

Alber Battery Explorer and Battery Xplorer Enterprise

System Requirements Guide

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1. Getting Started

1.1. Overview

This section outlines the hardware and software requirements necessary for successfully installing and configuring BatteryExplorer software and Battery Explorer Enterprise Web components.

1.2. Battery Explorer Workstation Diagram

The following diagram shows the relationship between the Battery Explorer workstation and the UXCM:

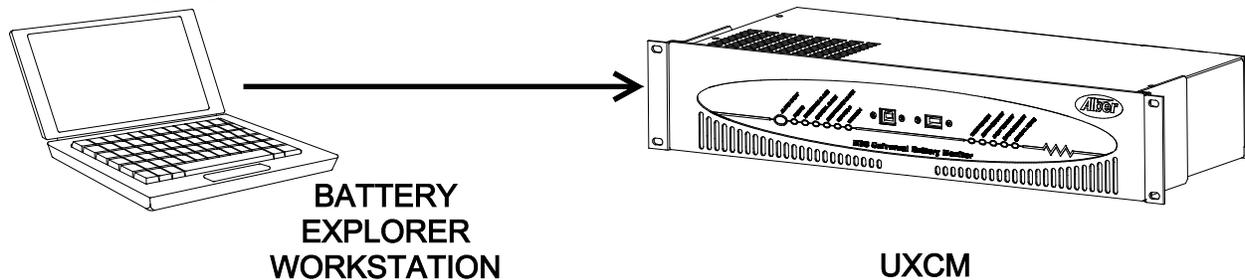


Figure 1 – Battery Explorer System Example

1.3. Battery Explorer Workstation Software Requirements

The following table lists each workstation and its required software:

Workstation Name	Required Software
<p>Battery Explorer Workstation This workstation is used by personnel working with the Battery Explorer system.</p>	<ul style="list-style-type: none"> • Microsoft Windows XP Professional, SP 2 or above. • Microsoft Data Access Components (MDAC) 2.8 or higher. • Battery Explorer application software (includes Microsoft XML3) • VC 2005 Runtime • Adobe® Reader 8.0 or 9.0 • Microsoft .NET Framework 4.0

Table 1 – Battery Explorer Workstation Software Requirements

1.4. Battery Xplorer Enterprise Server and Web Workstation Diagram

The following diagram shows the relationship between the Application server, Database server, Web server, and Web hosted workstations:

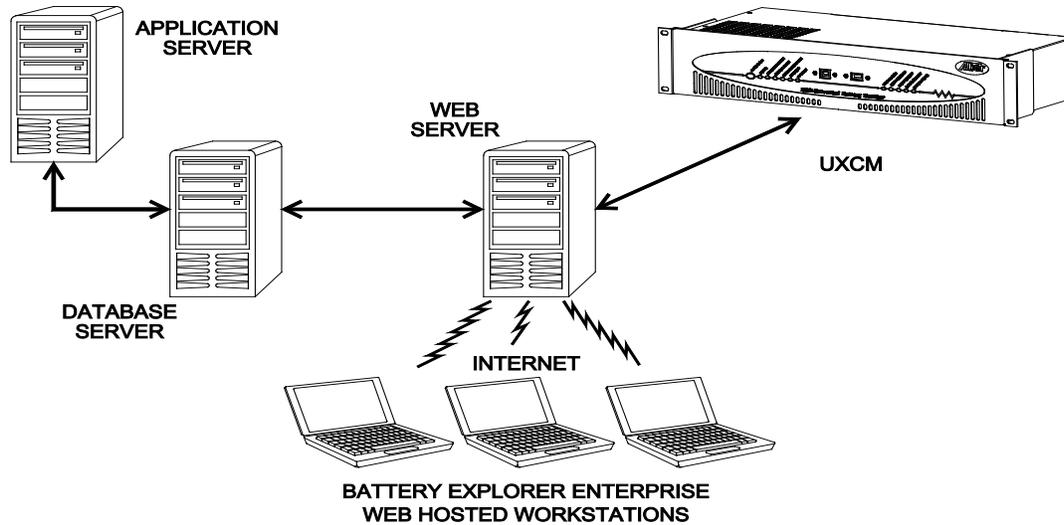


Figure 2 – Battery Xplorer Enterprise System Example

1.5. Battery Xplorer Enterprise Server Software Requirements

The software must be installed in a specific order. The following table lists each server and its required software:

