

NORTHSTAR HEALTH CLINICS – EHR DISRUPTION SCENARIO

PREPARED FOR

ITSM FINAL PROJECT PART 2

PRESENTED BY

GROUP 3 - MLTI B



**KNOWLEDGE
MANAGEMENT
ASSIGNMENT**

servicenow



DECEMBER 2025

CONTENT

Introduction

Group Roles

Standard Knowledge Article

Known Error Knowledge Article

Summary



Transforming real EHR incidents into clear, reusable knowledge for clinical staff and IT support

INTRODUCTION

This section of the project focuses on converting the operational experience from Part 1 into reusable Knowledge Base articles for both clinical end users and IT support staff. After resolving EHR-related incidents using Incident, Problem, Change, and CMDB processes, the next step is to document these learnings in a clear, standardized format. By creating Knowledge Articles in ServiceNow, our group ensures that common EHR issues can be understood, prevented, and resolved more efficiently by doctors, nurses, clinic staff, Service Desk teams, and Application Support teams.

LEARNING OBJECTIVES

By completing this activity, we will be able to:

1. Create Standard Knowledge Articles for clinical end users using non-technical, easy-to-follow language.
2. Develop Known Error Articles for IT support teams that explain root causes, workarounds, and permanent fixes.
3. Translate real incidents from Part 1 into structured, reusable knowledge assets.
4. Apply correct ServiceNow templates and publish articles properly within the shared PDI.
5. Strengthen organizational knowledge sharing by documenting recurring EHR issues and their solutions.



Group Roles

To complete Part 2, our group collaborated without assigned ITIL-specific roles, focusing instead on jointly creating the required Knowledge Articles in ServiceNow. Each member contributed to drafting, structuring, and refining both Standard Knowledge Articles and Known Error Articles, ensuring that the content accurately reflected the incidents and problems analyzed in Part 1. We worked together to organize article templates, craft clear explanations, link related incidents and problems, and publish the final articles within the shared PDI.



WILLIAM BRYAN
5026231011



GUSTI GRATIA
5026231097



KAYLA PUTRI
5026231158

While responsibilities were shared, we coordinated closely throughout the process to maintain consistency in writing style, accuracy in technical details, and alignment with Knowledge Management best practices.

Through collective effort and collaborative editing, our team successfully produced a complete and coherent set of Knowledge Articles that can be reused by clinical staff and IT support.

Standard Knowledge Article



A standard knowledge article provides clear, structured guidance to help clinical staff quickly understand and resolve common issues related to the EHR system by using simple, non-technical language. It summarizes essential steps, best practices, and practical instructions that support doctors, nurses, and clinic personnel in navigating system errors, preventing recurring problems, and maintaining smooth clinical workflows. By presenting information in a concise and accessible format, a knowledge article ensures that staff can easily follow recommended actions during system slowdowns, login issues, or other incidents, ultimately improving efficiency, reducing downtime, and supporting consistent patient care.

Standard Knowledge Base Setting

The screenshot shows the 'New Record' form for a Knowledge Base article in ServiceNow. The form is titled 'Knowledge Base New record' and includes a 'Submit' button in the top right corner. The form is divided into several sections:

- Title:** A required field with the text 'EHR Tips & Help for Clinical Staff'.
- Article Validity:** A text input field.
- Icon:** A button labeled 'Click to add...'.
- Disable commenting:** A checkbox.
- Disable suggesting:** A checkbox.
- Disable category editing:** A checkbox.
- Disable rating:** A checkbox.
- Disable mark as helpful:** A checkbox.
- Checklist:** A text input field with a search icon.
- Description:** A text area containing the text: 'This knowledge base provides simple, easy-to-follow guidance for using the Electronic Health Record (EHR) in daily clinical work. It includes step-by-step instructions, tips, and best practices to help doctors, nurses, and other healthcare staff complete tasks efficiently, such as documenting patient visits, ordering medications, reviewing lab results, and managing patient information. Designed with non-technical language, this help center supports smooth workflows and improves the overall EHR experience.'
- Set default knowledge field values:** A dropdown menu with the text '-- choose field --' and a text input field with the text '-- value --'.
- Application:** A dropdown menu with the value 'Global'.
- Owner:** A required field with the value 'Alfonso Griglen'. A blue tooltip message states: 'User Alfonso Griglen will be assigned the knowledge_manager role after adding!'.
- Managers:** A button with a plus icon and a button with a minus icon.
- Publish workflow:** A dropdown menu with the value 'Knowledge - Instant Publish'.
- Retire workflow:** A dropdown menu with the value 'Knowledge - Instant Retire'.
- Active:** A checkbox that is checked.

When setting up the Knowledge Base for Standard Knowledge Articles, ensure that all configurations support non-technical, end-user content by choosing a clear and relevant title that reflects practical **EHR tips for clinical staff**. Since Standard Knowledge is intended for doctors, nurses, and clinic teams, always select the Standard Template when creating each article, ensuring the format stays simple and easy to read.

During the Knowledge Base creation process, we will be asked to assign an owner, all articles must list **Alfonso Griglen** as the **owner**, as this role is required for consistent management and publishing oversight. In the Description field, provide a concise explanation of the Knowledge Base's purpose, highlighting that it contains straightforward, user-friendly guidance designed to help clinical staff navigate the EHR effectively without technical language, supporting smooth workflows and improving daily operations.

Selected Topic



3

HOW TO REPORT AN EHR SYSTEM ISSUE PROPERLY

Linked incidents : All incidents from Part 1

This topic is connected to all incidents because every issue in the EHR system—whether it involves slow pages, freezing, login failures, or short outages—requires proper reporting to ensure quick resolution. Clear reporting helps the support team identify what happened, when it occurred, and how it affected staff. Since every incident depends on accurate information from users, this topic teaches staff how to describe problems in a way that makes troubleshooting faster and more effective.

4

HOW TO AVOID SESSION TIMEOUTS IN THE EHR

Linked incidents :

- Incident 3 - Login failures
- Incident 4 - EHR freezing

This topic relates to login failures and freezing because both issues can cause or worsen session timeouts. When the system freezes or repeatedly fails to log in, users may be logged out automatically due to inactivity. The topic explains simple steps to reduce the chances of timeouts, such as staying active in the system, avoiding long idle periods, and recognizing early signs of freezing. By following these steps, staff can keep their sessions active and avoid losing progress.

5

HOW TO USE THE EHR DURING TEMPORARY SYSTEM SLOWNESS

Linked incidents:

- Incident 1 - Slow system/pages
- Incident 5 - Short outage

This topic is linked to incidents involving slowness and short outages because both situations require staff to continue working carefully while the system is unstable. The guidance helps users understand what they should do—such as being patient with loading times—and what they should avoid—such as clicking buttons repeatedly or refreshing too often. These behaviors help prevent additional system strain and reduce the risk of errors. The topic prepares staff to stay productive and protect patient information even during brief system disruptions.

Standard Article 3: How to Report an EHR System Issue Properly

Step 1 – Create New Record for Knowledge Article

Create a new Standard Knowledge Article record in the same EHR Support knowledge base used in Part 1, and fill in the basic information such as short description, template, and audience.

The screenshot shows the 'Knowledge New record' form. The 'Number' field is 'KB0010004'. The 'Knowledge base' is 'EHR Tips & Help for Clinical Staff'. The 'Category' is 'Incident Reporting'. The 'Scheduled publish date' is empty. The 'Valid to' date is '2025-12-31'. The 'Article type' is 'HTML'. The 'Workflow' is 'Draft'. The 'Source Task' is empty. The 'Attachment link' and 'Display attachments' checkboxes are unchecked. The 'Short description' is 'How to Report an EHR System Issue Properly'. The 'Article body' contains the text 'How to Properly Report an EHR System Issue'.

Step 2 – Add Category and Sub-category

Assign the article to a clear category and sub-category (EHR Support → Incident Reporting) so clinical staff can easily find it in the Knowledge Portal.

The screenshot shows the 'Knowledge New record' form with a 'Category picker' dialog box open. The dialog box displays a hierarchy: 'EHR Support' > 'Incident Reporting'. The 'Category' field in the background form is now 'EHR'. The 'Short description' is 'How to Report an EHR System Issue Properly'. The 'Article body' contains the text 'How to Properly Report an EHR System Issue'.

Standard Article 3: How to Report an EHR System Issue Properly

Step 3 – Create Article Body Using Source Code

Build the full article body using the Source Code editor, formatting the content into simple, non-technical sections that guide end users step by step.

Source Code

```
1 <p>&nbsp;</p>
2 <style>
3   body { font-family: system-ui, -apple-system, "Segoe UI", Roboto, "Helvetica Neue", Arial; line-height: 1.6; color: #111; padding: 20px;
max-width: 900px; margin: auto; }
4   h1 { font-size: 1.6rem; margin-bottom: 0.2rem; }
5   h2 { font-size: 1.15rem; margin-top: 1.2rem; }
6   p { margin: 0.6rem 0; }
7   ul, ol { margin: 0.4rem 0 0.8rem 1.2rem; }
8   li { margin: 0.35rem 0; }
9   .note { background:#fff8c4; border-left:4px solid #ffd24d; padding:10px 12px; margin:10px 0; }
10  .danger { background:#ffe6e6; border-left:4px solid #ff6b6b; padding:10px 12px; margin:10px 0; }
11  .example { background:#f4f7fb; border-left:4px solid #8aa4ff; padding:10px 12px; margin:10px 0; font-family: monospace; }
12  footer { margin-top:1.2rem; font-size:0.9rem; color:#444; }
13 </style>
14 <article>
15 <h1>How to Properly Report an EHR System Issue</h1>
16 <p>Properly reporting an EHR system issue is a critical part of keeping clinical work running smoothly. When you see an error, unexpected
behavior, or system malfunction, create an incident report through the official service portal rather than using informal channels. A clear,
timely report helps the support team diagnose and fix problems faster, reduces downtime, and ensures incidents are tracked and escalated
correctly.</p>
17 <section>
18 <h2>Quick reasons to report immediately</h2>
19 <ul>
20 <li><strong>Saves time:</strong> avoids back-and-forth clarification with support.</li>
21 <li><strong>Keeps things consistent:</strong> incidents are categorized and prioritized correctly.</li>
```

Ctrl-F Start search Ctrl-G Find next Shift-Ctrl-F Find previous
Shift-Ctrl-F Replace Shift-Ctrl-R Replace all

Cancel

Save

Step 4 – Link to Related Articles

Connect the new article to other relevant knowledge articles so users can quickly access additional background information, standards, or supporting guidance.

Add Filter Run filter ?

-- choose field --

-- oper --

-- value --

Collection

Q

KB0000001 v1.0
KB0000002 v1.0
KB0000003 v1.0
KB0000005 v1.0
KB0000006 v1.0
KB0000007 v1.0
KB0000008 v1.0
KB0000009 v1.0
KB0000010 v1.0
KB0000011 v1.0
KB0000012 v1.0
KB0000014 v1.0
KB0000015 v1.0
KB0000016 v1.0
KB0000017 v1.0
KB0000018 v1.0
KB0000019 v1.0

Related Articles List

KB0010004 v0.01

KB0000053 v1.0
KB0000013 v1.0

>

<

^

v

Cancel

Save

Standard Article 3: How to Report an EHR System Issue Properly

Step 5 – Add Relevant Related Articles as Supporting References

Select and link two existing knowledge articles, one about IPv6-related IP address issues and another about handling unresponsive applications to provide end users with real examples of system behaviors that may require proper incident reporting.

Affected Products	Feedback	Feedback Tasks	Approvals	Article Versions (1)	Related Articles (2)	Related Catalog Items
≡ 🔍 Order Search ⊞ — Actions on selected rows... Edit...						
Knowledge article = KB0010004 v0.01						
☐		Related knowledge article	Short description		Order ▲	Active
		KB0000053 v1.0	Switch to IPv6 causing IP address issues		100	true
		KB0000013 v1.0	How do I quit an application that isn't ...		200	true

Step 6 – Link to Related Incidents (from Part 1)

On the Related Incidents section, link all relevant EHR incidents from Part 1 (slow system, short outage, login failures, database not responding, freezing during patient care) to show that this article is based on real cases.

