WELCOME TO TINTRI

2021

Tintri
Intelligent Infrastructure

HOW IT WORKS

Your relationship with Tintri does not end with product purchase and installation. Tintri Technical Support is your partner in maintaining the smooth operation of your VMstore, NexentaStor or IntelliFlash hardware and software systems throughout their useful lives. Although details vary with the level of support purchased, a Tintri Support Plan entitles you to software and firmware upgrades, troubleshooting assistance, replacement of faulty parts, upgrade planning, health check services, and more.

This guide provides important information for productive interaction with Support.

ASSISTANCE

- Break/fix assistance
- Replacement parts
- Software/firmware upgrades & patches
- Upgrade planning
- Health check
- Secure site options

RESOURCES

- Customer Support Portal for online case management
- Online documentation with full text search
- Software & firmware release notices
- Technical Support Bulletins (TSBs)

COVERAGE

- Worldwide support offices & personnel
- Local parts depots worldwide
- 24 x 7 x 365 technical help under most plans
- Online, telephone, email, & Call Home access available

Tintri Support Plan descriptions and the service level objectives (SLOs) associated with each can be found at https://tintri.com/wp-content/uploads/2020/06/service-brief-002-vmstore-intelliflash-nexentastor-support-01.pdf

HOW TO CONTACT US

Tintri offers a variety of Support Plans and you purchased one of these when you acquired your product. If your support contract has expired, you may contact your account team for options on how to activate or reinstate support on your product. Tintri cannot provide support for a product without a valid support contract. While Tintri will use commercially reasonable efforts to alert you of an impending renewal, it is the customer's responsibility to maintain a valid support contract for their equipment.

The Customer Support Portal is always the preferred method for resolving technical issues and engaging Support. Additional contact options may be available depending on the support contract or Call Home features in force on your equipment or software as described below.

- **IMPORTANT!** *The Support Portal is your <u>ONLY non-emergency</u> access to Technical Support. In the event of an emergency for an already opened case, you may send an email and receive a response commensurate with your Warranty entitlement.*

- ***Gold and Platinum Support Plan*** customers may use the Customer Support Portal to report a case or may optionally open a case by email or telephone.

- ***Storage monitoring products equipped with the Call Home feature*** will open a case on your behalf if hardware and some software problems are detected. Further communication should proceed using the Customer Support Portal.

The Tintri Global Support organization provides technical support for VMstore, IntelliFlash and NexentaStor brands. Cases may be opened via Customer Support Portal, system phone-home capability, email or telephone. Below are the details for each of the brands

VMstore Customer Support Portal URL https://identity.tintri.com/login
IntelliFlash Customer Support Portal URL support@tegile.com/CustomLogin
Nexentastor Customer Support Portal URL support.nexenta.com/Portallogin

If you need to register for one of the Customer Support Portals please send an email to the appropriate support address below requesting access to one of the specific portals. You should include a serial number from your system if it's available, but at a minimum, your name, your company's name and your contact information.

VMstore Support Email
Support@tintri.com

IntelliFlash Support Email
support@tegile.com

Nexentastor Support Email
support@nexenta.com

When you email one of these support emails addresses a case will be opened. Please provide as much information as possible in the body of the email in order to help our Technical Support Experts begin to work your case.

VMstoreSupport Telephone Numbers

Country	Phone Number	Country	Phone Number
Australia	1-800-793-385	Netherlands	(+)31-858880300
Belgium	(+)32-78480321	Norway	800-17-366
China	400-120-3149	Philippines	800-1-116-1204
Denmark	(+)45-69918109	Portugal	800-180-113
Finland	0800-915-908	Russian Federation	8-800-100-9431
France	0805-080261	Singapore	800-130-2126
Germany	0800-100-4715	South Africa	(+)27-875502285
Hong Kong	800-906-185	South Korea	003-0813-2776
India	000-800-100-7094	Spain	(+)34-518880087
Ireland	1-800-904-123	Sweden	(+)46-770791819
Italy	(+)39-199241408	Switzerland	0800-848-831
Japan	0800-111-9510	Taiwan	00801-14-7056
Kazakhstan	8-800-333-4231	United Kingdom	0-808-134-9912
Malaysia	1-800-814-478	United States/Canada	855-484-6874

