

RED HAT'S SUBSCRIPTION GUIDE FOR JBOSS ENTERPRISE MIDDLEWARE

A GUIDE TO UNDERSTANDING RED HAT'S FLEXIBLE CONSUMPTION MODEL
FOR JBOSS ENTERPRISE MIDDLEWARE

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1. JBOSS ENTERPRISE MIDDLEWARE SUBSCRIPTIONS

Red Hat provides software subscriptions for JBoss Enterprise Middleware products that enable ongoing value throughout entire subscription terms. Features and benefits of the JBoss Enterprise Middleware subscription include:

- **Predictability:** Subscriptions are offered on an annual basis and include access to new versions at no additional cost; therefore, there are no large upfront license fees or hidden costs.
- **Integrated and certified enterprise platforms:** Access to enterprise open source middleware platforms, in source and binary forms, along with enterprise product documentation specific to each product release
- **Regular upgrades and updates:** Provide enhancements, new features, new platform certifications, and access to the latest defect and security fixes
- **Security Response:** Subscriptions include Red Hat's industry-recognized security response process to help customers proactively address potential security issues in their environments.
- **Long-term Stability:** Each JBoss Enterprise Middleware product has a defined multi-year product life-cycle with strict update policies that maintain application stability and compatibility for the long-term.
- **World-class Technical Support:** Unlimited incident support from the open source middleware experts, with coverage up to 24x7 with one-hour response time for critical issues
- **Red Hat Customer Portal Access:** A single portal for accessing all of the benefits of a Red Hat subscription, including: enterprise software delivery, product updates, critical issue notifications, knowledgebase access, and case management
- **Partner Certifications:** Deploy solutions with confidence that your enterprise middleware is fully certified by leading Red Hat ISV partners.
- **Legal Assurance:** The Red Hat Open Source Assurance program safeguards customers who are developing and deploying open source solutions from legal harm.

To help users properly size their JBoss Enterprise Middleware environments, Red Hat provides the following guidelines that cover common types of deployment scenarios.



2. SUBSCRIPTION SIZING GUIDELINES

Subscriptions to JBoss Enterprise Middleware products are provided in a virtualization-friendly model, consumed in increments of 16 and/or 64 processor core bands, and backed by a choice of enterprise service levels that support any type of mission-critical deployment. Key features of the JBoss consumption model include:

- Processor cores can be virtual or physical, making them ideally suited for the growing trend toward virtualizing middleware workloads.
- Customers are free to choose the types of processor cores that make sense for their environments; different types of processor cores are treated the same.
- Technical support covers issues across the entire application lifecycle, from development to deployment management, across any supported environment.
- A subscription for any individual JBoss Enterprise Middleware product includes development use for all of the products in the JBoss Enterprise Middleware portfolio.

Red Hat's subscription model for JBoss Enterprise Middleware provides customers with a simple and easy way to consume their enterprise middleware software.

2.1 JBOSS ENTERPRISE MIDDLEWARE PRODUCTS

The subscription sizing guidelines covered in this guide apply to the following JBoss Enterprise Middleware products:

- JBoss Enterprise Web Server
- JBoss Enterprise Web Platform
- JBoss Enterprise Application Platform
- JBoss Enterprise Portal Platform
- JBoss Enterprise SOA Platform
- JBoss Enterprise BRMS
- JBoss Operations Network

While certain JBoss Enterprise Middleware products are used throughout this guide to help illustrate a sizing example, the subscription sizing guidelines covered in the document apply only to the JBoss Enterprise Middleware products listed above.



2.2 PROCESSOR CORE ALLOCATION

For each JBoss Enterprise Middleware product deployed, the total processor cores under subscription can be allocated across any of the following three environments:

- 1. Production:** Usually a tightly controlled environment, often managed by a production operations team. If downtime or a system outage were to occur, business users and customers are typically negatively impacted, unproductive, or experience a loss of system functionality.
- 2. Test:** The environment where users might be testing or piloting pre-production versions of the system, and where IT teams typically conduct functionality, integration, performance, and scalability testing. Test environments are also sometimes referred to as quality assurance (QA), staging, integration, pre-production, or user acceptance testing (UAT) environments.
- 3. "Hot" Disaster Recovery/Failover:** An environment that typically mirrors the production environment, and is used to handle or offload system traffic that has been moved over or is shared with the production environment. In this environment, the JBoss Enterprise Middleware product is actively running and able to readily accept system traffic.

