# HP OpenView Distributed Configuration Server Using Radia

for the HP-UX, Linux, Solaris, and Windows operating systems*

Radia Release Version: 4.2i

Software Version: 4.8

## Installation and Configuration Guide


Document Release Date: September 2006

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## Documentation Updates

This manual's title page contains the following identifying information:

- Version number, which indicates the software version.
- Print date, which changes each time the document is updated.

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The following table indicates the changes that were made to this document since the previously released edition.

**Table 1 Changes in This Document**

| Chapter | Version | Changes |
|---|---|---|
| Chapter 1 | 8.1 | Page 16, revised some of the entries in Table 5; deleted Cloned Manager. |
| Chapter 2 | 8.1 | Page 20, revised the introductory paragraphs in the "Overview." |
| Chapter 2 | 8.1 | Page 20, revised the paragraph that follows the Note. |
| Chapter 2 | | Page 24, added information about how domain ownership is established. |
| Chapter 5 | | Page 58, revised the description of This ID shared. |
| Chapter 5 | | Page 64, removed references to Cloned Manager. |
| Chapter 7 | | Page 91, In the section, "DMABATCH Command-Line Options," removed the sub-section, "IP Address Support for Cloned Managers." |
| Chapter 7 | | Page 91, deleted Cloned Manager information in the section, "Hard-lock Operation." |

### Version Differences

This section has been included for the benefit of existing Distributed Configuration Server customers.

This version of the *Installation and Configuration Guide for the HP OpenView Distributed Configuration Server Using Radia (Distributed Configuration Server Guide)* contains several

| Change | Description |
|---|---|
| Database Verification | The pre-synchronization database-verification feature that was optional in version 4.6 (enabled with the Verify control data (pre-sync) check box on the Batch Operation tab) is not selectable because it is permanently active in post-4.6 versions.<br>See Batch Operation Options, starting on page 80. |
| Lock Exposure | The Batch Lock Exposure Action option which, in version 4.6 on the Batch Security tab, could be set to Continue, Reset, or Continue if DB unchanged, is, in post-4.6 versions, hard-coded to Continue if DB unchanged.<br>See Batch Security Options, starting on page 81. |
| Integration Server | In post-4.6 versions, the Source component of Distributed Configuration Server (which contains the Integration Server—the HP OpenView Using Radia HTTP server) must be co-resident with any Configuration Server that will be a master in a Distributed Configuration Server synchronization.<br>See Source Component, starting on page 22. |
| Co-Residency | In post-4.6 versions, the Destination component of Distributed Configuration Server (`dmabatch.exe`) must be co-resident with any Configuration Server that will act as destination in a Distributed Configuration Server synchronization.<br>See Destination Component, starting on page 22. |
| COMMIT=NO | In post-4.6 versions, if the COMMIT=NO command-line option is specified, and the synchronization is reset without the commit being done (as specified), resource orphans for the added resources might be left in the Destination database.<br>**Note**: This behavior was not present in 4.6 because COMMIT=NO allowed the synchronization to be done in two phases, at different times of day, but did not allow a partial synchronization.<br>See Deferred Commit, starting on page 91. |

| Change | Description |
| --- | --- |
| Lost & Found | In version 4.6, the goal was to accurately replicate databases, even if it meant replicating logical database errors. In post-4.6 versions, the intent is beyond simple replication—rather, it is the creation of a verifiable Destination database.<br>**Note**: In post-4.6 versions, database items that can be identified as being in-error or inconsistent, such as resource orphans, will be placed into a new directory, `lost+found`, under the Destination database root, instead of being placed in the Destination database. The result should then pass the database verification.<br>See Distributed Configuration Server Processes Defined, starting on page 30. |

# Support

Please visit the HP OpenView support web site at:

**www.hp.com/managementsoftware/support**

This web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by using the support site to:

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# Contents

# 1 Introduction

At the end of this chapter, you will have had the opportunity to:

- Preview which chapters contain which information about the various aspects of the HP OpenView Distributed Configuration Server Using Radia (Distributed Configuration Server)
- Become familiar with some of the HP OpenView Using Radia terminology
- Become familiar with some of the terminology that is specific to HP OpenView Distributed Configuration Server Using Radia

# Documentation Map

The following table provides an overview of this book; this will aid in locating specific information about the Distributed Configuration Server.

