



## Embedded Resource Manager

---

The Embedded Resource Manager (ERM) feature allows you to monitor internal system resource utilization for specific resources such as the buffer, memory, and CPU. ERM monitors resource utilization from the perspective of various subsystems within the Cisco IOS software such as resource owners (ROs) and resource users (RUs). ERM allows you to configure threshold values for system resources.

The ERM infrastructure is designed to be extensible and to allow for granular monitoring on an IOS task basis. Network administrators can define thresholds to create notifications according to the real-time resource consumption. ERM goes beyond simply monitoring for total CPU utilization. Through the use of ERM, network administrators and operators can gain a better understanding of the device's operational characteristics, leading to better insight into system scalability and improved system availability.

### Configuration Information

Configuration information is included in the “Embedded Resource Manager” module of the *Cisco IOS Network Management Configuration Guide*, Release 12.4, at the following URL:

[http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124cg/hnm\\_c/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124cg/hnm_c/index.htm)

The following sections provide information about this feature:

- Information About the Embedded Resource Manager
- How to Configure the Embedded Resource Manager

For a complete list of features included in the “Embedded Resource Manager” module, see the Feature Information Table located toward the end of the module.

### Command Reference Information

Command reference information is included in the *Cisco IOS Network Management Command Reference*, Release 12.4T, at the following URL:

[http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124tcr/tnm\\_r/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124tcr/tnm_r/index.htm)

### New or Modified Commands

The following commands are new or modified for this feature:

- **buffer public**
- **buffer tune automatic**



---

**Americas Headquarters:**  
**Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA**

© 2007 Cisco Systems, Inc. All rights reserved.

- **cpu interrupt**
- **cpu process**
- **cpu total**
- **critical rising**
- **debug resource policy notification**
- **debug resource policy registration**
- **instance (resource group)**
- **major rising**
- **memory io**
- **memory processor**
- **memory statistics history table**
- **minor rising**
- **monitor event-trace cpu-report (EXEC)**
- **monitor event-trace cpu-report (global)**
- **monitor processes cpu extended**
- **policy (ERM)**
- **policy (resource group)**
- **processes cpu autoprofile hog**
- **processes cpu extended**
- **resource policy**
- **show buffers leak**
- **show buffers tune**
- **show buffers usage**
- **show memory fragment**
- **show memory statistics history table**
- **show monitor event-trace cpu-report**
- **show processes cpu autoprofile hog**
- **show processes cpu extended**
- **show resource all**
- **show resource database**
- **show resource owner**
- **show resource relationship**
- **show resource user**
- **slot (ERM policy)**
- **system (ERM policy)**
- **user (ERM)**

---

CCVP, the Cisco Logo, and the Cisco Square Bridge logo are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, GigaStack, HomeLink, Internet Quotient, IOS, iPhone, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, MeetingPlace, MGX, Networking Academy, Network Registrar, *Packet*, PIX, ProConnect, RateMUX, ScriptShare, SlideCast, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0612R)

---

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

© 2007 Cisco Systems, Inc. All rights reserved.