Add Filter

Run filter 

-- choose field --

-- oper --

-- value --

Collection

Q INC001

INC0010001

Attached to Task List

KB0010004 v1.01

INC0010004

INC0010006

INC0010007

INC0010008

INC0010009

>

<

Cancel

Save

Number

INC0010004

Assigned to

Assignment group

Application Support - EHR

Short description

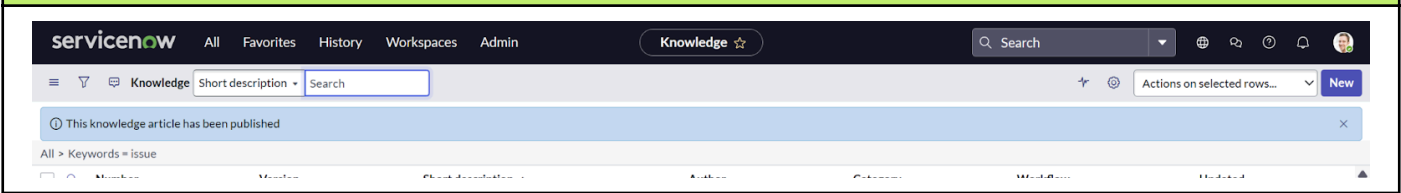
Login Failures (Escalation Required)

Affected Products	Feedback	Feedback Tasks	Approvals	Article Versions (3)	Related Articles (2)	Related Catalog Items	Attached to Task (5)
≡ 🔍 Task Search 🔗 — Actions on selected rows... ▼ New Edit...							
Knowledge article = KB0010004 v1.01							
☐ 🔍 Task ▲							
INC0010004							
INC0010006							
INC0010007							
INC0010008							
☐ 🔍 INC0010009							
⏪ ⏩ 1 to 5 of ⏪ ⏩							

Standard Article 3: How to Report an EHR System Issue Properly

Step 7 – Publish Knowledge Article

Change the article state from Draft to Published and verify that it appears in the EHR Support knowledge base so clinical staff can reuse it when reporting new system issues.



Link to Article

[https://dev292954.service-now.com/kb/en/how-to-report-an-ehr-system-issue-properly?id=kb article view&sysparm article=KB0010004](https://dev292954.service-now.com/kb/en/how-to-report-an-ehr-system-issue-properly?id=kb%20article%20view&sysparm_article=KB0010004)

Incidents Linked (From part 1)

INC0010004 - Login Failures	↘
INC0010006 - Five-Minute Outage	↘
INC0010007 - EHR running very slow	↘
INC0010008 - Database not responding	↘
INC0010009 - EHR Freezes During Patient Care	↘

Articles Linked

KB00000053 v1.0 - Switch to IPv6 causing IP address issues	↘
KB00000013 v1.0 - How do I quit an application that isn't responding?	↘

Standard Article 4: How to Avoid Session Timeouts in the EHR

Step 1 – Create New Knowledge Article Record

Create a new Standard Knowledge Article titled “How to Avoid Session Timeouts in the EHR” using the Standard template, ensuring the article is written in simple, non-technical language for clinical staff.

dev29254.service-now.com/now/nav/ui/classic/params/target/kb_knowledge.do%3FWizard%3Aaction%3Dfollow%26sys_action%3D%26sys_id%3D-%26sys_target%3Dkb_knowledge%26sysparm_query%3DGOTOshort_description%253e%253disse%2...

servicenowAllFavoritesHistoryWorkspacesAdminKnowledge - New Record

Search

SubmitSearch for Duplicates

KnowledgeNew record

NumberKB0010005

Version

* Knowledge baseEHR Tips & Help for Clinical Staff

Article typeHTML

CategorySession & Login Issues

WorkflowDraft

Scheduled publish date

Source Task

Valid to2025-12-31

Attachment link

Display attachments

* Short descriptionHow to Avoid Session Timeouts in the EHR

Article body

system-ui, app...B I U S A Paragraph

Understanding and Preventing EHR Session Timeouts

Session timeouts in the EHR system are designed to protect patient data by automatically logging out inactive users. This is especially important in clinical environments where workstations are shared. However, frequent or unexpected timeouts can interrupt workflows and slow down patient care. By understanding why timeouts occur and how to prevent them, users can reduce disruptions and maintain smoother operations.

Why Session Timeouts Happen

523 words

SubmitSearch for Duplicates

Step 2 – Add Category and Sub-category

Assign the article to a clear category such as EHR Support → Session & Login Issues so users can easily locate the guidance when they experience sudden logouts or inactivity warnings.

Category picker

EHR Support >

Incident Reporting

Performance Issues

Session & Login Issues

+

+

+

Cancel

OK

Standard Article 4: How to Avoid Session Timeouts in the EHR

Step 3 – Create Article Body Using Source Code

Develop the article body in the Source Code editor by explaining, in plain language, what causes session timeouts and offering practical steps users can take to prevent them during patient care activities.

Source Code

```
1 <p>   </p>
2 <style>
3   body { font-family: system-ui, -apple-system, "Segoe UI", Roboto, Arial; line-height: 1.6; color: #111; padding: 20px; max-width: 900px; margin: auto; }
4   h1 { font-size: 1.6rem; margin-bottom: 0.3rem; }
5   h2 { font-size: 1.15rem; margin-top: 1.2rem; }
6   p { margin: 0.6rem 0; }
7   ul, ol { margin: 0.4rem 0 0.8rem 1.2rem; }
8   li { margin: 0.35rem 0; }
9   .note { background:#fff8c4; border-left:4px solid #ffd24d; padding:10px 12px; margin:10px 0; }
10  .tips { background:#f4f7fb; border-left:4px solid #8aa4ff; padding:10px 12px; margin:10px 0; }
11  .warning { background:#ffe6e6; border-left:4px solid #ff6b6b; padding:10px 12px; margin:10px 0; }
12 </style>
13 <article>
14 <h1>Understanding and Preventing EHR Session Timeouts</h1>
15 <p>Session timeouts in the EHR system are designed to protect patient data by automatically logging out inactive users. This is especially important in clinical environments where workstations are shared. However, frequent or unexpected timeouts can interrupt workflows and slow down patient care. By understanding why timeouts occur and how to prevent them, users can reduce disruptions and maintain smoother operations.</p>
16 <section>
17 <h2>Why Session Timeouts Happen</h2>
18 <ul>
19 <li><strong>Idle Workstations:</strong> The most common cause—EHR logs users out after a period of inactivity.</li>
20 <li><strong>Unstable Network:</strong> Server connection loss may cause forced logout or freezing.</li>
21 <li><strong>Stale Sessions:</strong> Cached data or old sessions may conflict, especially after long use.</li>
22 <li><strong>Multiple Device Logins:</strong> Signing in on multiple devices can cause session collisions.</li>
23 </ul>
24 </section>
25 <section>
26 <h2>How to Reduce Session Timeouts</h2>
27 <ol>
28 <li><strong>Stay active in the system</strong> by navigating tabs, refreshing data, or saving drafts periodically.</li>
```

Ctrl-F Start search Ctrl-G Find next Shift-Ctrl-F Find previous
Shift-Ctrl-F Replace Shift-Ctrl-R Replace all

Cancel

Save

servicenow

All Favorites History Workspaces Admin

Knowledge - KB0010005 v0.01

Search

Knowledge KB0010005 v0.01

Publish Update Search for Duplicates Delete

Number KB0010005

Version 0.01

* Knowledge base EHR Tips & Help for Clinical Staff

Article type HTML

Category Session & Login Issues

Workflow Draft

Scheduled publish date

Source Task

Valid to 2025-12-31

Attachment link

Display attachments

* Short description How to Avoid Session Timeouts in the EHR

Article body

system-ui, -apple-system, Segoe UI, Roboto, Arial

B I U S A v v I Paragraph Q V ↶ ↷

Understanding and Preventing EHR Session Timeouts

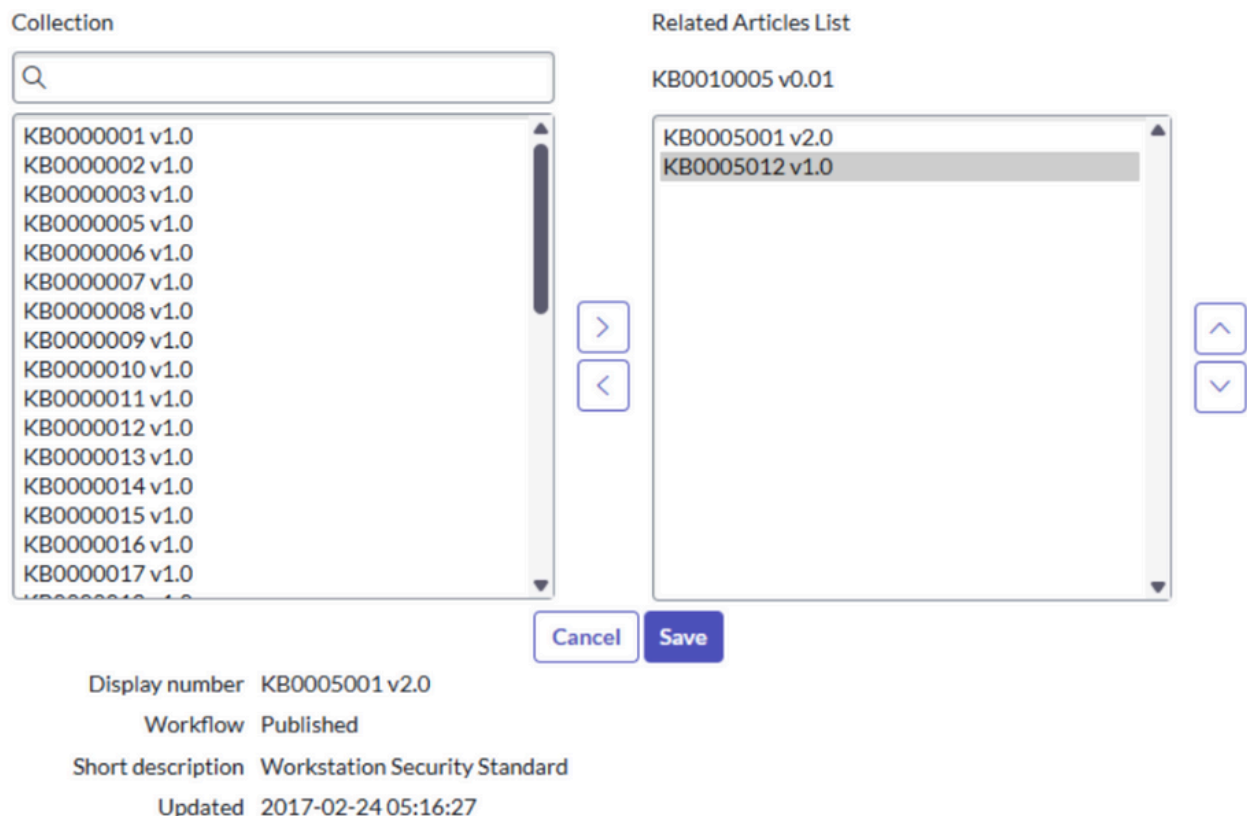
Session timeouts in the EHR system are designed to protect patient data by automatically logging out inactive users. This is especially important in clinical environments where workstations are shared. However, frequent or unexpected timeouts can interrupt workflows and slow down patient care. By understanding why timeouts occur and how to prevent them, users can reduce disruptions and maintain smoother operations.

P 521 words

Standard Article 4: How to Avoid Session Timeouts in the EHR

Step 4 – Link to Related Articles

Select and link the related knowledge articles KB0005001 v2.0 and KB0005012 v1.0 to provide users with additional guidance on workstation security and system stability, helping them understand conditions that may contribute to unexpected session timeouts.



Collection

Related Articles List

KB0010005 v0.01

KB0005001 v2.0

KB0005012 v1.0

Cancel Save

Display number KB0005001 v2.0

Workflow Published

Short description Workstation Security Standard

Updated 2017-02-24 05:16:27

Step 5 – Verify Related Articles Output

Review the Related Articles tab to confirm that the selected items (KB0005012 v1.0 and KB0005001 v2.0) appear correctly in the list, ensuring the article is properly linked to supporting guidance on lockout issues and workstation security.

