



SUPPORT AND MAINTENANCE SERVICE LEVEL AGREEMENT

1. DEFINITIONS

- a) "Agreement" means this Support and Maintenance Service Level Agreement.
- b) "Customer" means an organization that has purchased a Solution from Northern that includes a Support and Maintenance Agreement.
- c) "Project" means an endeavor undertaken by Northern to assist a Customer in achieving a set of defined and agreed goals.
- d) "Project Scope Document" or "PSD" means a document that defines the agreed scope of the Project; the goals that are to be achieved.
- e) "Solution" means the complete package delivered to the Customer to fulfill the needs of a Project. The solution will be based on the software product Northern Storage Suite and will likely include additional services and optimizations.
- f) "Underlying Software" means the software product Northern Storage Suite.
- g) "Ticket" means a unique technical query related to a Customer's Solution.
- h) "Incident" means a degradation or interruption in the function of the Solution.
- i) "Service Request" a question submitted as a Ticket that does not relate to a degradation or interruption in the function of the Solution.
- j) "Fault" means an Incident that is caused by an error in the Solution.
- k) "Problem" means an Incident that is caused by a factor outside of the Solution.
- l) "Professional Services Project" means a project to adapt or tune the Solution.
- m) "Change Request" means a request for the addition or adaptation of a feature in the Underlying Software.
- n) "Information Request" means a question about the function of the Solution
- o) "Severity" means the significance of Ticket in terms of its effect on the function of the Solution.
- p) "Acceptable Temporary Solution" means a measure that is taken to reduce or explain the impact of an Incident on the Solution while analysis is carried out.
- q) "Acceptable Permanent Solution" means a measure that is taken to remove or explain the impact of an Incident on the Solution.
- r) "Open Version" means a version of the Underlying Software with an open change window, i.e. the specifications for this version have not been frozen and new features or fixes can still be introduced.
- s) "Hours" means the hours between 9am and 6pm local time (measured at the Customer site) during Monday through Friday, excluding specific holidays detailed in the Agreement.
- t) "Time to Resolution" means the total time that elapses between a Ticket being properly submitted and an Acceptable Permanent Solution being delivered.
- u) "Initial Response Time" means the time that elapses between a Ticket being properly submitted by the Customer and an acknowledgment of the Ticket submission, together with the Ticket number, being provided by Northern's support team.
- v) "Communication Interval" means the time that is allowed to elapse between communications on a specific Ticket.
- w) "Solution Owner" is a representative of the Customer who is able to make key decisions about the Solution and its use by the Customer.



2. GENERAL INFORMATION

- 2.1 A typical customer engagement or Solution Delivery Project will see Northern assisting a Customer to design, define, test and deploy a Solution. Following successful deployment and hand-over the Customer will have all technical queries related to the Solution answered by Northern's Technical Support department in accordance with this Service Level Agreement.

3. SUPPORTED SOLUTIONS

- 3.1 Northern Storage Suite is a broad solution that offers a number of features and can achieve a number of goals. During the solution design phase of a Project Northern, together with the Customer, defines the goals of the Project, the features that will be used, their configuration and any additional optimizations or services. This documented and agreed package constitutes the Solution. This Solution is supported under the terms of the Agreement. No other products, software or solutions are subject to the terms of the Agreement.
- 3.2 Any significant changes to the Solution made by the Customer without consultation with Northern can be considered to give rise to a new solution which is outside the scope of the Agreement.
- 3.3 Incidents considered to have been caused by customer negligence are not supported under the terms of the Agreement.
- 3.4 Any Solution based on a version of the Underlying Software that has been withdrawn or been declared End of Life is not supported under the terms of the Agreement. Usually a software version upgrade will be recommended immediately after a Ticket is submitted, in order to bring the Solution under the terms of the Agreement. Information about product lifecycles at Northern can be found in the Northern Knowledge Base on www.northern.net.
- 3.5 In order to be subject to the terms of the Agreement, the Solution must be installed and operated in accordance with specified configuration guidelines and system requirements. These guidelines may be given explicitly by Northern personnel or found in the Northern Knowledge Base on www.northern.net.

