesired operation.

Page 7 REACH.htm. ASUS Recycling/Takeback Services ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials.

Page 8: Safety Information

Safety information Electrical safety • To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the server. • When adding or removing devices to or from the server, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing server before you add a device.

Page 9: About This Guide

• Chapter 3: ASUS Host Management Controller Set-up This chapter tells you how to use the ASUS Host Controller Set-up that the server management board supports. • Chapter 4: Webbased user interface (ASMB7-iKVM only) This chapter tells you how to use the web-based user interface that the server management board supports.

<u>Page 10</u> Conventions used in this guide To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual. DANGER/WARNING: Information to prevent injury to yourself when trying to complete a task. CAUTION: Information to prevent damage to the components when trying to complete a task.

Page 11: Asmb7-Ikvm Specifications Summary

ASMB7-iKVM specifications summary Chipset Aspeed 2300 Internal RAM 224 MB for system 32 MB for video Internal ROM 32 MB Timers 32-bit Watchdog Timer Main features IPMI 2.0compliant and supports KVM over LAN Web-based user interface (remote management) Virtual media...

Page 13: Chapter 1: Product Introduction

This chapter describes the server management board features and the new technologies it supports. Chapter 1: Product introduction...

Page 14: Welcome

2.0-compliant board that allows you to monitor, control, and manage a remote server from the local or central server in your local area network (LAN). With ASMB7-iKVM plugging in a server motherboard, you can completely and efficiently monitor your server in real-time. The solution allows you to reduce IT management costs and increase the productivity.

Page 15: Features

Monitor Sensor, show SDR, SEL, FRU, configure BMC, LAN • Support SSL (HTTPS) • Multiple user permission level • Upgrade BMC firmware Update Firmware • DOS Tool • Web GUI (Windows XP/Vista/2003/2008, RHEL5.2, SLES10SP2) ® Notification • • SNMP Trap • e-Mail ASUS ASMB7-iKVM...

Page 16: System Requirements

* A power supply supported PMBus and PSMI is necessary. ** Specifications are subject to change without notice. System requirements Before you install the ASMB7-iKVM board, check if the remote server system meets the following requirements: • ASUS server motherboard with Baseboard Management Controller (BMC) connector* •...

Page 17: Network Setup

Network setup The ASMB7-iKVM server management board installed on the remote server connects to a local/central server via direct LAN connection or through a network hub. Below are the supported server management configurations. Direct LAN connection RJ-45 cable Remote console with...

Page 18 Chapter 1: Product introduction...

Page 19: Chapter 2: Installation

This chapter provides instructions on how to install the board to the server system and install the utilities that the board supports. Chapter 2: Installation...

Page 20: Before You Proceed

Before you proceed Take note of the following precautions before you install the server management board to the remote server system. • Unplug the server system power cord from the wall socket before touching any component. • Use a grounded wrist strap or touch a safely grounded object or to a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity.

<u>Page 21</u> Ensure the VGA, USB, PS/2 cables are corrected, then connect the power plug to a grounded wall socket. Everytime after the AC power is re-plugged, you have to wait for about 70 seconds for the system power up. ASUS ASMB7-iKVM...

Page 22: Firmware Update And Ip Configuration

Firmware update and IP configuration You need to update the ASMB7-iKVM firmware and configure IP source before you start using the ASMB7-iKVM board. 2.3.1 Firmware update To update the firmware: Insert the support CD into the optical drive. Restart the remote server, then press during POST to enter the BIOS setup.

Page 23 When the update process is completed, the following screen appears. You may update firmware from the web-based user interface. Refer to page 4-13 for details. ASUS ASMB7-iKVM...

Page 24: Configure Bmc Ip Source Static Ip

2.3.2 Configure BMC IP source static IP Repeat the step 1-4 in the previous sub-section. On reboot, the main menu appears. Select Configure BMC IP Source Static IP for LAN1 (or DM_LAN1), and press <Enter> to enter the sub-menu. A confirmation message appears, asking if you want to configure the BMC IP source static IP now.

