



BMC FootPrints Asset Core - Technical Specifications

Version 11.5

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Prerequisites

This document will provide a list of all supported platforms, usable databases and information regarding the specific prerequisites of each module in the BMC® FootPrints Asset Core.

Solution Overview

Automate desktop and server lifecycle management, support security/compliance initiatives and take command of IT assets with an integrated suite of products that delivers the power of an enterprise solution with the flexibility to add incremental functionality. BMC FootPrints Asset Core (Asset Core) allows administrators to easily take inventory of assets, install operating systems, deploy software and patches, assess vulnerabilities, manage power usage and support end-user desktop issues remotely, all from a centralized console. Asset Core employs ONE Agent, ONE Console and ONE database and provides all the functionality you need built-in, which includes a graphical view of your entire asset relationship, dashboards for easy reporting, indexed search capabilities, remote management for devices on the internet and at the center - Operational Rules - which are pre-built templates that enable you to granularly configure your network and customize the solution for your business.

Hardware Requirements

Requirements for Master and Relay Devices

This table discusses the recommended hardware per node count. It is important to understand that this document generalizes the hardware recommendations and the hardware requirements may be more or less for any given environment.

When running in virtual environments, CPU, RAM, and NIC utilization on the host system may impact performance. Dedicated physical CPU, RAM, and NIC cards may improve performance.

Number of Devices	Master Server	Dedicated DB ⁶	Each Relay ^{2,3,4}
Evaluation or <500	Intel® Pentium® Core™ 2 Duo x86 2.2 GHZ 2 GB RAM 50 GB free space	Dedicated DB should not be required.	Dedicated relay should not be required Intel Pentium D 1 GB RAM 10 GB free space

Number of Devices	Master Server	Dedicated DB ⁶	Each Relay ^{2,3,4}
500-2000	Intel Pentium Core 2 Duo x64 3.2 GHZ4 GB RAM 100 GB free space 10k RPM or faster drives	Intel Pentium Core 2 Duo x64 3.2 GHZ4 GB RAM 80 GB free space 10k RPM or faster drives	Intel Pentium Core 2 Duo x86 2.2 GHZ 2 GB RAM 50 GB free space ¹
2001-10000	Intel Xeon® Dual Core™ x64 processor 8 GB RAM 100-150 GB free space 10k RPM or faster drives	Intel Xeon Dual Core x64 processor 8 GB RAM 150 GB free space 10k RPM or faster drives	
10,001 & Above ⁵	Consult a BMC® Software Engineer for help with determining the system recommendations for your environment.		

1. Required disk space varies based on size of deployed packages, patches and service packs.
2. Number of relays required will vary based upon network topology and other environmental factors.
3. It is not recommended to have more than 2000 nodes communicating with any single relay.
4. If the relay is to be used for multiple roles that is, (Packager, Patch Manager, Asset Discovery Scanner, Vulnerability Scanner, or Rollout Server) hardware requirements may increase.
5. A Linux based Master Server with a PostgreSQL or Oracle database is proven to deliver significantly increased performance results. This configuration should be considered for implementations larger than 10000.
6. Check with database vendor to identify any hardware limitations based upon version in use. Your licensed database version may not utilize all hardware resources. Ex: Microsoft SQL Express, Microsoft SQL Workgroup, Oracle Express

Console Requirements


Computers on which the Console is to be launched require at least 2 GB RAM.

Software Requirements

BMC FootPrints Asset Core Master Server

Component	Minimum Requirement ^{1,2,3,7,8}
Windows Operating System	Windows Server® 2003 32 and 64 bit (Standard, Web, Enterprise and Small Biz editions) Windows Server 2008 R2 32 and 64 bit (Standard, Web, Enterprise and Small Biz editions) including Core installation Windows XP 32 and 64 bit Windows 7 32 and 64 bit Windows 8 32 and 64 bit
Linux Operating Systems	Linux RHEL 4 (4.8 minimum), 5 and 6 SUSE 10 and 11 CentOS 4 (4.8 minimum), 5 and 6 Debian 5.0 and 6.0 Ubuntu LTS (10.04, 12.04)

