

SessionHistoryListener present and future

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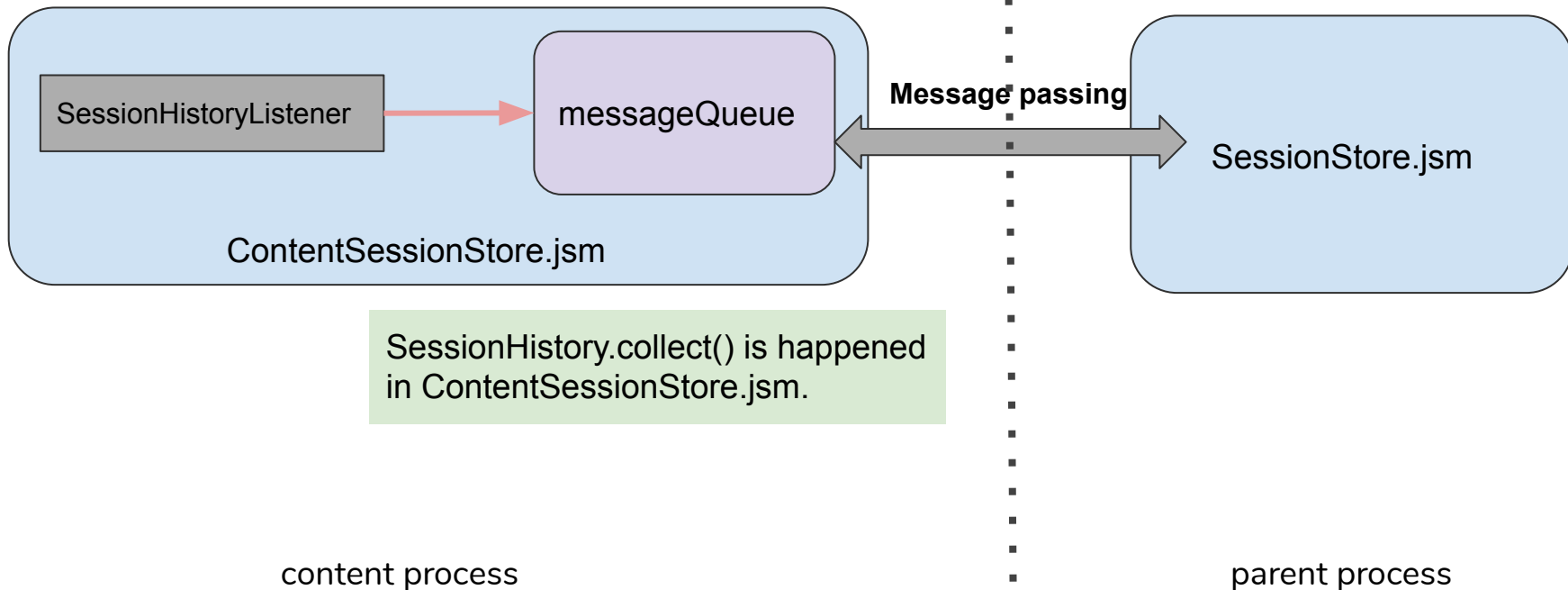
Bugs

- (API changed) Bug 1438272 - Move Session History State into the Parent Process
 - Need to adapt the sessionhistory listener into this architecture.
- Dependent bug
 - [Bug 1547734](#) - Store session history entries' mLayoutHistoryState in the parent process
 - [Bug 1445459](#) - Modify Session Restore to function on the new Child/ParentSHistory APIs

Collect()