Server Name	Required Software
Battery Xplorer Workstation This workstation is used by personnel working with the Battery Xplorer system.	<ul style="list-style-type: none"> • Microsoft Windows XP Professional, SP 2 or above. • Microsoft Data Access Components (MDAC) 2.8 or higher. • Battery Xplorer application software (includes Microsoft XML3) • VC 2005 Runtime • Adobe® Reader 8.0 or 9.0 • Microsoft .NET Framework 4.0
Application server This server stores third party application software. For example a HAL server.	<ul style="list-style-type: none"> • Microsoft Windows Server 2008, SP 1 Standard or Enterprise edition. • Microsoft SQL Server 2008 R2 Express or SQL Server 2012 Express RCO. • Microsoft .NET Framework 4.0 or higher. • HAL Device Drivers
Database server This server stores your site database.	<ul style="list-style-type: none"> • Microsoft Windows Server 2008, SP 1 Standard or Enterprise edition. • Microsoft SQL Server Express. • Microsoft .NET Framework 4.0 or higher.
Web server(s)	<ul style="list-style-type: none"> • Microsoft Windows Server 2008, Web edition only with Internet

Getting Started

This server stores the Web components.	Information Server (IIS) 7.0. <ul style="list-style-type: none">• Microsoft .Net 4.0 or higher.• ASP.NET Ajax
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Table 2 – Battery Xplorer Enterprise Software Requirements

2. Battery Explorer Workstation System Requirements

2.1. Workstation

This section outlines the prerequisites and system requirements for installing Battery Explorer's workstation components.

2.2. Installation Prerequisites

The following are prerequisites for the Battery Explorer workstation.

2.3. Battery Explorer Workstation General Installation Recommendations

Before you upgrade to Battery Explorer, you should:

- Back up your Battery Explorer workstation and have an emergency repair disk.
- Close all non-essential software and services.
- Disable virus protection software.

2.4. Battery Explorer Workstation Requirements

Vertiv recommends the following hardware requirements as a baseline for experiencing the best performance with Battery Explorer.

Note: Hardware requirements are based on new Battery Explorer implementations and the availability of current hardware configurations. Contact your Vertiv System Consultant for details on what machines can be used.

2.5. Battery Explorer Workstation Hardware Requirements

The table below identifies the recommended hardware for a Battery Explorer workstation:

Item	Description
Processor	Intel Pentium 4 with 2 GHz or better
RAM	2 GB or better
Display Setting	1024 x 960 dpi minimum resolution for Battery Explorer
Disk Space	Battery Explorer - 400 MB Temporary Space Requirements - 50 MB
Protocol	TCP/IP - The TCP/IP protocol must be installed and properly configured on the intended computer before installing Microsoft SQL Server Express.
Network Topology	Ethernet 100 Mps or higher

Table 3 – Battery Explorer Hardware Requirements

2.6. Battery Explorer Workstation Software Requirements

Battery Explorer Workstation is designed to operate on the Microsoft Windows XP operating system and pointing to a Microsoft SQL Server database server machine. The specifications outlined below establish the recommended configuration that can be reasonably obtained for optimum performance on the Battery Explorer workstation.

Item	Description
Operating System	Microsoft Windows XP SP 2 or 3. Note: When installing Microsoft Windows XP SP 2, it automatically updates from Microsoft Data Access Components (MDAC) 2.8 to MDAC 2.81.
MDAC 2.8 or higher	Microsoft Data Access Components (MDAC) 2.8 or higher. Note: MDAC 2.81 is currently only available when updating to Microsoft Windows XP SP 2.
Adobe Reader 8.0 or Higher	Adobe Reader is used to read PDF files such as, user guides. The Adobe Reader can be downloaded for free, on Adobe's Web site at http://www.adobe.com/ .

Table 4 – Battery Explorer Workstation Software Requirements

3. Database Server Battery Xplorer Enterprise System Requirements

This section outlines the prerequisites and system requirements for installing Battery Xplorer's Enterprise database components.