Affected Products	Feedback	Feedback Tasks	Approvals	Article Versions (1)	Related Articles (2)	Related Catalog Items
Knowledge article = KB0010005 v0.01>Related knowledge article Short description >= session						
Related knowledge article	Short description	Order	Active			
KB0005012 v1.0	What to do when you are locked out of yo...	200	true			
KB0005001 v2.0	Workstation Security Standard	100	true			

Standard Article 4: How to Avoid Session Timeouts in the EHR

Step 6 – Link to Related Incidents

Select and attach the relevant EHR incidents (INC0010004 and INC0010009) to show that this article is based on real session timeout-related cases from Part 1, helping IT teams trace how knowledge is used to address recurring issues.

Collection

Q INC001

INC0010001
INC0010006
INC0010007
INC0010008

Attached to Task List

KB0010005 v1.0

INC0010004
INC0010009

>

<

Cancel

Save

Number

INC0010004

Assigned to

Assignment group

Application Support - EHR

Short description

Login Failures (Escalation Required)

Step 7 – Verify Output of Related Incidents

Review the Attached to Task tab to confirm that both incidents appear correctly in the list, ensuring the article is fully linked to the operational records that justify its creation.

Affected Products

Feedback

Feedback Tasks

Approvals

Article Versions (2)

Related Articles (2)

Related Catalog Items

Attached to Task (2)

Task

Search

Knowledge article = KB0010005 v1.0

Task

INC0010004

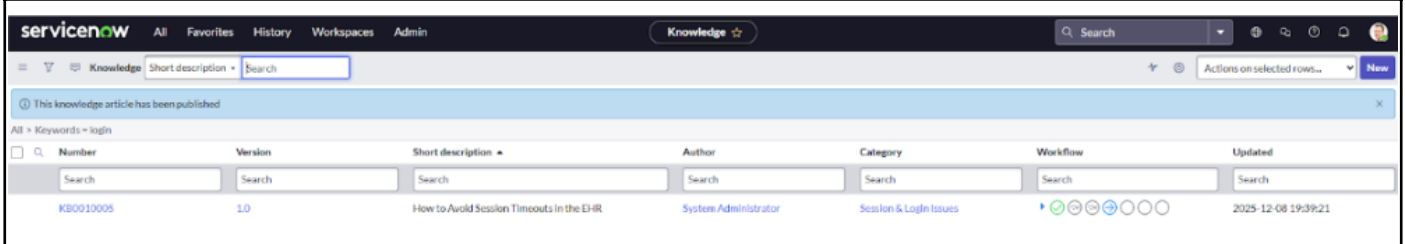
INC0010009

1 to 2 of 2

Standard Article 4: How to Avoid Session Timeouts in the EHR

Step 8 – Publish the Standard Knowledge Article

Set the article state to Published and verify that it appears in the Knowledge Base with the correct version, short description, category, and author, confirming that it is now available for clinical staff to use.



The screenshot shows the ServiceNow Knowledge Base interface. At the top, there's a navigation bar with 'servicenow' logo and tabs for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. A 'Knowledge' tab is active. Below the navigation bar, there's a search bar and a 'New' button. A message bar states 'This knowledge article has been published'. Below this, a table lists knowledge articles. The table has columns: Number, Version, Short description, Author, Category, Workflow, and Updated. One article is listed with the number KB0010005, version 1.0, short description 'How to Avoid Session Timeouts in the EHR', author 'System Administrator', category 'Session & Login Issues', and updated date '2025-12-08 19:39:21'.

Number	Version	Short description	Author	Category	Workflow	Updated
KB0010005	1.0	How to Avoid Session Timeouts in the EHR	System Administrator	Session & Login Issues		2025-12-08 19:39:21

Link to Article

https://dev292954.service-now.com/kb/en/how-to-avoid-session-timeouts-in-the-ehr?id=kb_article_view&sysparm_article=KB0010005

Incidents Linked (From part 1)

INC0010004 - Login Failures



INC0010009 - EHR Freezes During Patient Care



Articles Linked

KB0005001 v2.0 - Workstation Security Standard



KB0005012 v1.0 - What to do when you are locked out of you computer ?



Standard Article 5 : How to Use the EHR During Temporary System Slowness

Step 1 – Create New Record for Knowledge Article

Create a new Standard Knowledge Article titled “How to Use the EHR During Temporary System Slowness,” ensuring the content is written in simple, non-technical language for clinical staff who may experience slow system response.

The screenshot shows the 'Knowledge New record' form. The 'Number' field is populated with 'KB0010007'. The 'Knowledge base' is set to 'EHR Tips & Help for Clinical Staff'. The 'Category' is 'Performance Issues'. The 'Article type' is 'HTML'. The 'Workflow' is 'Draft'. The 'Source Task' is empty. The 'Scheduled publish date' is empty. The 'Valid to' date is '2100-01-01'. The 'Short description' is 'How to Use the EHR During Temporary System Slowness'. The 'Article body' contains the following text:

Managing Temporary EHR System Slowness

Temporary system slowness in the EHR can occur due to factors such as high server utilization, scheduled maintenance, network congestion, or temporary drops in infrastructure performance. Even during these events, users can remain productive by adjusting their workflow and prioritizing tasks that require minimal system processing.

What You Can Still Work on During Slowness

The article body is 477 words long.

Step 2 – Add Category (EHR Support) and Sub-category (Performance Issues)

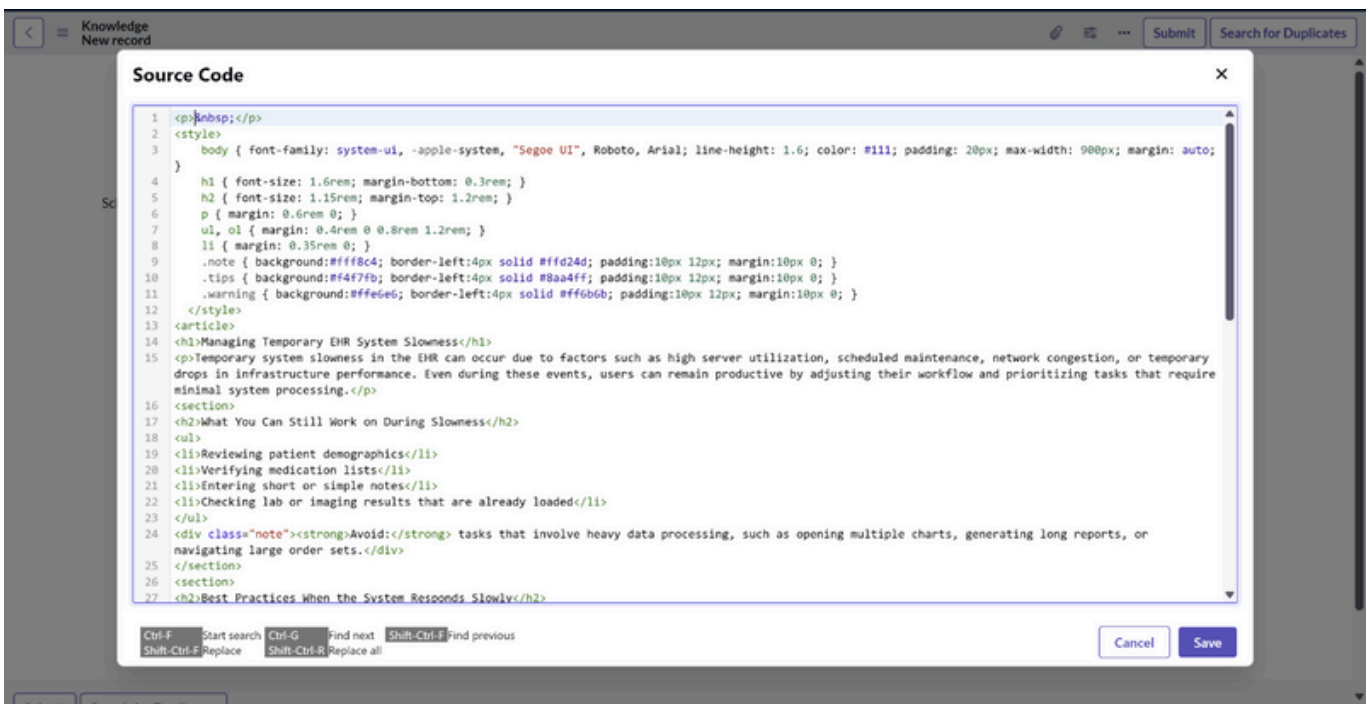
Assign the article to the EHR Support category and the Performance Issues sub-category so users can easily find guidance when they encounter slow loading pages or temporary system delays.

The screenshot shows the 'Knowledge New record' form with a 'Category picker' dialog box open. The dialog box has a search bar and a list of categories. The 'EHR Support' category is selected, and the 'Performance Issues' sub-category is highlighted. The 'OK' button is visible. The background form shows the 'Number' field with 'KB0010007', 'Knowledge base' as 'EHR Tips & Help for Clinical Staff', 'Article type' as 'HTML', 'Workflow' as 'Draft', 'Source Task' as empty, 'Scheduled publish date' as empty, 'Valid to' as '2100-01-01', and 'Short description' as empty. The 'Article body' is empty, showing 'Verdana' font and '0 words'.

Standard Article 5: How to Use the EHR During Temporary System Slowness

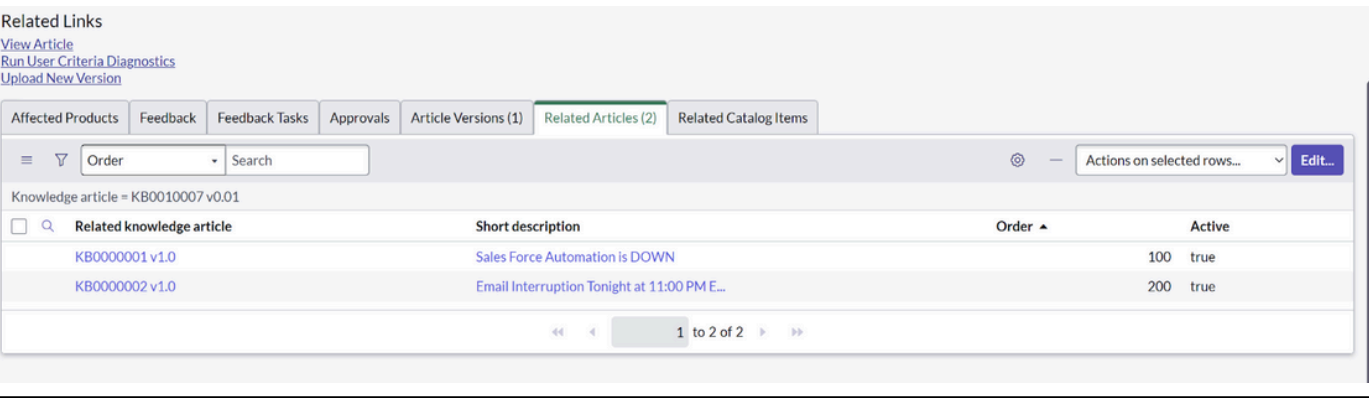
Step 3 – Create Article Body Using Source Code

Write the article content in the Source Code editor by providing clear, non-technical instructions that help clinical staff understand what temporary system slowness looks like and how they can continue working safely while the EHR stabilizes.



Step 4 – Link to Related Articles

Add the related knowledge articles KB00000001 v1.0 and KB00000002 v1.0 to provide users with examples of broader system interruptions that may coincide with temporary EHR slowness, helping them understand when slowness is part of a larger performance issue.



Standard Article 5: How to Use the EHR During Temporary System Slowness

Step 5 – Link to Related Incidents

Select and attach incidents INC0010006 and INC0010007 to show that this article is based on real EHR performance issues from Part 1, such as short outages and temporary slowdowns.

Add FilterRun filter ⓘ

-- choose field -- -- oper -- -- value --

Collection

Q INC

INC0000601
INC0001990
INC0007001
INC0007002
INC0008001
INC0008111
INC0008112
INC0009001
INC0009002
INC0009003
INC0009004
INC0009005
INC0009009
INC0010001
INC0010004
INC0010008
INC0010009

Attached to Task List

KB0010007 v2.01

INC0010006
INC0010007

><

CancelSave

Number INC0010006
Assigned to
Assignment group
Short description Five-Minute Outage

Step 6 – Verify Output of Related Incidents

Review the Attached to Task tab to confirm that both related incidents appear correctly, ensuring the article is fully connected to the operational cases that justify its creation.

