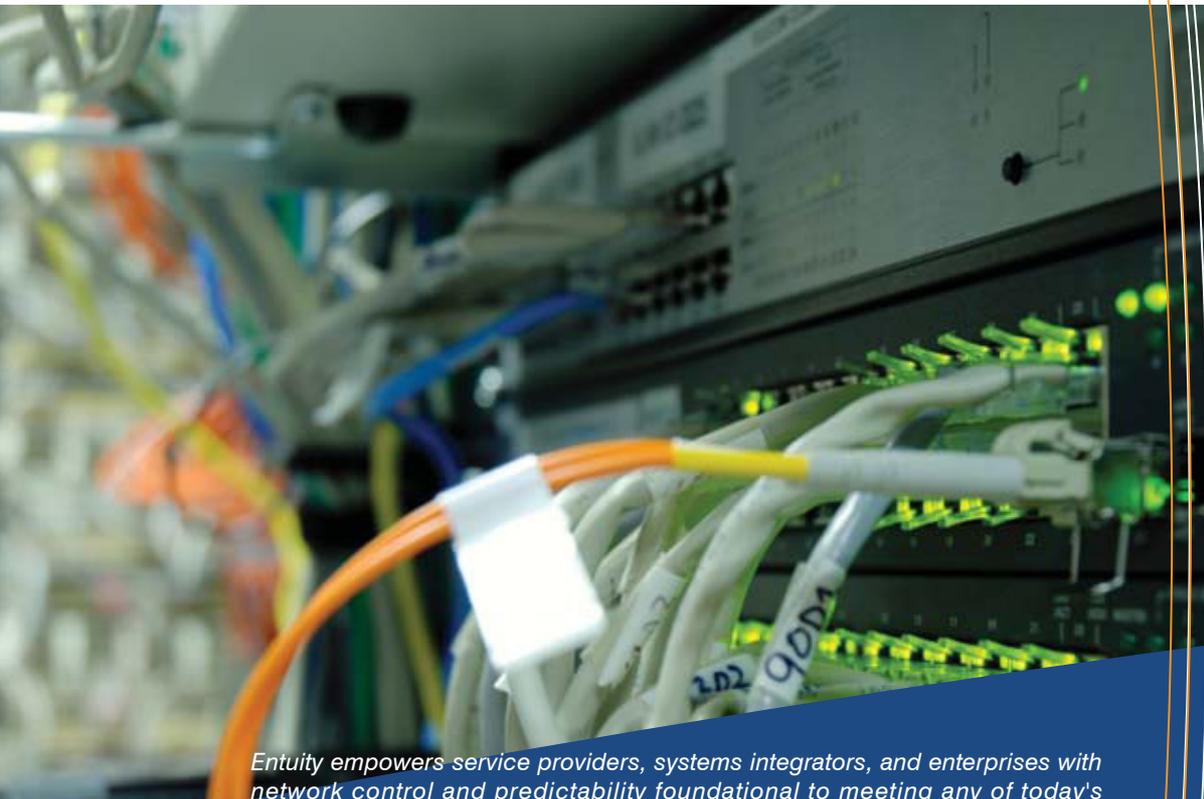# Entuity® 14.5
Migration Guide

Entuity empowers service providers, systems integrators, and enterprises with network control and predictability foundational to meeting any of today's complex IT infrastructure challenges. Entuity provides a succinct suite of the most important functionality for network management – inventory, fault, and performance management – but presented in an easy to use, quick to deploy format.

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1 Entuity 14.5 Migration Overview

This migration guide covers issues for users migrating from earlier versions of the Entuity software to Entuity 14.5 GA (General Availability).

You can find detailed install instructions in the *Entuity Getting Started Guide*.

> ⚠️ Before you upgrade to Entuity 14.5 you are strongly recommended to back up your current installation; the Entuity 14.5 upgrade process does not include a rollback facility.

Migration Prerequisites

Before installing Entuity 14.5 you should read its accompanying:

- *Known Issues* note which details the release contents and instructions on how to install the image.
- *Release Notes* which identifies for you new, changed and removed functionality.

You can find detailed install and configure instructions in the *Entuity Getting Started Guide*. The *Getting Started Guide* and *Release Notes* are available at the root of the supplied Entuity installation CD or ISO image.

When migrating from Entuity 13.5 you should also read the Entuity 14.0 *Release Notes* and *Migration Guide*.