3.1. Installation Prerequisites

The following are prerequisites for the database server.

3.2. Database Server General Installation Recommendations

Note: You must upgrade to Microsoft SQL Server Express before updating Battery Xplorer.

Before you upgrade to Battery Xplorer, you should:

- Back up your database server and have an emergency repair disk.
- Close all non-essential software and services.
- Disable virus protection software.

3.3. Battery Xplorer Enterprise Database Server Requirements

Vertiv recommends the following hardware requirements as a baseline for experiencing the best performance.

3.4. General Battery Xplorer Enterprise Database Server Hardware Recommendations

The table below provides general guidance on hardware specifications for your database server.

Requirement	Description
Server Class Unit(s)	Multiprocessor capable and expandable
Processor(s) RAM	Dual or Quad Processor Intel Xeon 2 GHz or better. (The 1 MB cache option is recommended.)
Disk Space	Approximately 10 MB per employee
Intelligent RAID Controller(s)	RAID Disk Controller capable of RAID level 5 with battery backup, 32-64 MB Read/Write Cache
Network Topology	Ethernet 100 Mbs or better
Power Backup	UPS power backup
Protocol	TCP/IP

Table 5 – Battery Xplorer Enterprise Hardware Recommendations

3.5. Battery Xplorer Enterprise Database Server Software Recommendations

Battery Xplorer Enterprise requires either Microsoft Windows server 2008 Standard or Enterprise edition, SP 1 and Microsoft SQL Server Express as the database server. To find out more about Microsoft SQL Server, refer to Microsoft's Web site at <http://www.microsoft.com/sql/>.

The tables below identify the required and optional software for a Battery Xplorer database server using Windows Server 2008 as the operating system.

Requirement	Description
Microsoft Windows Server	2008 Standard or Enterprise edition Service Pack 1
Microsoft SQL Server	2008 R2 Express or SQL Server 2012 Express RCO.

Optional Requirement	Description
Microsoft Internet Explorer	8.0 or higher

Table 6 – Battery Xplorer Enterprise Software Recommendations

4. Web Server System Requirements

Overview

This section outlines the hardware and software requirements for successfully installing and configuring Battery Xplorer’s Web components.

4.1. System Requirements

To use Battery Xplorer’s Enterprise Web components, you must install Battery Xplorer.

Note:

- Hardware requirements are based on new Battery Xplorer Enterprise implementations and the availability of current hardware configurations.
- Only Microsoft Windows Server 2008 32-bit is supported.

4.2. Web Server Hardware Recommendations

Below are the minimum hardware recommendations for the Web server.

Server Class Unit(s)	Microsoft Windows Server 2008 Web edition with IIS 7.0 (multiprocessor capable and expandable)
Number of Users	1-800
Processors	1 Intel Xeon 2 GHz
RAM	2 GB
RAID Controllers	1
Drive Arrays	2 x 36 GB RAID 1

Table 7 – Web Server Hardware Recommendations

4.3. Web Server Software Recommendations

Microsoft Windows Server 2008, SP 1 Web edition only with Internet Information Server (IIS) 7.0 is required as the Web server operating system. However, for load balanced environments, while it is recommended that a hardware based load balancing solution be implemented.

Note: Vertiv highly recommends using Windows Server 2008, SP 1 Web Edition as the operating system for your Web server.

The following table identifies the required and optional software for a Web server using Windows 2008 SP 1 Server as the operating System.

Required Software	Supported Version(s)
Microsoft Windows Server 2008	Web edition only, SP 1
Internet Information Server (IIS)	7.0
Microsoft .NET Framework	4.0
Microsoft Internet Explorer	8.0
ASP.NET Ajax	

Table 8 – Web Server Software Recommendations

A Microsoft Windows Server 2008 SP 1 Web edition license is required for each server on which the Microsoft Windows software is installed. Microsoft IIS is a component of the Microsoft Windows Server family. Therefore, if you have a Microsoft Windows Server 2008, SP 1 Web edition license, you do not need an additional license to run Microsoft IIS.

Note: In a Microsoft Windows Server 2008 SP 1 Web edition environment, Vertiv recommends using a separate server as your file server instead of combining your file server and your Web server together.