**Table 3 Document Map**

| Chapter | Contents |
|---|---|
| Chapter 2 Introduction to the Distributed Configuration Server | Distributed Configuration Server, including: how Distributed Configuration Server works; the roles of the two Distributed Configuration Server components; Configuration Server eligibility, domain ownership and domain eligibility. |
| Chapter 3 Installing the Distributed Configuration Server | Installing the two Distributed Configuration Server components, including: system recommendations and desktop shortcut icons. |
| Chapter 4 Distributed Configuration Server Security | Setting up security for Distributed Configuration Server, including: password protection on the host operating system. |
| Chapter 5 Setting Up a Distributed Configuration Server Synchronization | Defining Configuration Servers to Distributed Configuration Server, including: specifying their properties; and choosing a synchronization pair. |
| Chapter 6 Configuring Distributed Configuration Server Options | Configuring Distributed Configuration Server, including: a detailed look at the various Distributed Configuration Server settings that are available on the various Options tabs. |
| Chapter 7 Distributed Configuration Server's DMABATCH | Executing a Distributed Configuration Server session on a command-line, including: scripting, and automation and command-line options. |

| Chapter | Contents |
|---|---|
| Appendix A Troubleshooting the Distributed Configuration Server | Troubleshooting Distributed Configuration Server, including: logs, tracing, and domain eligibility |

## Terminology

The following table lists the terms that might be used interchangeably throughout this book, as well as in other HP OpenView Using Radia publications.

Substitution is dependent on the context; therefore, it is not always possible.

**Table 4 Terminology**

| Term | Alternate |
|---|---|
| Application | software, service |
| Client | Radia client, Application Manager, Software Manager |
| Computer | workstation, server, machine, host |
| edmprof file | Configuration Server Settings File; Profile File; Profile Editor; `edmprof.dat` (Windows); `.edmprof` (UNIX)<br>**Note**: This is the text file wherein a Configuration Server's operational parameters are specified. This manual uses this non-platform specific, generic reference. |
| NOVADIGM domain | PRDMAINT domain<br>**Note**: Starting with the 4.0 release of the Radia database, the NOVADIGM domain was renamed to PRDMAINT. Therefore, references to the PRDMAINT domain can be assumed to be referencing the NOVADIGM domain in pre-version 4.0 Radia databases. |
| Configuration Server | Manager, Active Component Server |

Table 5 describes the Distributed Configuration Server-specific terms that are used in this document. It is recommended that you review these terms and their descriptions in order to better understand the concepts and materials contained herein.

**Table 5 Distributed Configuration Server Terminology**

| Term | Description |
|---|---|
| Distributed Configuration Server | Formerly known as EDM DMA, the Distributed Configuration Server is an extension of the Configuration Server. It synchronizes Radia databases that are running on separate (Distributed Configuration Server-enabled) machines across an enterprise. |
| Integration Server | The HTTP file server of HP OpenView Using Radia. It gets installed on a Source Configuration Server in order to facilitate multiple concurrent file-transfer sessions and the creation of the container file. |
| Source Configuration Server | In a Distributed Configuration Server synchronization, the Configuration Server from which the Destination Configuration Server will receive database changes. |
| Destination Configuration Server | In a Distributed Configuration Server synchronization, the (target) Configuration Server on which Radia database changes will be replicated.<br>**Note**: This is *always* a replica of the Source database. |
| Synchronization | The replicating of administrator-specified domains from one Radia database (Source Configuration Server) to another (Destination Configuration Server). |
| Peer Synchronization | Synchronizing a domain on a Destination Configuration Server from a Source Configuration Server that does not own the domain.<br>See Foreign-Owned Domain in this table. |
| Synchronization Pair | The two Configuration Servers that have been selected as the Source and Destination. |
| Domain Ownership | All domains are “owned” by a Configuration Server. Domains are either **self-owned** or **foreign-owned**.<br>See Domain Ownership on page 24. |