Page 25: Configure Bmc Ip Source Dhcp

DHCP now. Select <Yes> to continue. WARNING !!! CONFIGURE BMC IP Source DHCP NOW ! DO YOU WANT TO CONTINUE ? When the configuration is completed, the below screen appears. Then you can get IP from DHCP server. ASUS ASMB7-iKVM...

Page 26: Bios Configuration

• Update the remote server BIOS file following the instructions in the motherboard/system user guide. Visit the ASUS website (www.asus.com) to download the latest BIOS file for the motherboard. • The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.

Page 27 Allows you to set the BMC subnet mask. We recommend that you use the same Subnet Mask you have specified on the operating system network for the used network card. Gateway IP Address Allows you to set the Gateway IP address. ASUS ASMB7-iKVM...

Page 28: System Event Log

2.4.3 System Event Log Allows you to view all the events in the BMC event log. It will take a maximum of 15 seconds to read all the BMC SEL records. Version 2.01.1204. Copyright (C) 2010 American Megatrends, Inc. SEL Components [Disabled] Allows you to enable or disable all features of system event log during booting.

Page 29: Ipv6 Bmc Network Configuration

LAN settings. IPv6 BMC DM_LAN1 IP Address Source [Previous State] Allows you to select the IP address source type and set the LAN channel parameters statically or dynamically. Configuration options: [Previous State] [Static] [Dynamic-Obtained by BMC running DHCP] ASUS ASMB7-iKVM 2-11...

<u>Page 30</u> The following items are available when you set IPv6 BMC DM_LAN1 IP Address Source to [Static]. IPv6 BMC DM_LAN1 IP Address Allows you to set the IPv6 BMC DM_LAN1 IP address. IPv6 BMC DM_LAN1 IP Prefix Length Allows you to set the IPv6 BMC DM_LAN1 IP Prefix length. IPv6 BMC DM_LAN1 Default Gateway Allows you to set the IPv6 BMC DM_LAN1 Gateway IP address.

Page 31: Running The Asmc7 Utility

Running the ASMC7 utility The ASMC7 utility allows you to update the ASMB7-iKVM firmware, configure the LAN setting for the remote server and change the user name/password in DOS environment. This utility is available from the support CD that came with the package.

Page 32 ASMC7 Help Menu options Options Description -kcs[smic/bt/pci_smic] NetFn command data..Send IPMI command -bmc_ip_source source[1: Static, 2: DHCP] Set the IP source -bmc_ip [ip_addr] Write the BMC IP address for (e.g., bmc_ip 10.10.10.20) dedicated LAN -bmc_mask [ip_mask] Write the subnet mask for dedicated (e.g., bmc_mask 255.255.255.0) - bmc_gateway [ip_addr] Write the gateway address for...

Page 33: Configuring The Lan Controller

2.5.1 Configuring the LAN controller Before you can establish connection to the ASMB7-iKVM board, you must configure the LAN port for server management used by the remote server to connect to the local/central server. To configure the LAN port of the remote server: Run the ASMC7 utility from the support CD following the instructions in the previous section.

Page 34: Configuring The User Name And Password

2.5.2 Configuring the user name and password You may change your user name and password from the ASMC7 utility. To change the user name and password: Follow steps 1-5 on page 2-11. When the C:> prompt appears, type ASMC7 -user_name xxxxx, then press <Enter>...

Page 35: Chapter 3: Asus Host Management Controller Set-Up

This chapter shows you how to set-up the ASUS Host Management Controller that the server management board supports. Chapter 3: ASUS Host Management Controller Set-up...

Page 36: Asus Host Management Controller Setup

ASUS Host Management Controller Setup The ASUS Host Management Controller Setup utility provides precise configuration and basic functions including System Event Log (SEL) generation and System Data Record (SDR) reading in DOS mode. This utility also supplies configuration sequences for the type of host interface as well as direct real-time monitoring of system information including CPU temperature(s), fan speeds and system voltages.

