

# Edge Technologies enPortal® for BMC Business Service Management Integration Note

Product Category: Portal

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## Product Abstract

Edge Technologies enPortal is a vendor-agnostic secure network management and OSS/BSS integration platform. enPortal collects information from existing applications, tools, and technologies then consolidates and coordinates it all into a single, secure view.

enPortal integrates management applications with a growing library of out-of-the-box Product Integration Modules (PIMs) including several BMC Business Service Management (BSM) solutions as well as support for CA Technologies, HP, IBM, Oracle, SevOne, SolarWinds, Splunk, VMware and many others. The BMC Software products supported include:

- BMC Atrium Discovery and Dependency Mapping (ADDM)
- BMC Atrium Orchestrator (BAO)
- BMC BladeLogic Decision Support for BSA (BDSSA)
- BMC BladeLogic Network Automation (BNA)
- BMC ProactiveNet Performance Management (BPPM)
- BMC Remedy IT Service Management (ITSM)
- BMC Transaction Management Application Response Time (TM ART)
- Entuity for TrueSight Operations Management

*Note: Edge also supports BMC Application Performance Management (APM) Console, BMC IT Data Analytics, BMC Performance Manager Portal, BMC Remedy Action Request System (ARS), BMC TrueSight Capacity Optimization, and BMC TrueSight Operations Management. These integrations have not yet been TAP validated.*

The core features and capabilities of enPortal include:

- Single-Sign-On to BMC BSM solutions and other management applications
- Over 100 pre-build PIMs for web-based applications from more than 45 vendors
- Advanced security
- Application hardening
- Integration with external user authentication systems
- Branding and customization
- Dashboard views
- Multi-tenancy
- Scalability

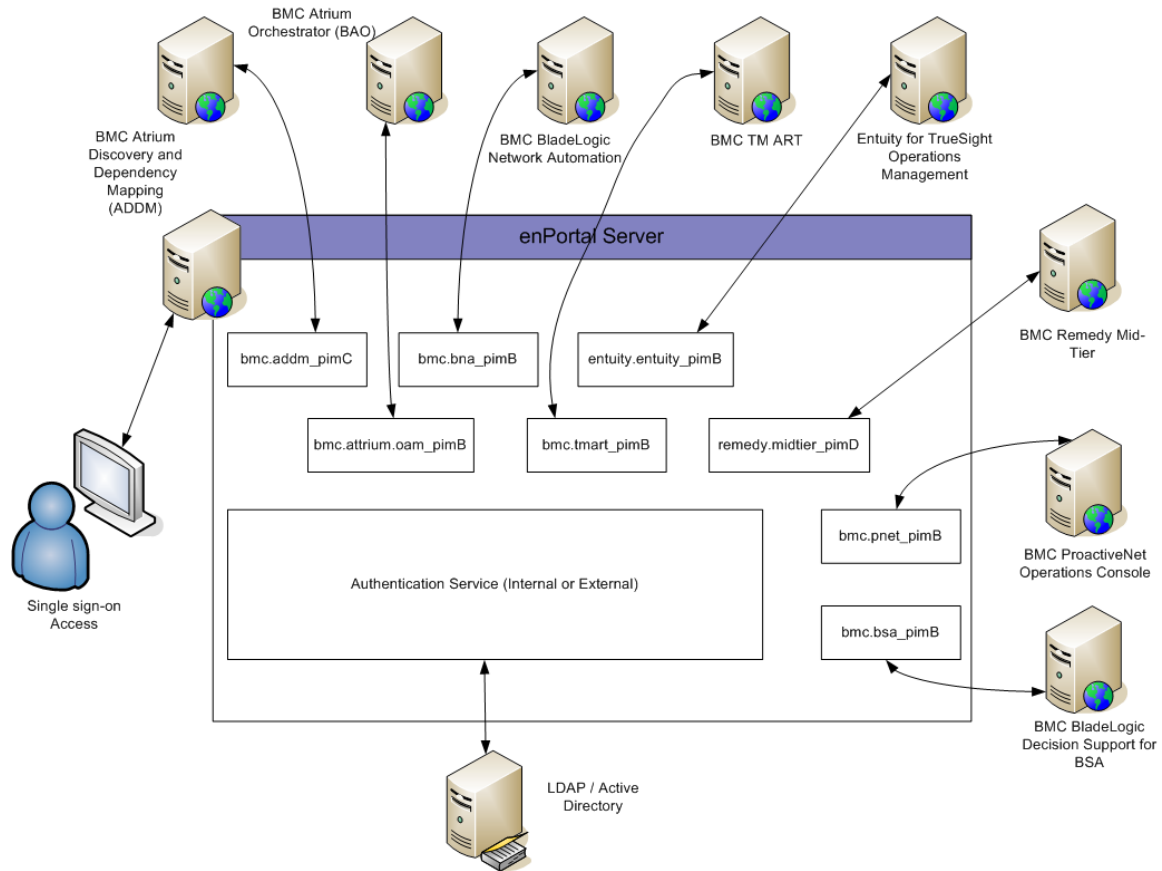
These features combine to provide the following business advantages:

