Major IT Service Issue Process

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1 **Purpose and Scope**

This process is intended to identify and ultimately resolve major IT service issues as quickly as possible through proper incident management, predefined escalation paths, and prompt communication procedures for our customers.

Major IT service issues are the interruption or degradation of a core production service (any centralized IT-provided service that serves multiple customers and users) that results in the disruption of its customers’ ability to carry out teaching, learning, research and/or administration activities.

The scope of this document is to provide a basic process that applies to every major IT service issue for all IT services and to provide guidelines for IT Staff to follow. It provides guidelines for employees to identify a major IT service issue and to escalate it to the appropriate technical group for resolution.

2 **Process Goals**

1. Users are alerted to or the occurrence of a Major IT service issue is confirmed as quickly as possible—early notification of the impacts of a potential issue is more important than an accurate description of the issue.
2. Major IT service issues are escalated as soon as possible to the service owner/designee responsible for the service.
3. Regular and timely communication occurs with affected end-users throughout the lifecycle of a major IT service issue.
4. Detailed documentation of major IT service issue occurs throughout the lifetime of each event.

3 **Document Owner**

*The document owner is responsible for ensuring that this document is accurate and up-to-date, following established processes.*

This document is owned by the Deputy Executive Director within IT Experience & Engagement.

4 **Definitions**

- **Incident**: An incident is a disruption in use of an IT service. It can be more specifically considered a breach or potential breach of service level agreement. For services which do not have service level agreements, an incident is when an IT Service is not functioning within expectations or cannot be used. Incidents are typically reported by users, although incidents can also be identified through monitoring tools or IT employees.
- **IT status**: A notification section on the Service Portal (4help.vt.edu) that indicates any outages or degradations of IT services.
- **Major IT service issue**: The interruption or degradation of a core production service that results in the disruption of its customers’ and users’ ability to carry out University teaching, learning, research and/or administration at the University.
- **Outage**: A record created in the event of an Outage or Degradation of a core IT service.
- **Problem**: A cause of one or more incidents. The cause is not usually known at the time a Problem record is created.

5 **Roles and responsibilities**

5.1 **Major IT Service Issue Process Owner**

Ensure documentation is relevant and coordinates updates and communications of the process.
- Maintaining this process documentation
- Communicating this process across the Division of IT
- Supporting the Major IT Service Issue Process Manager in operations of this process.

5.2 **Major IT Service Issue Process Manager**

Accountable for the operations of the Major IT Service Issue process across the Division of IT.
- Relaying needs for process documentation updates to the Major IT Service Issue Process Owner
- Coordinating parties involved in major IT Service Issue

5.3 **Service Desk**

The Service Desk is a function of 4Help that often serves as first and second tier support for incidents in coordination with the Information Center.
- Helping to identify a Major IT Service Issue
- Participating in the #itsupport-csc Slack channel.
- Placing a generic major IT service issue message on the Information Center Automatic Call Distributor (ACD) system, if deemed necessary
- Posting initial message on IT Status, techsupport-g@vt.edu, and the #itsupport-csc Slack channel

5.4 Information Center
Virginia Tech’s 24/7/365 Information Center serves as a point of contact for end users within the University and outside of the University.

- Helping to identify a major IT service issue
- Participating in the #itsupport-csc Slack channel.
- Placing a generic major IT service issue message on the Information Center Automatic Call Distributor (ACD) system, if deemed necessary
- Posting initial message on IT Status, techsupport-g@vt.edu, and the #itsupport-csc Slack channel

5.5 Incident Coordinator
The Incident Coordinator assumes responsibility during a major IT service issue for coordination, documentation, and communication.

For any major IT service issue, the Information Center On-Call supervisor will assume the role of Incident Coordinator. For issues of longer duration (more than 4 hours), the responsibility of the Incident Coordinator should be transferred to someone appointed by the relevant service owner. When a new individual assumes the role of the Incident Coordinator this should be documented in the major IT service issue after action timeline.

The Incident Coordinator is responsible for the following activities:
- Facilitating and participating in the #itsupport-csc Slack channel and being available by phone for updates
  - Identifying an alternate location for incident collaboration in the event of a Slack outage
- Facilitating communication with technical resources and Service Owners for status updates and additional information
- Posting updates, at least hourly, to IT Status, techsupport-g@vt.edu, and the #itsupport-csc Slack channel
- Ensuring that internal and external communications about a major IT service issue are completed in a timely manner by engaging the IT Communications Team (and escalating to Major IT Service Issue Process Owner if assistance in obtaining updates is an issue)