Current Architecture



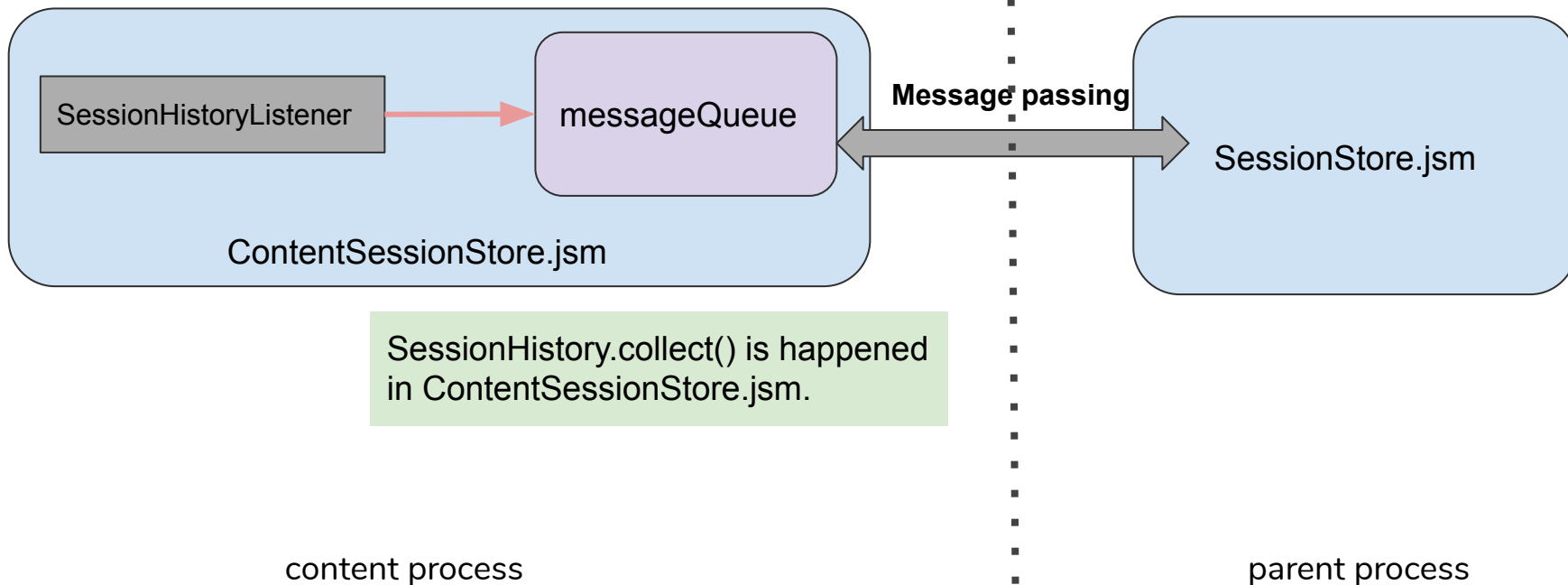


SessionHistoryListener

- Collect function: **SessionHistory.collect()** with docShell and index
- Queue a sessionHistory update when
 - nsIWebProgressListener.onStateChange: STATE_START and STATE_STOP
 - Receive “DOMTitleChanged” event (by **addEventListener("DOMTitleChanged")**)
 - Receive sessionHistory event: (by **sessionHistory.legacySHistory.addSHistoryListener**)
 - OnHistoryNewEntry
 - OnHistoryGotoIndex
 - OnHistoryPurge
 - OnHistoryReload
 - OnHistoryReplaceEntry

