

# Virtual Command Center

## Software Installation Guide



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## **Notices**

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# About This Guide

## Purpose of This Guide

This guide provides procedures for installing the Virtual Command Center (VCC) software (if required).

It is assumed that the installer is familiar with the Unix operating system, and the platform on which the VCC software will be installed.

## The VCC Documentation Set

In addition to this manual, you may need to refer to other manuals in the VCC documentation suite. These are:

- **Getting Started.** Contains an initial overview of the VCC, and its applications.
- **Getting Started for Former PCM Users.** Provides information for users who are migrating to the VCC from the Digital Equipment Polycenter product.
- **Operations Guide.** Contains procedures for day-to-day operation of the VCC, including selecting consoles, and managing alerts and messages.
- **Administration Guide.** Provides information on administering the VCC software and hardware.
- **Scripting Guide.** Describes how to write scripts in GCL (Global Control Language).
- **Installation Preparation Guide.** Contains information on how to install VCC hardware, and prepare mainframes and servers to communicate with the VCC.
- **Troubleshooting Guide.** Provides initial troubleshooting steps to take before contacting Technical Support.
- **VCC/BMC PATROL Integration Product Guide.** Describes how to install and use the optional software package that allows the BMC PATROL product to integrate with the VCC.

## HTML and Word Source Files

Source files for the VCC documentation are provided on the release CD in two formats:

- Microsoft Word 97 files in the `/usr/ics/etc/doc/manuals` directory, from which extra copies of the documents may be printed.
- HTML files, which may be opened from the CD in a Web browser or installed on an intranet server. The files are located in a top-level directory called “html-manuals”. To browse the HTML manual set, open the file called “html-manuals/index.html”, which provides a contents list for all the HTML documents.
- The documents may be obtained in PDF form from the [www.globalmt.com](http://www.globalmt.com) web site in <http://globalmt.com/html-manuals/index.html> directory, as well as updated html versions of the manual.

# Chapter 1 System Requirements

This chapter describes the hardware and software prerequisites for the system on which the VCC will be installed.

## Hardware Requirements

Before commencing installation, ensure the system on which the VCC will be installed meets the following requirements:

**Caution:** Because of the critical nature of this application, especially when console traffic is high and performance requirements most critical, Global MAINTeCH recommends that the VCC runs on a system that is dedicated to the VCC.

- Minimum processor speed: 1 GHz
- Memory requirement: 512 Mbytes preferred
- Motif X-Windows client libraries installed.
- 300 Mbytes of free disk space available in `/usr/ics`. If this directory does not already exist, the VCC install process creates it in `/usr`. This space requirement provides 230 Mbytes for the VCC software, and allows up to 70 Mbytes for user data and logs.

*Note:* Additional disk space may be required if you have a large number of custom scripts and logs. In a typical system, user data and logs occupy between 20 and 70 Mbytes.

## Software Requirements

- Intel-based computer system, running version RedHat ES3, ES4, or AS3. The installation program checks the version of Linux, and exits if incompatible
- The VCC requires that a license key file provided by Global MAINTeCH is installed on the system. Refer to the *Administration Guide* for information on licensing.

## Users Account and Group Requirements

- The VCC limits the maximum number of concurrent users to 50. The number of users also depends on the VCC user license purchased.
- The installation program creates the Unix user and groups listed below.

**login:** ics

**name:** VCC Administrator

**primary group:** ics

**other groups:** icsadmin

**shell:** /bin/ksh

**home directory:** /home/ics

The installation program creates the ics and icsadmin groups first. Once these groups exist, the installation program creates user ics belonging to two groups.

The program may exit if the ics or icsadmin groups, or the /home/ics directory already exist (except as the result of a previous VCC installation process).



## Chapter 2 Software Installation

This chapter describes:

- The effects that installing the VCC software will have on your system.
- Procedures for installing from CD-ROM.
- Considerations if you are upgrading an existing installation.