5.6 Service Owner
4Help has a list of service owners, which includes any authorized IT employee who has signed an MOU with 4Help for service. The service owner is responsible for the following activities:
- Identifying the appropriate Service Contact for each service
- Maintaining a list of appropriate Service Contacts for each service
- Verifying that a major IT service issue is occurring
- Participating in the #itsupport-csc Slack channel.
- Providing regular updates about the service restoration to the Incident Coordinator and IT Communications team for distribution to a wider audience
- Notifying the Information Center and Service Desk of an identified major IT service issue
- Identifying the business impact of a major IT service issue
- Assisting with developing messages and communications, for customers of the service, end-users and other non-IT parties
- Maintaining a record of events throughout a major IT service issue
- Confirming that resolution of a major IT service issue is in place
- Notifying the Incident Coordinator, IT staff, and any external parties of the resolution after verification that the issue is resolved
- Hosting an after-action review for interested IT staff (may include Departmental IT Staff when appropriate)
- Communicating with the CIO and Deputy CIO

5.4 IT Communications Team
The IT Communications Team is responsible for the following activities:
• Identifying and maintaining a list of appropriate stakeholder groups to always receive notifications during a major incident
• Ensuring that internal and external communications about a major IT service issue are completed in a timely manner by collaborating with the Incident Coordinator.
• Participating in the #itsupport-csc Slack channel and being available by phone for updates.
• Communicating with the CIO and Deputy CIO and passing on relevant communication to the internal and external partners including the Incident Coordinator and the Virginia Tech community.

6 Process
6.1 Major IT service issue process

| Triggers | ● More than three incidents related to a core production service are received by 4Help, within one hour
● A Service Owner designee notices that a Major IT Service Issue is occurring and notifies 4Help |
| Inputs   | ● Incident documentation
● Information Center On-call Supervisor, who will become the incident coordinator |
| Outputs  | ● Instantiation of Problem Management for Major IT Service Issue process
● Messages to IT status and Techsupport group
● Major IT service issue (outage) has been resolved
● Relevant incidents have been resolved
● Documentation of the IT service issue and after-action review |

1. The Problem Management for Major IT Service Issue process (see it.vt.edu/process) is triggered in parallel with this process. A Problem record is created and assigned by the Incident Coordinator. From that Problem an associated Outage is created. This Outage is the IT Status message referred to in the next step.

2. The Incident Coordinator will post a message on IT Status, techsupport-g@vt.edu, and the #itsupport-csc Slack channel stating “As of [DATE/TIME], we have received several incidents related to a potential issue with xxx service. An update will be provided as soon as we have additional information. You can also check [LOCATION] for updates.”
   a. If the Major IT Service Issue involves a security concern, the Service Owner will coordinate with the Incident Coordinator to ensure that the Cyber Security Incident Response (CIRT) process is activated.

3. The Incident Coordinator will immediately contact the person(s) listed in the Service Contact list. If primary the contact is unavailable, use the Service Contacts list on the CSC wiki until someone from the group is reached: https://webapps.es.vt.edu/confluence/x/TgD8Jg.

4. The Incident Coordinator will notify the Service Desk Manager and Deputy Executive Director.

5. Incidents related to the Major IT Service Issue should be associated with their related Problem and set to the state of “Awaiting Problem” as documented in the Problem Management for Major IT Service Issue process.

6. Once the issue is escalated, the Service Contact, Service Owner, or designee is responsible for providing at least hourly updates to the #itsupport-csc Slack channel.

7. Once the Service Owner or Service Contact has been notified, the Incident Coordinator will contact the IT Communications team contact and apprise them of the situation.

8. If the issue is expected to impact services for more than 4 hours, the Service Owner may appoint an Incident Coordinator within their group. The previous incident coordinator contacts all parties to let them know about the new Incident Coordinator. The previous incident coordinator also briefly the new Incident Coordinator on all activities that have taken place to date.

9. The Incident Coordinator or the Service Owner (if the Service Owner has expressly told the Incident Coordinator they would prefer to communicate) will, in joined effort with the IT Communications Team, communicate with affected end-users regularly throughout the lifecycle of a Major IT Service Issue.

10. Once the issue is resolved, the Incident Coordinator communicates to techsupport-g@vt.edu group, the #itsupport-csc Slack channel, and updates and schedules IT Status to be marked as “resolved” on the following business day.
11. The Service Desk resolves all related incidents, if not already resolved through the Problem Management for Major IT Service Issue process.

6.2 Major IT service issue after action process

<table>
<thead>
<tr>
<th>Triggers</th>
<th>• A Major IT Service Issue been resolved</th>
</tr>
</thead>
</table>
| Inputs   | • Documentation of technical events in related Problem record  
          • Documentation from Service Owner and others |
| Outputs  | • Documented timeline of the Major IT Service Issue  
          • Documented cause of the issue and improvement ideas |

1. Service Owner schedules a meeting with all Incident Coordinators, Service Desk Manager, Service Contacts, IT Communications Team members, and other Service Owners impacted by the Major IT Service Issue.