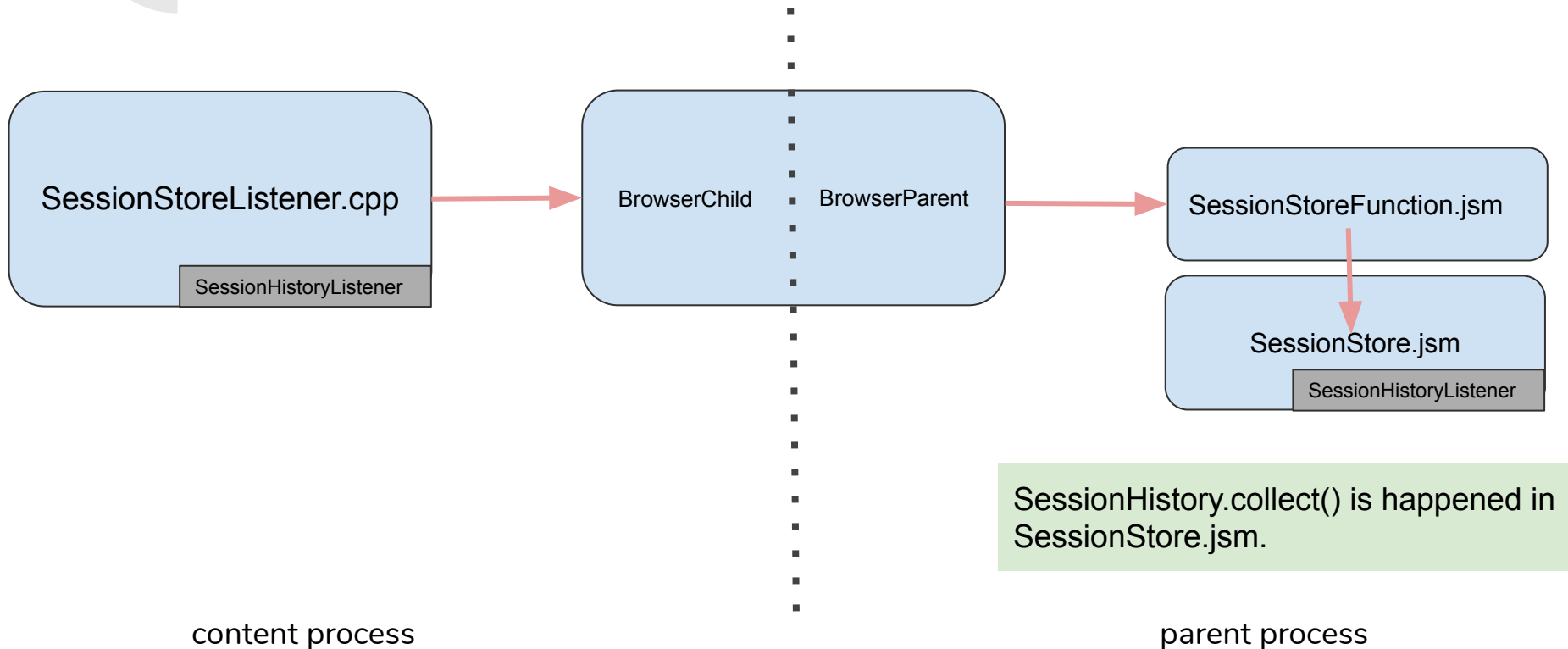


Current Architecture



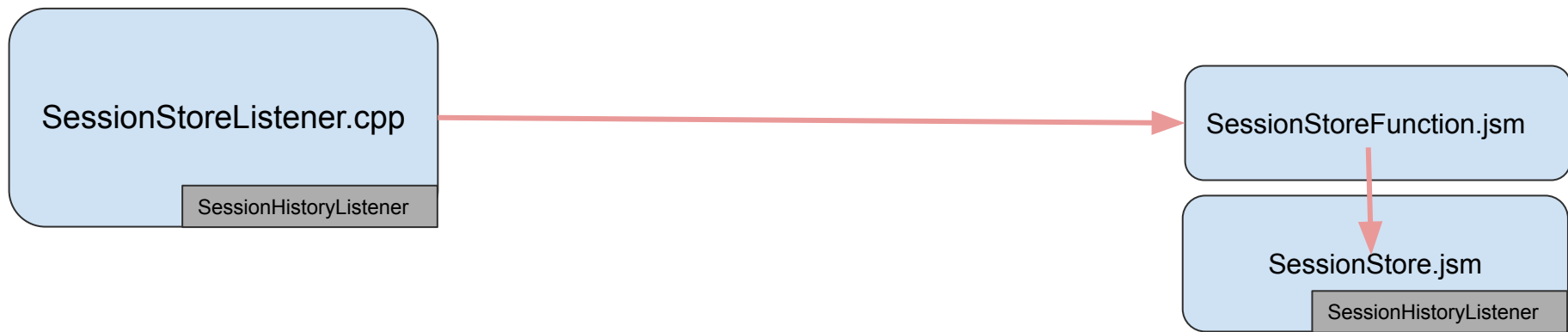


Proposed Architecture (e10s)





Proposed Architecture (non-e10s)



SessionHistory.collectFromParent() is happened in SessionStore.jsm.