4. SUBMITTING A SUPPORT TICKET

- 4.1 All Solution problems as well as information and enhancement requests are logged by the Customer as support Tickets. Tickets are submitted via the Ticket Submission Form within the community area of www.northern.net. Customers may follow-up on previously registered incidents via telephone and other means.
- 4.2 Tickets can be opened in the Customer's local language but the Customer should expect all detailed correspondence to be carried-out in English. Northern makes no warrant for the accuracy of any translation tools used in correspondence.
- 4.3 Each Ticket has a unique identification number. Any query that does not have a Ticket number is treated as normal correspondence and is not subject to the terms of this agreement.
- 4.4 Due to the often complex nature of technical queries, ticket submission via phone or other means is only acceptable in an emergency situation such as a loss of service or network outage. After submitting such an emergency ticket the Customer must immediately submit a duplicate report in the standard format via the Ticket Submission Form.
- 4.5 Failure to follow the reporting procedure will serve to release Northern from any liability associated with the Solution provided. Consistent disregard of the reporting procedure may lead Northern to revoke the Customer's right to use the service.



4.6 When submitting a Ticket the Customer agrees to provide the following information:

GENERAL INFORMATION	
Contact information	The contact details of the Customer representative who is submitting the Ticket. This person will be the main point of contact for this Ticket.
Software version number	The complete build number of the software version that is being used. This can be found by checking the Support Information for Northern Storage Suite in the Windows Add/Remove Programs utility.
Software Serial Number	The Serial Number being used by the relevant Northern Storage Suite installation(s).
Host platform	The operating system version of the relevant Northern Storage Suite host(s).
Target platform	The type and operating system version of the hosts that are being managed with Northern Storage Suite.
Suggested Ticket category	The Customer is asked to state their opinion of the category of the Ticket. <ul style="list-style-type: none"> ▪ Incident (a degradation or interruption in the function of the Solution) <ul style="list-style-type: none"> - Fault (an incident traced to an error in the solution) - Problem (an incident traced to an external factor) - Unknown ▪ Service Request <ul style="list-style-type: none"> - Professional Service Project (adaptation or tuning of the Solution) - Change Request (request for a change to the Underlying Software) - Information Request (a question about the function of the Solution)
Suggested Ticket Severity	The Customer is asked to state their opinion of the Severity of the ticket. <ul style="list-style-type: none"> ▪ Severity 1 <ul style="list-style-type: none"> - Users are unable to access the managed file systems ▪ Severity 2 <ul style="list-style-type: none"> - Sustained failure of a major feature of the Solution ▪ Severity 3 <ul style="list-style-type: none"> - Intermittent failure of a major feature of the Solution - Sustained failure of a minor feature of the Solution ▪ Severity 4 <ul style="list-style-type: none"> - Intermittent failure of a minor feature of the Solution ▪ Severity 5 <ul style="list-style-type: none"> - Professional Service Project - Change Request - Information Request - Documentation error
WHEN REPORTING UNEXPECTED BEHAVIOUR WITH SEVERITY 1-4	
Brief description	This description should include information about how the unexpected behaviour affects the function of the Solution.
Expected behaviour	Describing what the Customer would expect to be the result of the failing operation or process.
Encountered behaviour	Describing the actual result of the operation or process.
Error message	The full error message presented, if available. This could be displayed in the software itself and/or in the Windows Application Log.
Reproduction scenario	A description of the steps that lead to the error.
Reproduction rate	Describing if the unexpected behaviour occurs intermittently or always.
Attachments	Screen-shots that help to describe the Ticket, etc.
Troubleshooting	Describing any troubleshooting that has already been carried out by the Customer or a party representing the Customer.
WHEN SUBMITTING A GENERAL QUESTION WITH SEVERITY 5	
Description	This description should be as detailed as possible and include information about how the question/request relates to the Solution.
Intended goal	A description of the goal behind the Professional Services Project, Change or Information request.