Page 37: Command Fields

After selecting a command, use the down arrow key to display available options. Select a command, then press <Enter> to execute. ASUS Host Management Controller Setup Menu No Support Initial...

<u>Page 38</u> Use the down arrow key to display the next sensor event. Press <Esc> to return to the main screen. ASUS Host Management Controller Setup Menu No Support Initial View...

<u>Page 39</u> The number on the bottom left of the screen indicates the data record displayed in the right window pane over the total number of sensor data records in the remote host. ASUS Host Management Controller Setup Menu No Support Initial...

Page 40: Set

Select BMC Info from the View command option, then press <Enter>. A list of BMC information appears on the left pane. Use the down arrow button to select a BMC information. The BMC information is displayed in the right pane. ASUS Host Management Controller Setup Menu No Support Initial View...

<u>Page 41</u> Select Host Interface from the Set command option, then press <Enter>. The screen displays the host interfaces supported by the server management board. Use the down arrow button to select a host interface, then press <Enter>. ASUS Host Management Controller Setup Menu No Support Initial View...

Page 42: Monitor

3.1.6 Monitor The Monitor command displays real-time data on the remote server system and CPU temperatures, voltages, and fan speeds. ASUS Host Management Controller Setup Menu No Support Initial View Monitor Help All Sensor Temperature Voltage Fan Speed OEM Define 1...

Page 43: Help

3.1.7 Help The Help command displays the available utility options, utility version, and copyright information. ASUS Host Management Controller Setup Menu No Support Initial View Monitor Help Help About ASUS ASMB7-iKVM...

Page 44 3-10 Chapter 3: ASUS Remote Console...

Page 45: Chapter 4: Web-Based User Interface

This chapter tells you how to use the web-based user interface that the server management board supports. Web-based user interface...

Page 46: Loging In The Utility

Press <F10> to save your changes and exit the BIOS Setup. You should install JRE on remote console first before using web-based management. You can find JRE from the folder JAVA of the ASMB7-iKVM support CD. You can also download JRE from http://www.oracle.com/ technetwork/java/javase/downloads/index.html...

Page 47: Using The Utility

Menu bar: Click a menu to display available function lists. Function list: Click each function key to start using its specific functions. Function title: Displays the function title. Help menu: Click to display the brief description of the selected function. ASUS ASMB7-iKVM...

Page 48: Fru Information

FRU Information This section contains detailed information for various FRU deviced present in this system. Server Health This section contains the data related to the server health, such as the Sensor Readings, Event log and System and Audit Log. Click each function key to start using its specific functions Chapter 4: Web-based user interface...

Page 49: Sensor Readings (With Thresholds)

The Event Log page displays a table of system event log. Select an event log category: Allows you to select the type of events to be displayed in the list. Clear Event Log: Click to clear the event log. ASUS ASMB7-iKVM...

Page 50: Configuration

Configuration This section allows you to configure the system settings. Click each function key to start using its specific functions 4.4.1 Active Directory An active directory does a variety of function including the ability to provide the information on objects, helps organize these objects for easy retrieval and access, allows access by users and administrators, and allows the administrators to set security up for the directory.

Page 51 Configure IP addresses in Domain Controller Server Address1, Domain Controller Server Address2 & Domain Controller Server Address3. Click Save to save the entered settings and return to Active Directory Settings Page. Click Cancel to cancel the entry and return to Active Directory Settings Page. ASUS ASMB7-iKVM...

Page 52: To Modify Role Group

To add a new Role Group In the Active Directory Settings Page, select a blank row and click Add Role Group to open the Add Role group Page as shown in the screenshot below. In the Role Group Name field, enter the name that identifies the role group in the Active Directory.

Page 53: Dns

To open LDAP Settings page, click Configuration > LDAP from the main menu. A sample screenshot of LDAP Settings Page is shown in the screenshot below. LDAP Settings Page Advanced Settings: To configure LDAP Advanced Settings. Options are Enable LDAP Authentication, IP Address, Port and Search base. ASUS ASMB7-iKVM...

