

Migration Guide

ZENWORKS

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Migrating Novell® ZENworks® 7 to Novell ZENworks 10 Configuration Management

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**Migrating Novell ZENworks 7 to
Novell ZENworks 10 Configuration Management**

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Your Guide to Easy Migration

This guide contains the information, steps and processes you need to move from Novell® ZENworks® 7 to Novell ZENworks 10 Configuration Management, the next generation of ZENworks. To leverage the power and new features of ZENworks 10 Configuration Management, you will need to migrate from existing systems rather than perform a typical upgrade. As you will see, Novell has carefully plotted the migration path so you can easily move content and work to your new system. The Novell ZENworks team has developed tools and methodologies that allow you to migrate in an easy, step-by-step way. In fact, when you preview the migration utility, you will see for yourself that migration has never before been this easy.

To migrate your existing Novell ZENworks 7 system to Novell ZENworks 10 Configuration Management, you will need to perform the following minimal steps:

1. Perform a requirements analysis (including both business and technical assessments).
2. Design your new system.
3. Document your design in detail, including your solutions architecture and all configurations and settings.
4. Deploy your new ZENworks 10 Configuration Management infrastructure.
5. Migrate existing content from your ZENworks 7 infrastructure to your new ZENworks 10 Configuration Management Infrastructure. This includes applications, policies, images, workstations and associations.
6. Migrate your pilot users from ZENworks 7 to ZENworks 10 Configuration Management.
7. Pilot your new system including your solutions architecture (design elements and configurations) and feature sets.
8. Execute against your deployment plan and migrate all other users over from your ZENworks 7 infrastructure to ZENworks 10 Configuration Management.
9. Update your design documentation if required.
10. Verify your migration was successful.
11. Decommission your ZENworks 7 infrastructure (if applicable).

This paper covers several of the above steps in greater detail. Following these steps carefully will help you successfully migrate to Novell ZENworks 10 Configuration Management.

Note: *You may need to perform additional migration tasks depending on your specific infrastructure.*

Building an Effective Solution: Is Novell ZENworks 10 Configuration Management Right for Me?

Building the right solution for your organization is critical, so you must carefully design your solution's architecture. Your existing Novell ZENworks solution is powerful because:

- **It is flexible**—*the logic is in the object store, making it simple to move content and services around without having to perform major architectural overhauls.*
- **It is simple**—*services fit together very easily, and the architecture is very easy for administrators to understand, deploy and manage.*
- **It is scalable**—*no other systems management product on the market scales to the level of ZENworks (in fact, there are no known limits to how many users a single ZENworks system can manage).*

You will want your new infrastructure to be as flexible, simple and scalable as your existing environment. Thus, it's helpful to have a solid understanding of the architectural differences between existing versions of ZENworks 10 Configuration Management and earlier versions of Novell ZENworks. A few of these architectural differences are discussed below. For further details, consult the official product documentation for feature- and deployment-related information.

Traditional Novell ZENworks Architecture

Novell ZENworks 7 is the final release patterned after traditional ZENworks architecture. Traditional ZENworks architecture

is two-tiered and relies on direct access to the object store (Novell eDirectory™) for configuration information. In the past, every workstation was required to have the Novell Client™ installed in order to access ZENworks services—specifically object information, or logic, stored in the directory. Finally, it is important to note that the bulk of the logic and processing is done on the client side in the form of policy searching, launcher refreshing and so on. In other words, the client does most of the work. This setup has a dramatic effect on the scalability of the product. Instead of one server doing all of the work for 100 clients, the total workload is spread across all 100 clients. The following diagram illustrates the traditional architecture for Novell ZENworks 7 Desktop Management:

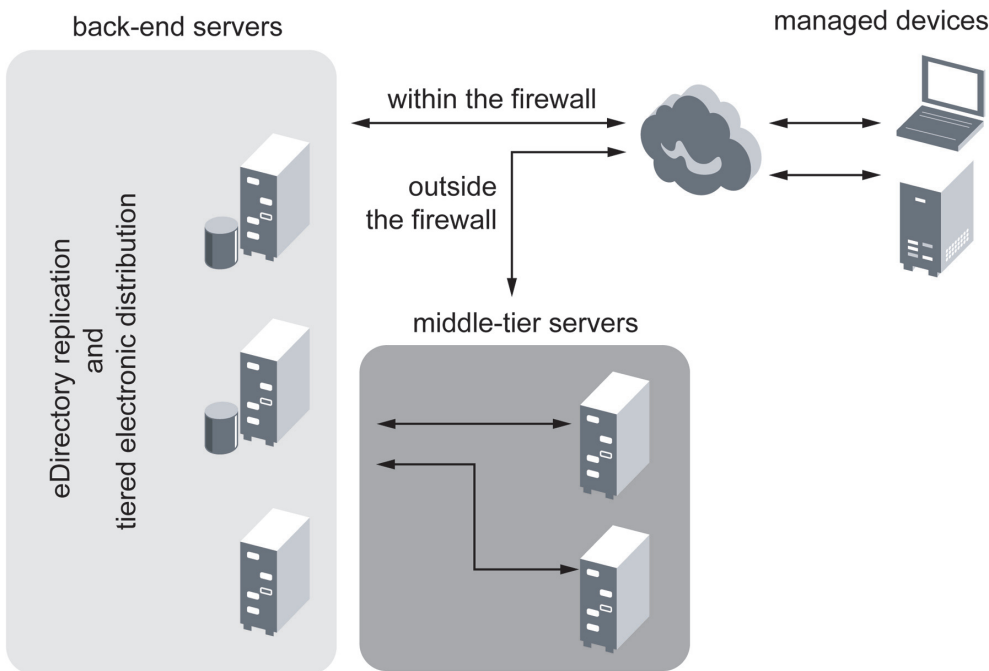


Figure 1. Traditional ZENworks architecture

Traditional Novell ZENworks architecture is characterized as follows:

- *The ZENworks Management Agent is installed on every workstation.*
 - Client32™ is required in a NetWare® environment.
 - The use of the middle-tier server is required in an environment where there is no NetWare infrastructure, or when the Novell Client is not installed on the managed devices.
- *Novell eDirectory is the key requirement as the object store for all users' workstations and ZENworks objects.*
- *Novell ConsoleOne® is required to manage the ZENworks infrastructure.*
- *All access to the eDirectory environment is via the NetWare Core Protocol (NCP).*
- *The product is cross-platform and supports services running on Linux*, NetWare and Windows*.*

Next-generation Novell ZENworks Architecture

Novell ZENworks 10 Configuration Management features a three-tier architecture, commonly known as Services-Oriented Architecture (SOA). This architecture separates the components, making the product far more modular. Now the various tiers can be updated independently, making it easier to change business logic or add new modules.