## The effects of installing VCC on the system

The VCC installation process makes certain additions and changes to your system, as follows:

- It adds two setuid root daemons, `icsmaster` and `gwSnmpTrapMgrd`.
- It installs the freeware `sudo` utility, and its associated configuration file `sudoers` into `/etc`, if they are not already installed. This extends certain system privileges to VCC users in a safe way. The `sudo` program runs `setuid root`.
- The VCC installation process modifies certain kernel parameters. It sets:
  - The maximum number of processes per user
  - The maximum number of threads per user
  - The `ubc-maxpercent`
  - The maximum allowable size of the shared memory segment.

It does this as follows:

```
proc:
    max-proc-per-user = 512
    max-threads-per-user = 4096

vm:
    ubc-maxpercent = 60

ipc:
    shm-max = 25165824
```

- It adds the following entries to the `/etc/services` file:

```
objmgr      63001/tcp
SnmpTrapMgrd 63005/tcp
AlertMgrd   63006/tcp
StatMgrd    63007/tcp
EventMgrd   63008/tcp
MvsD        63009/tcp
Oed         63011/tcp
Serd        63013/tcp
Daemon232   63014/tcp
EBusMgr     63015/tcp
GCLRund     63016/tcp
TelMgr      63017/tcp
IConMgr     63012/tcp
```

## Before Starting Installation

Before installing the VCC from the media supplied by Global MAINTTECH, refer to the README file supplied with the CD. The README file contains detailed installation procedures and last minute information that is not in the manuals. The file is located in the top-level directory of the CD, or in /usr/ics/README on the VCC host after the software is installed.

## Installing from the Distribution Media

Global MAINTTECH supplies the VCC software on CD-ROM. Specific installation procedures are given below.

*Note:* Steps marked (*Upgrade only*) apply only if installing on a server that already has a previous release of the VCC installed. These steps should be omitted if this is the first VCC installation on this server.

1. Obtain a license key file from Global MAINTTECH Technical Support and have it ready to install. See the *VCC Administration Guide* for more information.
2. (*Upgrade only*) Ensure that no other users are logged on to the VCC.
3. (*Upgrade only*) Shut down the VCC, using the **Administration - Shutdown...** menu option in the VCC GUI main window, or from the Unix command line, as follows:

```
/usr/ics/bin/icsmaster -X
```

4. From the Unix command shell, become the "Super User" (root), either by issuing `su` or by logging in as "root".
5. Install the VCC software as follows:
  - A. From the distribution CD-ROM

1. Insert the VCC CD-ROM disk into the drive on the VCC server. Choose or create a directory on which to mount the CD-ROM file system. This example uses /cdrom as the mount point. Mount the CD-ROM with the following command:

```
/sbin/mount /dev/cdrom /mnt
```

2. Run the `INSTALL` program from the CD-ROM with the mount point directory as the argument, as follows, noting that the command is case-sensitive:

```
/cdrom/PACKAGE/INSTALL /cdrom
```

The installation process prints status information and prompts for additional input.

If you do not wish to install the firmware at this time (either because you have already done so or you are testing), you may suppress the firmware code updates with the `nofirmware` argument:

```
/cdrom/PACKAGE/INSTALL /cdrom -nofirmware
```

This will install all files except those relating to the firmware that runs on the EBUS cards. There is also a `firmware` argument that will only install the firmware leaving the rest of the code untouched.

3. Unmount the CD-ROM. Again, the following example assumes the mount point is `/cdrom`:

```
/sbin/umount /cdrom
```

#### B. From an ftp file

1. Put the 'PACKAGE<revision>.tar.gz' file into a home directory and unzip the file with this command:

```
/tar xzf PACKAGE<revision>.tar.gz
```

2. Run the `INSTALL` program from the same home directory where the tar file is located as follows, noting the space and period at the end of the command:

```
PACKAGE/INSTALL .
```

6. (*Upgrade only*) There are new keymap files in the `examples` directory. If the keymap files in `/usr/ics/config/keymaps` have not been customized, copy the new examples into the same directory:

```
cp /usr/ics/examples/config/keymaps/* /usr/ics/config/keymaps
```

If the keymap files have been customized, compare the new examples with the customized keymaps before deciding whether to use the new examples.

