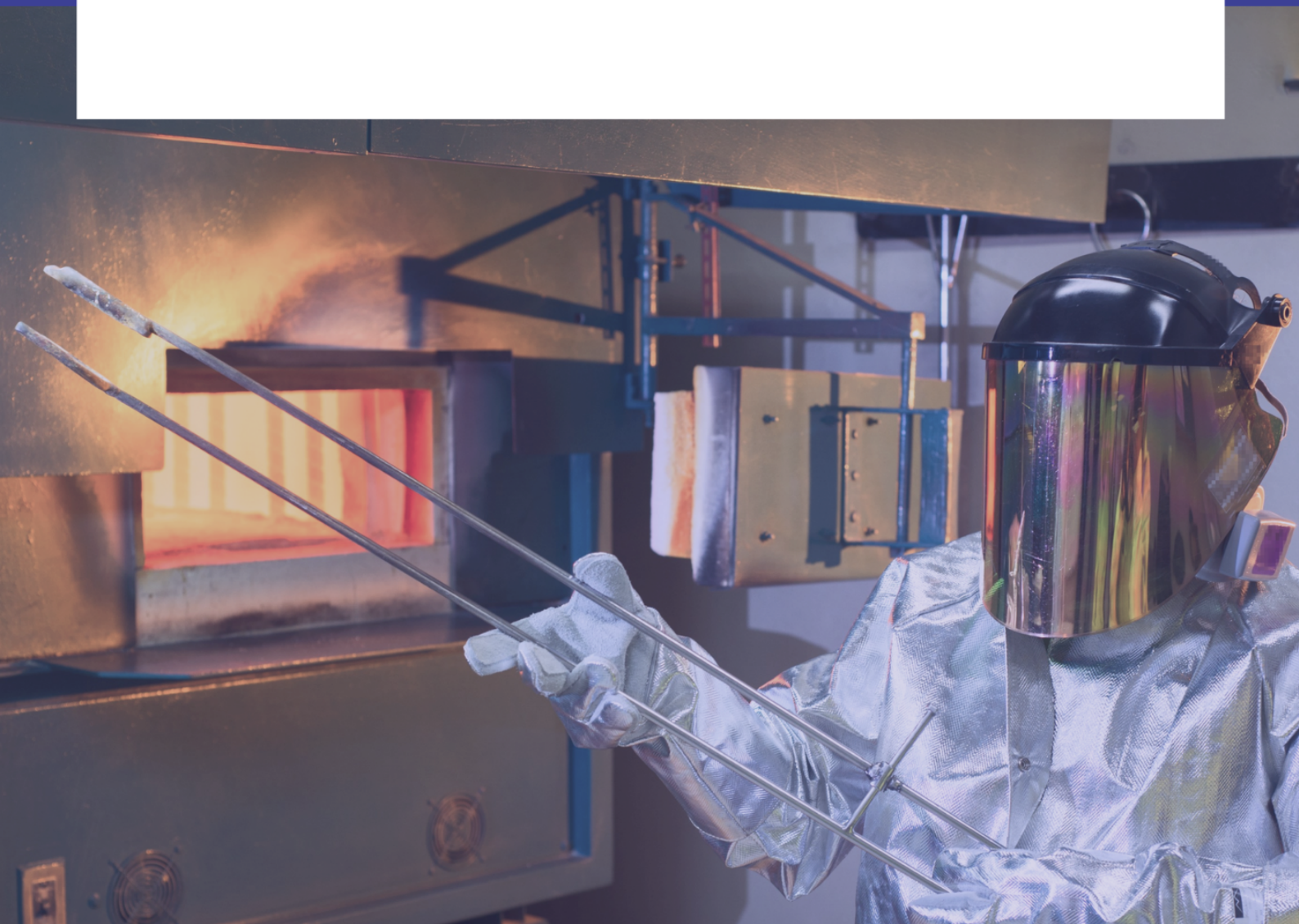
DATAMINE

ASSAYNET

AssayNet LIMS 4

System Requirements



© Copyright 2026 Datamine Corporate Ltd

All Rights Reserved Confidential and Proprietary

Published: Tuesday, March 10, 2026

The information contained in this documentation is subject to change without notice and is not warranted to be error-free. This documentation contains confidential information proprietary to Datamine Corporate Ltd which must not be disclosed, copied, or distributed to any third party without prior written consent of Datamine. Any unauthorized use or disclosure of this information would constitute a breach of confidentiality and would result in legal action.