parent process

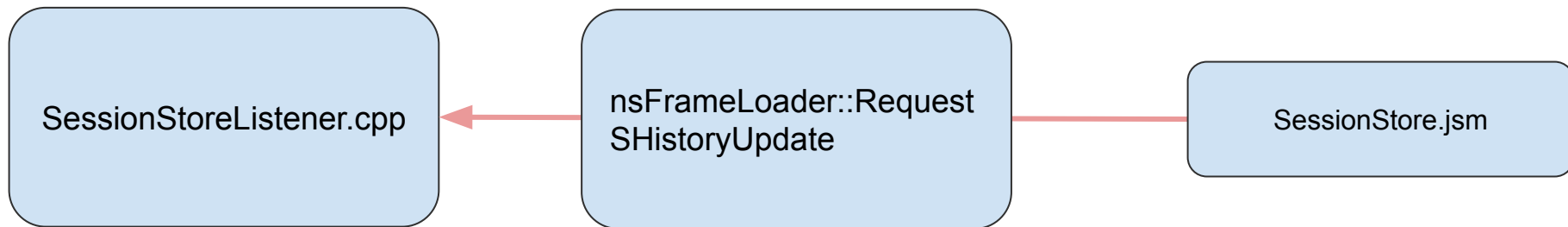


New SessionHistoryListener

- (SessionStoreListener.cpp)
 - Queue a sessionHistory update when
 - nsIWebProgressListener.onStateChange: STATE_START and STATE_STOP
 - Receive “DOMTitleChanged” event
- (SessionStore.jsm)
 - Add shistoryListener in the **parent process**.
 - Request a sessionHistory update when
 - OnHistoryNewEntry
 - OnHistoryGotoIndex
 - OnHistoryPurge
 - OnHistoryReload
 - OnHistoryReplaceEntry
- (SessionHistory.jsm)
 - New collect function: SessionHistory.collectFromParent()



If sessionHistory update is needed,

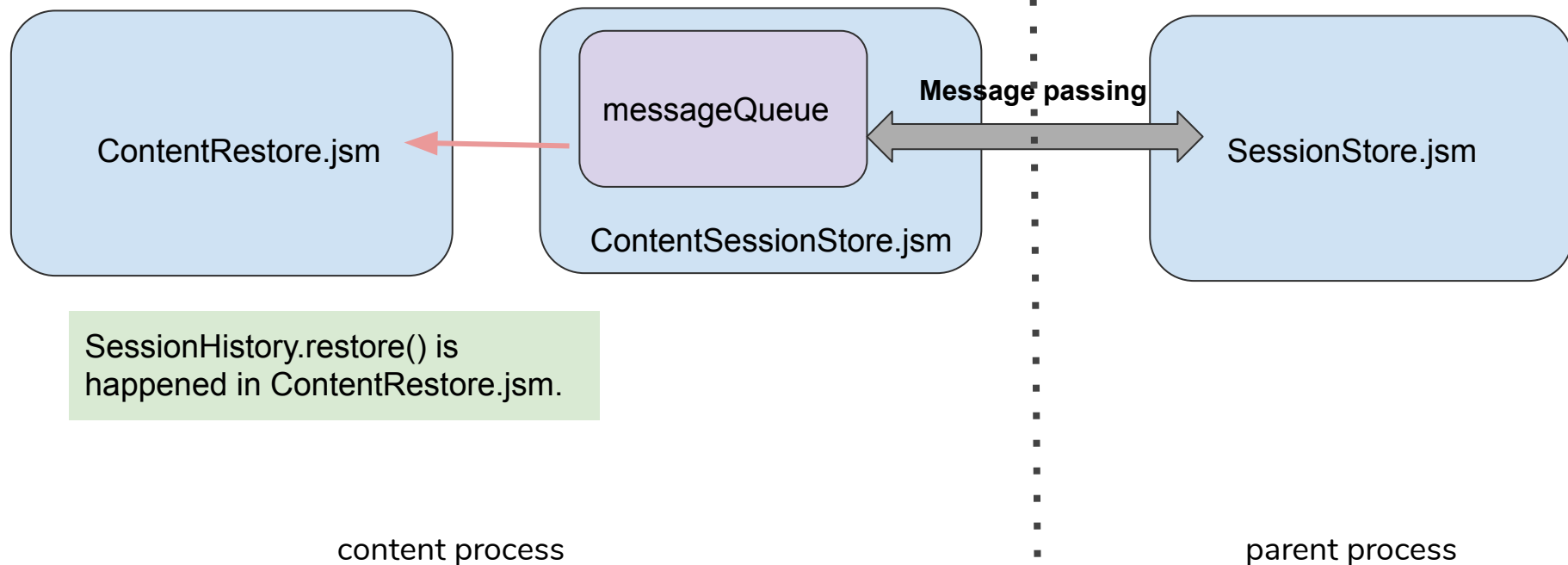


- Use **nsFrameLoader::RequestSHistoryUpdate** to notify SessionStoreListener that there is shistory changes.
- In the next sessionStore update, SessionStore.jsm will do **SessionHistory.collectFromParent()**.
- Before collecting session history changes, we only need to request once.