Entuity 14.5 Licenses

You must obtain from your Entuity representative an Entuity 14.5 license; licenses valid with earlier versions of Entuity are not valid with Entuity 14.5.

System Requirements and Shipped Software

Entuity 14.5 server is only certified for use with the 64-bit English edition variants of, Red Hat Enterprise Linux ES version 6, Oracle Linux 6, Windows Server 2008 R2, Windows Server 2008 SP2 and Windows Server 2012.

Changes to Shipped Third Party Software Versions

Product	Entuity 14.0	Entuity 14.5
Apache Tomcat	6.0.39	7.0.47
Apache HTTPD	2.2.27	2.4.9

Table 1   Third Party Software Versions

Entuity Web UI System Requirements

The Entuity web UI is certified for use with Internet Explorer 10.0 or later, Firefox 24 ESR (Extended Support Release) or later and Google Chrome 35 or later releases. Entuity web UI

is now delivered using HTML5 and therefore earlier versions of these browsers are no longer supported.

Users must have their web browsers enabled for both JavaScript, for example to allow the working of the Entuity menu structure, and cookies, for example to maintain your login status.

Entuity 14.5 Migration Path

The certified migration paths to Entuity 14.5 are from:

- Entuity 13.5 Patch 3
- Entuity 14.0 Patch 2.

You can check the Entuity Support site for the latest patches.

> If you are upgrading to Entuity 14.5 from a version of Entuity or patch level that is different to the certified migration path please contact Entuity Support for guidance.

Checking Patch Level

To check the current patch level of an Entuity server:

1) Login into the Entuity server.

2) Click **Help > About Entuity**.

   Entuity displays server details, including release version and patch details, for example:

   ```
   Entuity 14.0 Patch (P02)
   ```

Event Project Deployment

Entuity 14.5 Patch 1 includes an updated event project with a new Send to BEM action. When you install Entuity the new event project is available but it is only applied to the installation when it is deployed. Entuity does not merge projects therefore if you have a highly customized event project you may decide to amend your current project with the latest changes. (See *Update the Event Project*.)

Entuity 13.5 Patch 3 and Entuity 14.0 Patch 2 included changes to the Event Project, for example the new event suppression mechanism. If you are migrating to Entuity 14.5 from an earlier version of Entuity, for example Entuity 13.5 Patch 1, it is important to apply the missing patches. However you only need to deploy the Entuity 14.5 Patch 1 event project to activate all of the Event Management System updates.

Migrating to Entuity 14.5

Installing Entuity 14.5 is the same process whether migrating from Entuity 14.0 or Entuity 13.5. You do not have to install Entuity 14.0 to migrate from Entuity 13.5 to Entuity 14.5. Ensure you:

- Are migrating a server on the migration path.

- Read *Chapter 2 - Entuity 14.5 Migration*.
- Have an Entuity 14.5 license.

To migrate to Entuity 14.5:

1) Confirm the server is patched to the appropriate level (see *Checking Patch Level*).

   If it is not patched to the approved level you must apply any missing patches and then run `configure`.

2) Stop the Entuity server and take a backup.

3) Run `install` to install Entuity 14.5. You should add the new license before running `configure` (by default the license is installed to *entuity_home*`\etc`).

4) `configure` runs when you continue with the installation process.

5) Restart the Entuity server.

6) Deploy the updated event project or apply the changes within it to your current project.

2 Entuity 14.5 Migration

> ⚠ Before you upgrade to Entuity 14.5 you are strongly recommended to back up your current installation; the Entuity 14.5 upgrade process does not include a rollback facility.

Forwarding to BMC Event Manager

The BMC ProactiveNet Performance Management Module is deprecated in Entuity 14.5. If you are using this module it will continue to work, if you are not using this module then it is automatically hidden.

You can now setup Entuity to forward events and incidents to a BMC Event Manager by:

1) Using `configure` to specify the target BMC Event Managers and cell.

   You can configure additional servers and cells for incident and event forwarding through `bem-connections.cfg` although you must always use `configure` to set the default connection.

2) Using Event Management System (EMS) and the Send to BMC Event Manager action within a:

   - Rule which Entuity then uses to determine the events to forward to the BMC Event Manager.
   - Trigger which Entuity uses to forward the associated incidents to the BMC Event Manager.

   The new action is included in the new draft project and is only available when it is in the deployed project. (See *Update the Event Project*.)