IntelliFlash Support Telephone Numbers

Country	Phone Number	Country	Phone Number
Australia	1800-937-949	Netherlands	0800-022-7749
Belgium	0800-261-89	Switzerland	0800-554-337
Germany	0800-184-4300	United Kingdom	0808-243-2044
India	000-800-050 1527	United States/Canada	800 483-4453

Nexentastor Support Telephone Numbers

Country	Phone Number	Country	Phone Number
France	(+)33 800-913459	United Kingdom	(+)44 800-014-8436
Japan	(+)81 800-100-0072	United States/Canada	800-700-3005
Netherlands	(+)31 800-0200 733		

To open a new support case for VMstore on the Customer Support Portal:

To open a new VMstore Support case, point your favorite web browser to https://identity.tintri.com/login

1. Log in with your account username and password.

2. Click on the **Cases** tab at the upper left corner of your browser window.

3. When the tab opens, click the **Create New** button.

4. Fill out the **New Case** form. Please include:

- The Tintri product(s) affected, with firmware and file system versions (in **Product**)

- The main trouble symptom you are experiencing (in the **Subject**)

- Symptom details, history, and relevant error messages (in the **Description**)

5. Click **Submit with Attachments** if you have logs or diagnostic files of less than 25 MB each ready to upload. You will be prompted to attach these to the case. (See Collecting Logs and Uploading Logs to Tintri Support later in this document.)

6. Click **Submit** if you have no logs ready or your log files are larger than 25 MB each. You will need to upload logs separately. (See Collecting Logs and Uploading Logs to Tintri Support later in this document.)

IMPORTANT!   You can add comments or attachments to an *open* case at any time. But *if an existing case is marked "Closed," please open a new case* by following the steps above. Comments or attachments you attempt to post to a closed case may not be received by Tintri Technical Support.

To open a new support case for NexentaStor on the Customer Support Portal:

To open a new NexentaStor Support case, point your favorite web browser to https://support.nexenta.com

1. Log in using your Support portal username and password. If you do not have your login credentials, please contact your account team.

2. Click on **Open Case** in the bottom right of the screen:

3. Select your account and the system you're opening a case on. Click on **Continue**.

   a. Select the additional account contacts you want to copy on updates from Support.

   b. Enter the subject and please explain the problem you are experiencing. Click on **Continue**.

4. Review any knowledge base articles that may relate to the issue you are experiencing. Click on **Continue**.

5. Answer the questions yes/no by clicking the corresponding radio buttons to set the severity of the case.

6. Click on the **Open Case** button.

To open a new support case for IntelliFlash on the Customer Support Portal:

To open a new IntelliFlash Support case, point your favorite web browser to https://support.tegile.com.

1. Log in using your Support portal username and password. If you do not have your login credentials, please contact your account team.

2. Click on the "**Open a New Case**" button in the upper right:

   a. In the drop down menu on the next page, select the serial number of the asset experiencing the problem you want to discuss with support.

   b. Select the severity of problem you are experiencing using the severity definitions included in this document.

   c. If you are currently experiencing a production outage, please select yes.

   d. Enter the Subject of the case, and please describe the problem you are experiencing.

3. Click "**Send your case to Support**" button at the bottom of the page:

4. Please make note of the case number as that is how you will reference it in the future.

WHAT TO EXPECT FROM SUPPORT

When you first request service from Tintri Support our 24-hour Front Line Support (FLS) team requests some necessary information from you to create/update your online case record in the Customer Support Portal. Your FLS agent also verifies your support contract and corresponding entitlements then assigns your case to be worked based on the SLA of your contracted support level, the severity of your issue and the kind of assistance you need.