With Novell ZENworks 10 Configuration Management, the server-side infrastructure consists of two tiers (see Figure 2). The first is the data model, and the second comprises the file system (to store actual files), the database (for storing ZENworks information), and the optional identity store (Novell eDirectory or Microsoft* Active Directory* are supported with the release of ZENworks 10 Configuration Management), which allows user-based resource management.

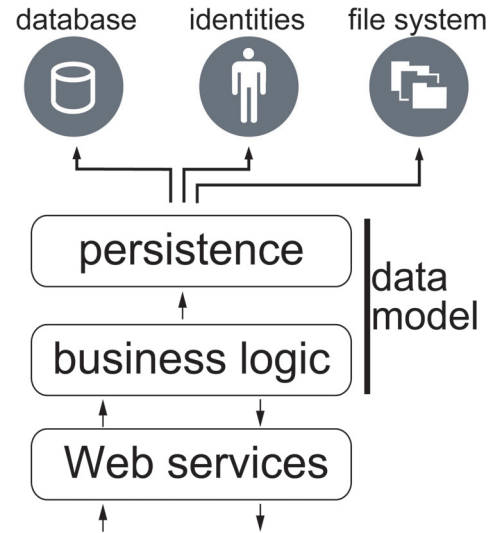


Figure 2. The three-tier architecture of ZENworks 10 Configuration Management

In the new architecture, Novell ZENworks 10 Configuration Management has been decoupled from eDirectory, which is no longer a key requirement for the product to function. You no longer need to manage a directory in order to provide systems management services. This does not mean that you would not benefit from integrating ZENworks 10 Configuration Management with your existing eDirectory environment. In fact, you can continue to use your existing directory infrastructure for user identity information, but you do not need to extend the schema or install the product on a server that runs eDirectory. ZENworks 10 Configuration Management supports either Novell eDirectory or Microsoft Active Directory natively for user identity information.

Another major architectural change is the way that the client and server communicate with each other (see Figure 3, opposite page). You will continue to run a Novell ZENworks Agent (Primary Agent) on the managed device, but the bulk of the work (logic and workload) will happen on the server side. As seen in Figure 3, the client initiates communications

with the server side (the Web server on the ZENworks 10 Configuration Management primary server), but the server may also communicate directly with the client. The client and server use industry-standard protocols such as HTTP, HTTPS, SOAP, CIFS and LDAP. The client will communicate with the server over HTTP or HTTPS, and the server will communicate with the Primary Agent via SOAP (Simple Object Access Protocol) over HTTPS.

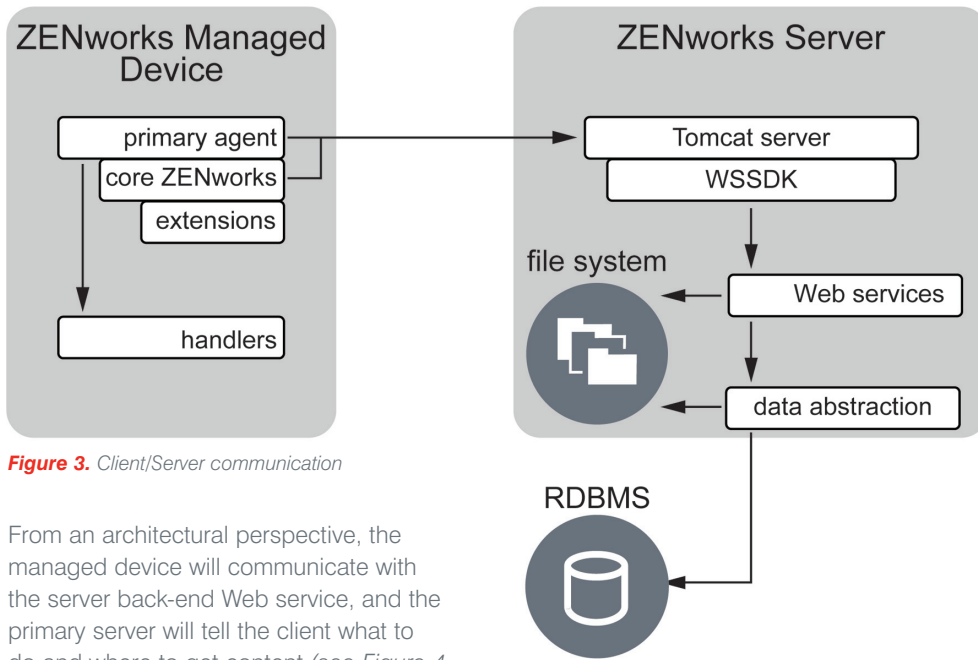


Figure 3. Client/Server communication

From an architectural perspective, the managed device will communicate with the server back-end Web service, and the primary server will tell the client what to do and where to get content (see Figure 4, next page). In effect, the server sends instructions to the client, and the client uses the required handler to perform the task, such as software installation, apply a policy, manage systems remotely and so on.

From an identity perspective, the user of a managed device will authenticate directly to

the identity store where his or her object is stored—either Novell eDirectory or Microsoft Active Directory. The only identity-related information stored in the Novell ZENworks object store is a reference object pointing back to the actual identity, increasing the efficiency of user-based resource management.