BMC FootPrints Asset Core Database Server

Component	Minimum Requirement ^{1,2,3,5,6,7,8}
Microsoft SQL Server	<p>Microsoft SQL Server 2005 (Express, Standard and Enterprise editions) 32 and 64 bit</p> <p>Microsoft SQL Server 2008 R2 (Express, Standard and Enterprise editions) 32 and 64 bit</p> <p>Microsoft SQL Server 2012 (Express, Standard and Enterprise editions) 32 and 64 bit</p>
Oracle RDBMS	<p>Oracle 9i: from 9.2.0.6</p> <p>Oracle 10g: 10.0 and 10.1 (with client 9.2.0.6), 10.2 (patches might be required)</p> <p>Oracle 11g: 11.2.0.2 (with 10.2.0.4/5 or 11.2.0.2 client)</p> <div>  <p>Note Please refer to the Installation manuals for the complete list of pre-requisites.</p> </div>
Postgre SQL	PostgreSQL 8 (8.4 minimum), PostgreSQL 9

BMC FootPrints Asset Core Client and Relay

Component	Minimum Requirement ^{1,2,3,4,7}
Windows Operating System	<p>Windows 2000 Professional SP4</p> <p>Windows Server 2000 32 bit with SP4 (Standard, Web, Enterprise and Small Biz editions)</p> <p>Windows Server 2003 32 and 64 bit (Standard, Web, Enterprise and Small Biz editions)</p> <p>Windows Server 2008 R2 32 and 64 bit and 2008 64 bit (Standard, Web, Enterprise and Small Biz editions) including Core installation</p> <p>Windows XP 32 and 64 bit</p> <p>Windows Vista® 32 and 64 bit (Business, Enterprise and Ultimate editions) with SP1</p> <p>Windows 7 32 and 64 bit</p> <p>Windows XP Embedded 32 and 64 bit</p> <p>Windows 7 Embedded Standard 32 and 64 bit</p> <p>Windows 8 32 and 64 bit</p>
Linux Operating Systems	<p>Linux RHEL 4 (4.8 minimum), 5 and 6</p> <p>SUSE 10 and 11</p> <p>CentOS 4 (4.8 minimum), 5 and 6</p> <p>Debian 5.0 and 6.0</p> <p>Ubuntu LTS (10.04, 12.04)</p>

Component	Minimum Requirement ^{1,2,3,4,7}
Mac OS	Intel Based Mac OS: v10.5 (Leopard) Intel Based Mac OS v10.6 (Snow Leopard) Intel Based Mac OS: v10.7 (Lion) Intel Based Mac OS v10.8 (Mountain Lion)

BMC FootPrints Asset Core Console

The BMC FootPrints Asset Core console requires the Java Runtime Environment (JRE) version 1.6.x (provided with the installation program) or 1.7.x. Windows x64 devices require the JRE version 1.6 update 17 or later to be preinstalled.

Supported Directory Servers

Component	Supported Platforms
Microsoft Active Directory	Microsoft Active Directory® Services (ADS) 2000, 2003, 2008
Lotus Domino	Lotus Domino 8.0, 8.5
Novell eDirectory	Novell eDirectory 8.7, 8.8

Supported Email Servers

Component	Supported Platforms
Email Servers with support for SMTP	BMC FootPrints Asset Core requires SMTP for sending email notifications Secure SMTP (SSL) Authenticated SMTP

Supported Languages

Component	Supported Platforms
Languages	English, French, German, Japanese, Spanish, Brazilian Portuguese

1. Minimum requirements do not include the total requirements for the server operating system or any other application (ie: MS SQL, MS IIS, antivirus, etc) installed on the same server.
2. If several Asset Core components (ie: Asset Core Master Server, database, or web server application) are installed together on a common server, the minimum requirements for each server component must be combined, and note 1 above will also apply.
3. Actual requirements and product functionality may vary based on your system configuration and operating system.
4. Recommendation: >=512 Kbps connectivity from audited machine to Asset Core Relay.
5. Microsoft SQL Server must be case insensitive and have remote connections enabled
6. See Asset Core installation guide for detailed database pre requisites.
7. Itanium 64 bit processes are not supported.
8. Windows XP, Windows 7 and Windows 8 are supported for evaluation only.