- ■ *Diagnostic troubleshooting cases* are assigned to a Technical Support Engineer (TSE) for problem diagnosis and resolution. If an especially complex case requires advanced expertise to diagnose and resolve, your TSE will elevate that case to the Advanced Support Team (AST). If the issue involves a hardware or software defect, AST will engage Engineering.

- ■ *Faulty part replacements* (called RMAs, for Return Material Authorizations) are initiated by an FLS agent or TSE to resolve a case that requires a replacement part. Parts are dispatched from our global network of spare parts depots and shipped to your location based on the Service Level Agreement (SLA) of the Support Plan you purchased.

- **Upgrade planning cases** are assigned to the Upgrade Team within Tintri Support. An upgrade plan tailored to your product configuration is normally provided in 10 business days from when we receive the appropriate health checks, logs and required system information.

- **Support portal requests** are processed by Front Line Support (FLS) in 1 business day.

At every step, your online case record in the Customer Support Portal keeps you informed of any changes or progress to your case.

SEVERITY, RESPONSE TIME, AND CASE MANAGEMENT

Response to your case is prioritized by issue severity and the Service Level Agreement (SLA) specified in your Support Plan.

Severity levels are described in the table below. While you the customer gets to set the severity level, there is an implied understanding that you will follow the boundaries of the table below. Support will monitor compliance to these boundaries and may adjust severity if required.

SEVERITY	DESCRIPTION
Severity 1	**CRITICAL IMPACT** • Storage Hardware or software is down • No access to data • Unrecoverable data integrity/loss at risk
Severity 2	**MAJOR IMPACT** • Single node operation • Partial or intermittent access to data • Nonredundant condition puts system at risk of critical impact
Severity 3	**MODERATE IMPACT** • Operational with functional limitations • Performance degraded by break/fix issue (not configuration tuning) • Loss/fault of one drive
Severity 4	**NO IMMEDIATE BUSINESS IMPACT** • Routine upgrade plan or system health check • Operational question or product change request • Support portal registration • Upgrade plans

- **Severity 1 cases** are worked around the clock on a "follow-the-sun" basis. Your case is first assigned to a TSE in one of our global Technical Support locations who can work your case during their daytime shift. Your case gets an initial technical response within the time frame provided by your Support Plan entitlement. When the work shift ends for that TSE, your case "follows the sun" to a TSE in another daylight time zone who continues the work. A "warm handover" procedure assures that the two TSEs discuss the status of your case during the handover to maintain continuity. This process continues around the clock and around the globe until your issue is mitigated and access to data is restored. Once your issue has been mitigated, there will likely still be a set of tasks to be completed before the case can be closed. At this point your case will be handled by an assigned TSE and worked during the shift of that assigned TSE. There is no specified SLA for ongoing

communication frequency once a mitigation has been put in place. Communication back to you occurs as needed, but every 2 business days unless you request communication less often. Communication takes place via updates to case notes within the Support Portal. If you have questions, enter those questions in the case notes and the TSE will respond when they are next on shift and within 2 business days. If the case requires a Root Cause Analysis (RCA) a note will be put in the case letting you know the estimated date for the RCA to be completed. Once the RCA is complete, the case will be updated with the relevant information. Case notes will be added if the estimated date changes. RCA can take up to 30 days to complete depending on the nature of the issue. In extenuating circumstances an email or a call to the FLS team will attempt to get you an answer more promptly.

- **Severity 2, Severity 3, and Severity 4 cases** are worked by one case owner who provides a single point of contact. Your case is assigned to a TSE in one of our global Technical Support locations whose work shift is aligned as closely as possible to your own. This way your case gets an initial technical response within the time frame provided by your Support Plan entitlement. Your TSE will then own your case to resolution, picking up the effort each workday during subsequent work shifts and pulling in other technologists as required during the course of the work. Each TSE works five 8-hour shifts per week, and the timing of those shifts is provided in the signature section of his or her emails to you. There is no specified SLA for "Time to Resolution" (TTR) since each case is different. There is no specified SLA for ongoing communication frequency. Communication back to you occurs as needed, but every 2 business days unless you request communication to be less often. Communication takes place via updates to case notes within the Support Portal. If the case requires a Root Cause Analysis (RCA) a note will be put in the case letting you know the estimated date for the RCA to be completed. Once the RCA is complete, the case will be updated with the relevant information. Case notes will be added if the estimated date changes. RCA can take up to 30 days to complete depending on the nature of the issue. In extenuating circumstances an email or a call to the FLS team will attempt to get you an answer more promptly.