5. TICKET CATEGORIES

- 5.1 There are two categories of support Ticket. Each of these categories is divided into sub-categories leading to a total of five Ticket types. The categories and their sub-categories are described below:
- 5.2 Incidents: Technical queries concerning a degradation or interruption in the function of the Solution are classified as Incidents. There are two Ticket types in this category:
- 5.2.1 Fault Tickets: Incidents that are traced back to faults in the Solution are classified as Fault Tickets.
- 5.2.2 Problem Tickets: Incidents that are traced back to a factor that is external to the Solution are classified as Problem Tickets.
- 5.3 Service Requests: Technical queries that aim to increase the scope or understanding of the solution are classified as Service Requests.
- 5.3.1 Professional Services Project: a project to adapt or tune the Solution is classified as a Professional Services Project Ticket.
- 5.3.2 Change Request: a request for the addition or adaptation of a feature in the Underlying Software is classified as a Change Request.
- 5.3.3 Information Request: a question about the function of the Solution is classified as an Information Request.
- 5.4 When submitting a Ticket the Customer is asked to provide an opinion of the Category of the Ticket. This is used as a guideline by Northern's Technical Support team but the initial suggestion made by the Customer can be changed after the Ticket is submitted. Any changes are made in communication with the Customer.

6. TICKET SEVERITIES

- 6.1 Each Ticket is applied a specific Severity. The Severity of a Ticket is determined by the affect that it has on the performance of the Solution. An unexpected behaviour that cripples the performance of the solution is given a higher Severity rating than an unexpected behaviour that introduces an error in a small component of the Solution.
- 6.1.1 Severity 1
- Loss of service; business-critical systems are unavailable.
- 6.1.2 Severity 2
- Sustained failure of a major feature of the Solution
- 6.1.3 Severity 3
- Intermittent failure of a major feature of the Solution
 - Sustained failure of a minor feature of the Solution
- 6.1.4 Severity 4
- Intermittent failure of a minor feature of the Solution
- 6.1.5 Severity 5
- Professional Service Project
 - Change Request
 - Information Request
 - Documentation error
- 6.2 When submitting a Ticket the Customer is asked to provide an indication of the Severity of the Ticket. This is used as a guideline by Northern's Technical Support team but the initial suggestion made by the Customer can be changed after the Ticket is submitted. Any changes are made in communication with the Customer.



7. TICKET HANDLING PROCEDURE

- 7.1 The Ticket handling procedure is broken into four main steps. The first two steps concern ensuring that the Ticket is subject the Service Level Agreement and that it is correctly logged. The third step is the process of identifying the necessary corrective action. The fourth and final step is to deliver accepted corrective action. Details are as follows:
- 7.1.1 Phase 1: The first phase of Ticket handling is to confirm that the Ticket relates to the Solution, that a valid Support and Maintenance Agreement exists for the Solution and if the Customer is eligible for priority queuing (see Appendix 1 - Augmented Service, for more information). If the Ticket is identified as being out of the scope of the original agreed Solution or that no Support and Maintenance Agreement exists, then the Ticket may be rejected. If the Ticket is rejected the Customer will be provided with information about alternative routes forwards.
- 7.1.2 Phase 2: The second phase of the Ticket handling procedure is for Northern's Technical Support team to review the Customer's suggested categorization and Severity rating of the Ticket. Any necessary adjustments will be discussed and agreed upon with the Customer.
- 7.1.2.1 When Tickets have been correctly classified as Incident or Service Request, and their Severity level is agreed, they are placed into work queues.
- 7.1.2.2 There are separate work queues for each combination of Ticket classification and Severity. The Severity 1 Incident Ticket work queue takes precedent over other work queues.
- 7.1.3 Phase 3 (Service Request Tickets only): Professional Service Project, Change Request and Documentation Error Tickets will be passed to Northern's Sales Engineering, Commercial and/or Product Management teams for further processing. Information Request Tickets will be processed by the Technical Support team.
- 7.1.4 Phase 3 (Incident Tickets only): Analysis of the reported incident is carried out. This analysis can involve multiple phone calls, emails, remote sessions and off-line research. It is possible that the category of the Ticket will change as this analysis is carried out and as the root-cause of the unexpected behaviour is identified.
- 7.1.4.1 During this analysis phase it is likely that an Acceptable Temporary Solution is identified. If so then this will be delivered to or communicated to the Customer. Definitions of Acceptable Temporary Solutions depend on the type of the Ticket and its Severity. More information can be found in section 8 of the Agreement.
- 7.1.4.2 The Customer agrees in general to assist Northern's efforts to duplicate and or reproduce Tickets identified as Faults or Problems to the furthestmost possible extent.
- 7.1.4.3 The Customer agrees specifically to, whenever possible, open separate support Tickets with their other service, software or hardware suppliers, including but not limited to Microsoft Corporation, EMC Corporation and NetApp Inc., when Northern's Technical Support staff present good reason to believe that these suppliers may be able to further the analysis of the Ticket.