Affected ProductsFeedbackFeedback TasksApprovalsArticle Versions (5)Related Articles (2)Related Catalog ItemsAttached to Task (2)

TaskSearch

Knowledge article = KB0010007 v2.01

Task

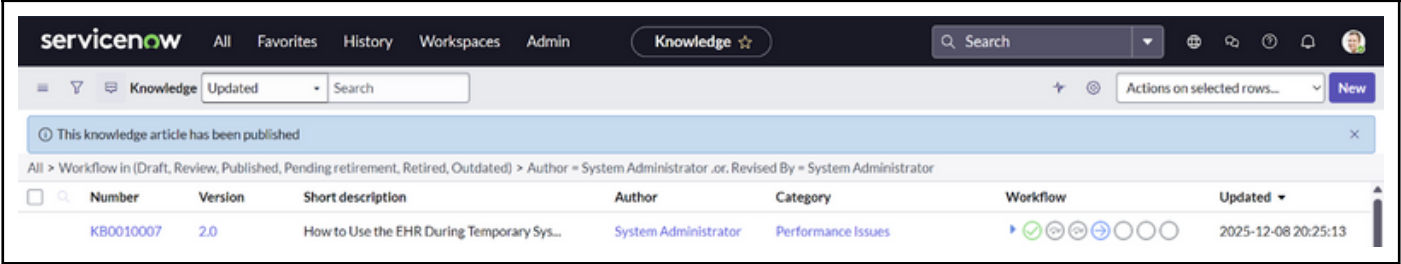
INC0010006
INC0010007

1 to 2 of 2

Standard Article 5: How to Use the EHR During Temporary System Slowness

Step 7 – Publish the Standard Knowledge Article

Set the article state to Published and verify that it appears in the Knowledge Base with the correct short description, category, workflow status, and version, confirming it is now available for clinical staff to use during periods of system slowness.



Link to Article

https://dev292954.service-now.com/kb/en/how-to-use-the-ehr-during-temporary-system-slowness?id=kb_article_view&sysparm_article=KB0010007

Incidents Linked (From part 1)

INC0010006 - Five-Minute Outage ➤

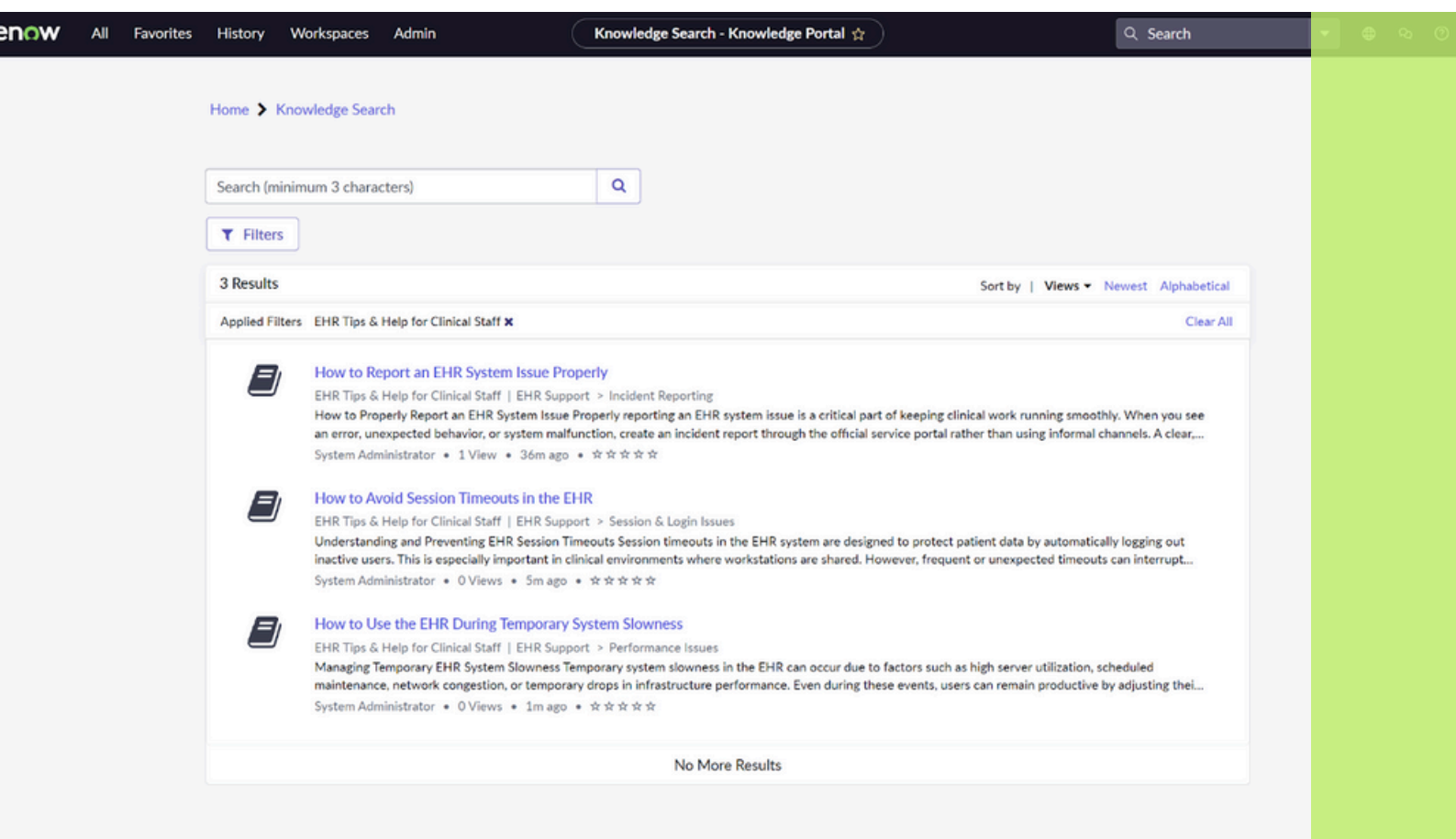
INC0010007 - EHR running very slow ➤

Articles Linked

KB00000002 v1.0 - Email Interruption Tonight at 11:00 PM Eastern ➤

KB00000001 v1.0 - Sales Force Automation is DOWN ➤

Clear guidance to help clinical staff work confidently with everyday EHR issues.



The screenshot displays the 'Knowledge Search - Knowledge Portal' interface. At the top, a navigation bar includes links for 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. A search bar on the right contains the text 'Search'. Below the navigation bar, the breadcrumb 'Home > Knowledge Search' is visible. The main search area features a search input field with the placeholder 'Search (minimum 3 characters)' and a magnifying glass icon. Below the search field is a 'Filters' button. The results section shows '3 Results' and a 'Sort by' dropdown menu with options for 'Views', 'Newest', and 'Alphabetical'. An 'Applied Filters' section indicates 'EHR Tips & Help for Clinical Staff' is selected, with a 'Clear All' link. Three search results are listed, each with a document icon, a title, a breadcrumb trail, a summary, and metadata including the author 'System Administrator', view count, and time since publication.

Home > Knowledge Search

Search (minimum 3 characters) 🔍

Filters

3 Results Sort by | Views ▾ Newest Alphabetical

Applied Filters EHR Tips & Help for Clinical Staff ✕ Clear All

-  **How to Report an EHR System Issue Properly**
EHR Tips & Help for Clinical Staff | EHR Support > Incident Reporting
How to Properly Report an EHR System Issue Properly reporting an EHR system issue is a critical part of keeping clinical work running smoothly. When you see an error, unexpected behavior, or system malfunction, create an incident report through the official service portal rather than using informal channels. A clear,...
System Administrator • 1 View • 36m ago • ★★★★★
-  **How to Avoid Session Timeouts in the EHR**
EHR Tips & Help for Clinical Staff | EHR Support > Session & Login Issues
Understanding and Preventing EHR Session Timeouts Session timeouts in the EHR system are designed to protect patient data by automatically logging out inactive users. This is especially important in clinical environments where workstations are shared. However, frequent or unexpected timeouts can interrupt...
System Administrator • 0 Views • 5m ago • ★★★★★
-  **How to Use the EHR During Temporary System Slowness**
EHR Tips & Help for Clinical Staff | EHR Support > Performance Issues
Managing Temporary EHR System Slowness Temporary system slowness in the EHR can occur due to factors such as high server utilization, scheduled maintenance, network congestion, or temporary drops in infrastructure performance. Even during these events, users can remain productive by adjusting thei...
System Administrator • 0 Views • 1m ago • ★★★★★

No More Results

These articles aim to support clinical staff by providing simple, easy-to-understand guidance for addressing common EHR issues.

Known Error Knowledge Article



A Known Error knowledge article provides a detailed, technical explanation intended for Service Desk and IT Support teams to quickly identify, diagnose, and resolve recurring issues within the EHR system. Unlike standard articles written for clinical staff, Known Error articles use the Known Error Template and focus on documenting the root cause, technical conditions, and underlying system behavior that led to the failure. Each article must include a clear short description, a full description of the problem, the confirmed workaround that IT can apply immediately, and the verified technical cause gathered from incident trends, logs, or problem investigations. By presenting this information in a structured, technical format, a Known Error article helps IT teams resolve issues such as multi-user login failures, database non-responsiveness, or short outages more efficiently, reducing troubleshooting time and preventing repeated disruptions during high-impact EHR events.

Known Error Knowledge Base Setting

The screenshot shows the 'New Record' form for a Knowledge Base article in ServiceNow. The form is titled 'New Record | Knowledge Base | ServiceNow - Google Chrome'. The URL in the address bar is 'dev292954.service-now.com/kb_knowledge_base.do?sys_id=-1&sys_is_list=true&sys_target=kb_knowledge_base&sysparm_checked_items=&sysparm_fixed_query=&sysparm_group_sort=&sys...'. The form includes the following fields and options:

- Title:** EHR IT Support Troubleshooting Guide
- Article Validity:** (empty field)
- Icon:** Click to add...
- Disable commenting:** ☐
- Disable suggesting:** ☐
- Disable category editing:** ☐
- Disable rating:** ☐
- Disable mark as helpful:** ☐
- Checklist:** (empty field)
- Description:** This knowledge base contains technical resources for IT teams to identify, diagnose, and resolve EHR-related issues. It includes troubleshooting steps, system error explanations, known incident resolutions, configuration references, and root-cause analysis guides. Built for technical support staff and system administrators, this repository helps ensure fast, consistent, and accurate resolution of EHR problems across the organization.
- Set default knowledge field values:** -- choose field -- -- value --
- Application:** Global
- Owner:** Alfonso Griglen
- Managers:** (empty field)
- Publish workflow:** Knowledge - Instant Publish
- Retire workflow:** Knowledge - Instant Retire
- Active:** ☒

A 'Submit' button is located at the bottom right of the form.

When setting up the Knowledge Base for Known Error Articles, ensure that all configurations support technical troubleshooting and problem-resolution workflows by selecting a title that clearly reflects its purpose as an **IT support resource**. Because Known Error content is designed for Service Desk analysts and system administrators, always use the Known Error Template when creating each article so that the required fields, Short Description, Description, Workaround, and Cause are consistently documented.

During the Knowledge Base setup, you will be asked to assign an owner, and all Known Error articles must list **Alfonso Griglen** as the **owner** to maintain centralized oversight and ensure that technical content is reviewed, updated, and published correctly. In the Description field, provide a clear statement explaining that this Knowledge Base contains technical references, root-cause documentation, system error explanations, and approved workarounds to help IT teams quickly diagnose and resolve recurring EHR issues, ensuring accuracy, consistency, and faster service restoration across the organization.

Selected Topic



2

EHR LOGIN FAILURES FOR MULTIPLE USERS

Linked Incidents & Problem:

- Incident 3 – Login failures
- Problem – Authentication impact

This Known Error focuses on recurring EHR login failures affecting multiple users, caused by authentication issues that prevent successful system access. By documenting the technical cause, workaround, and permanent fix, IT support can quickly recognize the pattern of symptoms and restore access for impacted users during future occurrences.