Deactivate BMC ProactiveNet Performance Management Module

The new BMC Event Manager action and the BMC ProactiveNet Performance Management Module cannot be used together. If you currently export events to multiple BMC Event Managers and cells then you should continue using the module, when you want to forward events and incidents to a single BMC Event Manager and cell then you should use the new action.

To deactivate the BMC ProactiveNet Performance Management Module:

1) In *entuity_home*`\etc\startup_`*O*/*S*`_site_specific.cfg` set the BMC Event Manager client state to none:

   `[bemclient]`

   `state=none`

   When you have setup multiple BMC Event Manager clients then you must deactivate all of them.

2) Run `configure` to apply the change.

Update the Event Project

Entuity 14.5 Patch 1 includes a new Event Project which contains the Send to the BMC Event Manager action. Projects are not active until they are deployed. A deployed project replaces the previously deployed project it does not attempt to merge the differences between the two projects. Neither does deployment delete the previous project, it remains available for reference or even redeployment.

If you have customized your current event project then you can either apply your custom changes to the new project, or apply the updates in the new project to your custom project.

Deploy the New Event Project
To deploy the updated event project:

1) Click **Administration > Events > Events Administration**.

2) Click **View all projects**.

3) Click the new draft event project., **Upgrade: new version**.

4) Click **Deploy**.

Copy the New Action to your Current Project
The Entuity 14.5 project includes one new action. To copy this action into your customized project:

1) Click **Administration > Events > Events Administration**.

2) Click **View all projects**.

3) Click the new draft event project., **Upgrade: new version**.

4) Navigate to the Actions tab, highlight **Send to BMC Event Manager** and click **Edit**.

5) Select **Script Execution: /**...** and then click **Edit**. Copy the Groovy script.

6) You can now open your customized live project, navigate to its Actions tab and **Add** a new action.

   Enter a *Name* and *Description* and when adding the *Action Steps* ensure you set the *Action Type* to **Groovy Script** and paste in the copied script.

7) Click **Save and Deploy**. The change to your project is only active if you save and deploy the project.

View Filter Enhancements Migration

IP Address Range and IP Address were options available in Entuity 13.5 when defining the source of a content filter rule (alongside, Device, Application, Port and VLAN). In Entuity 14.0 and Entuity 14.5:

■ IP Address Range is an option available when defining a content filter with the Device, Application and Port source types.

■ IP Address is a check box option available when defining an Event Filter.

IP Address Range

When creating a view filter rule IP Range used to be an option available from Source. Unlike other filter rules which were OR'd a rule with the source set to IP Range was AND'd. This was a source of confusion.

Entuity removes IP Range from Source and instead makes it a separate option available from the Edit Filter Rule dialog when Source is set to Device, Port or Application. This change makes the effect of IP Address Range on a view filter easier to understand but does not change how IP Address Range works.

Where a content filter had:

■ Multiple rules including an IP Range rule, Entuity would remove that rule but set the IP Address Range in all of the other rules within that filter. This ensures the behavior of the filter in Entuity 14.5 is the same as its behavior in earlier versions of Entuity.

■ Only an IP Range rule, Entuity would silently apply the IP Address Range to the view against which it is applied. This ensures the behavior of the filter in Entuity 14.5 is the same as its behavior in earlier versions of Entuity. However this setting is hidden in Entuity 14.5 and if you subsequently amend the filter setting of the view in Entuity 14.5 then the IP range is lost.

Entuity Support recommended before upgrading from Entuity 13.5 that you amend the filter so it includes additional Port and Device rules. After you upgrade to Entuity 14.5 the IP range is then available to view and it is persistent even if you were to make other amendments to the view's filters.
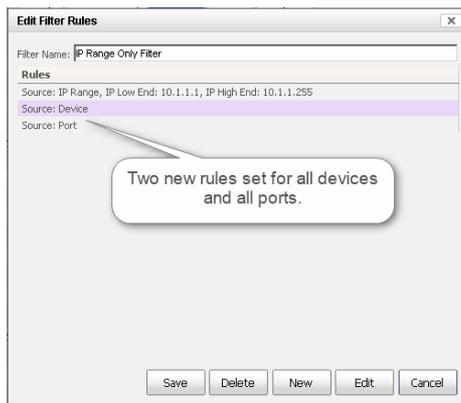

Figure 1   Amended IP Range Filter

IP Address

Filters that had an IP Address rule are not migrated in Entuity 14.5 but instead you must amend their event filters to select the **Include events from devices that are not under management** check box. This check box is available from the Edit Event Filter dialog

In Entuity 14.5 the All Events filter is amended with the **Include events from devices that are not under management** check box selected.