7.1.4.4 The Customer agrees specifically to, whenever possible, provide additional testing, documentation, log files and/or direct access to the Customer environment for Ticket analysis purposes.

7.1.5 Phase 4 (Incident Tickets only): Delivery of an Acceptable Permanent Solution. The Ticket is closed when the Customer has received and confirmed an Acceptable Permanent Solution. Definitions of Acceptable Permanent Solutions depend on the type of the Ticket and its Severity. More information can be found in section 9 of the Agreement.

8. ACCEPTABLE TEMPORARY SOLUTIONS

- 8.1 Service Requests are not considered to have temporary solutions. Professional Services Project, Information Request, Change Request and Documentation Error Tickets are considered to have only permanent solutions and, because of the varied nature of permanent solutions to these Tickets, no warrant can be made in the Agreement concerning the description of such a solution.
- 8.2 What can be considered an Acceptable Temporary Solution to an Incident depends on the Ticket type and its Severity.
- 8.3 Fault Tickets, where the degradation or interruption in the function of the Solution is traced back to the Solution itself, are considered temporarily resolved as follows:
- 8.3.1 Severity 1
- The Solution is completely disabled, or
 - The Solution is partially disabled, or
 - A Solution adaptation/workaround that requires repetitive manual intervention is delivered.
- 8.3.2 Severity 2
- A Solution adaptation/workaround that requires repetitive manual intervention is delivered.
- 8.3.3 Severity 3
- A Solution adaptation/workaround that requires repetitive manual intervention is delivered, or
 - A technical description of the root cause of the Fault is delivered.
- 8.3.4 Severity 4
- A technical description of the root cause of the Fault is delivered.
- 8.4 Problem Tickets, where the degradation or interruption in the function of the Solution is traced back to a factor outside of the Solution, are considered temporarily resolved as follows:
- 8.4.1 Severity 1
- The Solution and/or environmental component are completely disabled, or
 - The Solution and/or environmental component are partially disabled, or
 - A support case is opened, by the Customer, with the relevant third party.
- 8.4.2 Severity 2
- A support case is opened, by the Customer, with the relevant third party.
- 8.4.3 Severity 3
- A technical description of the root cause of the Problem is delivered.
- 8.4.4 Severity 4
- A technical description of the root cause of the Problem is delivered.



9. ACCEPTABLE PERMANENT SOLUTIONS

- 9.1 Service Requests, i.e. Professional Services Project, Information Request, Change Request and Documentation Error Tickets, are considered to have only permanent solutions and, because of the varied nature of permanent solutions to these Tickets, no warrant can be made in the Agreement concerning the description of such a solution.
- 9.2 What can be considered an Acceptable Permanent Solution to an Incident depends on the Ticket type and its Severity.
- 9.3 Fault Tickets, where the degradation or interruption in the function of the Solution is traced back to the Solution itself, are considered permanently resolved as follows:
- 9.3.1 Severity 1
- A code change in the Underlying Software, usually implemented as a patch release to the current public version, is delivered, or
 - A Solution adaptation/workaround that does not require repetitive manual intervention is delivered.
- 9.3.2 Severity 2
- A code change in the Underlying Software, usually implemented as a patch release to the current public version, is delivered, or
 - A Solution adaptation/workaround that does not require repetitive manual intervention is delivered.
- 9.3.3 Severity 3
- A code change in the Underlying Software, usually implemented in the next Open Version, is delivered, or
 - A Solution adaptation/workaround that requires repetitive manual intervention is delivered.
- 9.3.4 Severity 4
- An error report is logged with Northern's Product Management team and considered for inclusion in a future version of the Underlying Software, or
 - A technical description of the root cause of the Fault is delivered.
- 9.4 Problem Tickets, where the degradation or interruption in the function of the Solution is traced back to a factor outside of the Solution, are considered permanently resolved as follows:
- 9.4.1 Severity 1
- A Solution adaptation/workaround that requires repetitive manual intervention is delivered, or
 - A support case is opened, by the Customer, with the relevant third party.
- 9.4.2 Severity 2
- A support case is opened, by the Customer, with the relevant third party.
- 9.4.3 Severity 3
- A technical description of the root cause of the Problem is delivered.
- 9.4.4 Severity 4
- A technical description of the root cause of the Problem is delivered.