3

“DATABASE NOT RESPONDING” ERROR IN EHR

Linked Incidents:

- Incident 2 – Database error during scheduling

This Known Error documents the root cause behind the “Database Not Responding” message that appears during scheduling operations. The issue typically stems from underlying database latency or temporary unavailability. By capturing the error details, diagnostic steps, and recovery method, IT teams can rapidly respond when this error reappears and minimize downtime for clinical users.

4

SHORT EHR OUTAGE DURING HIGH LOAD

Linked Incidents:

- Incident 5 – Five-minute outage

This Known Error addresses short, high-load-related outages in the EHR system, such as the five-minute downtime captured in the linked incident. The article outlines the technical trigger behind the outage, provides immediate recovery actions, and documents long-term remediation to prevent recurrence during future peak load conditions.

Known Error Article 2: EHR Login Failures for Multiple Users

Step 1 – Create New Record Known Error Article

Create a new Known Error article using the Known Error template, enter a clear short description about multi-user EHR login failures, and ensure the article is stored in the EHR IT Support knowledge base for technical use.

The screenshot shows the 'New record' form for a Known Error article. The form includes the following fields and content:

- Number:** KB0010006
- Version:** (empty)
- * Knowledge base:** EHR IT Support Troubleshooting Guide
- Workflow:** Draft
- Category:** User Authentication / Login
- Source Task:** (empty)
- Valid to:** 2100-01-01
- Attachment link:** ☐
- Display attachments:** ☐
- * Short description:** EHR Login Failures for Multiple Users
- Description:** Multiple users (doctors, nurses, staff) are unable to log in to the EHR at the same time. The system shows invalid credentials or gets stuck during the authentication process. The issue occurs across several users simultaneously.
- Workaround:** A rich text editor containing the following content:

Workaround – EHR Login Failures for Multiple Users

 1. Restart authentication connector or SSO service based on IT SOP
 2. Ask users to log out fully, wait 1 minute, then retry.
 3. Clear or refresh stuck SSO/LDAP sessions.
 4. Redirect authentication traffic to secondary identity servers if available.
 5. Monitor authentication load and temporarily limit retry bursts.
- Cause:** (empty)

Step 2 – Add Category and Sub-Category (EHR Application → User Authentication / Login)

Assign the Known Error article to the EHR Application category and the User Authentication / Login sub-category so IT support teams can quickly locate technical guidance related to multi-user login failures and authentication issues.

The screenshot shows the 'New record' form for a Known Error article, with a 'Category picker' dialog box open. The form fields are the same as in the previous screenshot. The 'Category picker' dialog box has the following content:

- Category picker**
- EHR Application** > **User Authentication / Login**
- Cancel** **OK**

Known Error Article 2: EHR Login Failures for Multiple Users

Step 3 – Create Cause Using Source Code

Document the confirmed technical causes in the Source Code editor, outlining factors such as high authentication server load, network latency between the authentication service and the EHR application, simultaneous login attempts, and stale authentication sessions from previous failures.

Source Code

```
1 <style>
2   body { font-family: Arial, sans-serif; padding: 20px; line-height: 1.6; }
3   h1 { color: #b45309; }
4   ul { margin-left: 20px; }
5 </style>
6 <h1>Cause &ndash; EHR Login Failures for Multiple Users</h1>
7 <ul>
8   <li>Authentication server experiencing high load or degraded performance.</li>
9   <li>Network latency or interruptions between authentication server and EHR application.</li>
10  <li>High volume of simultaneous login attempts causing request queueing.</li>
11  <li>Stale or corrupted authentication sessions from previous failures.</li>
12 </ul>
```

Ctrl-F Start search Ctrl-G Find next Shift-Ctrl-F Find previous
Shift-Ctrl-F Replace Shift-Ctrl-R Replace all

Cancel

Save

Step 4 – Create Workaround Using Source Code

Write the immediate workaround steps in the Source Code editor, including restarting the authentication connector or SSO service, instructing users to fully log out before retrying, clearing stuck sessions, redirecting authentication to secondary servers, and temporarily limiting retry bursts to reduce system strain.

Source Code

```
1 <style>
2   body { font-family: Arial, sans-serif; padding: 20px; line-height: 1.6; }
3   h1 { color: #2563eb; }
4   ol { margin-left: 20px; }
5 </style>
6 <h1>Workaround &ndash; EHR Login Failures for Multiple Users</h1>
7 <ol>
8   <li>Restart authentication connector or SSO service based on IT SOP.</li>
9   <li>Ask users to log out fully, wait 1 minute, then retry.</li>
10  <li>Clear or refresh stuck SSO/LDAP sessions.</li>
11  <li>Redirect authentication traffic to secondary identity servers if available.</li>
12  <li>Monitor authentication load and temporarily limit retry bursts.</li>
13 </ol>
```

Ctrl-F Start search Ctrl-G Find next Shift-Ctrl-F Find previous
Shift-Ctrl-F Replace Shift-Ctrl-R Replace all

Cancel

Save

Known Error Article 2: EHR Login Failures for Multiple Users

Step 5 – Link to Related Articles

Select and attach the related knowledge articles KB0010005 v1.0, KB0005001 v2.0, and KB0000015 v1.0 to provide IT support with additional references on EHR timeouts, workstation security, and account management procedures that may influence login failures.

Add FilterRun filter ⓘ

-- choose field -- -- oper -- -- value --

Collection

Q

KB0000001 v1.0
KB0000002 v1.0
KB0000003 v1.0
KB0000005 v1.0
KB0000006 v1.0
KB0000007 v1.0
KB0000008 v1.0
KB0000009 v1.0
KB0000010 v1.0
KB0000011 v1.0
KB0000012 v1.0
KB0000013 v1.0
KB0000014 v1.0
KB0000016 v1.0
KB0000017 v1.0
KB0000018 v1.0
KB0000019 v1.0

Related Articles List

KB0010006 v0.01

KB0010005 v1.0
KB0005001 v2.0
KB0000015 v1.0

>

<

^

v

Cancel

Save

Step 6 – Verify Output of Related Articles

Review the Related Articles tab to confirm that all three selected items appear correctly, ensuring the Known Error is fully connected to supporting technical documentation for troubleshooting authentication issues.

Related Links

[View Article](#)
[Run User Criteria Diagnostics](#)

Affected ProductsFeedbackFeedback TasksApprovalsArticle Versions (1)Completed AQsRelated Articles (3)Related Catalog Items

≡ 🔍 Order

Search

⚙️ — Actions on selected rows... New Edit...

Knowledge article = KB0010006 v0.01

☐ 🔍	Related knowledge article	Short description	Order	Active
	KB0010005 v1.0	How to Avoid Session Timeouts in the EHR	100	true
	KB0005001 v2.0	Workstation Security Standard	200	true
	KB0000015 v1.0	How do I create and delete users?	300	true

1 to 3 of 3

Known Error Article 2: EHR Login Failures for Multiple Users

Step 7 – Link to Related Configuration Items

Attach the relevant EHR Configuration Items EHR Application Server, EHR Database Server, and EHR Service to identify which technical components are impacted during multi-user login failures and to guide IT support during root-cause analysis.

Add FilterRun filter ⓘ

-- choose field -- -- oper -- -- value --

Collection

EHR

--None--

Affected Products List

KB0010006 v0.01

EHR Application Server

EHR Database Server

EHR Service

><

CancelSave

NameEHR Service

Manufacturer

ClassConfiguration Item

Location

Assigned to

Model ID

Step 8 – Verify Output of Related Configuration Items

Review the Affected Products/Configuration Items tab to ensure all three CIs appear correctly, confirming that the Known Error is fully mapped to the infrastructure components involved in authentication issues.

Related Links

View Article

Run User Criteria Diagnostics

Affected Products (3)

Feedback

Feedback Tasks

Approvals

Article Versions (1)

Completed AQ's

Related Articles (3)

Related Catalog Items

Configuration item

Search

ⓘ

Actions on selected rows...

New

Edit...

Knowledge article = KB0010006 v0.01

Configuration item

EHR Application Server

EHR Service

EHR Database Server

<<

<

1

>

>>

to 3 of 3

Known Error Article 2: EHR Login Failures for Multiple Users

Step 9 – Link to Related Problem

Attach the underlying Problem record PRB0040003 to show that the multi-user login failures stem from a recurring issue involving EHR slowness and authentication errors, ensuring future incidents can be traced back to the same root cause.

Add FilterRun filter ⓘ

-- choose field --

-- oper --

-- value --

Collection

Q PRB004

PRB0040001
PRB0040006

Attached to Task List

KB0010006 v1.0

PRB0040003

>

<

Cancel

Save

Number PRB0040003

Problem statement Recurring EHR slowness and login failures

Step 10 – Link to Related Incident

Link the primary incident INC0010004 to document the real case that exposed the login failure pattern, giving IT support a concrete reference for how this Known Error appears operationally.

Add FilterRun filter ⓘ

-- choose field --

-- oper --

-- value --

Collection

Q INC001

INC0010001
INC0010006
INC0010007
INC0010008
INC0010009

Attached to Task List

KB0010006 v1.0

INC0010004
PRB0040003

>

<

Cancel

Save

Number INC0010004

Assigned to

Assignment group Application Support - EHR

Short description Login Failures (Escalation Required)

Known Error Article 2: EHR Login Failures for Multiple Users

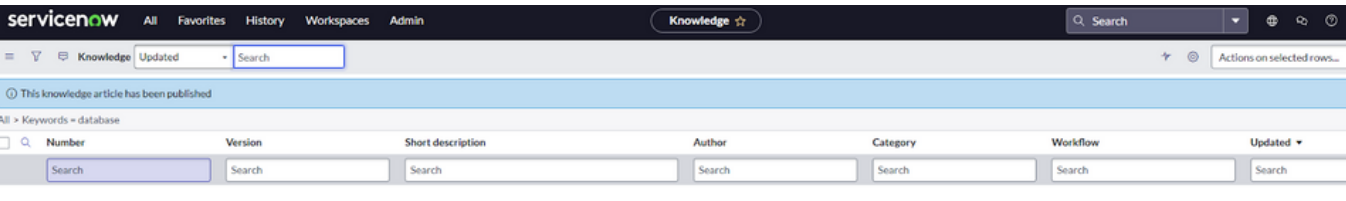
Step 11 – Link to Related Task (Problem and Incident)

Verify in the Attached to Task tab that both the related Incident (INC0010004) and the related Problem (PRB0040003) are correctly linked, ensuring the Known Error is fully integrated into the incident-problem resolution workflow.



Step 12 – Publish Article

Set the workflow state to Published and confirm the article appears in the Knowledge Base with the correct version, short description, and category, making it available for IT support teams to reference during future login failure events.



Link to Article

https://dev292954.service-now.com/kb/en/ehr-login-failures-for-multiple-users?id=kb_article_view&sysparm_article=KB0010006

Incident & Problem Linked (From part 1)

INC0010004 – Login Failures ↘

PRB0040003 – Recurring EHR slowness and login failures ↘

CI Linked (From part 1)

EHR Application Server ↘

EHR Database Server ↘

EHR Service ↘

Articles Linked

KB00000015 v1.0 – How do I create and delete users? ↘

KB00100005 v1.0 – How to Avoid Session Timeouts in the EHR ↘

KB00050001 v2.0 – Workstation Security Standard ↘

Known Error Article 3: "Database Not Responding" Error in EHR

Step 1 – Create New Record for Known Error Article (KB0010009)

Create a new Known Error article and enter the key details including short description, category, and validity date to document recurring "Database Not Responding" errors observed during scheduling or patient data loading in the EHR system.

ites

History

Workspaces

Admin

Known Error article - New Record ☆

Search

Number

KB0010009

Version

* Knowledge base

EHR IT Support Troubleshooting Guide

Workflow

Draft

Category

Database Connectivity

Source Task

Valid to

2025-12-31

Attachment link

☐

* Short description

"Database Not Responding" Error in EHR

Display attachments

☐

Description

Users receive a "Database not responding" message when accessing the scheduling module or loading patient data. The system becomes slow or unresponsive during these periods.