NOTE	Please be aware that **notes left in the case are only visible to the TSE who owns the case**. They will not be seen until your TSE is next on shift. If you need assistance in the interim, please email or call Tintri Global Support using the contact methods provided at the beginning of this document. Your request will be assigned to a TSE on shift at that time.
NOTE	Please be aware that **communication takes place every two business days**. This implies that if you put in a case note on a given business day, you will get a response by "Close of Business" 2 business days later. Example: if you put in a case note on a Friday, Saturday, or Sunday, you will get a response by the following Tuesday before close of business (COB). If you put in a case note on a Monday, you will get a response by COB Wednesday.

ROOT CAUSE ANALYSIS/CORRECTIVE ACTION PLANS

There will be occasions when your case will require a Root Cause Analysis/Corrective Action plan (RC/CA). The RC/CA process starts as soon as your mitigation has been put in place or when required hardware is received by Tintri whichever is later. RC/CA may involve various organizations within Tintri and can take time to complete. In some cases, up to 30 days. There

is no specified SLA for the time it will take to process an RC/CA. The TSE assigned to your case will provide case notes as to when a case will enter the RC/CA process and provide, in the case notes, the expected date by which the RC/CA will be provided. If any of these dates change the case notes will be updated as required. Once a product defect has been identified, elevated to engineering and engineering has determined the cause, that is equivalent to an RC/CA.

CLOSING A CASE

A case is closed when a problem is diagnosed and resolved, a replacement part is delivered and replaced, an upgrade plan is supplied, or your portal assistance request is fulfilled.

Case resolution requires the active participation of both Support and you, the customer. We often need your engagement to provide information or to intervene on the system. Once a case is deemed to be complete, we will notify you of our intent to close the case. Cases are typically closed after a few business days if we do not receive a response from you that a case should remain open and a reason for the case to remain open.

Once a case is closed, it generally cannot be reopened. It is not uncommon in the course of working one issue to discover additional conditions that need attention. These should be addressed in a separate case so that the original issue and the follow-on work each issue gets its own undivided attention. If a problem is resolved but later recurs, open a new case to capture the latest set of symptoms in their current context.

IMPORTANT!	***Please do not send emails to a closed case***, as the case will not be re-opened and your Technical Support Engineer will likely not see it.

WHAT WE NEED FROM YOU

Although your Technical Support Engineer is always ready to help, the rapid resolution of your support case requires certain information and assistance from you.

DIAGNOSTIC TROUBLESHOOTING CASES REQUIRE . . .

- *A brief symptom description* with relevant error messages and impact on operations

- *Product identification* for affected hardware or software, and identification of where any affected software executes (external server or embedded in the storage)

- *Hardware logs* that capture system configuration and status during the trouble event

- *Software logs* for affected file systems or storage management software

- *Availability of your technical team* to run commands or work with equipment

PART REPLACEMENT CASES REQUIRE . . .

- *Logs* that capture the current storage hardware and firmware configuration

- *Special firmware version requirements if any exist*, so flashing can be arranged at the factory

- *Shipping address with recipient* name and contact information (phone and email)

- *Security requirements* for onsite parts installation (if your Support Plan covers this)

- *Return of failed part to Tintri within 15 days* (a nonreturnable drive option is available) or be subject to being invoiced for the non-returned parts.

Note: Spare parts are normally shipped with return shipping instructions and return label included. It is important that you use these documents to return your failed component. If these documents are lost or damaged, or didn't arrive with the spare part, please contact support for further instructions.

UPGRADE CASES REQUIRE . . .