Supported Configuration

Core Functions	Windows 2000/03/08/7/8/XP/Vista	Mac 10.5, 10.6, 10.7, 10.8	Linux
Discovery/Inventory	x	x	x
Applications Usage (Self-healing and Blocking)	x		x
Software Deployment	x	x	x
OS Deployment	x ¹		
Patch Management	x		
Vulnerability Management	x		x ²
Remote Control	x		
Direct Access	x	x	x
USB & Port Security	x		
Power Management	x	x	x

1. The operating system for OSD must be listed in the supported Windows Operating Systems for the master server
2. The operating system of the Vulnerability scanner device must be Linux RHEL 4,5 and a6 SUSE 10 and 11, CentOS 4, 5 and 6, Debian 5 and 6
3. Self-healing is only available on Windows Operating Systems

Supported Virtualization

Component	Supported Platforms ¹
Virtual Platform Support	BMC FootPrints Asset Core (Asset Core) has been proven by BMC Software customers to function properly in virtualized data centers that use VMware® ESXi™, VMware® Infrastructure™ and Microsoft Hyper-V Core Server 2008 R2. Asset Core is only supported in these environments if the product is installed on an approved OS platform, web server, and database. Asset Core may work properly on other virtualization products, but BMC Software has not tested them and verified that functionality. BMC Software has no documented statistics regarding the performance of Asset Core in these environments since the mix of outside vendors' applications and hardware can have a direct impact on overall performance. Additionally, should BMC Software believe that the virtualization layer is the root cause of an incident the customer will be required to contact the appropriate virtualization layer support provider to resolve the virtualization issue. Please note that BMC server components are not supported on VMware Server™ or VMware Workstation using the GSX engine in a production environment since it is not designed for hardware optimization.

1. The OSD Manager (functional agent module/role) is not supported on a virtual platform. It must be designated/reside on a physical host due to TFTP constraints with virtualization.

Bare Metal Hypervisors (Virtual Infrastructure Element)

Inventory Manager can discover bare metal hypervisors, detect their configuration and attached virtual machine, and allows for management of those virtual machines. This functionality is supported on:

Component	Supported Platforms
VMWare	vSphere, ESX and ESXi ¹ v3.5 and 4.x
Microsoft	Hyper-V 2008

1. The VMWare licensing policy limits the free version of VMware ESXi to read-only access by the VMware vSphere SDK. To enable full functionality (that is, active management such as start/stop Virtual Machines) on a VMware ESXi host, the host must be licensed with vSphere Essentials.

Default Ports

Component	Port/Description ¹
Client Agent	The general agent communication port as configured (default is 1610)
Management Console	The general console management port as configured (default is 1611)
Bandwidth Throttling	Bandwidth management port on relay servers (default is 1609)
Application Kiosk	Web-based User kiosk port on master server (default is 1612)
Integration Port	Port used for 3rd party integrations and set with specific SSL certificate (default is 1616)
TCP Discovery	TCP ports scanned for auto-discovery (default is 23,25,139)
Multicast Traffic	The multicast transfer agent listen port as configured (default is 2500)
Active Directory LDAP	LDAP port (default is 389)

1. Ports are configurable

Glossary of Terms in Asset Core

Master Server:

As part of the network topology, it is the primary server that connects to the database, answers requests from the Console, executes the appropriate database communications and receives and stores all information sent by the Client Agents.

Master Server Database:

A database system in which each network or system component is modeled and operating in real-time, this database reacts to changes in the network and system components by updating and changing the corresponding objects in the database.

Super Master Server:

Consolidates data from "local" Master Servers and enables configuration for distributed organizations with many independent business units and segregated IT teams.

Console:	A Java™-based graphical user interface that connects directly to the Master Server to display collected data, access reports, manage client devices remotely and configure the Master Server. Note: The Console can be installed on any device of your Asset Core architecture.
Relays:	Organizations requiring a distributed configuration for multiple locations can use this as an intermediate device to balance the network workload. One Relay per physical site is recommended with the maximum number of Agents per Relay limited to 2000 for a dedicated Relay and 500 for a Shared Device.
Client Agent:	The Agent that is installed on each target device receives data, instruction and also forwards data to with the Master Server. The Agent sends information on regularly defined intervals based on a pre-defined schedule of events or when polled by the Master Server.
Secure Communications:	Communications between Consoles, Agents, Relays, Master Servers and Super Master Servers is set to HTTP using ports 1610-1612 by default. SSL can be enabled to secure communications and certificates may also be used for trusted authentication.
Operational Rules:	Pre-built templates that enable allow you to granularly configure your network.
Agent-less Inventory:	Asset Core typically requires an agent to perform most functions, but basic hardware, software and configuration information about any asset connected to a network can also be remotely discovered