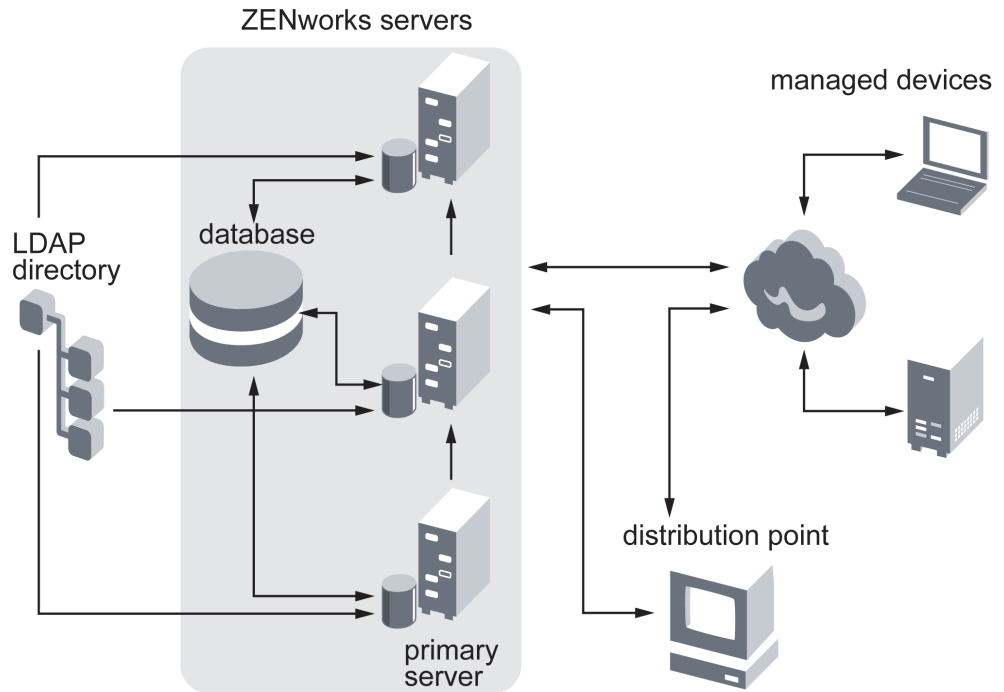


Figure 4. Architecture of Novell ZENworks 10 Configuration Management

The new Novell ZENworks 10 Configuration Management architecture includes the following important characteristics:

- Installation of the ZENworks Primary Agent on every managed device
- Three-tier Services-Oriented Architecture
- Additional primary servers for computing tasks, removing the workload from the managed device
- No more specific requirement for Novell eDirectory
- No more requirement for the Novell Client (Client32) to be installed on either the managed device (in a NetWare environment), or the server (if you are running the server services on a Windows server)
- A new Web-based administrative console to manage all ZENworks objects, configurations and functions (referred to as ZENworks Control Center)

- Native support for both Novell eDirectory and Microsoft Active Directory
- Based on industry-standard protocols
- Direct, one-time server installation—then the deployment of additional primary servers and managed devices from the server, using ZENworks Control Center
- Installation of primary server software on either Windows Server 2003 or SUSE® Linux Enterprise Server

With this basic discussion of the architectural differences between Novell ZENworks 10 Configuration Management and earlier versions, you are ready to migrate from your existing ZENworks infrastructure to your new ZENworks 10 Configuration Management infrastructure.

Migrating Content from Novell ZENworks 7 to Novell ZENworks 10 Configuration Management

Migrating from Novell ZENworks 7 to Novell ZENworks 10 Configuration Management is not a difficult process, but you need to complete some preparatory work to ensure a successful migration.

The Novell ZENworks Migration Console is the primary tool that you will use to migrate existing content from your Novell ZENworks 7 infrastructure to your new Novell ZENworks 10 Configuration Management infrastructure. This console allows you to simultaneously connect to both your existing ZENworks 7 infrastructure and your new ZENworks 10 Configuration Management infrastructure. Once connected, you will simply choose the content you wish to migrate, and then allow the tool to move it over non-intrusively, leaving your existing system untouched and unchanged.

Let's run through the basic sections so you can see how easy this process really is.

Connecting to Your Infrastructures

The first step in the process is to connect to both your Novell ZENworks 7 and Novell ZENworks 10 Configuration Management infrastructures. That way, you can begin

to model what your migration will look like and begin moving content across systems. The most important thing you need to keep in mind is that the migration of object information and content is completely non-intrusive and non-destructive. In other words, by using the ZENworks 10 Configuration Management Migration Utility, you are building a parallel system based on ZENworks 10 Configuration Management while you migrate your users from your ZENworks 7 infrastructure. The amount of time you take to migrate your users and workstations is completely up to you. You can go as fast or as slow as you want.

The first thing you will do is connect to your *Migration Source*. This is the Novell eDirectory environment that currently hosts your ZENworks 7 information.

As seen in Figure 5 on the next page, you are simply providing credentials so you can search the eDirectory tree and look for specific content to migrate. You do not need special administrative credentials to do this because you are not making any modifications to the tree.

The connection in this case is an LDAP connection, and you can perform either a secure or unsecure connection to your eDirectory environment. If you choose to connect securely (as is the recommendation), then select the *Use SSL* checkbox.

The screenshot shows a Windows-style dialog box titled "eDir Login". At the top left, it says "Novell. ZENworks." and "ZENworks Configuration Management Migration Utility" with a logo. On the right, there is a large red "N." logo. Below the header, there are four input fields: "UserName (e.g. cn=admin,o=novell):", "Password:", "Server (DNS name or IP address):", and "LDAP Port:". The "LDAP Port" field contains the number "389". To the right of the "LDAP Port" field is a checkbox labeled "Use SSL" which is not checked. At the bottom right, there are three buttons: "Help", "OK", and "Cancel".

Figure 5. Connection information for your ZENworks 7 infrastructure

Next, you will need to connect to your *Migration Destination*. This destination is the new ZENworks 10 Configuration Management infrastructure you have put in place, and it's where you intend to migrate your users and devices.

As seen in Figure 6 on the opposite page, you are simply providing administrative credentials in the new ZENworks 10 Configuration Management zone. The credentials you provide need to be administrative as you

will be copying content to the content repository on the ZENworks server and creating new objects inside of the ZENworks Object Repository (the database).

The connection you are making in this case is an HTTP connection to the ZENworks Web server. As before, you can choose to connect to the Web server securely or unsecurely. We suggest that you make a secure connection to avoid any sort of security breach. To connect securely, select the Use SSL checkbox.

Figure 6. Connection information for your ZENworks 10 Configuration Management infrastructure

Now that you have successfully connected to both of your ZENworks infrastructures, you can begin to execute on your migration design and strategy. Remember to document your approach so everyone is clear on how you will perform the migration.

Let's move on to the specific steps in the process. There are really six possible migration steps, but because we are discussing migration from ZENworks 7 to ZENworks 10 Configuration Management we will simply cover steps 1 through 3, and 5 through 6.

Migrating Your Novell ZENworks 7 Applications

The first step in migrating your ZENworks 7 infrastructure is migrating your ZENworks 7 Application Objects and related source content. This will likely be the largest part of any migration from ZENworks 7 to ZENworks 10 Configuration Management because this is typically the most greatly utilized feature of ZENworks.

Simply select *Step 1: Applications* from the *Migration Tasks* window and begin to browse your source eDirectory tree (as seen in the

left pane) for Application Objects that you will migrate. Once you have located the objects, you can highlight them and then drag and drop them in the right window (see Figure 7).