Restore()

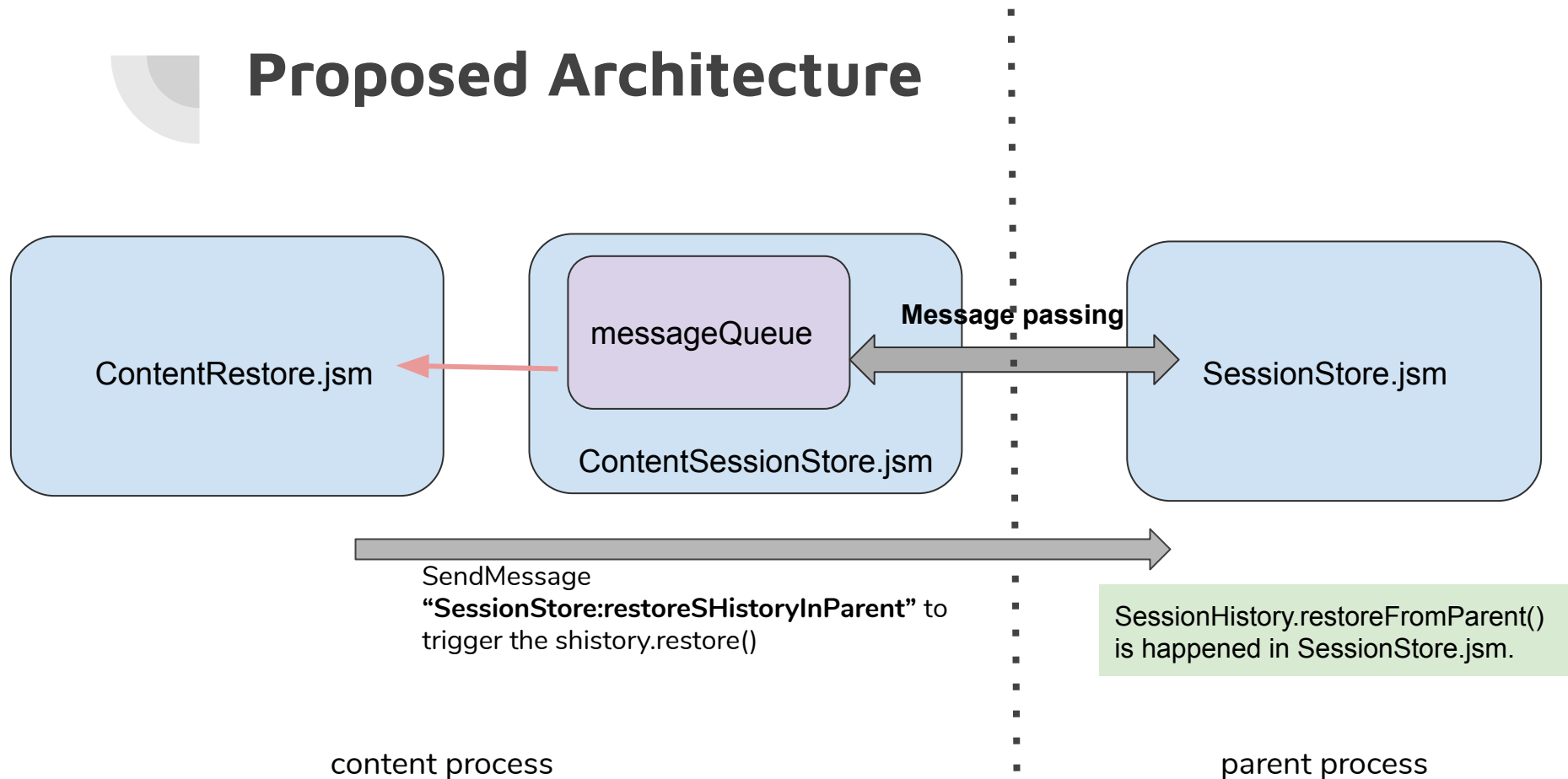


Current Architecture





Proposed Architecture





In parent process

- In SessionStore.jsm
- After receiving MSG “**SessionStore:restoreSHistoryInParent**”,
 - use “**SessionHistory.restoreFromParent()**” to restore session history
 - create a listener and add it into browsingContext.sessionHistory
 - OnHistoryNewEntry(): send “**SessionStore:OnHistoryNewEntry**” to child process
 - OnHistoryReload: send “**SessionStore:OnHistoryReload**” to child process
 - in the end, send “**SessionStore:restoreHistoryBottomHalf**” to child process



In child process,

- In ContentSessionStore.jsm and ContentRestore.jsm
- After receiving MSG “**SessionStore:restoreHistoryBottomHalf**”,
 - call contentRestore.restoreHistoryBottomHalf() to finish the rest of work
 - If there is queued content data, restoring them.
- In contentRestore.restoreTabContent(),
 - send MSG “**SessionStore:removeRestoreListener**” to remove the listener from browsingContext.sessionHistory.