Step 2 – Add Knowledge Base (EHR IT Support Troubleshooting Guide)

Assign the article to the EHR IT Support Troubleshooting Guide knowledge base so that technical teams can access the root cause, workaround steps, and resolution guidance specific to EHR backend and database-related failures.

Number

KB0010009

* Knowledge base

EHR IT Support Troubleshooting Guide

Category

Valid to

* Short description

"Database Not Responding" Error in EHR

Description

Users receive a "Database not responding" message when accessing the scheduling module or loading patient data. The system becomes slow or unresponsive during these periods.

Workaround

Knowledge Bases | ServiceNow - Google Chrome

dev292954.service-now.com/kb_knowledge_base_list.do?sysparm_target=kb_template_known_error_article.kb_kn

Knowledge Bases for text Search

The list of knowledge bases is filtered based on the selected article template.

Title

KCS Knowledge Base (demo data)

EHR IT Support Troubleshooting Guide

EHR Tips & Help for Clinical Staff

Known Error

Known Error Article 3: "Database Not Responding" Error in EHR

Step 3 – Add Category (EHR Application) & Sub-Category (Database Connectivity)

Assign the Known Error article to the EHR Application category and the Database Connectivity sub-category so IT support teams can quickly identify that this issue relates to backend database communication and system performance during high load.

The screenshot shows a 'Category picker' dialog box. At the top, there's a search bar with 'Database Connectivity' entered. Below the search bar, a tree structure is visible. The first level shows 'EHR Application' with a right-pointing arrow. The second level shows 'Database Connectivity' with an edit icon. Below this, a list of sub-categories is shown, with 'System Performance / High Load' selected. At the bottom right of the dialog are 'Cancel' and 'OK' buttons.

Step 4 – Create Workaround Using Source Code

Document the immediate workaround steps in the Source Code editor, including restarting EHR application services, terminating or clearing blocked database sessions, redirecting read-only queries, delaying batch jobs until after peak hours, and instructing users to retry after load decreases.

The screenshot shows a 'Source Code' editor window. The code is HTML and includes a title 'Workaround - Database Not Responding' Error'. Below the title is a list of five steps: 1. Recycle or restart the EHR application services using the approved SOP. 2. Terminate or clear blocking database sessions and long-running queries. 3. Redirect read-only queries to replica or reporting databases. 4. Pause heavy batch jobs until after system peak hours. 5. Advise users to retry after 2-5 minutes while load decreases. The editor has a status bar at the bottom with search and replace shortcuts, and 'Cancel' and 'Save' buttons.

Known Error Article 3: "Database Not Responding" Error in EHR

Step 5 – Verify Output of Workaround

Review the Workaround field to ensure that all documented steps appear correctly in the formatted output, confirming that IT support can clearly follow the immediate actions required when the database becomes unresponsive.

Workaround

Workaround – “Database Not Responding” Error

1. Recycle or restart the EHR application services using the approved SOP.
2. Terminate or clear blocking database sessions and long-running queries.
3. Redirect read-only queries to replica or reporting databases.
4. Pause heavy batch jobs until after system peak hours.
5. Advise users to retry after 2–5 minutes while load decreases.

p > style

Step 6 – Create Cause Using Source Code

Document the underlying technical causes in the Source Code editor, including heavy database load, blocking queries, network disruptions, connection pool exhaustion, and long-running scheduling queries that typically trigger the “Database Not Responding” error.

Source Code

1

<!doctype html>

2

<html lang="en">

3

<head>

4

<meta charset="utf-8" />

5

<title>Cause - "Database Not Responding" Error</title>

6

<style>

7

body { font-family: Arial, sans-serif; padding: 20px; line-height: 1.6; }

8

h1 { color: #b45309; }

9

ul { margin-left: 20px; }

10

</style>

11

</head>

12

<body>

13

<h1>Cause - "Database Not Responding" Error</h1>

14

15

Database server under heavy load resulting in CPU or IO saturation.

16

Blocking queries or deadlocks affecting read/write operations.

17

Network disruption between EHR application server and database host.

18

Application layer exhausting the database connection pool.

19

Long-running scheduling-related queries during peak activity.

20

21

</body>

22

</html>

23

24

25

Ctrl-F

Start search

Ctrl-G

Find next

Shift-Ctrl-F

Find previous

Shift-Ctrl-E

Replace

Shift-Ctrl-R

Replace all

Cancel

Save

Known Error Article 3: "Database Not Responding" Error in EHR

Step 7 – Verify Output of Cause

Review the Cause field to ensure the documented root causes are displayed clearly and formatted correctly, allowing IT support to quickly understand the technical factors that trigger the "Database Not Responding" error.

The screenshot shows a rich text editor for the 'Cause' field. The title is "Cause – 'Database Not Responding' Error". Below the title is a bulleted list of five causes:

- Database server under heavy load resulting in CPU or IO saturation.
- Blocking queries or deadlocks affecting read/write operations.
- Network disruption between EHR application server and database host.
- Application layer exhausting the database connection pool.
- Long-running scheduling-related queries during peak activity.

The editor has a toolbar with various formatting options like bold, italic, underline, and font color. The status bar at the bottom shows "p > style".

Step 8 – Submit Known Error Article

Finalize the Known Error article by submitting the record, ensuring that the short description, workaround, cause, and category fields are complete so the article can move forward for publication and technical review.

The screenshot shows the 'Known Error article - New Record' form in ServiceNow. The form includes the following fields:

- Number:** KB0010009
- Knowledge base:** EHR IT Support Troubleshooting Guide
- Category:** Database Connectivity
- Valid to:** 2025-12-31
- Version:** (empty)
- Workflow:** Draft
- Source Task:** (empty)
- Attachment link:** ☐
- Display attachments:** ☐
- Short description:** "Database Not Responding" Error in EHR
- Description:** Users receive a "Database not responding" message when accessing the scheduling module or loading patient data. The system becomes slow or unresponsive during these periods.
- Workaround:** A rich text editor containing the title "Workaround – 'Database Not Responding' Error" and a numbered list of five steps:
 1. Recycle or restart the EHR application services using the approved SOP.
 2. Terminate or clear blocking database sessions and long-running queries.
 3. Reindex read-only queries to replica or reporting databases.
 4. Pause heavy batch jobs until after system peak hours.
 5. Advise users to retry after 2-5 minutes while load decreases.
- Cause:** A rich text editor (partially visible at the bottom) for documenting the root causes.

The form has a 'Submit' button and a 'Search for Duplicates' button. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Admin', and a search bar.

Known Error Article 3: “Database Not Responding” Error in EHR

Step 9 – Link to Related Configuration Items

Attach the relevant EHR Configuration Items EHR Application Server, EHR Database Server, and EHR Service to clearly identify which system components contribute to or are impacted by the recurring database connectivity failures.

Collection

EHR

--None--

Affected Products List

KB0010009 v0.01

EHR Application Server

EHR Database Server

EHR Service

>

<

Cancel

Save

Name EHR Service

Step 10 – Verify Output of Related Configuration Items

Review the Affected Products/Configuration Items tab to ensure all selected CIs appear correctly, confirming that the Known Error is fully mapped to the backend infrastructure involved in the “Database Not Responding” issue.

Affected Products (3)

Feedback

Feedback Tasks

Approvals

Article Versions (1)

Completed AQIs

Related Articles

Related Catalog Items

Configuration Item

Search

Knowledge article = KB0010009 v0.01>Configuration Item Name >= EHR

Configuration item

Search

EHR Application Server

EHR Database Server

EHR Service

1 to 3 of 3

Known Error Article 3: “Database Not Responding” Error in EHR

Step 11 – Link to Related Articles

Associate this Known Error with other relevant knowledge articles—including login issues, performance degradation, and reporting errors—to help IT staff quickly access context and supporting information that may relate to or contribute to the database connectivity failure.

Add FilterRun filter?

KeywordsaredatabaseANDORX

Collection

Q

--None--

Related Articles List

KB0010009 v0.01

KB0000001 v1.0

KB0000028 v1.0

KB0010004 v1.0

><

↑↓

CancelSave

Display number KB0010004 v1.0

Step 12 – Verify Output of Related Articles

Review the Related Articles tab to confirm that all selected articles appear correctly, ensuring complete cross-reference coverage for troubleshooting and escalation workflows.

Affected Products (3)

Feedback

Feedback Tasks

Approvals

Article Versions (1)

Completed AQLs

Related Articles (3)

Related Catalog Items

Related knowledge i

Search

Actions on selected rows...

New

Edit...

Knowledge article - KB0010009 v0.01

☐ Related knowledge article	Short description ^	Order	Active
☐ KB0010004 v1.0	How to Report an EHR System Issue Properly	300	true
☐ KB0000001 v1.0	Sales Force Automation is DOWN	100	true
☐ KB0000028 v1.0	What are phishing scams and how can I av...	200	true

1 to 3 of 3

Known Error Article 3: “Database Not Responding” Error in EHR

Step 13 – Link to Related Incident

Attach the incident record INC0010008 to the Known Error to establish a direct relationship between the documented database failure and the real operational event where users encountered the “Database not responding” issue.

Collection

Q INC001

INC0010001
INC0010004
INC0010006
INC0010007
INC0010009

Attached to Task List

KB0010009 v1.0

INC0010008

>

<

Cancel

Save

Number INC0010008

Assigned to

Assignment group

Short description Database not responding

Step 14 – Verify Output of Related Incident

Review the Attached to Task tab to confirm that the linked incident appears correctly, ensuring the Known Error is fully connected to the supporting operational evidence for troubleshooting and root cause tracking.

Affected Products (3)

Feedback

Feedback Tasks

Approvals

Article Versions (2)

Completed AQIs

Related Articles (3)

Related Catalog Items

Attached to Task (1)

Task

Search

Knowledge article = KB0010009 v1.0

Task

INC0010008

1 to 1 of 1

Known Error Article 3: "Database Not Responding" Error in EHR

Step 15 – Publish Known Error Article

Submit and publish the Known Error article to make it officially available for IT Support teams. This ensures the workaround, cause analysis, and related records (CI, Problem, Incident, and related articles) are accessible for future troubleshooting and faster resolution of similar database connectivity issues.

servicenow All Favorites History Workspaces Admin Knowledge ☆ Search							
Knowledge Updated Search Actions on selected rows...							
This knowledge article has been published							
All > Keywords = database							
☐	Number	Version	Short description	Author	Category	Workflow	Updated
☐	Search	Search	Search	Search	Search	Search	Search
☐	KB0010009	1.0	"Database Not Responding" Error in EHR	System Administrator	Database Connectivity	▶ ⏏ ⏴ ⏵ ⏶ ⏷	2025-12-08 20:26:56

Link to Article

https://dev292954.service-now.com/kb/en/database-not-responding-error-in-ehr?id=kb_article_view&sysparm_article=KB0010009

Incident Linked (From part 1)

INC0010008 – Database Not Responding



CI Linked (From part 1)

EHR Application Server



EHR Database Server



EHR Service



Articles Linked

KB0010004 v1.0 – How to report an EHR System Issue Properly



KB00000001 v1.0 – Sales Force Automation is DOWN



KB00000028 v1.0 – What are phishing scams and how can I avoid them?



Known Error Article 4: Short EHR Outage During High Load

Step 1 – Create New Record for the Known Error Article

Create a new Known Error article using the Known Error template. Fill in the required fields such as the Knowledge Base, Category, Valid To date, short description, and initial explanation of the outage.

servicenow

AllFavoritesHistoryAdmin

Known Error article - KB0010010 v...

Search

Known Error article KB0010010 v1.01

PublishUpdateSearch for DuplicatesDelete

NumberKB0010010

Version1.01

* Knowledge baseEHR IT Support Troubleshooting Guide

WorkflowDraft

CategorySystem Performance / High Load

Source Task

Valid to2100-01-01

Attachment link

Display attachments

* Short descriptionShort EHR Outage During High Load

DescriptionThe EHR system experiences short outages (around 5 minutes) during sudden spikes in user traffic. The system becomes unavailable, pages fail to load, and transactions time out.

Workaround

B I U ↶ ↷ Arial 22px

Cause – Short EHR Outage During High Load

- Sudden spikes in user volume exceeding system processing capacity.
- CPU or memory saturation on the EHR application server nodes.
- Load balancer misrouting or failing to distribute traffic evenly.
- Slow response from autoscaling mechanisms during demand peaks.
- Background processes consuming resources at peak activity periods.