By default when you create a new event filter the **Include events from devices that are not under management** check box is not checked.

HTTPS Security and SSL Certification

Entuity 14.5 updates Apache Tomcat to version 7.0.47 and Apache HTTPD 2.4.9. If you have configured Entuity to use HTTPS then changes to the Apache software may mean your SSL certificates are no longer compatible.

If you are upgrading from Entuity 13.5 then the changes in Apache also include updates to the Java version and tightened security that may invalidate your current SSL certificate.

You are strongly advised to install Entuity 14.5 to a test environment and then test your SSL certificates. You can contact Entuity Support for further guidance.

DER Encoding Certificate Format Not Supported

Apache HTTPD 2.4.9 does not support SSL certificates using DER encoding; Entuity 14.5 does not run with a DER format certificate.

You can convert a DER format certificate to the supported PEM format using the `openssl` utility, located in *entuity_home*`/lib/apache/bin`.

MD5 Certificates Not Supported

Apache HTTPD 2.4.9 does not support SSL certificates using MD5 message-digest algorithm; Entuity 14.5 does not run with a SSL certificate using the MD5 signature hash.

512 Bit Long Public Keys Not Supported

If you are upgrading from Entuity 13.5 then you are also changing the underlying Java version used by Apache Tomcat from Java 1.6.x to Java 1.7.x. Java 1.7.x has tightened security and will not accept public keys of less than 1024 bits long. A certificate with a 512 bit public key and which worked successfully under earlier versions of Entuity is not valid with Entuity 14.5.

LDAP and SSL Private Certification

If running LDAP over SSL and using your own private certification authority then during the upgrade to Entuity 14.5 the Java certificate store is replaced and in effect your CA certificate removed. If you attempt to run and connect to the Entuity server then the attempt will fail.

You must re-install the CA certificate, you cannot simply copy across the old certificate. After installing the certificate you must restart the Tomcat server, for example by restarting the Entuity server.

Exclude Private Views Preference

System administrators have access to all views within Entuity. Entuity includes an option that allows an administrator to decide whether they want to display all of the views on the server or just the set of views to which they have explicitly assigned themselves access.

Previously the Exclude Other User's Private Views preference was by default turned on. When administrators created and assigned a view to a user group to which they were not a member Entuity would no longer display the view to the administrator. Some administrators found this confusing.

In Entuity 14.5 Exclude Other User's Private Views is turned off by default unless the administrator has updated and saved any of their preference settings in which case this update does not amend their current settings. System administrators can still amend the Exclude Other User's Private Views setting through their Preferences page.

Essential Reports Deprecated

Recent releases of Entuity have seen the Essential Report functionality being delivered through Entuity's standard set of reports. Essential Reports are now deprecated and by default hidden in Entuity 14.5, this includes the KPI and Executive report modules that were delivered as Essential Reports.

If Essential Reports were enabled prior to the upgrade, then they will continue to be visible and accessible.

Changes to Application States

Prior to Entuity 14.5 applications that were unavailable but not the root cause of the problem Entuity assigned a Degraded (yellow) state. In Entuity 14.5 these applications are assigned the Unknown (grey) state. Therefore in Entuity 14.5 an application that does not respond to Entuity within the time frame set in the:

- Application Latency threshold Entuity sets to a Degraded state (yellow).
  You can set these thresholds through the Thresholds page.

- Application Timeout threshold and it is the root cause of the problem then Entuity sets to a Down state (red).
- Application Timeout threshold and it is not the root cause then Entuity sets to an Unknown state (grey).
  You can set the application timeout threshold through a section in *entuity_home*\etc\entuity.cfg:

  ```
  [applicationmonitor]
  appTimeout=8
  ```

Where *appTimeout* defines the system wide application timeout in seconds, by default set to 5 seconds.

Using a Non Standard Database Port

If you configured Entuity to run with a non standard database port then during an upgrade Entuity does not retain that override. Entuity would use the default port, 3306 and if that is unavailable the next available port, for example 3307. You do have the option to re-enter your port override when configuring Entuity.