If you cannot remember where you have stored your Application Objects in your source ZENworks 7 system, you can simply drag and drop containers from your source system into the right pane. This act triggers the ZENworks 10 Configuration Management Migration Utility to search the source system from the container down, locating all Application Objects below that point. All “found” objects of that type will be presented in the right pane after the search has been completed.

After you have selected all the applications you want to migrate, review the model on the *Items to Migrate* tab (more on this later in the document) and run the migration by clicking the *Migrate Now* button on the left side of the screen. The migration will run, and all Application Object information—as well as all the related source content for each of the source applications—will be migrated to the new ZENworks 10 Configuration Management system and content repository. After the modeled migration has completed, click the *Migration History* tab (more on this later in the document) to review what was migrated and see if there were any errors.

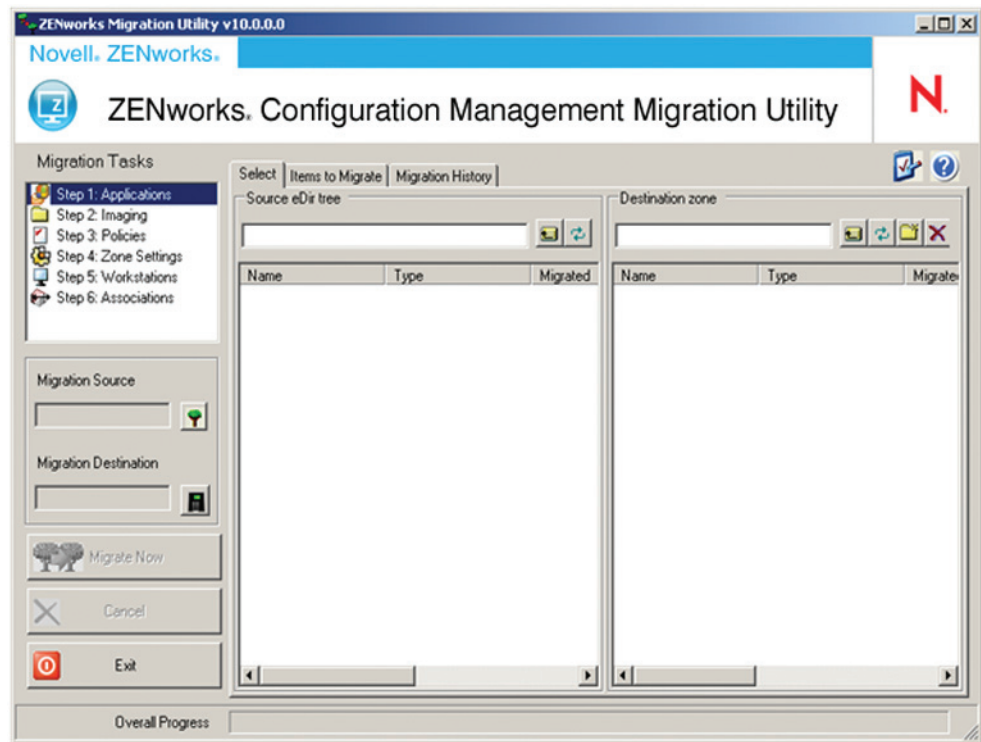


Figure 7. Step 1: Migrating your ZENworks 7 Application Objects and source content

Please note that you can model the migration without running the migration. After modeling it, you can move on to Step 2 in the process, but we recommend running the migration of each type of content separately. This will ensure the highest level of control and success.

Now let's move to the next step in the process: migrating your ZENworks 7 Scripted Image Objects and any related image files.

Migrating Your Novell ZENworks 7 Images

The second step in migrating your ZENworks 7 infrastructure is moving your ZENworks 7 Scripted Image Objects and related image files. We recommend you use the Universal Imaging features of ZENworks Imaging Services, which make this process faster and easier.

Simply select *Step 2: Imaging* from the *Migration Tasks* window and begin to browse your source eDirectory tree (as seen in the left pane) for the Scripted Image Objects that you will migrate. Once you have located the objects, you can highlight them and then drag and drop them in the right window (see *Figure 8*).

If you cannot remember where you have stored your Scripted Image Objects in your source ZENworks 7 system, you can simply drag and drop containers from your source

system into the right pane. This act triggers the ZENworks 10 Configuration Management Migration Utility to search the source system from the container down, locating all Scripted Image Objects below that point. All “found” objects of that type will be presented in the right pane after the search has been completed.

After you have selected all the images you want to migrate, review the model on the *Items to Migrate* tab (more on this later in the document) and run the migration by clicking the *Migrate Now* button on the left side of the screen. The migration will run and all Scripted Image Object information—as well as the related image files for each of the source images—will be migrated to the new ZENworks 10 Configuration Management system and content repository. After the modeled migration has completed, click the *Migration History* tab (more on this later in the document) to review what was migrated and see if there were any errors.

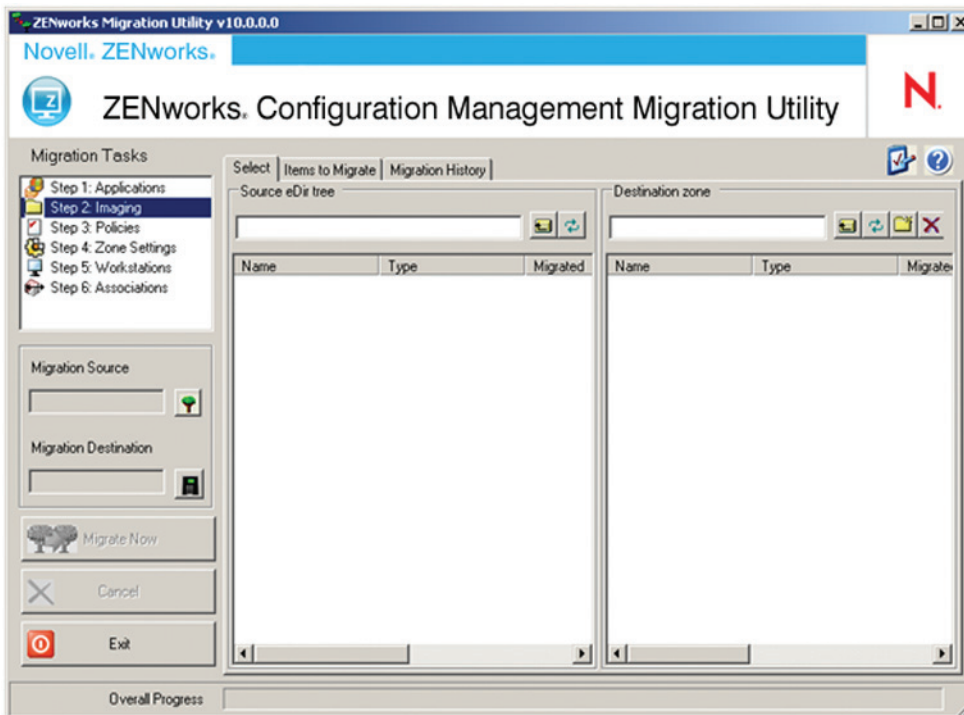


Figure 8. Step 2: Migrating your ZENworks 7 Scripted Image Objects and image files

Now let's move to the next step in the process: migrating your ZENworks 7 Policy Objects and related policy content and files.