- *Logs* that capture the current system configuration and health status

- *10 business days* to create a customized, step-by-step upgrade plan

- *Maintenance window* in which to perform the upgrade if required

- *Whenever possible* upgrade plans will be "self-service" and or automated and will not require assistance from the support team.

PORTAL REGISTRATION CASES REQUIRE . . .

- *Organization name* and location under which to register the account

- *A serial number* from any Tintri product purchased by your organization

- *Username and email address* for each user account linked to the organization

CUSTOMER SATISFACTION INITIATIVES

When your support case is resolved, you will receive a brief customer satisfaction survey by email. We value your feedback, so please let us know what we did right and what we could have done better on that particular case.

IF YOU EVER FEEL YOU NEED TO ESCALATE YOUR CASE TO THE ATTENTION OF SENIOR TINTRI SUPPORT STAFF, CALL TINTRI GLOBAL SUPPORT USING THE CONTACT METHODS PROVIDED AT THE BEGINNING OF THIS DOCUMENT.

TECHNICAL SUPPORT BULLETINS & RELEASE NOTES

As a customer, you are eligible to receive Technical Support Bulletins (TSBs) and Product Release Notes by email or portal as required. These mailings provide important technical information as it becomes available and enable you to keep current on software and firmware upgrades.

Notification of new TSB availability is emailed to the support contacts listed under your portal account. For VMStor and NexentaStor you can also find TSBs on your customer support portal web page.
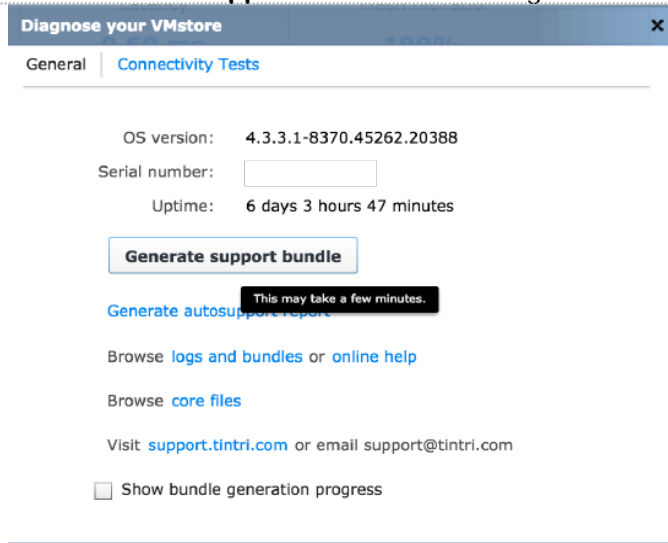
COLLECTING LOGS for VMStore

Please use the following procedure to generate a Support Bundle:

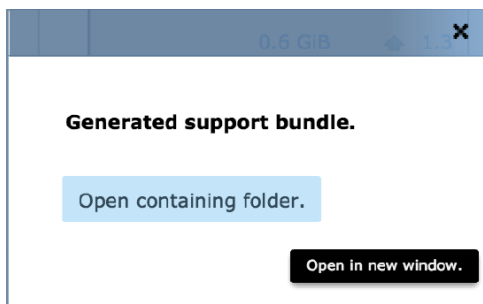1. From Tintri Web UI, click on **Diagnose** in the top right corner of the screen.

2. Click **Generate support bundle** in the dialog window.

For Customers who need to upload the bundle, these additional steps are required:

1. When bundle generation is complete, a window will appear saying, **Generated support bundle.** Click the link, **Open containing folder.**
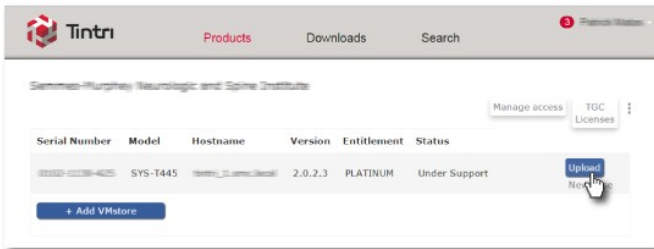

Alternatively, click the **Browse logs and bundles** link in the **Diagnose your VMstore** window and browse to the **phonehome/archive** path.