<u>Page 54</u> Add Role Group: To add a new role group to the device. Alternatively, double click on a free slot to add a role group. Modify Role Group: To modify the particular role group. Delete Role Group: To be delete a role group from the list. Procedure Entering the details in Advanced

LDAP Settings Page In the LDAP Settings Page, click Advanced Settings.

<u>Page 55</u> In the LDAP Settings Page, select the row that you wish to modify and click Modify Role Group. Make the necessary changes and click Save. To Delete a Role Group In the LDAP Settings Page, select the row that you wish to delete and click Delete Role Group. ASUS ASMB7iKVM 4-11...

Page 56: Mouse Mode

4.4.4 Mouse Mode The Mouse Mode page allows you to select the mouse mode. Save: Select the desired mouse mode, and then click Save to apply the setting. 4.4.5 Network The Network page allows you to configure the network settings. MAC Address: Select whether to obtain the IP address automatically or manually configure one.

Page 57: Network Bond

Network Bond This page allows you to enable or disable networking bonding feature and configure the default interfaces. 4.4.7 This page allows you to configure the NTP server or view and modify the device's Date and Time settings. ASUS ASMB7-iKVM 4-13...

Page 58: Pef

4.4.8 Platform Event Filtering (PEF) provides a mechanism for configuring the BMC to take selected actions on event messages that it receives or has internally generated. These actions include operations such as system power-off, system reset, as well as triggering the generation of an alert. A PEF implementation is recommended to provide at least 16 entries in the event filter table.

Page 59 Generator ID 1 field is used to give raw generator ID1 data value. • Generator ID 2 field is used to give raw generator ID2 data value. In RAW data field, to specify hexadecimal value prefix with '0x'. ASUS ASMB7-iKVM 4-15...

<u>Page 60</u> Alert Policy Tab This page is used to configure the Alert Policy and LAN destination. You can add, delete or modify an entry in this page. The fields of PEF Management – Alert Policy Tab are explained below. Policy Entry #: Displays Policy entry number for the newly configured entry (read-only).

Page 61 LAN Destination has to be configured under Configuration->PEF->LAN Destination. That is if you select the number 4 for destination selector in Alert Policy Entry page, then you have to configure the 4th slot (LAN Destination Number 4) in the LAN Destination tab. ASUS ASMB7-iKVM 4-17...

<u>Page 62</u> In the Alert String field, enable the check box if the Alert policy entry is Event Specific. 10. In the Alert String Key field, choose any one value that is used to look up the Alert String to send for this Alert Policy entry. 11.

Page 63 Add: To save the new LAN destination and return to LAN destination list. Cancel: To cancel the modification and return to LAN destination list. ASUS ASMB7-iKVM 4-19...

<u>Page 64</u> Procedure: In the LAN Destination Tab, choose the slot to be configured. This should be the same slot that you have selected in the Alert Policy Entry- Destination Selector field. That is if you have chosen the Destination Selector as 4 in the Alert Policy Entry page of Alert Policy Tab, then you have to configure the 4th slot of LAN Destination Page.

Page 65: Radius

Auto Attach - Attaches Virtual Media to the server only when a virtual media session is started. Save: To save the current changes. It will automatically close the existing remote redirection either KVM or Virtual media sessions, if any. Reset: To reset the modified changes. ASUS ASMB7-iKVM 4-21...

Page 66: Services

4.4.11 Services This page lists services running on the BMC. It shows current status and other basic information about the services. Press Modify to modify the services configuration. 4.4.12 SMTP The SMTP page allows you to configure SMTP mail server. Enter the IP address of the mail

server, and then click Save to apply the settings.

Page 67: Ssl

Upload SSL option is used to upload the certificate and private key file into the BMC. Generate SSL option is used to generate the SSL certificate based on configuration details. View SSL option is used to view the uploaded SSL certificate in readable format. ASUS ASMB7-iKVM 4-23...

<u>Page 68</u> The fields of SSL Certificate Configuration – Upload SSL tab are explained below. Current Certificate: Current certificate information will be displayed (read- only). New Certificate: Certificate file should be of pem type Current Privacy Key: Current privacy key information will be displayed (read-only).