AssayNet LIMS 4 System Requirements

Important: System specifications and disk space requirements depend on anticipated data volumes and growth. We recommend a scoping study to determine exact requirements. Testing or training environments must not be set up on the same server as the production environment, to reduce production load and isolate it from potential issues in other environments. For high-availability solutions additional hardware is required and should be discussed during the implementation planning phase.

The AssayNet Application Server and Database Server may be hosted on a single machine for smaller deployments. If using this configuration, increase resources accordingly (for example, a minimum of 8 vCPU and 32 GB RAM).

AssayNet Application Server (Blazor on IIS)

CPU	4 vCPU
Memory	8–12 GB RAM (8 GB supports ~20 concurrent users; 12 GB provides headroom for caching, debugging, or future expansion)
Operating System	Windows Server 2016 or later (Windows Server 2022 recommended)
.NET Runtime	ASP.NET Core 8.0 Hosting Bundle (includes ASP.NET Core Runtime and ASP.NET Core Module V2 for IIS) See Hosting and Deploying ASP.NET Core to IIS.
IIS Features	WebSocket Protocol (required for SignalR / Blazor Server)
Authentication	LDAP/Active Directory access for authentication
Network	• HTTPS (TCP 443) to clients • LDAP (TCP 389) / LDAPS (TCP 636) to Active Directory • SQL Server (TCP 1433) to the Database Server
Storage / Disk Layout	• `C:` OS + IIS + Application • `D:` Logs / uploads (optional)

AssayNet Database Server (Microsoft SQL Server)

Recommended for approximately 20 concurrent users, with database growth up to 50 GB.

RDBMS	Microsoft SQL Server 2016–2022
CPU	8–12 vCPU
Memory	16–32 GB RAM
Storage	NVMe or SSD-backed datastore
Network	Low latency link to Application Server (target <1 ms)

Drive Configuration Options

Setup	Layout	Pros	Cons
2 Virtual Disks	`C:` OS + SQL `D:` Data + Logs + TempDB + Backups	Simplest; acceptable on fast SSD/NVMe	No I/O isolation; logs share disk
3 Virtual Disks	`C:` OS `D:` Data `E:` Logs + TempDB + Backups	Good balance; separates random vs sequential I/O	TempDB and logs share disk
4 Virtual Disks	`C:` OS `D:` Data `E:` Logs `F:` TempDB (optional `G:` Backups)	Best logical separation and performance	Slightly more complex management

SQL Configuration Notes

- **Max Server Memory:** Leave 4–6 GB for the OS (for example, with 16 GB total, set SQL to ~12 GB).
- **TempDB:** 4–8 files, equal size, fixed MB growth.
- **Instant File Initialization:** Enabled.

- **Recovery Model:** Full, with frequent transaction log backups.
- **Backups:** Store on a separate datastore or network share.

Virtual Environment Notes

- Host handles RAID (prefer RAID 10).
- Use NVMe or SSD-backed datastores.
- Target low latency between App and DB VMs (<1 ms).
- Use VM-level backups via snapshot or backup agent (for example, Veeam).

Recommended Configuration Summary

Server	vCPU	RAM	vDisks
App Server (IIS / Blazor)	4	8–12 GB	2 (OS + App + optional Logs)
DB Server (SQL Server 2016–2022)	8–12	16–32 GB	3 (OS, Data, Logs + TempDB)

- **Storage:** SSD/NVMe datastore with host-level RAID 10.
- **Software:** Windows Server 2022; SQL Server 2019 or 2022 Standard.
- **Designed for:** ~20 concurrent users and a 30–50 GB database.