4.4. Network Recommendations

If you want your employees to access Battery Xplorer's Web components over the Internet, you *must* have a connection to the Internet (such as T1, ISDN, DSL, and so on.).

Note: Ensure that your network firewall is in place. For information on firewalls, visit Microsoft's support Web site at <http://support.microsoft.com>.

Your Web server *must* have access to the SQL Server in order to retrieve and update your data.

Important! A **Secure Sockets Layer (SSL)** Certificate is strongly recommended. If you permit Internet access to the Web server, it is recommended that you purchase a Secure Server ID and implement SSL to protect your information.

5. Required Information Worksheet

To streamline the installation process, complete this worksheet prior to installing your Battery Xplorer software. You may have more than one SQL Server or more than one Web server. If you do, please be sure to complete a worksheet for each.

Battery Xplorer Database Server (SQL Server)	
Name of SQL Server computer	
IP address for SQL Server computer	
Name of database(s)	

Battery Xplorer Web Server	
Destination folder of the root directory for the Web software or the location of www folder if this is an upgrade	
Name of Web server computer	
IP address for Web server computer	
Name of the Web site in DNS	
Name assigned to the Battery Xplorer Web site	
Secure Sockets Layer	
Registered domain name	
Secure Server ID from Certificate Authority	
Fully qualified domain name for the server	
IP address that binds to the virtual server on which you want to install the certificate	
E-mail address of the certificate server administrator	
Miscellaneous	
Battery Xplorer service account name and password	
Domain user name and password	
Name of directory on local workstation where the Battery Xplorer resides	
Contract number	

Table 9 – Battery Xplorer Enterprise Software Requirements

6. Battery Xplorer Firewall and Port Settings

6.1. Overview

Before installing Battery Xplorer, read the following information about firewalls and ports settings that are required for Battery Xplorer. This information outlines the machine types and what port numbers are recommended for successfully installing and configuring Battery Xplorer. This information provides you with information to assist you in knowing what ports are used for each Battery Xplorer component.

Note: If a port number is currently in use you may need to use a different port.

6.2. Battery Xplorer Machine Types with Common Open Ports and Protocols

The information in this document lists each machine type and the common ports associated. A diagram of each specific machine type shows how the firewall relates to that particular machine type.

6.3. Web Server

The following table lists the Web server and the common ports associated. A diagram shows how the firewall relates to the Web server.

Machine Type	Open Ports	Protocol Type
Web server This server stores the Battery Xplorer Web application software.	80 and 443 TCP	HTTP and Https (incoming)

Table 9 – Battery Xplorer Enterprise Software Requirements

This firewall diagram illustrates access between the Internet Service Provider to the Web server.

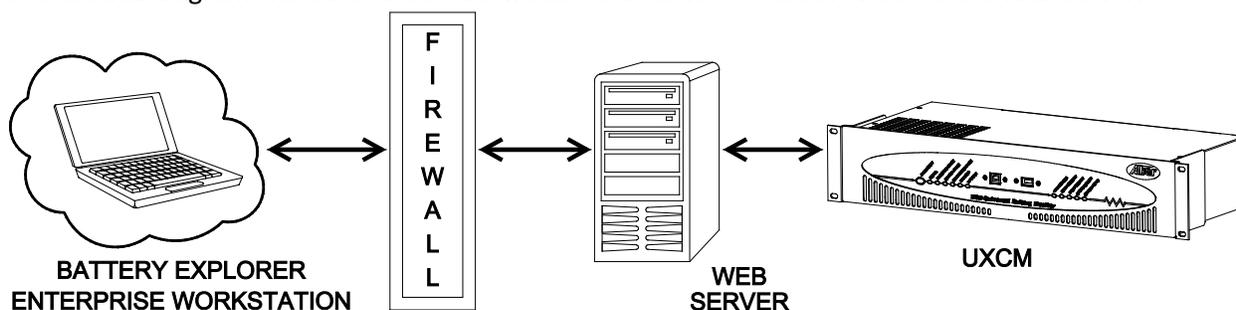


Figure 3 – Battery Xplorer Enterprise System Example using Ports 80 and 443 TCP

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