- **Time:** Rapid integration of existing products from multiple vendors
- **Standardization:** Integration of information provided by various applications into a single cohesive, branded display
- **Flexibility:** An integration platform that creates interoperability between disparate tools, and can be rapidly adapted to meet unknown future requirements
- **Convenience:** A single, secure access point for all tools, with minimal disruption to end-users when applications are replaced or upgraded
- **Scalability:** Support for large numbers of concurrent users without impacting system performance.

## Integration Summary

enPortal's patented Content Retrieval System (CRS) was built from the ground up using cutting-edge Java and JSP technology, and was developed specifically to address single sign-on and integration requirements. Through this secure integration platform, enPortal is able to offer BMC customers the ability to extend the power of their existing BSM implementation.

enPortal integrates with BMC Business Services Management applications through its pre-built BMC Product Integration Modules (PIMs). enPortal PIMs are pre-built, plug-and-play integration packages that provide built-in hooks into web-based applications. By using "proxy" technology, enPortal enables BMC product integrations and single sign-on with no additional coding and no changes to the back-end applications.



**Figure 1:** This figure illustrates data flow between the BMC application servers and client browser, through the enPortal server using proxy technology.

Each BMC PIM allows enPortal to recognize user names, security specifics, and a wide variety of other variables already established within each application. Each PIM provides pre-built channels through enPortal, so application specific data can be easily accessed through the enPortal GUI.

Once the initial BMC application integration is complete, enPortal can easily facilitate further integration between additional BSM applications and a wide variety of additional third-party management applications.

## Support Information

The integration described in this note is supported by Edge Technologies, Inc. and its many partners (go to [www.edge-technologies.com](http://www.edge-technologies.com) and click on “Partners” to see a listing of Edge Technologies partners). Edge Technologies develops, markets, and supports the installation of enPortal and its integration with the BMC Business Service Management suite of applications.

For more information on any of Edge Technologies integration offerings, please contact [sales@edge-technologies.com](mailto:sales@edge-technologies.com), or call 1-888-771-EDGE or +1 703-691-7900.

## System Requirements

### Supported Platforms

The following table lists operating systems supported by enPortal. In general enPortal is supported on any 32 or 64-bit platform that runs Java Runtime Environment (JDK) 1.6 or later. enPortal is also supported on virtualized environments such as VMWare.

Vendor	Platform	Versions
Oracle/Sun Microsystems	Solaris	8, 9, 10, 11 - SPARC or x86 / x86_64
Red Hat Enterprise Linux	Linux	5.7+, 6+ (or equiv for CentOS, Scientific Linux, Oracle Linux, and Amazon Linux)
SUSE Linux Enterprise Server	Linux	10, 11
Microsoft	Windows	Windows 7, 8, Server 2003, Server 2008 R2, Server 2012

