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VT Writer – Customer Hosted Deployment Overview

1. VT Writer Intro

VT Writer is an industry-leading AI-powered writing aid designed for organizations who create and review sensitive content. It is a browser-based software application (with an optional MS Word Addin) that creates 1st draft content, scores content for clarity / accessibility and provides suggestions for how you can improve content quality. It runs 100% securely, with no data going outside your network.

Note on Security:

- **100% Isolated:** VT Writer can operate 100% isolated behind your firewall. For regulated sectors or government agencies, it is often deployed into “air-gapped”, sensitive compartmented information facilities (SCIFs) or 100% secure environments with no internet connectivity. Typically, it runs on a private cloud or on-premises on RedHat or Windows. All data remains behind the firewall. VisibleThread staff have no visibility into your data.

2. Deployment Overview

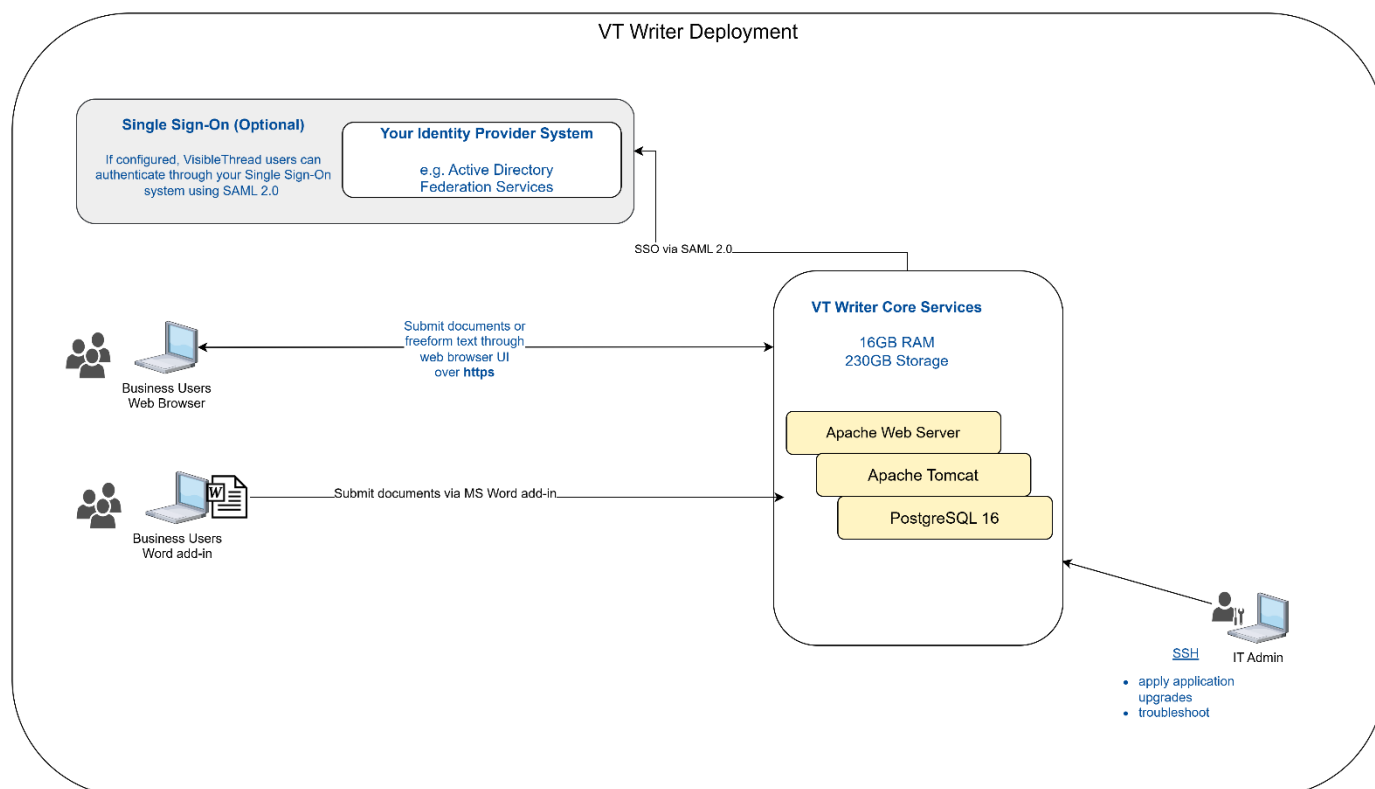
A VT Writer deployment consists of multiple components:

- VT Writer application server (running on Apache Tomcat)
- Apache HTTP Service (optional for Windows-based installs, can use IIS alternatively)
- PostgreSQL RDMS service

To enable generative AI capabilities, you must also deploy the VT Rag Service and provide a Large Language Model (LLM). See below for further details.