For subscription sizing purposes, as long as the total cores for a given JBoss Enterprise Middleware product do not exceed the amount under subscription, customers can allocate any of these cores across any of their production, test, or "hot" disaster recovery/failover environments.

2.3 DEPLOYMENT TYPES

JBoss Enterprise Middleware subscriptions are extremely flexible. For example, an individual product subscription can be deployed across a variety of different virtual or physical operating environments and hardware types.

VIRTUAL DEPLOYMENTS

With the growing trend towards virtualization, Red Hat's subscription for JBoss Enterprise Middleware provides a virtualization-friendly model that allows customers to take full advantage of all of the benefits of using server virtualization technology.

When deploying in a virtual environment, users often pool multiple servers together and use virtualization software (e.g., Red Hat Enterprise Virtualization, VMware vSphere/ESX, or Microsoft Hyper-V) to share these pooled server resources across numerous guest instances. Virtualization users then typically size these guest instances using an allocation based on virtual processor cores. Often times, users will allot a subset of their total physical processing capacities to the virtual guest instances assigned to run JBoss Enterprise Middleware.

When using virtualization software on a supported configuration, only the virtual processor cores allocated to the JBoss deployments are counted; in some cases, this may be fewer than the total number of physical number of cores.

Example: Virtualizing a single six-core processor and allocating only four of the six cores to guest instances containing the JBoss Enterprise Middleware product would count as four cores.



PHYSICAL DEPLOYMENTS

When deploying a JBoss Enterprise Middleware product directly onto physical servers in a non-virtualized way, the total number of processor cores on those servers is counted.

Example: Deploying a JBoss Enterprise Middleware product on two four-core processors would count as eight cores.

When JBoss Enterprise Middleware is deployed on a physical server using hard disk drive partitioning, only the total number of physical cores assigned to the partition containing JBoss Enterprise Middleware is counted.

Example: An eight-core physical server is partitioned into two equal partitions, each allocated four processor cores. A JBoss Enterprise Middleware product is deployed to only one of these partitions. Only the cores allocated to the partition containing JBoss Enterprise Middleware are counted (four processor cores in this example).

For each JBoss Enterprise Middleware product deployment, the lesser of either the total sum of virtual cores or the total sum of the physical cores allocated to the JBoss Enterprise Middleware product is counted.

DISASTER RECOVERY

Subscriptions for JBoss Enterprise Middleware products can be used to support and test "cold" disaster recovery systems. "Cold" disaster recovery refers to systems where a JBoss Enterprise Middleware product may be installed for infrequent (e.g., annual or quarterly) disaster recovery testing, and is not actively taking on live system traffic. Since a production system is offline at the time of disaster, customers can simply reallocate the necessary number of processor cores already under subscription to support their "cold" disaster recovery systems (temporarily making these "cold" systems actually production systems during the disaster recovery process).

DEVELOPMENT

Subscribers to any individual JBoss Enterprise Middleware product have access to use all of the products in the JBoss Enterprise Middleware portfolio for development use. Development use can be on a variety of environments, such as a server, laptop, and workstation, and is provided for up to 25 users with every 16 cores of a JBoss Enterprise Middleware product under subscription.

Products in the JBoss Enterprise Middleware portfolio that are provided for development use include:

- JBoss Developer Studio
- JBoss Enterprise Web Server
- JBoss Enterprise Web Platform
- JBoss Enterprise Application Platform
- JBoss Enterprise Portal Platform
- JBoss Enterprise SOA Platform
- JBoss Enterprise BRMS



2.4 SUBSCRIPTION SERVICE LEVEL AGREEMENTS

JBoss Enterprise Middleware subscriptions are offered with a choice of either Standard or Premium Service Level Agreements (SLAs). Support SLAs apply only to technical support issues concerning the JBoss Enterprise Middleware product under subscription.

The Standard SLA provides coverage during normal business hours, whereas the Premium SLA expands this coverage to include 24x7 support for critical issues. For any JBoss Enterprise Middleware subscription, different SLA types can be mixed and matched across any type of operating environment.