Step 2 – Add Category and Sub-Category

Assign the article to the EHR Application category and the Performance / High Load sub-category so IT support teams can quickly find it when troubleshooting short outages caused by heavy system load.

Category picker

EHR Application

Performance / High Load

+

+

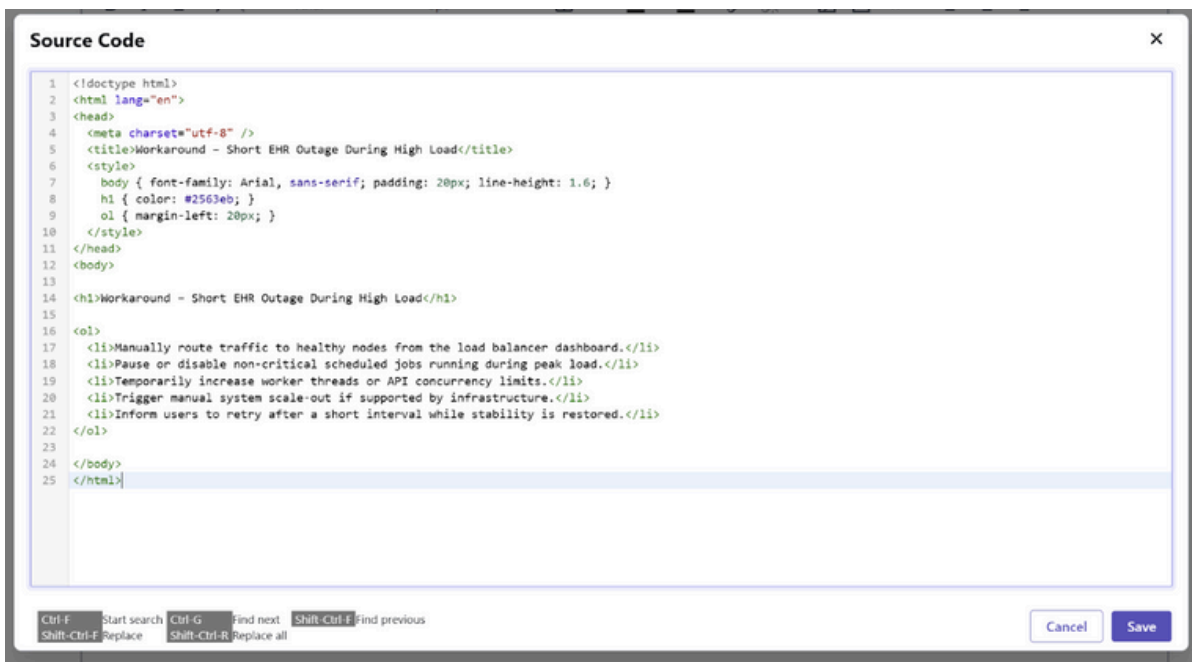
Cancel

OK

Known Error Article 4: Short EHR Outage During High Load

Step 3 – Create Workaround Using Source Code

Add a workaround section that provides temporary actions IT support can perform such as routing traffic, adjusting load-balancer settings, or advising users to retry so clinical operations can continue during short high-load outages.



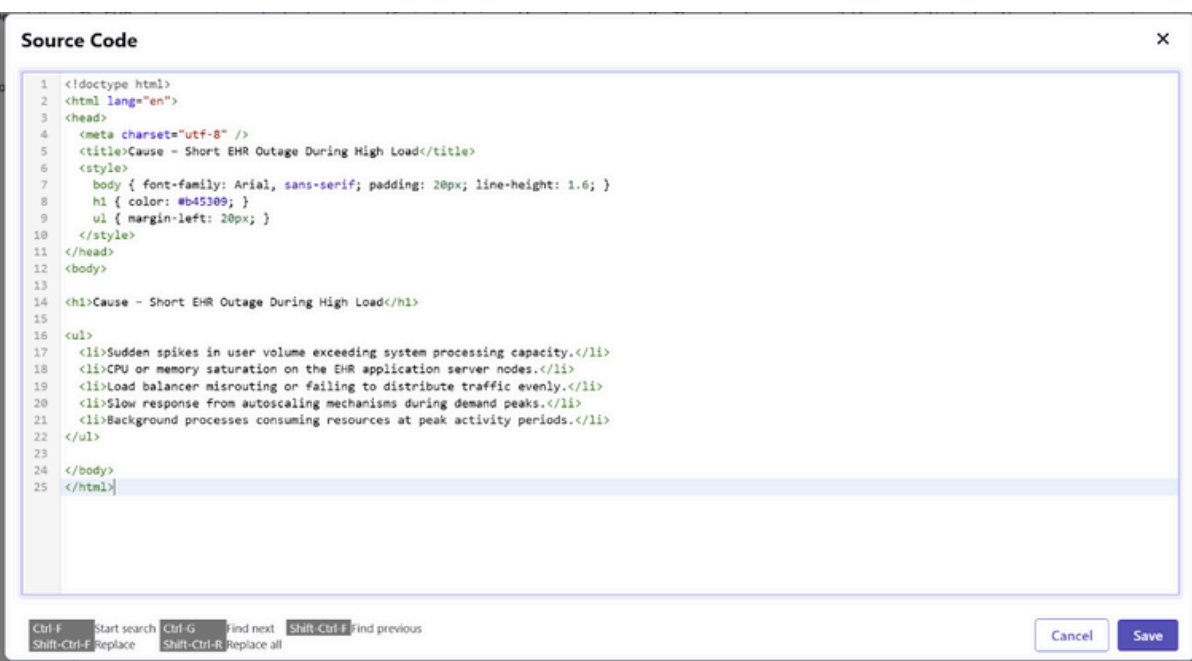
The screenshot shows a 'Source Code' editor window with the following HTML code:

```
1 <!doctype html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8" />
5   <title>Workaround - Short EHR Outage During High Load</title>
6   <style>
7     body { font-family: Arial, sans-serif; padding: 20px; line-height: 1.6; }
8     h1 { color: #2563eb; }
9     ol { margin-left: 20px; }
10  </style>
11 </head>
12 <body>
13
14 <h1>Workaround - Short EHR Outage During High Load</h1>
15
16 <ol>
17   <li>Manually route traffic to healthy nodes from the load balancer dashboard.</li>
18   <li>Pause or disable non-critical scheduled jobs running during peak load.</li>
19   <li>Temporarily increase worker threads or API concurrency limits.</li>
20   <li>Trigger manual system scale-out if supported by infrastructure.</li>
21   <li>Inform users to retry after a short interval while stability is restored.</li>
22 </ol>
23
24 </body>
25 </html>
```

At the bottom of the editor, there are keyboard shortcuts: Ctrl-F (Start search), Ctrl-G (Find next), Shift-Ctrl-F (Find previous), Shift-Ctrl-F (Replace), and Shift-Ctrl-R (Replace all). There are also 'Cancel' and 'Save' buttons.

Step 4 – Create Cause Using Source Code

Document the technical root cause of the outage by describing conditions like sudden traffic spikes, CPU or memory saturation, misbehaving load balancers, or background processes overwhelming system resources during peak periods.



The screenshot shows a 'Source Code' editor window with the following HTML code:

```
1 <!doctype html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8" />
5   <title>Cause - Short EHR Outage During High Load</title>
6   <style>
7     body { font-family: Arial, sans-serif; padding: 20px; line-height: 1.6; }
8     h1 { color: #b45309; }
9     ul { margin-left: 20px; }
10  </style>
11 </head>
12 <body>
13
14 <h1>Cause - Short EHR Outage During High Load</h1>
15
16 <ul>
17   <li>Sudden spikes in user volume exceeding system processing capacity.</li>
18   <li>CPU or memory saturation on the EHR application server nodes.</li>
19   <li>Load balancer misrouting or failing to distribute traffic evenly.</li>
20   <li>Slow response from autoscaling mechanisms during demand peaks.</li>
21   <li>Background processes consuming resources at peak activity periods.</li>
22 </ul>
23
24 </body>
25 </html>
```

At the bottom of the editor, there are keyboard shortcuts: Ctrl-F (Start search), Ctrl-G (Find next), Shift-Ctrl-F (Find previous), Shift-Ctrl-F (Replace), and Shift-Ctrl-R (Replace all). There are also 'Cancel' and 'Save' buttons.

Known Error Article 4: Short EHR Outage During High Load

Step 5 – Link to Related Articles

Link the Known Error article KB0010010 v3.0 to the two selected knowledge articles KB0000020 v1.0 and KB0000052 v1.0 so IT support staff can quickly access supporting information related to outage handling and similar system performance issues.

Add FilterRun filter ?

-- choose field -- -- oper -- -- value --

Collection

KB0000001 v1.0
KB0000002 v1.0
KB0000003 v1.0
KB0000005 v1.0
KB0000006 v1.0
KB0000007 v1.0
KB0000008 v1.0
KB0000009 v1.0
KB0000010 v1.0
KB0000011 v1.0
KB0000012 v1.0
KB0000013 v1.0
KB0000014 v1.0
KB0000015 v1.0
KB0000016 v1.0
KB0000017 v1.0

Related Articles List

KB0010010 v3.0

KB0000020 v1.0
KB0000052 v1.0

> < ^ v

CancelSave

Step 6 – Linked Related Articles

The system now displays both linked articles KB0000052 v1.0 and KB0000020 v1.0 under the Related Articles tab for KB0010010 v0.01, confirming that the Known Error article is correctly associated with the supporting knowledge resources.

PublishUpdateSearch for DuplicatesDelete

Related Links

[View Article](#)
[Run User Criteria Diagnostics](#)

Affected Products (3)FeedbackFeedback TasksApprovalsArticle Versions (1)Completed AQLsRelated Articles (2)Related Catalog Items

Related knowledge : Search

Knowledge article = KB0010010 v0.01

Related knowledge article	Short description	Order	Active
KB0000052 v1.0	Cisco WebEx Meetings Server does not boo...	200	true
KB0000020 v1.0	Windows: Should I upgrade to Windows 8.x...	100	true

<< < 1 to 2 of 2 > >>

Known Error Article 4: Short EHR Outage During High Load

Step 7 – Link to Related Configuration Items

Link the Known Error article to the relevant configuration items EHR Application Server, EHR Database Server, and EHR Service so the technical dependencies behind the short high-load outage are clearly documented for future troubleshooting.

The screenshot shows the ServiceNow interface for editing a knowledge article. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Admin', and a search bar. The main header is 'Knowledge Related to Products - Edit...'. Below this, there's a 'Filter' section with 'Add Filter' and 'Run filter' buttons. A filter rule is shown: '-- choose field --' -- oper -- -- value --, with 'AND' and 'OR' operators. The 'Collection' dropdown is set to 'EHR'. The 'Affected Products List' shows 'KB0010010 v0.01'. Below this, there are two lists: 'Collection' (containing '--None--') and 'Affected Products List' (containing 'EHR Application Server', 'EHR Database Server', and 'EHR Service'). There are '>' and '<' buttons between the lists. At the bottom, there are 'Cancel' and 'Save' buttons. Below the lists, there's a table with columns 'Name', 'Manufacturer', and 'Class'. The first row shows 'EHR Application Server' under 'Name'.

Step 8 – Linked Configuration Items

The Related Configuration Items section now shows the three linked components EHR Application Server, EHR Database Server, and EHR Service confirming that the Known Error article is properly associated with all affected backend systems.

The screenshot shows the 'Affected Products (3)' section of the ServiceNow interface. The top navigation bar includes 'Affected Products (3)', 'Feedback', 'Feedback Tasks', 'Approvals', 'Article Versions (1)', 'Completed AQIs', 'Related Articles', and 'Related Catalog Items'. Below this, there's a search bar and a 'Configuration item' dropdown. The main content area shows a table with columns 'Configuration item', 'Name', 'Manufacturer', and 'Class'. The first row shows 'EHR Application Server' under 'Name'. The second row shows 'EHR Database Server' under 'Name'. The third row shows 'EHR Service' under 'Name'. At the bottom, there's a pagination bar showing '1 to 3 of 3'.