DATAMINE

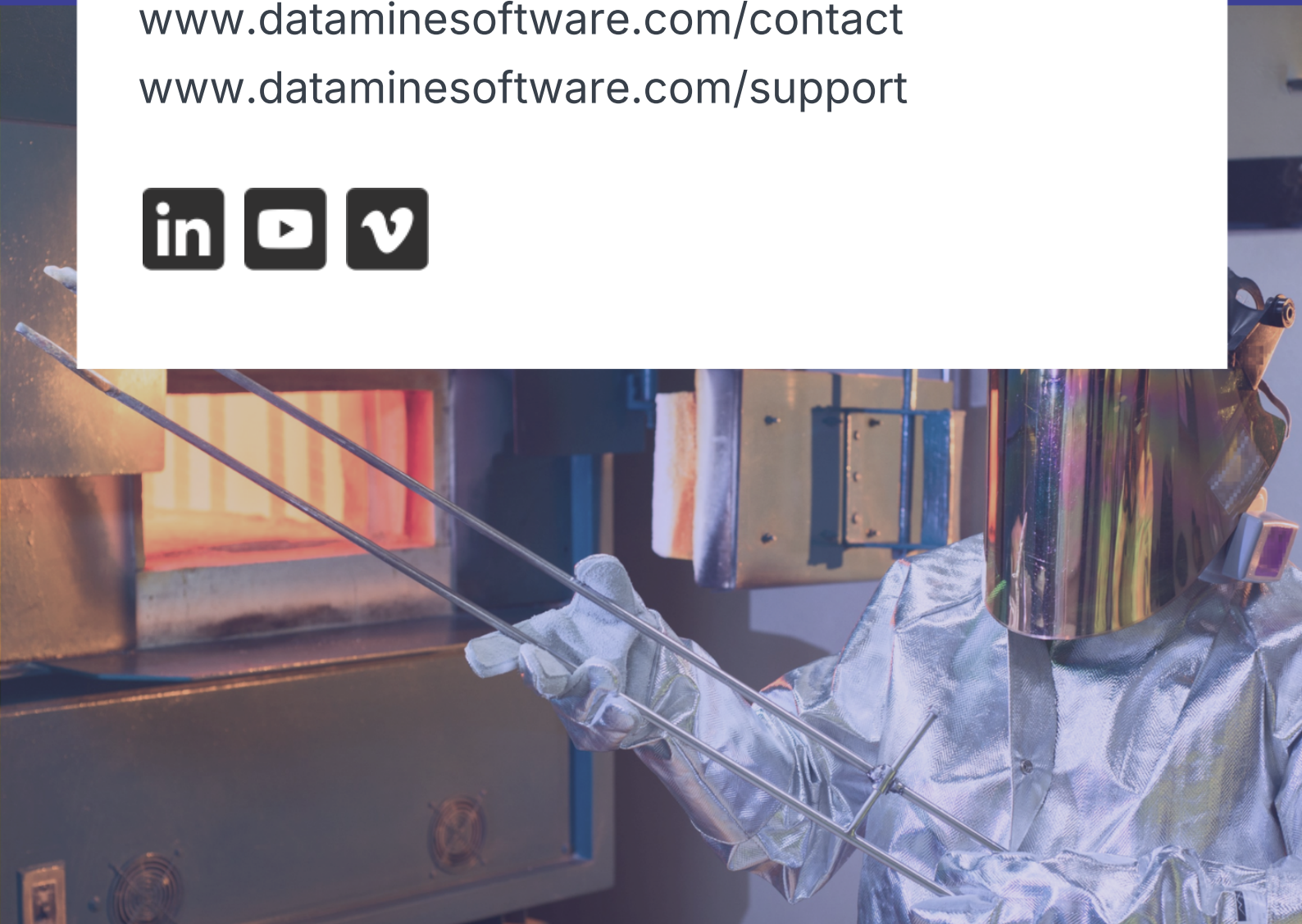
ASSAYNET

Datamine enables efficient and sustainable mining through the application of world-leading technology and services.

Read the Docs

docs.dataminesoftware.com

Get in Touch

www.dataminesoftware.com/contact

www.dataminesoftware.com/support