VT Writer Core Services

The "out-of-the-box" single server installation option will set up all components on a single server, providing you with a streamlined "VT Writer in a Box" deployment. This is suitable for small – medium deployments or deployments that must be “air-gapped” for compliance reasons.



The VT Writer Word Add-in

The VT Writer word add-in is a Word AddIn built using the MS Office Add-ins platform. Effectively the Word AddIn is a tailored web client for the VT Writer application that you are hosting on your network. It is designed to work with the VT Writer server deployed in your organization and give the user feedback as they are editing/creating content in Microsoft Word. For more details see our support site here:

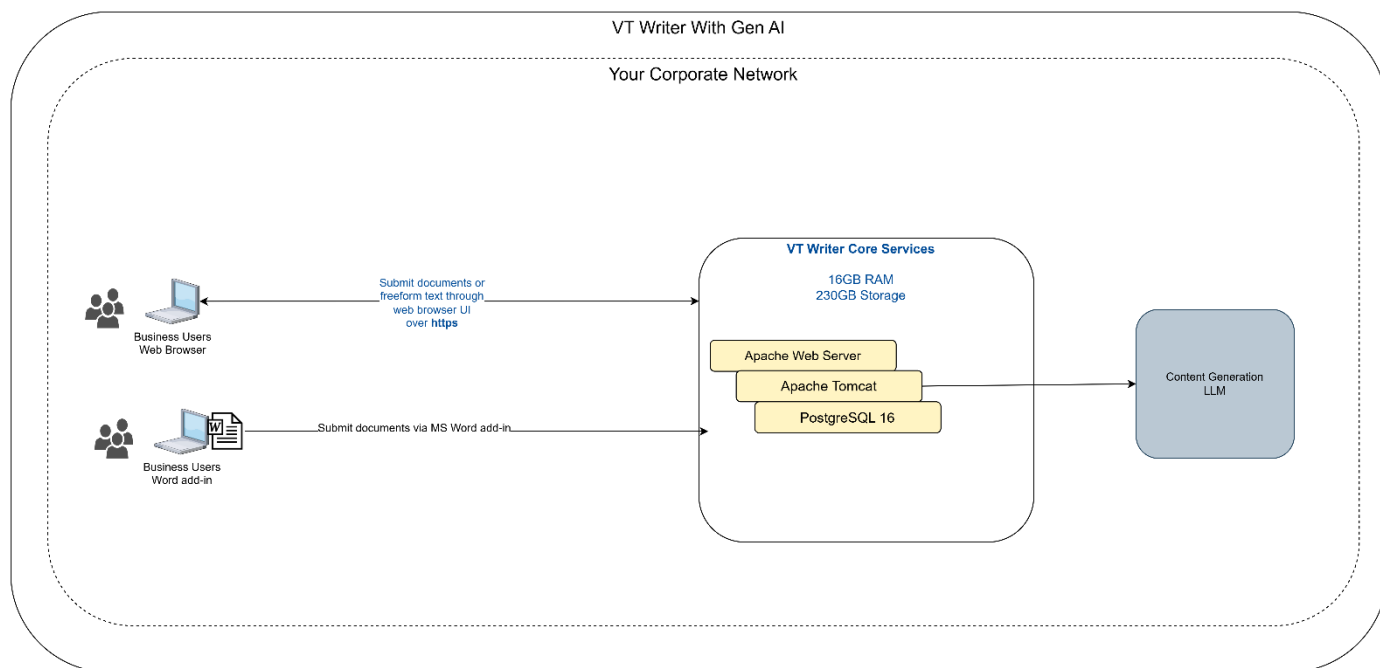
<https://support.visiblethread.com/hc/en-us/articles/13182316039569-How-to-deploy-the-VT-Writer-word-add-in-for-on-premise-users>

Gen AI Deployment

VT Writer can be configured to leverage a Large Language Model (LLM) to provide Gen AI capabilities for drafting content or rephrasing complex paragraphs. VT can also integrate with SharePoint Online and SharePoint in GCC and GCC-High to allow users prime the LLM context with relevant documents from your own SharePoint repositories. VT Writer itself does not include an LLM as part of its deployment, this must be provided by your IT team.