SUBSCRIPTION SERVICE LEVEL AGREEMENTS

SLA OPTION	STANDARD	PREMIUM
Hours of Coverage	Standard Business Hours	Standard Business Hours 24x7 for Severity 1 & 2
Support Channel	Web and Phone	Web and Phone
Number of Cases	Unlimited	Unlimited
Software Maintenance	via Red Hat Management Portal	via Red Hat Management Portal

A Red Hat customer raising a technical support issue defines the initial severity level of that issue. These severity levels provide Red Hat customers with a common nomenclature to use when assessing the importance and impact of a technical support issue. Both Standard and Premium SLAs use the same four severity levels and definitions, which range from urgent priority to low priority. Severity levels also may differ for production or development issues. For example, all four severity levels apply to production-related issues, whereas only severity 3 and 4 apply to development-related issues.

SEVERITY LEVEL DEFINITIONS

Severity 1	Urgent: A problem that severely impacts your use of the software for production purposes (e.g., loss of production data, production systems are not functioning). The situation halts your business operations and no procedural workaround exists.
Severity 2	High: A problem where the software is functioning but your use of it for production purposes is severely reduced. For production purposes, the situation is causing a high impact to portions of your business operations and no procedural workaround exists.
Severity 3	Medium: A problem that involves partial, non-critical loss of use of the software for production purposes or development purposes. For product purposes, there is a medium-to-low impact on your business, but your business continues to function (by perhaps using a procedural workaround). For development purposes, the situation is causing your project to no longer continue or migrate into production.
Severity 4	Low: A general usage question, reporting of a documentation error or recommendation for a future product enhancement or modification. For production purposes, there is low-to-no impact on your business or the performance or functionality of your system. For development purposes, there is a medium-to-low impact on your business, but your business continues to function (by perhaps using a procedural workaround).



Both Standard and Premium SLAs include initial and ongoing update response times that suit the needs of any mission-critical application. Response times differ depending on the SLA and severity level of the issue raised:

RESPONSE TIMES

	STANDARD	PREMIUM	
Severity Level	Initial Response	Initial Response	Ongoing Response
Severity 1	1 Business Hour	1 Hour	1 Hour or As Agreed
Severity 2	4 Business Hours	2 Hours	4 Hours or As Agreed
Severity 3	1 Business Day	4 Business Hours	8 Business Hours or As Agreed
Severity 4	2 Business Days	8 Business Hours	2 Business Days or As Agreed

2.5 SUPPORT CONTACTS

Each JBoss Enterprise Middleware product subscription provides each customer with the ability to designate a set number of named contact(s) within his/her organization to be the primary interface with Red Hat technical support staff. For each JBoss Enterprise Middleware product under subscription, the subscriber can designate one named customer contact for every 16 cores purchased. Additional named support contacts can be added to any JBoss Enterprise Middleware subscription. The SLA type for the additional support contact must match the corresponding SLA for the product under subscription.

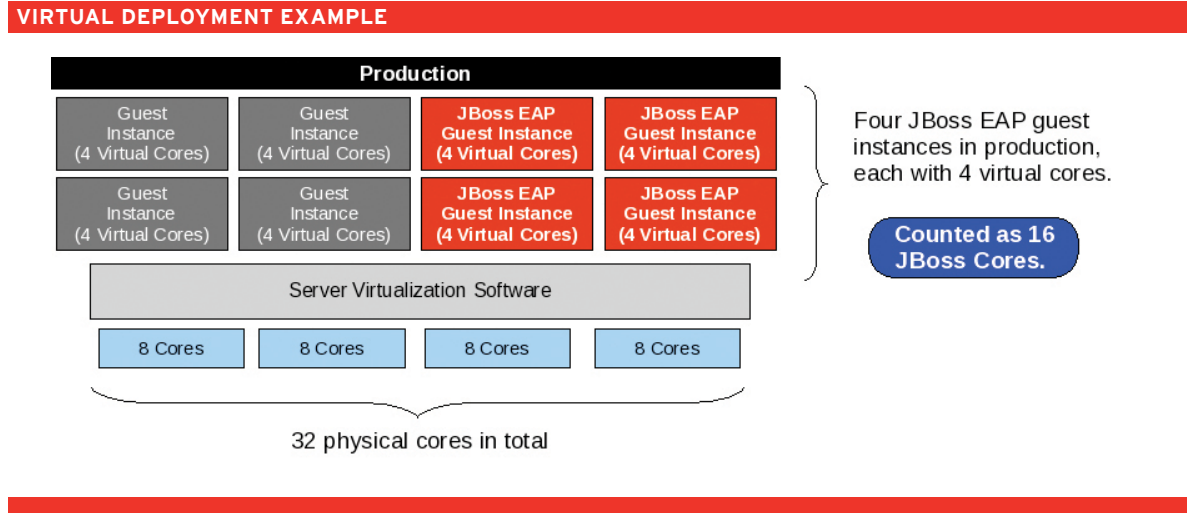
Designated support contacts can raise technical support issues and questions for the product under subscription. Issues and questions might include inquires into common product configurations, development best practices, identification and workarounds for potential product defects, recommended settings for production use, operational management procedures, feature requests, and many other product-related topics.