10. **RESPONSE TIMES AND COMMUNICATION INTERVALS**

- 10.1 In addition to Time to Resolution, there are two important time variables in the processing of support Tickets. The first is the time that elapses between a Ticket being properly submitted by the Customer and an acknowledgment of the Ticket submission, together with the Ticket number, being provided by Northern's support team. This is referred to as the Initial Response Time.
- 10.2 The second important time variable is the interval between communications; the time that is allowed to elapse between communications on a specific Ticket. This is referred to as the Communication Interval. Such communications can be simple updates on the status of offline analysis, requests for the Customer to test proposed solutions or data gathering exercise, requests for the Customer to provide additional trace or log information, etc.



10.3 Target Initial Response Times and target Communication Intervals for Incidents depend on the severity of the Ticket, as shown in the table below:

RESPONSE TIMES AND COMMUNICATION INTERVALS			
SEVERITY 1 ▪ Loss of service; business-critical systems are unavailable.			
Target Initial Response Time	Target Communication Interval	Acceptable Temporary Solutions	Acceptable Permanent Solutions
<8 Hours	<16 Hours	Fault Tickets - Complete disabling of Solution - Partial disabling of Solution - Adaptation/workaround with repetitive manual intervention	Fault Tickets - Emergency code change - Adaptation/workaround with repetitive manual intervention
		Problem Tickets - Complete disabling of Solution and/or environmental component - Partial disabling of Solution and/or environmental component - Support case opened with the relevant third party	Problem Tickets - Adaptation/workaround with repetitive manual intervention - Support case opened with the relevant third party
SEVERITY 2 ▪ Sustained failure of a major feature of the Solution.			
Target Initial Response Time	Target Communication Interval	Acceptable Temporary Solutions	Acceptable Permanent Solutions
<8 Hours	<16 Hours	Fault Tickets - Adaptation/workaround with repetitive manual intervention	Fault Tickets - Emergency code change - Adaptation/workaround without repetitive manual intervention
		Problem Tickets - Support case opened with the relevant third party	Problem Tickets - Support case opened with the relevant third party
SEVERITY 3 ▪ Intermittent failure of a major feature of the Solution. ▪ Sustained failure of a minor feature of the Solution.			
Target Initial Response Time	Target Communication Interval	Acceptable Temporary Solutions	Acceptable Permanent Solutions
<12 Hours	<20 Hours	Fault Tickets - Adaptation/workaround with repetitive manual intervention - Root cause description	Fault Tickets - Code change in next Open Version - Adaptation/workaround with repetitive manual intervention
		Problem Tickets - Root cause description	Problem Tickets - Root cause description
SEVERITY 4 ▪ Intermittent failure of a minor feature of the Solution.			
Target Initial Response Time	Target Communication Interval	Acceptable Temporary Solutions	Acceptable Permanent Solutions
<16 Hours	<32 Hours	Fault Tickets - Root cause description	Fault Tickets - Error report logged and considered for inclusion in future version - Root cause description
		Problem Tickets - Root cause description	Problem Tickets - Root cause description



(Abbreviated descriptions of Severity classifications, Acceptable Temporary Solutions and Acceptable Permanent Solutions are shown in this table for information purposes only. Sections 6, 8 and 9 provide additional information on these topics.)

11. HOURS OF SERVICE

- 11.1 Northern serves a global market through a centralized technical infrastructure; this means that the opportunity for online research (direct interaction with the Customer and the Customer's environment) is constrained to specific windows according to the geographical location of the Customer. The total number of hours that can be invested in both online and offline research remains constant for all geographical regions.
- 11.2 Response Times and Communication intervals (described in section 10) are measured in Hours. These Hours are defined as 9am (09:00) to 6pm (18:00) local time (i.e. the Customer's local time-zone) during Monday through Friday with the exception of holidays listed in section 11.3. For example: a Ticket properly submitted at 5pm PST (Pacific Standard Time) on a Monday that receives an initial response at 9am PST on the following day will be considered to have an Initial Response time of 1 Hour.
- 11.3 Specific holidays where service is not available are as follows: January 1st, the last Monday in May, the Friday before the fourth Saturday in June, July 4th, the fourth Thursday in November, December 24th, December 25th, December 26th and December 31st.