To enable Generative AI integration with VT Writer, you will need:

- An LLM for content generation. Deployment and management of the LLM is the responsibility your IT team. We support several common third party LLM interfaces, e.g. Azure AI (GCC and non GCC), AWS Sagemaker. If your organization does not have access to or utilize an LLM today our support team can recommend an open source LLM to use. We encourage you to reach out to our support team at support@visiblethread.com to discuss different options for leveraging Generative AI within VT Writer.



VT Writer “Use Files” (RAG) service – new with VT Writer 5.1

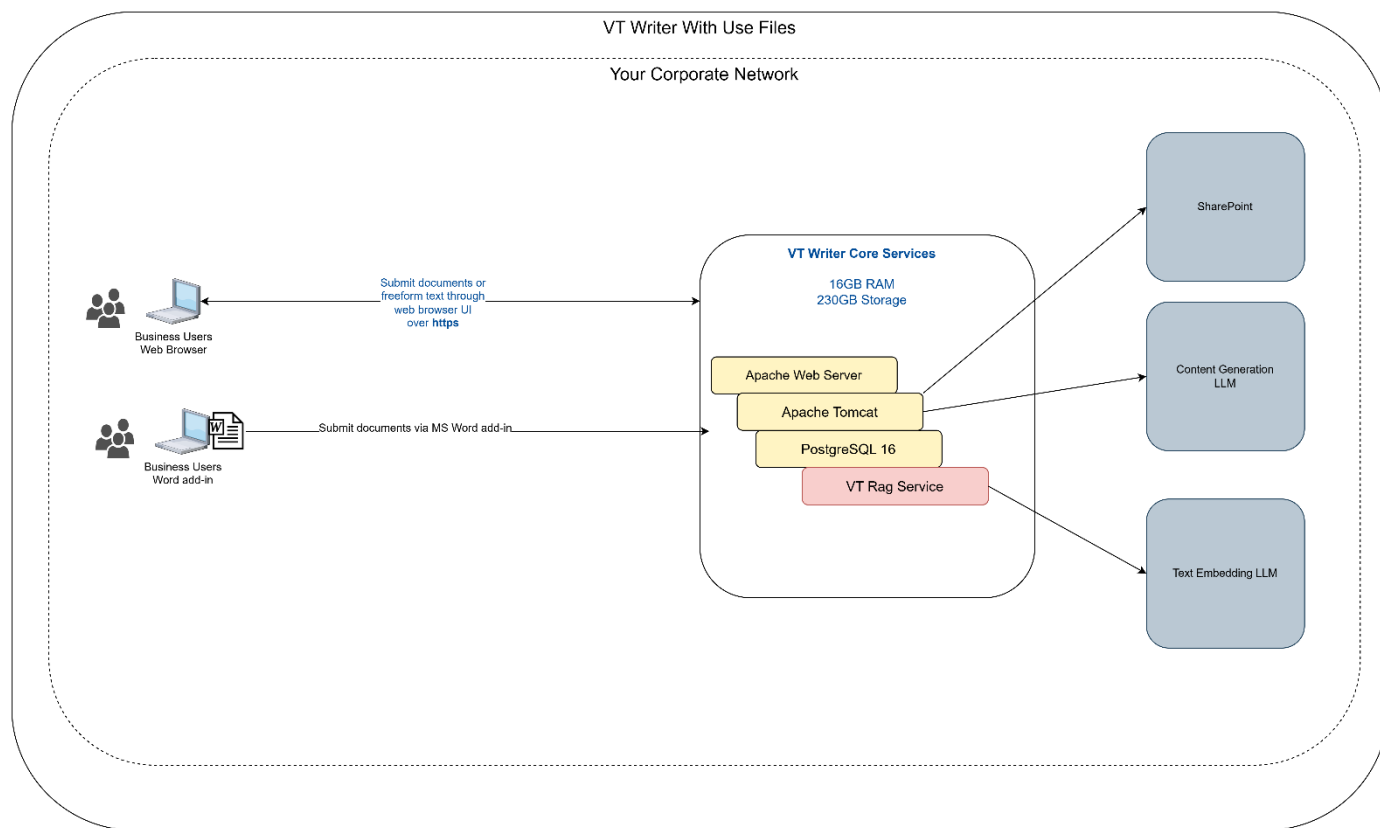
With VT Writer 5.1 you can now use source data contained in SharePoint sites or your file system to ground the response from the LLM. This means that the result of prompting the LLM is based on your proprietary data rather than the LLM itself.