3. SUBSCRIPTION SIZING EXAMPLES

The following examples are included to help JBoss Enterprise Middleware subscribers size their deployments appropriately. While many examples use JBoss Enterprise Application Platform (EAP) for illustrative purposes, these examples apply to any JBoss Enterprise Middleware product.

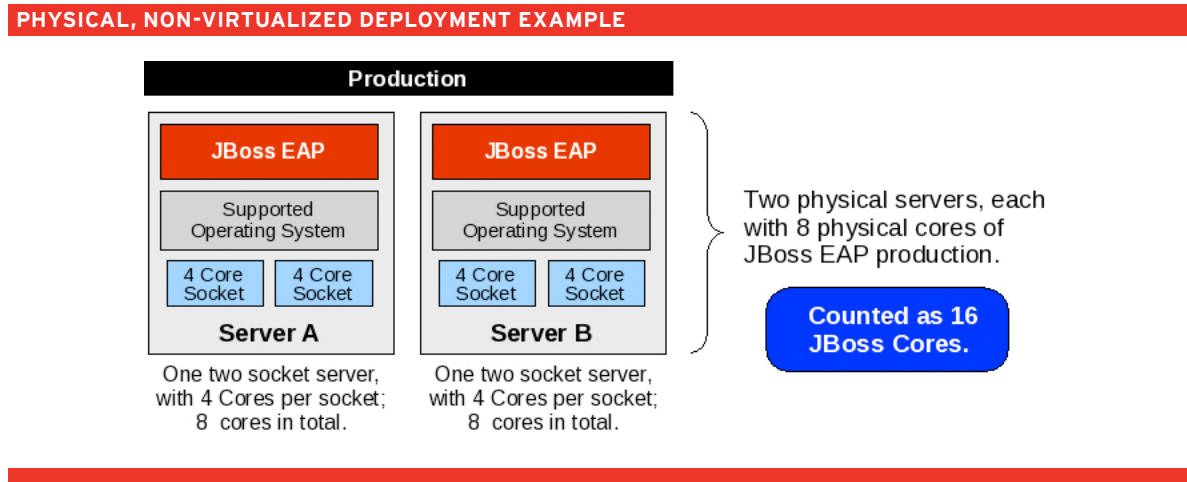
3.1 VIRTUAL DEPLOYMENT EXAMPLE

With JBoss Enterprise Middleware subscriptions, cores can be either physical processor cores or virtual processor cores. When using server virtualization software, the total virtual cores assigned to the JBoss Enterprise Middleware product are counted. In many cases, this may be less than the total number of physical cores available to the server virtualization software.



3.2 PHYSICAL, NON-VIRTUALIZED DEPLOYMENT EXAMPLE

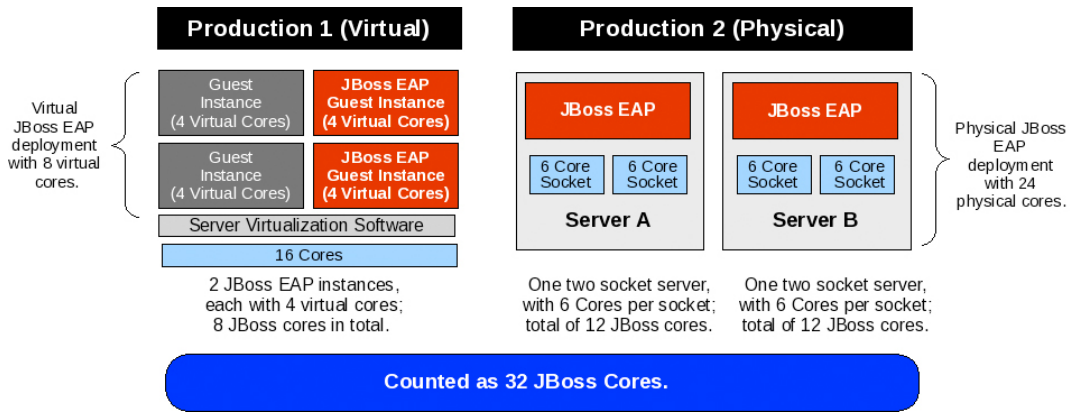
When deploying JBoss Enterprise Middleware in a physical, non-virtualized environment, the total number of physical cores are counted.