Migrating Your Novell ZENworks 7 Policies

The third step in migrating your ZENworks 7 infrastructure is moving your ZENworks 7 Policy Objects and related policy content and files. This is likely to be the second largest area of migration, as it is a popular feature for most ZENworks 7 customers.

Note: *The policy standard in ZENworks 10 Configuration Management (from an operating environment perspective) is the Windows Group Policy format. With this in mind, legacy ZENworks Extensible Policies are not supported and will not be migrated using the ZENworks 10 Configuration Management Migration Utility.*

Simply select *Step 3: Policies* from the *Migration Tasks* window and begin to browse your source eDirectory tree (as seen in the left pane) for Policy Objects that you will migrate. Once you have located the objects, you can highlight them and then drag and drop them in the right window (see *Figure 9, opposite page*).

If you cannot remember where you have stored your Policy Objects in your source ZENworks 7 system, you can simply drag and drop containers from your source system into the right pane. This act triggers the ZENworks 10 Configuration Management Migration Utility to search the source system from the container down, locating all Policy Objects below that point. All *"found"* objects of that type will be presented in the right pane after the search has been completed.

After you have selected all the policies you want to migrate, review the model on the *Items to Migrate* tab (more on this later in the document and run the migration by clicking the *Migrate Now* button on the left side of the screen. The migration will run and all Policy Object information—as well as the related policy content and files for each of the source policies—will be migrated to the new ZENworks 10 Configuration Management system and content repository. After the modeled migration has completed, click the *Migration History* tab (more on this later in the document to review what was migrated and see if there were any errors.

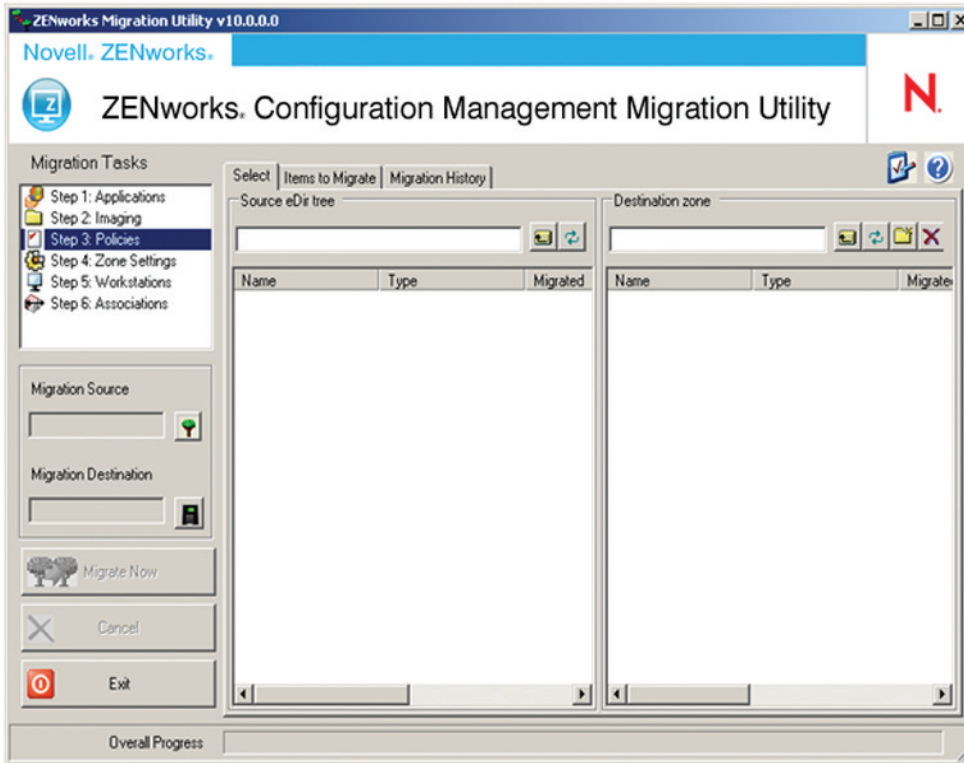


Figure 9. Step 3: Migrating your ZENworks 7 Policy Packages and policy files

Now let’s move on to the next step in the process: migrating your ZENworks 7 Workstation Objects.

Migrating Your Novell ZENworks 7 Workstations

The fourth step in migrating your ZENworks 7 infrastructure is moving your ZENworks 7 Workstation Objects. This is one of the most important steps in the migration process because it will take your currently registered devices and migrate them from your ZENworks 7 infrastructure to your new

ZENworks 10 Configuration Management infrastructure (while eliminating some steps in the registration process). In addition, this step—in combination with all your earlier migration steps—ensures that duplicate content from your new ZENworks 10 Configuration Management system will not be deployed to your managed devices. This minimizes the possibility of user downtime and lost productivity.

Simply select *Step 5: Workstations* from the *Migration Tasks* window and begin to browse your source eDirectory tree (as seen in the

left pane) for Workstation Objects that you will migrate. Once you have located the objects, you can highlight them and then drag and drop them in the right window (see Figure 10).

If you cannot remember where you have stored your Workstation Objects in your source ZENworks 7 system, you can simply drag and drop containers from your source system into the right pane. This act triggers the ZENworks 10 Configuration Management Migration Utility to search the source system from the container down, locating all Workstation Objects below that point. All “found” objects of that type will be

presented in the right pane after the search has been completed.

After you have selected all the workstations you want to migrate, review the model on the *Items to Migrate* tab (more on this later in the document) and run the migration by clicking the *Migrate Now* button on the left side of the screen. The migration will run, and all Workstation Object information will be migrated to the new ZENworks 10 Configuration Management system and content repository. After the modeled migration has completed, click the *Migration History* tab (more on this later in the document) to review what was migrated and see if there were any errors.