Known Error Article 4: Short EHR Outage During High Load

Step 9 – Link to Related Incident

Link the Known Error article to the corresponding outage record by selecting INC0010006 from the incident list, ensuring the short high-load outage is tied to the actual five-minute outage incident.

Add FilterRun filter ⓘ

-- choose field -- -- oper -- -- value --

Collection

Q INC001

INC0010001
INC0010004
INC0010007
INC0010008
INC0010009

Attached to Task List

KB0010010 v3.0

INC0010006

>
<

CancelSave

Number INC0010006
Assigned to
Assignment group
Short description Five-Minute Outage

Step 10 – Output of Related Incident

The incident INC0010006 now appears under the Attached to Task section, confirming that the Known Error article is properly associated with the related operational incident.

Affected Products (3)FeedbackFeedback TasksApprovalsArticle Versions (6)Completed AQIsRelated Articles (2)Related Catalog ItemsAttached to Task (1)

Task Search ⓘ Actions on selected rows... New Edit...

Knowledge article = KB0010010 v3.0

Task

INC0010006

1 to 1 of 1

Known Error Article 4: Short EHR Outage During High Load

Step 11 – Publish Article

Publish the Known Error article to make it officially available in the knowledge base, ensuring that IT support teams can reference the documented outage behavior, causes, and workarounds during future high-load incidents.

servicenow							
All Favorites History Workspaces Admin Knowledge ☆							
Knowledge Updated Search							
All > Workflow in (Draft, Review, Published, Pending retirement, Retired, Outdated) > Author = System Administrator .or. Revised By = System Administrator							
	Number	Version	Short description	Author	Category	Workflow	Updated
	KB0010010	2.0	Short EHR Outage During High Load	System Administrator	System Performance / High Load	▶✔⊖⊕⊖⊕⊖⊕	2025-12-08 20:22:30

Link to Article

[https://dev292954.service-now.com/kb/en/short-ehr-outage-during-high-load?id=kb article view&sysparm article=KB0010010](https://dev292954.service-now.com/kb/en/short-ehr-outage-during-high-load?id=kb%20article%20view&sysparm_article=KB0010010)

Incident & Problem Linked (From part 1)

IINC0010006 - Five-Minute Outage



CI Linked (From part 1)

EHR Application Server



EHR Database Server



EHR Service



Articles Linked

KB0000052 v1.0 - Cisco WebEx Meetings Server doesn't boot up after deployment



KB0000020 v1.0 - Windows: Should I upgrade to Windows 8.x?



Clear guidance to help IT support teams resolve recurring EHR system issues efficiently.

icenow



System Admin

[Home](#) > [Knowledge Search](#)

3 Results

Sort by | Views ▾ Newest Alphabetical

Applied Filters EHR IT Support Troubleshooting Guide ✕

[Clear All](#)



EHR Login Failures for Multiple Users

EHR IT Support Troubleshooting Guide | EHR Application > User Authentication / Login

Multiple users (doctors, nurses, staff) are unable to log in to the EHR at the same time. The system shows invalid credentials or gets stuck during the authentication process. The issue occurs across several users simultaneously. Workaround – EHR Login Failures for Multiple Users Restart authentication...

System Administrator • 5 Views • 3d ago • ★★★★★



"Database Not Responding" Error in EHR

EHR IT Support Troubleshooting Guide | EHR Application > Database Connectivity

Users receive a "Database not responding" message when accessing the scheduling module or loading patient data. The system becomes slow or unresponsive during these periods. Workaround – "Database Not Responding" Error Recycle or restart the EHR application services using the approved SOP. Terminate or...

System Administrator • 2 Views • 3d ago • ★★★★★



Short EHR Outage During High Load

EHR IT Support Troubleshooting Guide | EHR Application > System Performance / High Load

The EHR system experiences short outages (around 5 minutes) during sudden spikes in user traffic. The system becomes unavailable, pages fail to load, and transactions time out. Cause – Short EHR Outage During High Load Sudden spikes in user volume exceeding system processing capacity. CPU or memory...

System Administrator • 1 View • 3h ago • ★★★★★

No More Results

These Known Error articles provide Service Desk and IT Support teams with clear, technical explanations of root causes and proven resolution steps for common EHR-related issues.

Explanation of how the articles connect to incidents & problems in Final Project Part 1.

All Knowledge Articles created in Part 2 are directly derived from real operational issues documented in Final Project Part 1. Each article is explicitly linked to one or more incidents to ensure alignment between incident resolution and knowledge creation.

The Standard Knowledge Articles are connected to incidents such as:

- Login failures
- EHR system slowness
- Short outages
- Database unresponsiveness
- System freezing during patient care

These incidents demonstrated recurring user-facing issues that required clearer guidance for clinical staff.

The Known Error Knowledge Articles are linked to specific high-impact incidents and, where applicable, to a Problem record from Part 1. For example:

- The EHR Login Failures for Multiple Users Known Error is linked to INC0010004 and PRB0040003, documenting a recurring authentication issue.
- The Database Not Responding Known Error is linked to INC0010008, capturing backend database connectivity failures.
- The Short EHR Outage During High Load Known Error is linked to INC0010006, documenting short outages caused by peak system load.

In addition, each Known Error article is linked to relevant Configuration Items (CIs), such as the EHR Application Server, EHR Database Server, and EHR Service. This ensures that incidents, problems, and technical components are fully traceable within the ITSM process.



Explanation of how Knowledge helps End users and IT support staff



For end users, particularly clinical staff, Knowledge Management provides clear and accessible guidance for handling common EHR issues. The Standard Knowledge Articles help users:

- Understand how to properly report system issues
- Avoid behaviors that worsen system performance
- Reduce session timeouts and data loss
- Continue working safely during temporary system disruptions

By using non-technical language and step-by-step instructions, these articles reduce confusion, minimize repeated incidents, and support uninterrupted patient care.

For IT Support teams, Knowledge Management plays a critical role in improving efficiency and consistency. The Known Error Articles:

- Provide documented root causes for recurring issues
- Offer verified workarounds that can be applied immediately
- Reduce troubleshooting time during high-impact incidents
- Enable faster service restoration during outages
- Support proactive problem management and continuous improvement

By linking incidents, problems, configuration items, and related knowledge articles, IT support teams can resolve future incidents more effectively without repeating investigation efforts.



Description of Advanced Features Used (A Grade Criteria)

To achieve an A grade, our group implemented multiple advanced Knowledge Management features in ServiceNow that go beyond basic article creation. These features demonstrate a deeper understanding of how Knowledge integrates with Incident, Problem, and Configuration Management within IT Service Management (ITSM).

1. Linking Configuration Items (CIs) to Known Error Articles

All Known Error Knowledge Articles were explicitly linked to relevant Configuration Items (CIs), including:

- EHR Application Server
- EHR Database Server
- EHR Service

This linkage allows IT support teams to quickly identify which technical components are impacted when a recurring issue occurs. By associating Known Errors with specific CIs, troubleshooting becomes more targeted, enabling faster root-cause analysis and more efficient incident resolution. This approach also supports impact analysis by showing which services and infrastructure elements are affected by each Known Error.

2. Linking Known Error Articles to Incidents and Problems from Part 1

Each Known Error article is directly connected to real operational records from Final Project Part 1. For example:

- The EHR Login Failures for Multiple Users Known Error is linked to INC0010004 and Problem PRB0040003.
- Other Known Error articles are linked to relevant incidents such as database failures and short system outages.

This linkage demonstrates how recurring incidents are transformed into structured Known Errors. By connecting incidents and problems to knowledge records, IT teams can trace current issues back to previously identified root causes and apply proven workarounds without repeating full investigations.

3. Use of Related Articles Between Knowledge Records

Our group utilized the Related Articles feature to link knowledge records with other relevant Standard and Known Error articles. This creates a connected knowledge network that allows users and IT support staff to easily navigate between related guidance.

For example, Standard Knowledge Articles related to session timeouts are linked to Known Error articles addressing login failures. This ensures that both end users and IT staff can access additional context and supporting information when troubleshooting or reporting issues, improving knowledge reuse and consistency across the organization.

4. Accurate Use of Categories and Subcategories

All Knowledge Articles were assigned appropriate Categories and Subcategories based on their purpose and target audience. Examples include:

- EHR Support → Incident Reporting
- EHR Support → Session & Login Issues
- EHR Application → Database Connectivity
- Performance / High Load

This accurate categorization improves article discoverability within the Knowledge Base and ensures that users and IT support staff can quickly locate relevant information. Proper classification also supports long-term maintainability as the Knowledge Base grows.

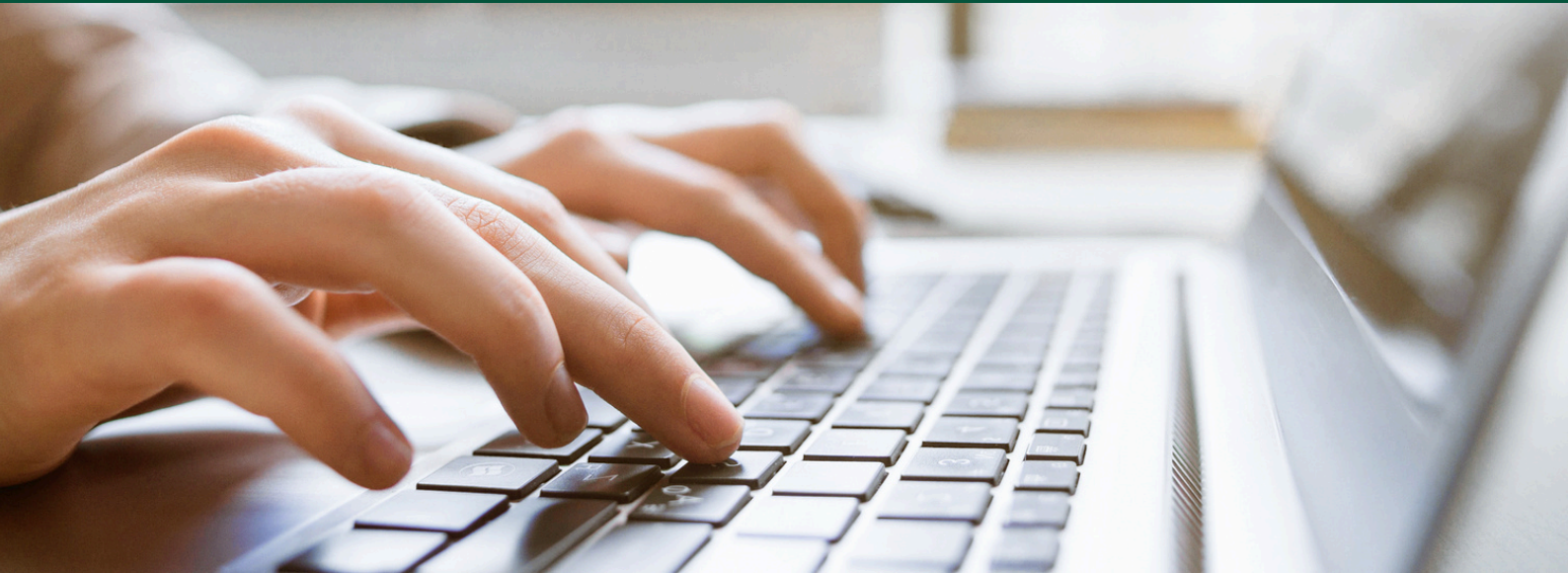
Collaborative ITIL practices successfully improved overall EHR performance.

CONCLUSION

In this second phase, our team created and published three complete Known Error Articles in ServiceNow, applying ITIL Problem Management and Knowledge Management practices. We identified technical causes, documented accurate workarounds, assigned proper categories and configuration items, and linked each Known Error to its related incidents and articles. This process strengthened our understanding of how structured knowledge documentation supports faster troubleshooting, reduces repeated EHR disruptions, and improves overall service reliability. Through this activity, we gained practical experience in producing high-quality technical knowledge that directly supports Service Desk and IT operations.



PDI Link and Youtube Link



PDI Link: <https://dev292954.service-now.com/>
Username: Admin
Password: @cj*XVn0I13C

Youtube Link :
<https://youtu.be/O5lgT6GGzUs>

THANKS



**KNOWLEDGE MANAGEMENT
ASSIGNMENT**