3.3 MIXED PHYSICAL AND VIRTUAL DEPLOYMENT EXAMPLE

When deploying JBoss Enterprise Middleware in mixed environments, where some JBoss Enterprise Middleware product deployments are physical and other deployments of that same product are virtual, cores across both environments should be counted.

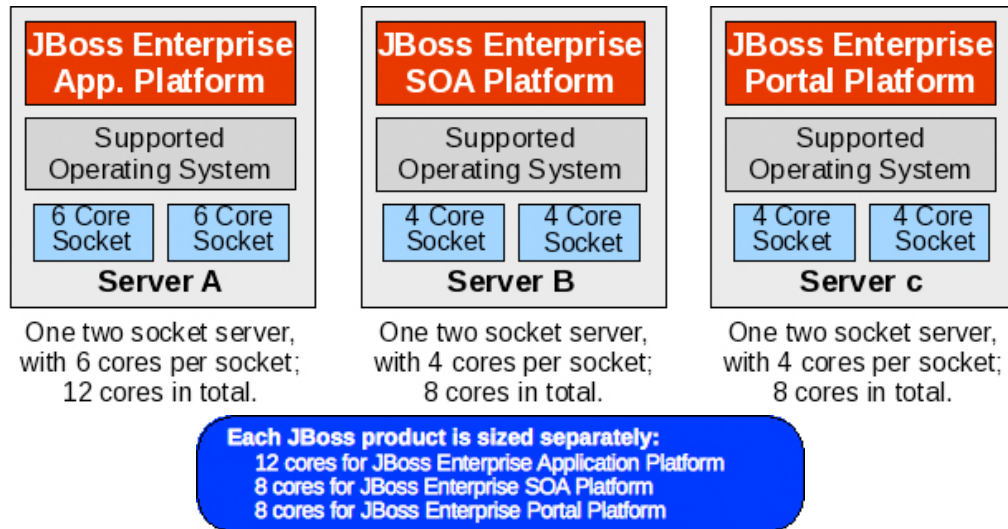
MIXED PHYSICAL AND PHYSICAL DEPLOYMENT EXAMPLE



3.4 MULTIPLE JOBBOS ENTERPRISE MIDDLEWARE PRODUCT DEPLOYMENTS

When multiple JBoss Enterprise Middleware products are deployed, whether they exist on the same server or on different servers, each JBoss Enterprise Middleware product should be sized separately.