7. Copy the license key configuration file to `/usr/ics/config` directory.
8. Use the procedure in *Chapter 3 Updating EBUS Firmware* to download of new EBUS firmware (if required) to the EBUS interface cards.
9. Restart the VCC Server:

```
/sbin/shutdown -rf now
```

## Starting or Restarting the VCC

After the installation program completes, log in to any VCC user's account to restart the VCC. If this is a new VCC installation, refer to the *VCC Administration Guide* for configuration procedures. If this is an upgrade from a previous release, the VCC will run with the existing configuration. Contact Global MAINTECH Technical Support if any problems occur.

## Chapter 3 Updating EBUS Firmware

This chapter describes how to update the EBUS firmware, if this is necessary as part of a VCC software upgrade. This procedure may not always be necessary, as the EBUS firmware will not be upgraded with every VCC software upgrade. The Release Notes for the release or patch will indicate if the EBUS firmware should be updated.

## EBUS Firmware Update Procedure

The EBUS firmware can only be upgraded after the revised VCC software has been installed, as described in Chapter 2. For the new EBUS firmware version to take effect, the firmware must be resent to the interface cards, as described below.

1. Ensure all consoles that are connected to the VCC via the EBUS kit are varied offline to avoid errors.
2. Ensure all users are logged off and no scripts are running on the VCC server.
3. There are two ways to download revised firmware from the VCC server:
  - Power the EBUS kit off, then on again. This initiates a firmware download to each card that requires updated firmware.
  - Press the Hard Reset button on each interface card in turn

When the Code indicator light on each interface card changes from blinking green to steady green, the firmware download is complete.

*Note:* To update EBUS card boot blocks, use the ebusmaint tool. Refer to Chapter 20 of the *Administration Guide* for details.

## Chapter 4 Software De-Installation

This chapter describes how to remove the VCC software from a server. De-installation may typically be considered in the following circumstances:

- If a suspected installation problem prevents the VCC from running correctly. The software can subsequently be re-installed.
- If the VCC software is moved to another server.
- To remove an evaluation copy of the VCC that is no longer required.

## The Effects of De-Installing the VCC from the System

The VCC tries to restore the system to its state before the VCC was installed, as follows:

- Removes those lines in `/etc/services` that were added during VCC installation.
- Restores the kernel settings in `/etc/sysconfigtab` to their values before VCC installation. If the values differ from those set during VCC installation, they are not changed.
- Archives customer-specific VCC data from `/usr/ics` to a temporary directory indicated by the `deinstall` program, including configuration, script, system, and log data. This information may subsequently be retrieved by the customer, for example, if the VCC software is moved to another server.
- Restores `/etc/sudoers` to its state before VCC installation, normally deleting it. If it differs from the file installed by the VCC, it is left unchanged.

The de-installation process does NOT do the following:

- Remove only an upgrade to an existing VCC installation. The de-installation process returns the system to its state before the VCC was installed, regardless of how many upgrades were made.. To restore a previous release, remove the VCC completely, then re-install from the relevant CD.
- Remove or change login users, even if they were originally created by the VCC.

## De-Installing the VCC Software

1. Ensure that no other users are logged on to the VCC.
2. Shut down the VCC, using the **Administration - Shutdown...** menu option in the VCC GUI main window, or from the Unix command line, as follows:

```
/usr/ics/bin/icsmaster -X
```

3. If the deinstall is being performed prior to installing a prior release of VCC back up the entire contents of the config directory and any other modified files before proceeding. It may be used to restore the configuration when the prior release is restored.
4. From the Unix command shell, become the "Super User" (root), either by issuing `su` or by logging in as "root".
5. Start the de-installation process by entering:

```
/user/ics/bin/vcc-deinstall
```

The VCC prints a transcript of the de-installation process, including the location of saved configuration data, the locations of backup files, the restored kernel values, and the names of VCC services that are removed.

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