### Typical System Requirements

Component	Minimum Requirement (per enPortal server)	Example Deployment Scenarios		
		Dev or Test Lab	Internal use (NOC, SOC, etc)	External use (MSP customer-facing) 2+ servers in a cluster
CPU	Single CPU	Single CPU	2+ CPU cores	4-8 CPU cores
Memory	1 GB RAM	2 GB RAM	4-8 GB RAM	16-32 GB RAM
Storage	1 GB disk	1 GB disk	2 GB disk	2 GB disk
Operating System	32 or 64 bit O/S	32 or 64 bit O/S	64 bit O/S	64 bit O/S
Java	JDK 1.6+ installed on enPortal server			
Database	<b>Recommended:</b> use the embedded H2 database (1) <b>OPTIONAL:</b> external database; see below (2)			<b>Recommended:</b> use an external, clustered RDBMS (3)

\* Notes in regards to the database requirements:

(1) By default, enPortal includes an in-memory H2 database for configuration data to maintain the mappings between users, roles and proxied content. For most deployment scenarios - excluding HA, clustered architectures - Edge recommends using this embedded H2 database. This will simplify the deployment and lower hardware cost as the H2 database will be installed on the same physical or logical server as the enPortal application.

(2) Optionally, if it is desired to use an external database for this configuration data, Edge supports the following databases: Hypersonic, SQLServer, Oracle, SQLAnywhere, PostgreSQL, and MySQL.

(3) For HA, clustered enPortal architectures, it is required to use an external database on separate hardware to avoid a single point of failure and ideally this database will be installed on an HA database cluster that has a high bandwidth, low latency network connection to the enPortal servers. Because the size of the database needed by enPortal will be minimal (typically in the 10's of MBs), using an existing customer-supplied, clustered database from the list in (2) above is encouraged to keep costs low and to minimize deployment efforts.

### Default Network Ports

Component	Port	Protocol	Scope/Accessibility
Tomcat Web Server	8080	HTTP	enPortal server via client host
Tomcat Shutdown Port	8005	N/A	localhost
embedded H2 database	N/A	JDBC/ System File	runs in the Tomcat process
(optional - if used) external database	Refer to specifications outlined by the vendor of the database		

### Client Browser Requirements

Vendor	Platform	Version(s)	Optional Plug-Ins*
Microsoft	Internet Explorer	7, 8, 9, 10, 11	as required by integrated applications
Mozilla	Firefox	3+	
Google	Chrome	4+	

\* If enPortal is deployed in conjunction with AppBoard, then the Adobe Flash Player is required for any client browser used.

### Supported Product Versions

The following table lists the BMC Business Service Management product versions supported by the enPortal PIM suite.

Product	Version	PIM
BMC Atrium Discovery and Dependency Mapping	8.3.2.2	bmc.addm_pimC
BMC Atrium Orchestrator	7.6.02.04	bmc.atrium.oam_pimB
BMC BladeLogic Decision Support for BSA	8.2.01.273	bmc.bdssa_pimB
BMC BladeLogic Network Automation	8.2.01	bmc.bna_pimB
BMC ProactiveNet Performance Management	8.6	bmc.pnet_pimB
BMC Remedy IT Service Management	7.6.04	remedy.midtier_pimD
BMC Transaction Management Application Response Time	4.1.0	bmc.tmart_pimB
Entuity for TrueSight Operations Management	12.5 (P03)	entuity.entuity_pimB

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## Integration Details

**The BMC BSM integration suite consists of eight product integration modules (PIMs). The PIMs may be used separately or in any combination to achieve the integrations required by the user.**

### BMC Atrium Discovery and Dependency Mapping (ADDM)

The enPortal integration to ADDM allows ENMS administrators to selectively choose which top-level ADDM capabilities are provided to users through the integration channels provided by the PIM. The following features are provided by the enPortal ADDM PIM:

- enPortal PIM: bmc.addm\_pimC
- PIM Channels:
  - ApplicationHome – Provides user access to the ADDM Home tab and features;
  - DiscoveryHome – Provides user access to the ADDM Discovery tab and features;
  - InfrastructureHome – Provides user access to the ADDM Infrastructure tab and features;
  - Reports – Provides user access to the ADDM Reports tab and features;
  - SetupHome – Provides user access to the ADDM Setup tab and features, and;
  - Proxy – The channel that is used by the system to display Access Manager channels.
- Caveats: None

### BMC Remedy Mid-Tier

The enPortal integration to ITSM provides a series of channels to the various ITSM tools and capabilities that are within the Mid-Tier server bundle.