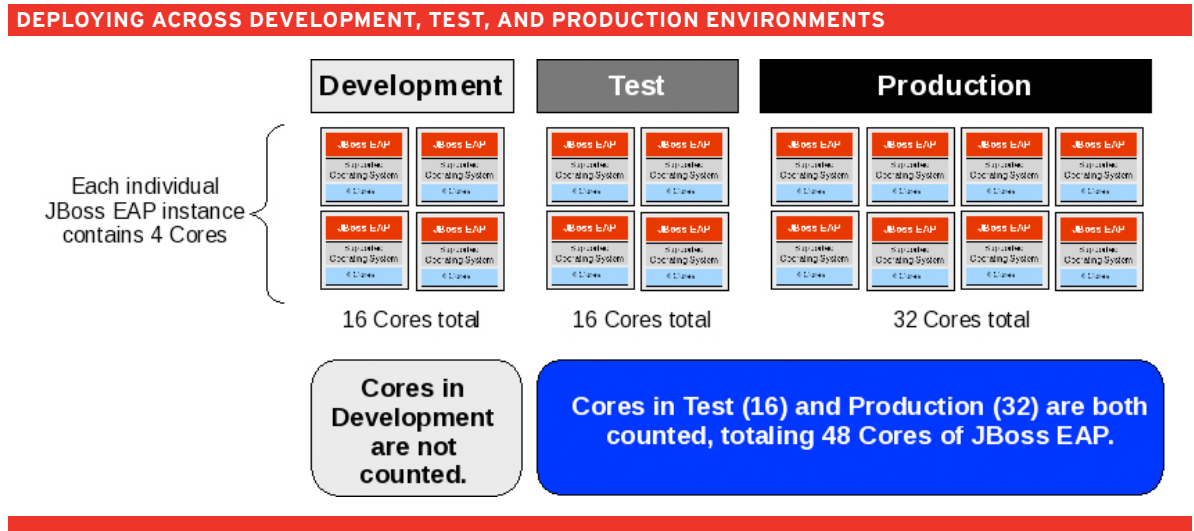
MULTIPLE JOBBOS ENTERPRISE MIDDLEWARE PRODUCT DEPLOYMENTS



3.5 DEPLOYING ACROSS DEVELOPMENT, TEST, AND PRODUCTION ENVIRONMENTS

When deploying JBoss Enterprise Middleware, the virtual or physical cores across test, production, and “hot” disaster recovery/failover environments should be totaled. In test environments, business users might be testing early versions of a given application or conducting various application functionality, performance, or integration testing.

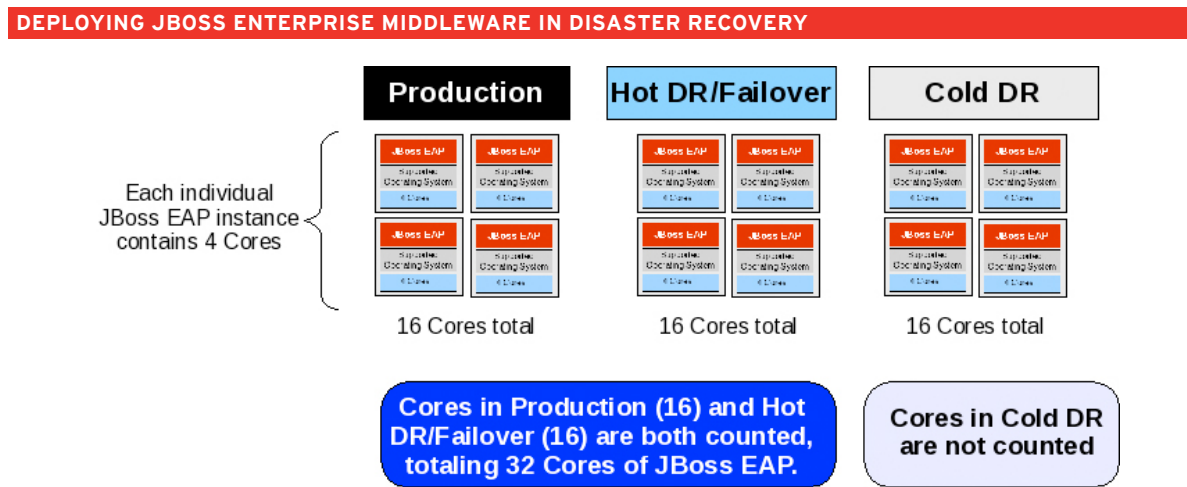
For development environments, the total number of users (e.g., developers), rather than cores, is counted. In development environments (e.g. laptops, workstations, or servers), developers are writing application code. Applications in this environment may be incomplete or going through considerable change. With the JBoss Enterprise Middleware subscription model, for every 16 cores under subscription, 25 users are provided with development use for all JBoss Enterprise Middleware products.



3.6 DEPLOYING JBOSS ENTERPRISE MIDDLEWARE IN DISASTER RECOVERY

When deploying JBoss Enterprise Middleware deployments in disaster recovery environments, virtual or physical cores across "hot" disaster recovery/failover should be included as part of the total core count.

Cores in "cold" disaster recovery are not counted. If a disaster were to occur and production systems under subscription were no longer available, customers can temporarily transfer their pre-existing production subscriptions that are no longer in use to their disaster recovery environments (making "cold" disaster recovery a temporary production environment).



4. ADDITIONAL INFORMATION

For additional information on JBoss Enterprise Middleware, please visit redhat.com or contact your Red Hat account manager.



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