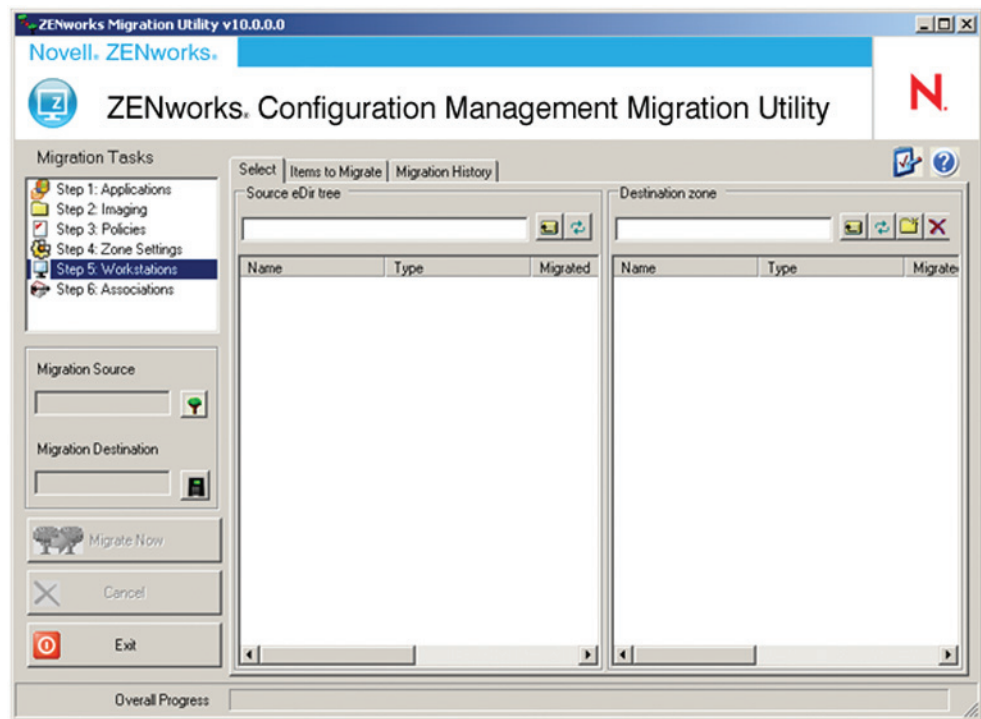


Figure 10. Step 5: Migrating your ZENworks 7 Workstation Objects

Now let's move on to the next step in the process: migrating your ZENworks 7 Associations.

Migrating Your Novell ZENworks 7 Associations

The final step in migrating your ZENworks 7 infrastructure is moving your ZENworks 7 Associations. This is the most important step in the migration process. We highly recommend using the ZENworks 10 Configuration Management Migration Utility to migrate your existing settings (in terms of associations). Otherwise, you will need to manually reset hundreds of them in the new system.

Simply select *Step 6: Associations* from the *Migration Tasks* window and begin to browse your source eDirectory tree (as seen in the left pane) for objects that have associations you want to retain. Once you have located the objects, you can highlight them and then drag and drop them in the right window (see *Figure 11*). These associations will be automatically reassigned to objects in the ZENworks 10 Configuration Management database.

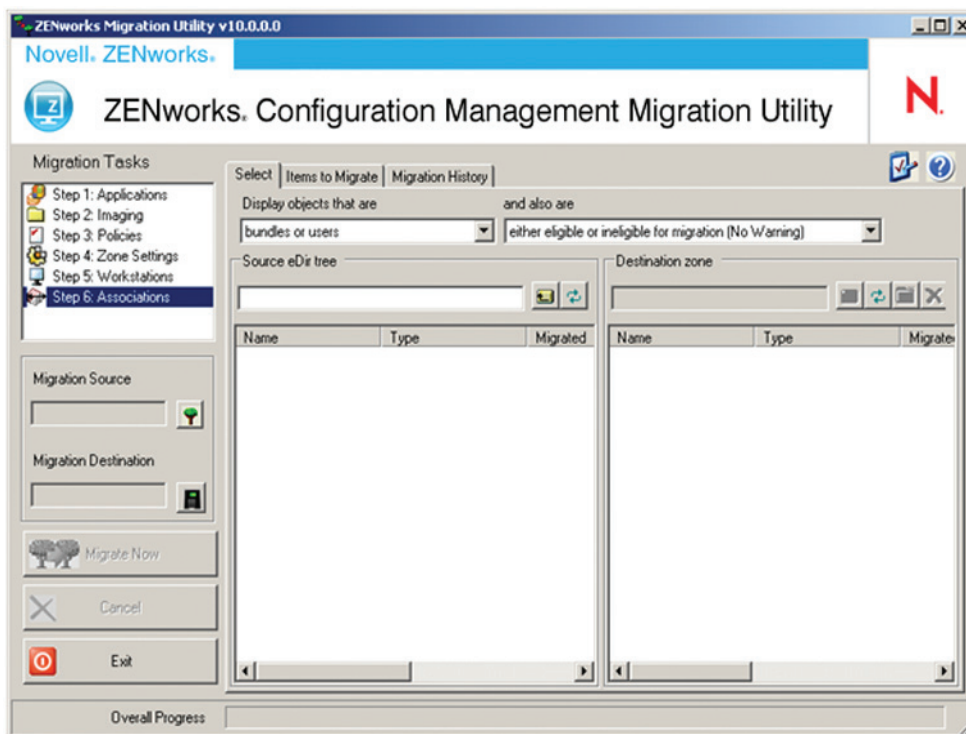


Figure 11. Step 6: Migrating your ZENworks 7 Associations

Now let's move on to the next series of steps in the process: migrating your users and workstations from your existing ZENworks 7 infrastructure to your new ZENworks 10 Configuration Management infrastructure.

Migrate Your Users and Workstations to Novell ZENworks 10 Configuration Management

After you have migrated your existing content to the new ZENworks 10 Configuration Management infrastructure, you can begin to migrate your existing managed devices. This is a simple process and requires very

little work. In order to migrate your workstations, launch ZENworks Control Center and click the *Deployment* tab. All of the Workstation Objects that you migrated using the ZENworks 10 Configuration Management Migration Utility will show as Deployable Devices in the top pane of the page (see *Figure 12*).