- enPortal PIM Name: remedy.midtier\_pimD
- PIM Channels:
  - AppFormView – Provides access to the Remedy Mid-Tier application form;
  - ConfigTool – Provides access to the Remedy Mid-Tier configuration options;
  - Form View – Provides access the Remedy Mid-Tier form;
  - Home – Displays the top-level Home page for the Remedy Mid-Tier application;
  - ViewFormServlet – Displays the Remedy Mid-Tier forms servlet, and;
  - Proxy – The channel that is used by the system to display Remedy Mid-Tier channels.
- Caveats: None

## BMC Transaction Management Application Response Time (TM ART)

The enPortal integration to TM ART comprises a solution that takes into consideration the unique menu structure of the application to allow for very fine grained control of access into the product. Thus, the integration contains six channel packages and their corresponding sub-channels / field options.

- enPortal PIM Name: bmc.tmart\_pimB
- PIM Channels:
  - Administration – Provides access to the Administration page and its sub-components;
    - Files
    - Locations
    - Projects
    - REM
    - Reports
    - System
    - SystemHealthUnit
    - Upgrade
    - Users
  - Function – Provides access to the Function page;
  - Help – Provides access to the application Help page and its sub-components;
    - About
    - Documentation
    - Tools
  - Home – Displays the top-level Home page for the TM ART application;
  - Monitoring – Provides access to the Monitoring page and its sub-components, and;
    - Configuration
    - Monitoring
    - Projects
    - Reports
  - Proxy – The channel that is used by the system to display TM ART channels.
- Caveats: None

## BMC BladeLogic Network Automation (BNA)

The enPortal integration to BladeLogic centers on the application tabs to allow for access to one or more tabs or the application as a whole.

- enPortal PIM Name: bmc.bna\_pimB
- PIM Channels:
  - Application – This channel represents the break-out of each BladeLogic tab;

- adminTab
- homeTab
- networkTab
- policiesTab
- reportsTab
- Home – Displays the top-level Home page for the BladeLogic application, and;
- Proxy – The channel that is used by the system to display BladeLogic channels.
- Caveats: None

## BMC BladeLogic Decision Support for BSA (BDSSA)

- enPortal PIM Name: bmc.bsa\_pimB
- PIM Channels:
  - Home – Displays the top-level Home page for the BDSSA application, and;
  - Proxy – The channel that is used by the system to display BDSSA channels
- Caveats: None

## Entuity for TrueSight Operations Management

The enPortal integration to the Entuity application has been implemented to focus all user interaction on the web explorer component of the application versus the Java applet Component Viewer. Thus, access to the Component Viewer is deleted from the enPortal integration for this application.

- enPortal PIM Name: entuity.entuity\_pimB
- PIM Channels:
  - Home – Displays the top-level Home page for the Entuity application without the Component Viewer menu selection, and;
  - Proxy – The channel that is used by the system to display Entuity channels
- Caveats: The Home channel that displays the top-level entry page will not provide access to the ComponentViewer Java Webstart application (The navigation bar does not show the option to launch the Component Viewer.) The following caveats apply:
  - Functions only available in the Component Viewer:
    - Essential reports (still not all covered by web UI yet);
    - Editing of attributes, configuration monitor settings, IPSLA settings, line speed correction, etc.
    - Service creation and editing
    - Ticker
    - Manual port peering
    - Visibility of all objects/associations in a tree structure (effectively covered by Explorer's Advanced tab)
    - Open Trap Receiver (OTR) configuration



- Functions only available through enPortal in the Explorer (and web UI, in general):
  - Seamless navigation with rest of the UI
  - Seamless multi-server support
  - Flow - Explorer also contains flow summaries
  - View and ACL management
  - Vastly improved search facility
  - Improved graphing
  - 100+ Jasper reports
  - Reports builder
  - Perspectives
  - Custom dashboards
  - Map
  - Events
  - Account management (User/Group)
  - Inventory management

## BMC ProactiveNet Operations Console (BPPM)

- enPortal PIM Name: bmc.pnet\_pimB
- PIM Channels:
  - Home – Displays the top-level Home page for the Entuity application without the Component Viewer menu selection;
  - ManagementConsole – Displays the management console, only. Allows for drill through from the management console to subordinate pages;
  - OperationConsole – Displays the operations console, only. Allows for drill through from the operations console to subordinate pages, and;
  - Proxy – The channel that is used by the system to display PNET channels
- Caveats: Access to the SLO console (Service Level Objective) cannot be hidden but will not function appropriately and must be noted as a training item.