| Term | Description |
|---|---|
| Self-Owned Domain | A domain that is owned by the current Configuration Server.<br>**Note**: In order for a domain to be self-owned, the owning MGR_ID and current MGR_ID must be identical. |
| Foreign-Owned Domain | A domain that is owned by a Configuration Server other than the current one.<br>**Note**: If the owning MGR_ID and current MGR_ID are different, the domain is foreign-owned. |
| Unrelated Domains | Domains that are not owned by the same Configuration Server—that is, they do not have the same owning MGR_ID. |
| Middle-tier Configuration Server | A middle-tier Configuration Server is not an HP product. Rather this term is used exclusively to reference any Configuration Server on which the Source and Destination components are installed so that it can support Peer Synchronizations. |
| Container File | A file, created on the Source, in which the instance data is compressed before being transferred to the Destination. This file is much faster to transfer than a large number of small files.<br>**Note**: At the Commit phase, the instance-container file is used as the data source, so the files are moved directly from it to their ultimate destination. This minimizes the number of times that the data is moved and the length of time that the Radia database is hard-locked. |

# 2 Introduction to the Distributed Configuration Server

At the end of this chapter, you will have had the opportunity to learn:

- How the Distributed Configuration Server works to synchronize Radia databases
- Why there are two Distributed Configuration Server components, and the role of each in ensuring a successful synchronization
- How to define a pair of Configuration Servers for synchronization, based on Configuration Server *eligibility* and *domain ownership*
- The role of Radia database domains in Distributed Configuration Server operations, as well as: *domain-naming considerations*, *domain eligibility*, and *selecting domains*
- How to establish *domain ownership across the enterprise*, and how to use this to set up *simultaneous synchronizations*
- The *steps of the Distributed Configuration Server process*, which will aid in troubleshooting

communicate with both Configuration Servers that comprise the synchronization pair (see Two Configuration Servers: A Synchronization Pair on page 23).

In a synchronization operation, Distributed Configuration Server compares the control information of one Radia database with that of another, for the domains that have been selected.

## Distributed Configuration Server Components

Inasmuch as there are two Configuration Servers involved in Distributed Configuration Server synchronizations, the two Distributed Configuration Server components perform different functions and must be installed separately, based on the intended role of the host Configuration Server.

- Each Configuration Server that will act as a Source must have the Distributed Configuration Server *Source* component installed.
- Similarly, each Configuration Server that will act as a Destination must have the Distributed Configuration Server *Destination* component installed.
- If a Configuration Server has both components of the Distributed Configuration Server installed, it can act as Source and Destination, albeit in separate Distributed Configuration Server operations.

With the Distributed Configuration Server components installed on the Configuration Server machines, Distributed Configuration Server:

- Provides the synchronization facilities to contact the Source and Destination,
- Reconciles the differences between the selected domains, and
- Provides the intermediate facilities to make identical the Source and Destination domains.

The Destination is always a replica of the Source.

The following section offers a more detailed look at these components and their functions.

### Source vs. Destination

The Source and Destination components perform different functions during the Distributed Configuration Server synchronization. Therefore, it is

important to correctly install these components in order to ensure: 1) the availability and accessibility of the appropriate Source-Destination synchronization pairs, and 2) the expected synchronization results.

### Source Component

The Source component must be installed on any Configuration Server that is going to function as the master in a synchronization. This component contains the HP OpenView Integration Server Using Radia (Integration Server), the product suite's HTTP server.

**Integration Server Notes**

- For a brief description of Integration Server and how it relates to Distributed Configuration Server, see the section, Integration Server.
- For a detailed description of Integration Server, refer to the *Essentials Guide for HP OpenView Using Radia* (*Essentials Guide*), available in the HP OpenView Using Radia library.

The Source component loads the database instances into a single repository. This repository can be directly accessed, thereby eliminating the excessive overhead of opening, storing, transferring, and writing individual files for each Radia database instance.

### Integration Server

Integration Server is the HP OpenView Using Radia product suite's HTTP file server. It facilitates multiple concurrent file-transfer sessions (HTTP "get" requests) and the creation of the instance-container file (see Container File in Table 5 starting on page 16).

Integration Server is not a separately licensed HP product. It integrates several independent modules (HP OpenView Management Portal Using Radia [Management Portal], HP OpenView Proxy Server Using Radia [Proxy Server], HP OpenView Inventory Manager Using Radia [Inventory Manager]) giving them access to all the functions and resources under its control.

### Destination Component

The Destination component must be installed on any Configuration Server that is going to function as the target in Distributed Configuration Server synchronization. This component provides direct access to the target file system.