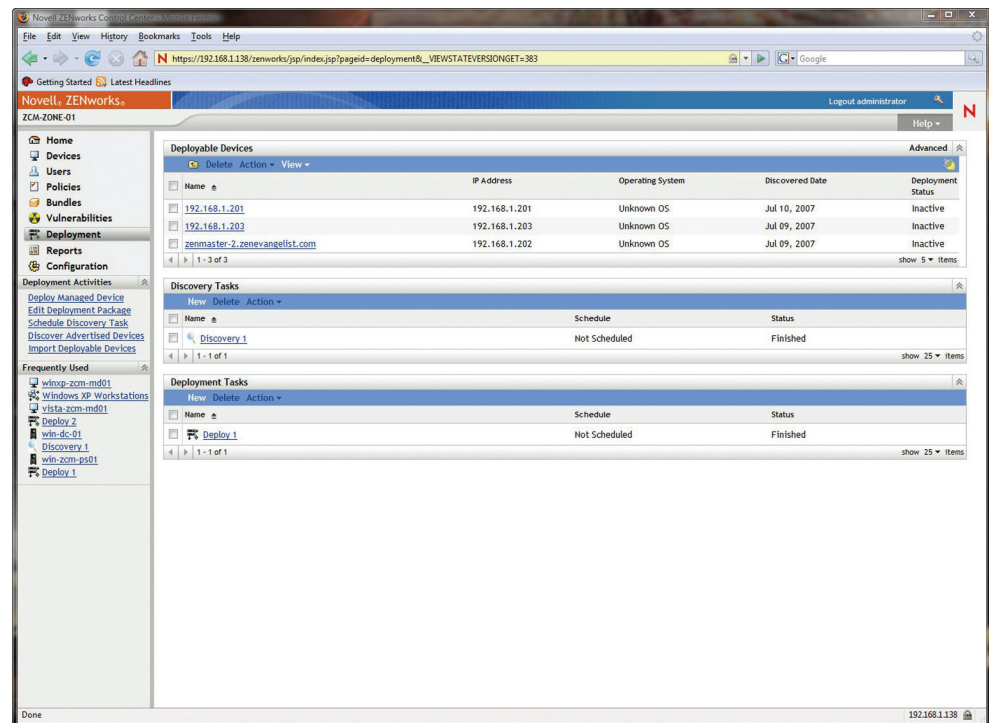


Figure 12. Deployment Tab in ZENworks Control Center showing deployable devices

The next step is to simply select the devices to which you would like to deploy the new ZENworks Adaptive Agent (by clicking the checkbox next to the device). Then click *Actions* and select the option to run the deployment of the ZENworks Adaptive Agent. This will start the wizard that enables you to create a deployment task and start the deployment process. The ZENworks 10 Configuration Management server will send the prepackage agent to the targeted device and will run the installation. The agent installer will remove the old ZENworks 7 agent and install the new ZENworks Adaptive Agent.

Once the agent has been installed, the device will register with the ZENworks 10 Configuration Management zone that you have configured, and you will now be able to manage these devices from it. Figure 13 shows how registered devices appear in ZENworks Control Center.

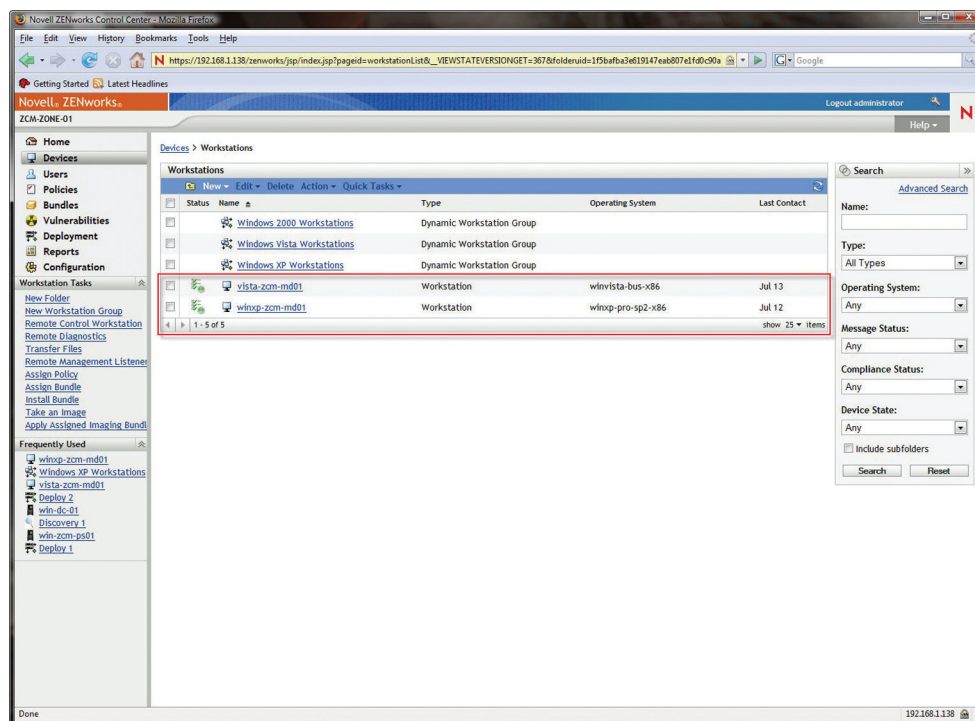


Figure 13. Registered workstations as seen using ZENworks Control Center

After a device has had the ZENworks 7 agent removed and the ZENworks Adaptive Agent installed, it can no longer participate in the original ZENworks 7 infrastructure. With that in mind, only migrate devices that you know will never again need to access the ZENworks 7 infrastructure.

The installation of the ZENworks Adaptive Agent also ensures that a device is registered into the ZENworks database using the Workstation Object you previously migrated. If you have completed the steps in the order we outlined and documented in our online documentation, then you can be confident that no software or other content will redeploy to your managed devices after you have finished the migration process.

It is also worth mentioning at this point that you need to have User Sources configured in order to have the capability to perform user-based systems.

We highly recommend that you migrate your existing managed devices using a very phased approach. When you migrate similar—or identical—devices at the same time, you can minimize risk and keep the process under tight control. In addition, it would be wise to first perform a pilot migration across multiple groups and then proceed with the mass migration of the rest of your infrastructure.

Verify That Your Migration Was Successful

In terms of content migration, there are two additional control features built into the ZENworks 10 Configuration Management Migration Utility. These features allow you to view the items you are about to

migrate and then view the results of each item's migration.