## BMC Atrium Orchestrator Manager (BAO)

- enPortal PIM Name: bmc.bao.am\_pimB
- PIM Channels:
  - Home – Displays the top-level Home page for the BAO management application (not CDP [Continuous Data Protection]);
  - Proxy – The channel that is used by the system to display BAO channel
- Caveats: None

## PIM Configuration Example

Customers integrate BMC Remedy Mid-Tier into the enPortal framework by using the BMC Remedy PIM (Product Integration Module). Installing the PIM takes only a few minutes, as follows:

- Log into the enPortal server (example: <http://portal.edge-technologies.com:8080/enportal>)
- Download and extract the PIM JAR (file `remedy.midtier_pimD.jar`) in the enPortal root directory
- Re-start the enPortal server as the administrator user
- Under the **Advanced** tab, select **PIMImport**
- Click the **Browse...** button
- Locate the Remedy Mid-Tier package .jar file in the Open dialog
- Click the **Start** button to extract the files from the PIM .jar archive
- Under the **Advanced** tab, select **XMLImport**
- Click the **Start** button to load the PIM into the system
- Confirm that the following message is displayed: "Import completed; loaded the following file(s): `load_remedy.midtier_pimD.txt`"
- Under the **Advanced** tab, select **Explore System**
- Navigate to the `/Directory/system/proxy` folder and locate the "**Manage Proxy**" channel
- Right-click the "**Manage Proxy**" channel item and select **Open** to launch the channel into the right-hand view pane

## CHANNEL TYPES

- AppFormView - Channel that accesses the Remedy Mid-Tier application form
- ConfigTool - Channel that provides the Remedy Mid-Tier configuration options
- Form View - Channel that accesses the Remedy Mid-Tier form
- Home - Channel that displays the top-level Home page of the Remedy Mid-Tier application
- ViewFormServlet - Channel that displays the servlet of Remedy Mid-Tier forms
- Proxy - Channel that is used by the system to display Remedy Mid-Tier channels

## CONFIGURING AN INTEGRATION

After installing the Entuity PIM, perform the following steps to configure access to the host Entuity server:

- Click on the **Applications** tab
- Right-click on the name "sample" in the row for BMC Remedy ITSM v7.6 and select "Modify"
- Fill in the items in the **Modify Application Wizard** dialog:
- Select the protocol used to access your Remedy server (http or https)
- Change the host name from "changeme" to the hostname or ip address that will resolve to your Remedy server

- Change the port to the port number of your Entuity server
- Click "Save" to keep your changes and exit the popup widow
- Click on the **Integrations** tab
- In the Explorer, under Packages, expand the remedy.midtier\_pimD tree and click on the **Sample** target. Confirm that the information you entered is displayed for your Remedy server in the right-hand view panel
- Under the **Sample** target, click on the **Home** channel. A login prompt should be displayed.
- Log in using the same credentials you would use for accessing the Remedy application in a browser. Confirm that the Remedy Home page is displayed.

## CREATING CHANNELS

After installing the Entuity PIM and configuring access to the host Entuity server, perform the following steps to create channels to display Entuity content:

- Click on the **Applications** tab
- Right-click on the row for BMC Remedy ITSM v7.6 (remedy.midtier\_pimD) and select a 'build' channel type
- In the "Channel Name" box, enter the name you want to give to the new channel
- For "Channel Type", select "3rd Party Pims"
- Click **Next**
- Click **Finish**
- Click on the Integrations tab
- In the Explorer, under Packages, expand the remedy.midtier\_pimD tree and click on the **Sample** target. Confirm that the new channel is listed along with the other sample channels
- Repeat the above steps to create additional channels. Select a different Channel Type in step 2 to create a different type of channel.