2. Scroll to the bottom of the list of links.ate and download the **Interactive** bundle zip file (filenames include the Support Bundle type and creation timestamp)

-20170312182033-0700-SupportBundle-Interactive.zip.never-uploaded	1896059 KiB Sun Mar 12 19:12:34 PDT 2017
progress.txt	1 KiB Sun Mar 12 19:12:34 PDT 2017

53 files, 1 folders

3. Return to the Support Portal and click **Upload** for the appropriate asset serial number.

4. Click **Choose File** and locate the interactive bundle you downloaded.
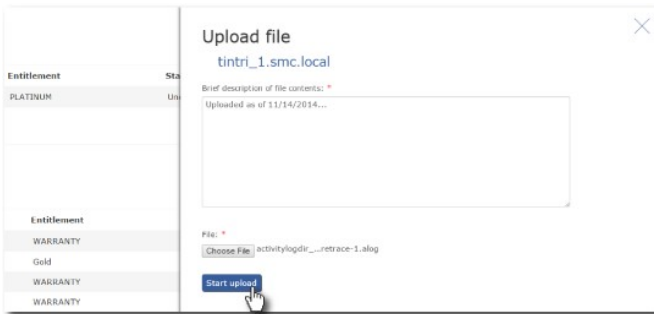
5. Click **Start upload.**

COLLECTING LOGS for NexentaStor and Fusion

Overview:

The scope of this document is to provide a high level on how to send log data to Nexenta servers.

Uploading Bundles/Logs from connected Systems:

NexentaStor 4.x	NexentaStor 5.x	NexentaFusion
From the CLI: **Step 1:** nexenta-collector **Step 2:** Verify that the bundle is uploaded using View Logs	**From the CLI:** **Step 1:** bundle create (Provides output for bundle ID) **Step 2:** bundle upload <bundle ID> **Step 3:** Verify that the bundle is uploaded using View Logs	**From UI:** **Step 1:** Create Support Bundle **Step 2:** Upload to support server **From Console:** **Step 1:** Advanced Actions **Step 2:** Collect Support Bundles **_Note:_** _Please ensure that your NexentaFusion instance is registered on the under your account on portal.nexenta.com_

For systems that have connectivity to Nexenta's servers , please use the steps below to generate and transfer collector bundles:-

Direct upload allows for faster collection of support bundles and reduces time to resolution. Below is the list of URL's and corresponding IP addresses for you to configure your firewalls and provide access.

> **_Outbound Connections to Nexenta for Licensing , Upgrades and Logs upload to Nexenta Servers_**
>
> ftp.nexenta.com : 104.254.242.108 (443/20/21/7000-8000)
> logcollector.nexenta.com : 104.254.242.108 (443/20/21/7000-8000)
> logcollector02.nexenta.com :104.254.242.35 (ssl/443)
> licensingservice.nexenta.com : 104.254.242.107 (ssl/443)
> prodpkg.nexenta.com: 104.254.242.107 (ssl/443)

Uploading Bundles/Logs from non-connected Systems:

Systems that do not have connectivity to Nexenta servers will require the file(s) to be transferred to a workstation connected to the internet and then uploaded to the servers. Please see steps below for generating the collector bundles on the systems.