<u>Page 69</u> - Value ranges from 1 to 3650 days. Key Length: The key length bit value of the certificate. 10. Generate: To generate the new SSL certificate. HTTPs service will get restarted, to use the newly generated SSL certificate. ASUS ASMB7-iKVM 4-25...

Page 70 The fields of SSL Certificate Configuration – Generate SSL tab are explained below. Basic Information: This section displays the basic information about the uploaded SSL certificate. It displays the following fields. • Version • Serial Number • Signature Algorithm • Public Key Issued From: This section describes the following Certificate Issuer information •...

Page 71 MegaRAC® SP's IP address here> 3. For example, if your MegaRAC® SP's IP address is 192.168.0.30, enter the following: https://192.168.0.30 4. Please note the <s> after <http>.You must accept the certificate before you are able to access your Generic MegaRAC® SP. ASUS ASMB7-iKVM 4-27...

Page 72: Users

4.4.14 Users The User Management page allows you to view the current list of user slots for the server. You can add a new user and modify or delete the existing users. To open User Management page, click Configuration > Users from the main menu.

<u>Page 73</u> To change the password, enable the Change Password option. After editing the changes, click Modify to return to the users list page. Delete an existing User To delete an existing user, select the user from the list and click Delete User. ASUS ASMB7-iKVM 4-29...

Page 74: Remote Control

Remote Control This section allows you to perform remote operations on the server. Click each function key to start using its specific functions 4.5.1 Console Redirection The remote console application, which is started using the WebGUI, allows you to control your server's operating system remotely, using the screen, mouse, and keyboard, and to redirect local CD/DVD, Floppy diskette and Hard disk/USB thumb drives as if they were connected directly to the server.

Page 75 Console Redirection window. The Console Redirection main menu consists of the following menu items. • Video • Keyboard • Mouse • Options • Media • Keyboard Layout • Help A detailed explanation of these menu items are given below. ASUS ASMB7-iKVM 4-31...

<u>Page 76</u> Video This menu contains the following sub menu items. Pause redirection: This option is used for pausing Console Redirection. Resume Redirection: This option is used to resume the Console Redirection when the session is paused. Refresh Video: This option can be used to update the display shown in the Console Redirection window.

Page 77 Alt+Ctrl+Del: This menu item can be used to act as if you depressed the <CTRL>, <ALT> and keys down simultaneously on the server that you are redirecting. Context menu: This menu item can be used to act as the context menu key, when in Console Redirection. ASUS ASMB7-iKVM 4-33...

Page 78 Mouse Show Cursor: This menu item can be used to show or hide the local mouse cursor on the remote client system. Mouse Calibration: This menu item can be used only if the mouse mode is relative. In this step, the mouse threshold settings on the remote server will be discovered. The local mouse cursor is displayed in RED color and the remote cursor is part of the remote video screen.

Page 79 Zoom In: For increasing the screen size. This zoom varies from 100% to 150% with

an interval of 10% Zoom Out: For decreasing the screen size. This zoom varies from 100% to 50% with an interval of 10% ASUS ASMB7-iKVM 4-35...

<u>Page 80</u> Media Virtual Media Wizard: To add or modify a media, select and click 'Virtual Media Wizard' button, which pops out a box named "Virtual Media" where you can configure the media. A sample screenshot of Virtual media screen is given below. Virtual Media. Floppy Key Media: This menu item can be used to start or stop the redirection of a physical floppy drive and floppy image types such as img.

Page 81 Note: Soft keyboard is applicable only for JViewer Application not for other application in the client system. Soft keyboard is applicable only for JViewer Application not for other application in the client system ASUS ASMB7-iKVM 4-37...

Page 82: Server Power Control

4.5.2 Server Power Control The Server Power Control page displays the current server power status and allows you to change the current settings. Select the desired option, and then click Perform Action to execute the selected action. 4.5.3 Chassis Identify Command The Chassis Identify Command page allows you to perform a chassis identify command control operation.