The *Items to Migrate* tab (see Figure 14) allows you to view the model that you have created and the objects that you are about to migrate. It is important to review this information before running the migration process.

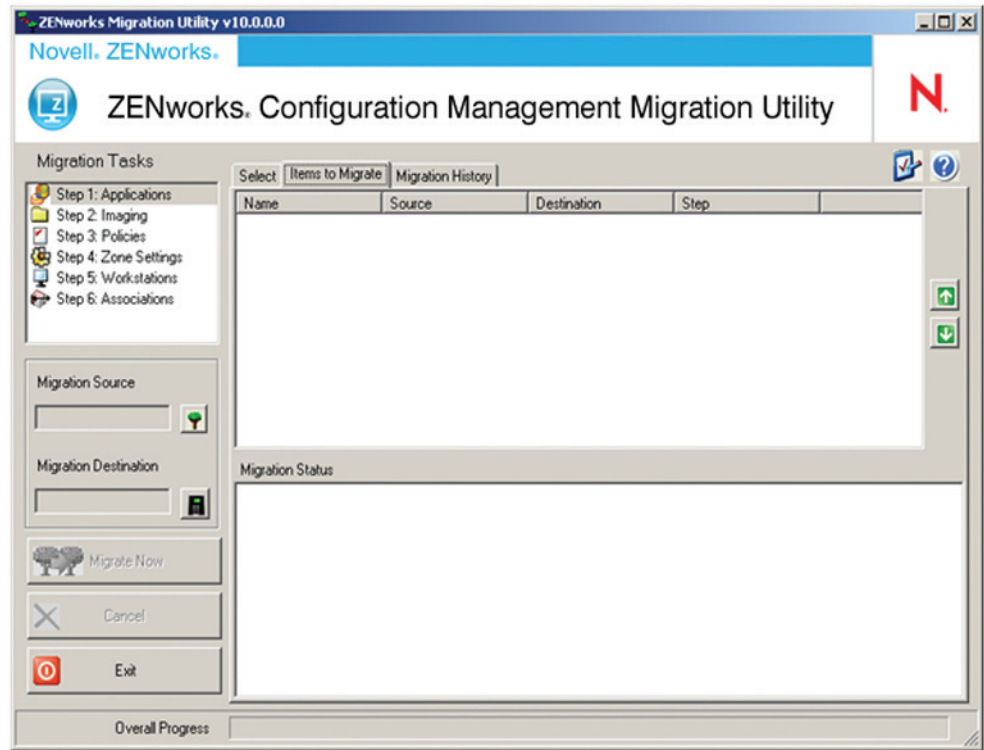


Figure 14. Reviewing the items that you plan to migrate

The other control feature built into the ZENworks 10 Configuration Management Migration Utility is the ability to review the results of the migration. This is highly valuable for troubleshooting purposes, ensuring the successful migration of your content to your new infrastructure.

The *Migration History* tab (see *Figure 15*) allows you to view the migration status and results, even while the migration is in progress. You can see the overall migration and review information pertaining to each of the individual

items you have migrated. If you encounter any problems with these items, then you can review the information specifically related to them, rather than having to locate error information in an all-encompassing log file.

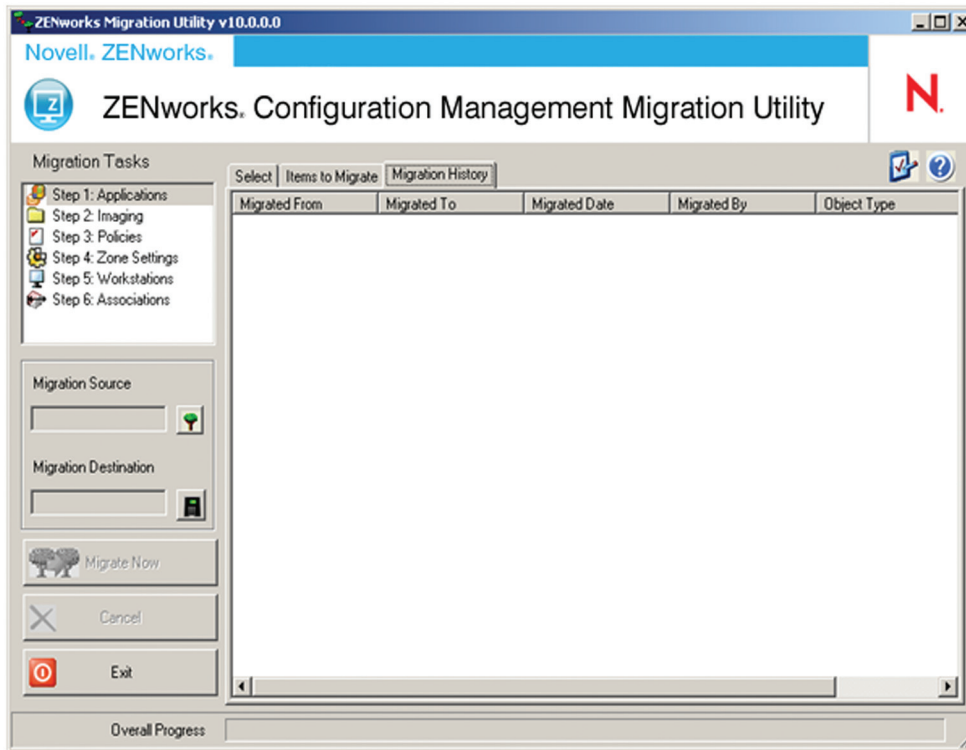


Figure 15. Reviewing your migration status and history

You should be very familiar with these features of the ZENworks 10 Configuration Management Migration Utility and leverage them heavily for your controlled migration(s).

The Importance of Good Documentation

Having detailed, accurate documentation can save you hours of time, regardless of the task at hand. In this case, it is important that you have documentation outlining the exact steps of the entire migration process—from start to finish. All aspects of the process should be documented so that anyone can understand the steps, design and progress at any given point in time. This will allow any authorized individual to pick up the document at any stage in the process, and participate in the migration with little knowledge transfer.

Achieve Successful Migration

This document explains the high-level steps involved in migrating your systems management content and managed devices from Novell ZENworks 7 to Novell ZENworks 10 Configuration Management. We recommend that you read the online installation and migration documentation located at: www.novell.com/documentation

It is our hope that you will see how simple and non-intrusive this process really is. By using the controlled migration methodologies discussed in this document, you can quickly and successfully migrate to the next generation of Novell ZENworks.

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