2. In the meeting, the Service Owner reviews a written timeline of the Major IT Service Issue and documents the group’s ideas for improvements to mitigate or prevent future similar major IT service issues. The group assigns owners and timelines to each improvement.

3. Service Owner determines an appropriate level of detail from the timeline and improvement ideas to share with non-Division of IT Stakeholders and ensures these are distributed to appropriate groups.

4. Service Owner (or designee) attaches this after-action review to the Problem record associated with the Major IT Service issue (which was created in the Major IT Service Issue with Problem process).

7 Related documentation
The below processes, policies, or other documentation are related to this process:

<table>
<thead>
<tr>
<th>Process</th>
<th>Process Owner</th>
<th>Relationship to this process</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Management process for Major IT Service Issue</td>
<td>Deputy Executive Director, ITE²</td>
<td>Is triggered in parallel to this process and, through its outputs, provides a means of resolving sets of incidents and a record for attaching After Action reviews.</td>
<td>it.vt.edu/process</td>
</tr>
<tr>
<td>Process modification process</td>
<td>Process documentation manager</td>
<td>Defines how this process is approved</td>
<td>it.vt.edu/process</td>
</tr>
<tr>
<td>Service Contact list</td>
<td>Deputy Executive Director, ITE²</td>
<td>List of contacts that are responsible for operation of IT services</td>
<td>Wiki, SharePoint, ServiceNow</td>
</tr>
<tr>
<td>Stakeholder notification list</td>
<td>Communications team</td>
<td>Default group of stakeholders to keep notified during outages and on after-action findings</td>
<td>TBD</td>
</tr>
<tr>
<td>Service-specific</td>
<td>Each service owner</td>
<td>If services have stakeholder groups that need to be notified during outages and on after-action findings that differ from the overall Stakeholder notification lists, service owners need to identify these groups</td>
<td>TBD</td>
</tr>
<tr>
<td>Cyber Security</td>
<td>ITSO</td>
<td>Provides a guide for cyber incident handling, particularly for analyzing incident-related data and determining the appropriate response to each incident.</td>
<td><a href="http://security.vt.edu/content/dam/security_vt_edu/downloads/incident_response.pdf">http://security.vt.edu/content/dam/security_vt_edu/downloads/incident_response.pdf</a></td>
</tr>
</tbody>
</table>
8 Workflow of Process

Major IT Service Issue triggered

The Incident Coordinator posts message on IT Status, Slack #itsupport-csc, and techsupport-q@vt.edu

Issue a security concern? Yes

Service Owner will coordinate with Incident Coordinator to activate CIRT process.

No

Incident Coordinator contacts person(s) listed in the Service Contact list.

Incident Coordinator notifies Service Desk Manager and Deputy Executive Director.

Incidents are associated with Problem and set to 'Awaiting Problem' state

Incident Coordinator contacts IT Communications Team

Service Owner or designee provides updates to Incident Coordinator

Yes

Is the issue resolved?

No

Incident Coordinator communicates issue resolution to techsupport-q, #itsupport-csc, and schedules IT status to be resolved.

Major IT Service Issue After-Action process triggered.

All incidents resolved.

Yes

Issue ongoing after 1 hour?

No

Issue ongoing after 4 hours?

Yes

Process triggered

Steps for Initial Incident Coordinator

Steps for any Incident Coordinator

Steps for Service Owner/Designee

Process completed

Service Owner or designee verifies resolution and communicates with IT Communications Team and Incident Coordinator

Service Owner may assign new Incident Coordinator

New Incident Coordinator notifies current Incident Coordinator

Incident Coordinator provides updates to IT Communications team/End-users

No
9 Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 2-1</td>
<td>David Duckett</td>
<td>April 4, 2018</td>
<td>Implemented identified process improvements, which included integrating with a Problem process (triggering Problem and updating relevant steps and flowchart), creating a location for after-action reviews (attaching to Problem records), identifying additional means of distributing Major IT Service Issue group chats (Slack channel #itsupport-csc), and added roles and responsibilities for process owner and process manager to distinguish who owns the documentation (Process Owner) and who is the contact for day-to-day operations (Process Manager).</td>
</tr>
</tbody>
</table>

10 Identified Process Improvements to Implement

The below are improvements identified for consideration during future revisions of this document

- Generate list of stakeholders as related documentation (see the TBD lists in the Related Documentation section).
- Identify authoritative source of IT Status updates.
- Improve access and editability of service contacts list.
- Define time-period for when CIO/Deputy CIO are notified if no contact can be made with a service owner or technical lead.
- Cross-reference this process with OEM best practices and fold in appropriate updates.
- Identify an alternate communications channel to Slack in case the Slack service were to be down.
- Adding a process for the case of ServiceNow experiencing a Major IT Service Issue.
- Update the workflow diagram so it follows BPMN (Business Process Modeling Notation) guidelines.