12. MAINTENANCE

- 12.1 Northern publishes new software versions as service releases, minor new versions and major new versions. Access to all of the release types is restricted.
- 12.2 A valid Support and Maintenance Agreement entitles the Customer to upgrade the Underlying Software to any new version.
- 12.3 Without a valid Support and Maintenance Agreement the Customer is not entitled to upgrade the Underlying Software to any new version.
- 12.4 New software versions are available upon request from Northern Support and Account Management representatives.

13. ADDITIONAL INFORMATION

- 13.1 Northern reserves the right to change the Agreement. The Customer will be notified prior to any such changes.



APPENDIX 1 – AUGMENTED SERVICE

For those customers who are eligible to receive Northern's augmented service level, the following also applies:

1. PRIORITY QUEUING OF SUPPORT TICKETS

- 1.1 The Customer's access to prioritized Ticket queuing is established during the first phase of Ticket handling (detailed in section 7 of the Agreement).
- 1.2 Tickets associated with customers of this Augmented Service will be placed at the front of the relevant work queue.

2. APPOINTED SOLUTION MANAGER

- 2.1 Customers of this Augmented Service are entitled to have a Solution Manager appointed.
 - 2.1.1 The Solution Manager will act as a single point of contact for any questions the Customer may have about their continued use of the Solution.
 - 2.1.1.1 The Solution Manager may guide the Customer into engaging with other individuals working for, or in association with, Northern. This can include Northern technical support staff, account management staff, representatives of hardware suppliers or support staff from other organizations. The Support Manager will monitor these engagements at all times and participate when necessary.
 - 2.1.2 The Solution Manager will be responsible for working proactively to ensure the Customer realizes the full value of the Solution. Including the exposure of new opportunities to realize value.

3. BUSINESS REVIEW MEETINGS

- 3.1 Regular meetings will be held by the Solution Manager. Participants from the Customer will include the Solution Owner and should include any additional personnel who may be able to contribute to the meeting agenda.
- 3.2 These meetings will normally be held on a quarterly basis, with two per year being held at the Customer's primary location and the remaining two per year held as web conferences.
 - 3.2.1 Specific travel costs or travel expenses may be passed to the Customer in certain circumstances. Such circumstances will be identified and agreed prior to travel.
- 3.3 The agenda and goals for each meeting will be communicated and agreed in advance.
- 3.4 The list of participants for each meeting will be communicated and agreed in advance.

4. AUTOMATIC QUALIFICATION FOR BETA PROGRAMS

- 4.1 Customers of this service will automatically qualify for participation in beta programs concerning new versions of the Underlying Software.
 - 4.1.1 Participants of these programs have the opportunity to get assisted installations and training in use of new functions of the Underlying Software
 - 4.1.2 Participants of these programs are encouraged to give direct feedback on the scope and function of new versions of the Underlying Software and are able to influence the changes that are made.



5. SOFTWARE MAINTENANCE SERVICES

- 5.1 As detailed in section 12, Northern regularly produces new versions of the Underlying Software. These new versions will enhance the current Solution for the customer and may add new opportunities to achieve User Data Management goals.
- 5.2 Customers of this augmented service are entitled to receive direct assistance in the planned installation of new versions of the Underlying Software.
 - 5.2.1 Work should include participation in the planning of software upgrade and the practical work of the upgrade process itself.
- 5.3 The work carried-out may extend the scope of the current Solution, but this is not its goal – and such activities are likely to quickly exhaust the annual quota of hours available. A Professional Services project is the expected method for such Solution scope growth work to be carried-out.
- 5.4 The amount of time spent in this work by Northern personnel is limited to a total of ten man-hours per year.
 - 5.4.1 This work will normally be carried out remotely, but may be, at Northern's discretion, carried-out at the Customer site.
 - 5.4.1.1 Travel and travel expenses will be paid for by the Customer if maintenance service is carried-out at the Customer site.
 - 5.4.2 These hours are normal working hours (measured at the location of the Northern personnel who will carry-out the work) only. Requests for work to be carried-out outside of normal working hours may be considered.

6. DISCOUNTED PROFESSIONAL SERVICES

- 6.1 Customers of this augmented service are entitled to a 10% discount on listed prices for Northern's Professional Services.