To enable “Use Files” you will need:

- The VTRag Service. This service is responsible for taking your proprietary documents and converting them to “chunks” that can be used for searching.
- A PostgreSQL database used to store text “chunks”
- An LLM used by the VTRag service to calculate the embeddings for the text chunks, that is convert the text chunks into a format suitable for searching.

Can I use the same LLM for text generation (Gen AI), and for text embedding (RAG)?

No. VT Writer requires a specific class of LLM for generating content, rephrasing etc (e.g. GPT 3.5, Mistral-nemo) and a different class of LLM for calculating text embeddings for search purposes (e.g. mx-bai-embed-large, text-embedding-3-small).



3. Frequently Asked Questions

Q: What are the system requirements to run VT Writer

A: VT Writer can be installed on a RHEL 8/9 based server or on Windows Server (versions 2016, 2019, 2022). The hardware requirements are listed below:

	RHEL 8/9	Windows Server
RAM	16GB	16GB
CPU	2 CPU Cores	2 CPU Cores
Disk space	230 GB	230GB

Q: Where does the application store its data?



A: Both VT Writer “Core Services” and VT Rag service require access to a PostgreSQL DB (v 16). Using our standard install this is installed locally, and the required databases are automatically bootstrapped. However, you can host the database in a separate service for redundancy purposes (e.g. AWS RDS)

Q: Can VT Writer be deployed in a Fed Ramp approved private cloud, e.g. GCC High

A: Yes, VT Writer is a standalone application and can be deployed in a secure restricted private cloud environment, such as GCC High.

Q: What external access does VT Writer require once deployed

A: The application does not require any access to external networks and is fully self-contained. The VT Writer application does not require any contact with VisibleThread servers, and VisibleThread staff will have no access to the system once deployed.

Q: How is access to the system managed

A: VT Writer supports two types of authentication systems. Application managed authentication is a username/password-based system that is managed in VT Writer. Single Sign On (SSO) authentication allows integration with your IDP (e.g. AD/Entra) and delegates authentication to your IDP. This allows support for MFA and any other authentication mechanism provided in your internal IDP. Users can have one or more access permissions:

- “System Admin” permission allows access to system management, including SSO configuration, data retention settings etc.
- “User Admin” permission allows access to application settings, including keyword management, user management and license allocation.
- “Licensed User” permission grants access to scan content using the application.

Q: What email integration is required

A: Email integration is required for two optional features that can be enabled / disabled by your system admins:

- Ingesting documents via email. VT Writer can be configured to read documents sent to a dedicated MS Office 365 mailbox (e.g. writer@mycorp.com). The mailbox must support access via Graph API. Once this is enabled a licensed VT Writer user can send a document to the dedicated mailbox. VT Writer will analyze the document and send the results back to the user.
- Sending emails from VT Writer via an SMTP server (internal to your organization). This is used to send password reset emails (if not using SSO), license expiry reminders, and results of any document scans send to the application via email.

Q: How is the application updated/patched

A: Customers are encouraged to include the VT Writer server in their standard patching cycles. VisibleThread support staff do not provide updates to operation system components. These should be patched via regular OS updates. The VT Writer application is updated via an install package that can be downloaded from our support site, uploaded and deployed to the VT Writer server. This must be completed by your IT support team as VisibleThread support staff will have no access to your systems, however our support team are more than happy to assist with upgrades via Teams/Zoom calls. We typically release application updates twice yearly.



Q: Can VT Writer be deployed behind a load balancer or proxy (e.g. IIS)

A: Yes. By default, Apache HTTP server is installed with VT Writer and is configured to provide SSL termination. A self-signed certificate is included as part of the install. However, VT Writer can be configured to use a third-party load balancer or proxy server.