## UPGRADING TO A NEWER APPLICATION VERSION

Perform the following steps when the Entuity server is upgraded to a newer version of Entuity:

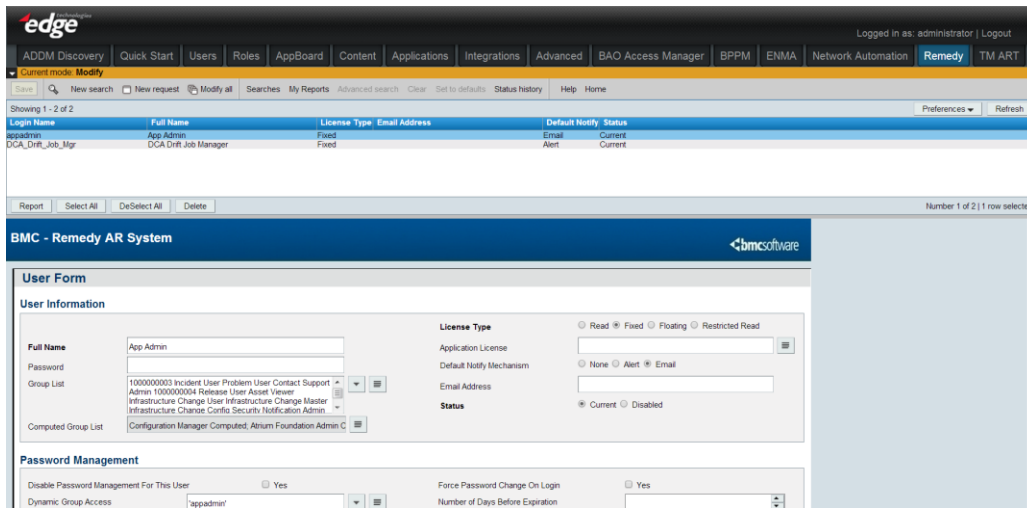
- Check the AppBoard/enPortal PIM online documentation to see if the new Entuity version is supported by the existing remedy.midtier\_pimD PIM.
- To test if the new Entuity version is supported by the existing PIM that you have installed, perform the following steps:
  - Click on the **Applications** tab
  - Right-click on the row for the old Entuity server and select "Modify"
  - Update the protocol, host, and port to reference the server where the new version of Entuity is running
  - If the new Entuity version is not supported by the existing PIM that you have installed, perform the following steps to upgrade the PIM:
    - Download the new PIM version from the PIM download site

- Follow the steps in the Installation section above to install and configure the new PIM version
- Re-create all Entuity channels to reference the new PIM
- Integration is complete!

[NOTE: the above are basic steps for the BMC Entuity for TrueSight Operations Management application-enPortal integration. Please refer to the *PIM Integration Guide* for complete integration instructions.]

## Sample Scenario

True business value is gained when customers display Business Service Management information through the enPortal's single pane of glass – in any way the customer needs to see that information.



**Figure 2: enPortal's single pane of glass lets any authorized user – from an IT staffer to the CEO to an outside customer – get the information they need to do their job effectively and efficiently.**

For example, one of Edge Technologies' customers is a large national telecommunications provider. This provider integrates the BMC ITSM ticketing application with enPortal to gain a competitive advantage, and to significantly improve customer service.

Specifically, with the ITSM-enPortal integration, this provider:

- Displays internal ITSM Help Desk information in customized role-based views specific to user's needs
  - IT managers can see all Help Desk tickets
  - Help Desk staffers can see only the tickets that are assigned to them
  - Account managers can see only those tickets that originate from particular end-users
- Improves customer satisfaction by allowing external customers to see the status of problem calls in a completely secure manner
  - Lets customers see the tickets they initiated

- Customers can check status online rather than calling in to a customer service representative
- Customers only see their own tickets – not those reported by other customers
- Customers can create their own look-and-feel views to help create an environment in which they are completely comfortable and familiar

## Endnotes

Edge Technologies, Inc. produced this integration note to assist customers with joint BMC/Edge Technologies implementations. Edge Technologies has made an effort to ensure that the information contained in this document is accurate, but do not guarantee accuracy now or in the future.

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