NexentaStor 4.x	NexentaStor 5.x	NexentaFusion
From the CLI: **Step 1:** option expert_mode=1 !bash **Step 2:** Run the nexenta-collector command : bash# nexenta-collector --no-upload Make a note of the filename that is created. Usually the output will be saved into /var/tmp/ **Step 3:** Transfer generated file to workstation. As an example using pscp: C:\> pscp.exe -scp root@<appliance_name_or_IP>:/var/tmp/<bundle name> . An example using scp from a Linux/UNIX client: $ scp root@<appliance_name_or_IP>:/var/tmp/<bundle name> . **Step 4:** Follow the instructions Upload files to Nexenta Support portal below	**From the CLI:** **Step 1:** bundle create (Provides output for bundle ID) The command will respond with the bundle-ID that will be generated and begin creating the bundle. Monitor for status with bundle list until it shows create 100% and STATUS ok **Step 2:** Transfer generated file to workstation As an example using pscp: C:\> pscp.exe -scp admin@<appliance_name_or_IP>:/var/lib/nef/bundles/<bundle_id>/collector.tar.gz . Alternatively, if running NexentaStor 5.2 or later Enable downloading of support bundles: CLI@nexenta> config set support.downloadEnabled=true Obtain the download URL: CLI@nexenta> bundle get download <bundle_id> Using a web browser or wget download the bundle from the appliance using port 8443: $ wget --no-check-certificate -O collector.tar.gz https://<appliance_name_or_IP>:8443/support/bundles/<bundle_id>/download (edited) **Step 3:**Follow the instructions Upload files to Nexenta Support portal below	**From UI:** **Step 1:** Create Support Bundle **Step 2:** Transfer generated file to workstation **Step 3:** Follow the instructions Upload files to Nexenta Support portal below **From Console:** **Step 1:** Advanced Actions **Step 2:** Transfer generated file to workstation **Step 3:** Follow the instructions Upload files to Nexenta Support portal below ***Note:*** *Please ensure that your NexentaFusion instance is registered on the under your account on portal.nexenta.com*

Support bundles/logs can be uploaded through https://support.nexenta.com

New case: You will be prompted to upload logs as part of the new case creation process.

Existing case: Open an existing case and scroll down the System Logs/ Collector Bundles section. Click on Upload Logs to start the upload process.

Direct from System & Licensing page: From a details page of a system, click on Logs tab and then Upload Logs

Note: Please ensure that the bundles being loaded correspond correctly to the GUID/Machine ID. This will ensure faster response to your reported issues.

<u>Uploading custom bundle collection from connected systems:</u>

For NexentaStor 4.x, 5.x , NexentaFusion and NexentaEdge and systems that have connectivity to the Nexenta™ servers, and need to upload a custom bundle collection using FTP, please use below command:

curl -T "<local file path>" ftp://logcollector.nexenta.com/nstor/<guid or machineid>/<case number >/<file name > --ftp-create-dirs

* Replace the text within the <> symbols with the appropriate information

For NexentaStor 3.x and systems that have connectivity to the Nexenta servers, and need to upload a custom bundle collection using FTP, please use below steps:
cd < path of file to upload from>

ftp ftp.nexenta.com
username: anonymous
password: <enter>
pasiv
bin
cd nstor
mkdir <GUID/Machine ID>
cd <GUID/Machine ID>
mkdir <case number>
cd <case number>
mput <filename>
bye

COLLECTING LOGS for IntelliFlash

1. Using an SSH terminal emulator such as PuTTY/Terminal, log in to either controller under the user account (zebiadmin).

2. You can log in over the storage network or connect by cable directly to the local serial port on the controller itself. Access the controller over dedicated/management IP address.

3. Switch to root (su -)

4. Run the following commands:

   a. support.sh pull

   b. Supportlogs.pl

5. Input a short name/identifier for the logs (e.g: disk-fail/DIMM errors) and the case#

6. Logs would be generated and auto uploaded to our log server

7. Wait for the upload to complete and let us know in the case when upload is complete

Manual Upload (Over FTP)

*Important: When uploading files to the FTP server, please use zip, gzip, or tar format for file archives whenever possible.

Upload Instructions

ftp: lh.tegile.com

login: anonymous

password: <your email address>

Directory:

cd /pub/###000/<case_number>

 - please replace ### with the first 3 digits of the case

Note: When using a GUI-based FTP client you will see error messages when connecting to our FTP server, but these are expected. You have write-only access to this resource and each time you execute a command (i.e. connect or change directories), an error message will pop-up. Ignore the messages.

Change the current folder on the remote pane to the one listed in the instructions above, then drag the files to the remote pane and they will write to the destination folder.