Page 83: Power Button

4.5.4 Power Button The Power Button page allows you to enable or disable power button and click Perform Action to confirm the selection. ASUS ASMB7-iKVM 4-39...

Page 84: Maintenance

Maintenance This section allows you to perform the firmware update for the remote server. You can also use Restore Factory Defaults to reset system settings. 4.6.1 Firmware Update This section allows you to enter the update mode, and update the firmware of ASMB7.

<u>Page 85</u> The Appendix shows the location of the LAN ports for server management and BMC connector on server motherboards. This section also presents common problems that you may encounter when installing or using Appendix: Reference the server management board. information...

Page 86: Appendix: Reference Information

BMC connector The ASUS server motherboards that support the ASMB7-iKVM comes with a Baseboard Management Controller (BMC) connector. Refer to the illustration below to locate the BMC connector on different server motherboards. The motherboard illustration is for reference only. The motherboard layout and appearance may vary depending on the model.

Page 87: Lan Ports For Server Management

LAN ports for server management The ASUS server motherboards that support the ASMB7-iKVM comes with three LAN (RJ-45) ports: one for network connection and the other two for server management. For easy identification, the LAN ports for server management are LAN1 and DM_LAN1 ports.

Page 88: Troubleshooting

Troubleshooting This troubleshooting guide provides answers to some common problems that you may encounter while installing and/or using ASUS ASMB7-iKVM. These problems require simple troubleshooting that you can perform by yourself. Contact the Technical Support if you encounter problems not mentioned in this section.

Page 89: Sensor Table

0x00: DIMM_A1, 0x01: DIMM_A2, (For Intel DP platform only 0x01: Read ECC error 0x02: DIMM_A3, 0x03:DIMM_A4, -- ASUS Z8 series server 0x02: ECC Error occurred on a scrub 0x04: DIMM_B1, 0x05: DIMM_B2, MB; -E6 server system) 0x04: Write Parity Error...

Page 90 Backplane HD Sensor No. Sensor Name Sensor Type Sensor Type Code Sensor Value or Event Type 0x68 Backplane1 HD1 Drive Slot 0x0D Discrete(0x6F) 0x01: Drive Presence 0x02: Drive Fault 0x80: Rebuild 0x69 Backplane1 HD2 Drive Slot 0x0D Discrete(0x6F) 0x01: Drive Presence 0x02: Drive Fault 0x80: Rebuild 0x6A...

Page 91: Power Supply

0x40: Transition to Non-Recoverable 0x9E PSU2 Slow FAN2 0x04 Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable 0x9F PSU2 PWR Detect Power Supply 0x08 Discrete(0x6F) 0x01: Presence Detected 0x02: Power Supply Failure Detected ASUS ASMB7-iKVM...

Page 92: Hardware Monitor

Upper Critical - going high 0x39 +1.5V_ICH Voltage 0x02 Threshold(0x01) (For Intel DP platform only -- ASUS Z8 Lower Non-critical - going low series server MB; -E6 server system) Lower Critical - going low Upper Non-critical - going high Upper Critical - going high 0x3A +1.1V_IOH...

Page 93 0x3F P2VTT Voltage 0x02 Threshold(0x01) (For Intel DP platform only -- ASUS Z8 Lower Non-critical - going low series server MB; -E6 server system) Lower Critical - going low Upper Non-critical - going high Upper Critical - going high 0x40 +3.3VSB...

Page 94 0xA2 FRNT_FAN1 0x04 Threshold(0x01) Lower Non-critical - going low Lower Critital - going low 0xA3 FRNT_FAN2 0x04 Threshold(0x01) Lower Non-critical - going low Lower Critital - going low 0xA4 FRNT_FAN3 0x04 Threshold(0x01) Lower Non-critical - going low Lower Critital - going low 0xA5 FRNT_FAN3 0x04 Threshold(0x01) Lower Non-critical - going low Lower Critital - going low 0xA5 FRNT_FAN4 0x04...

Page 95: Asus Contact Information

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Page 96: Technical Support

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