

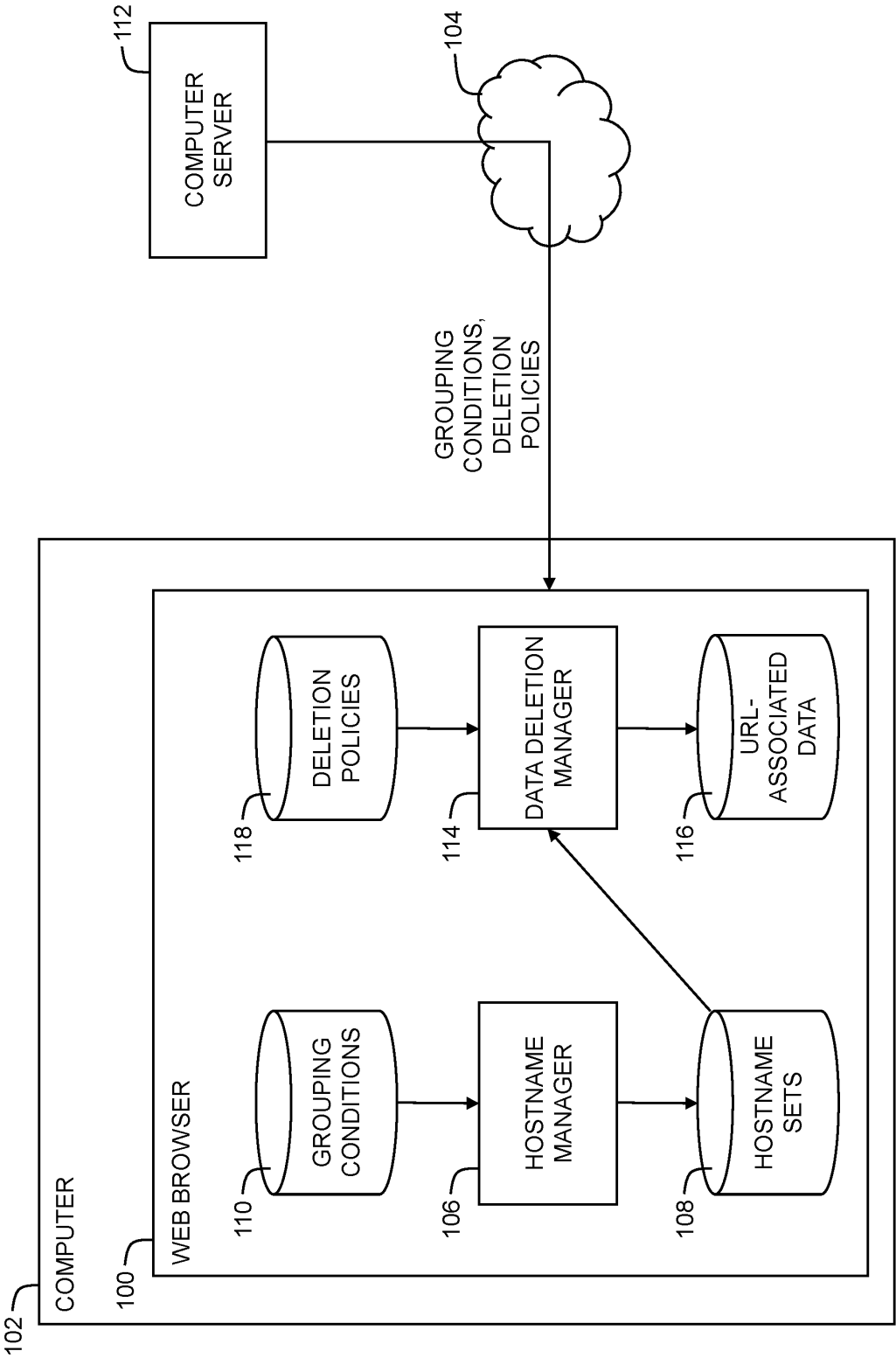


Fig. 1A

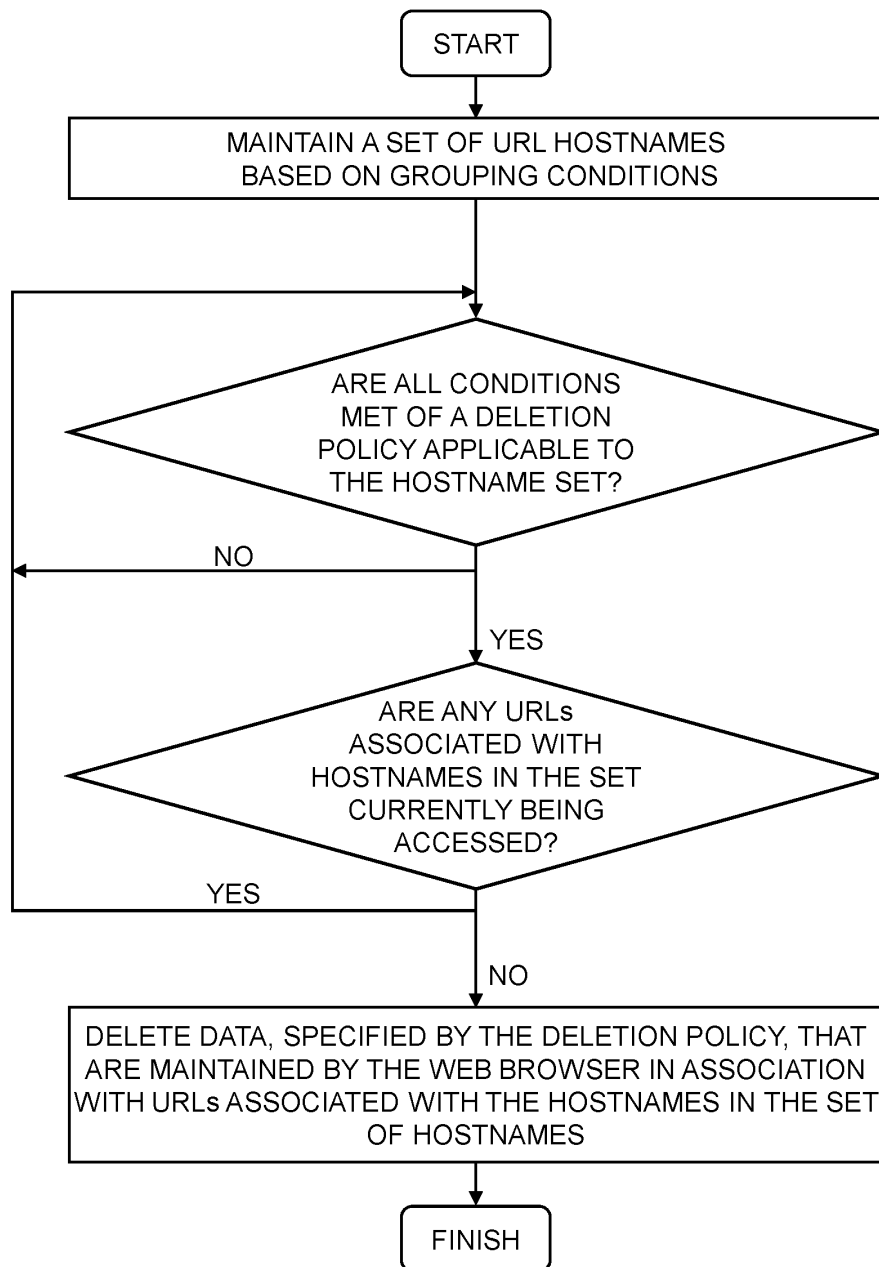


Fig. 1B

```

private async startTracking(
  matchedUrlObject: URLObjectDto,
  hostToTrack: string,
  isUrlObjectBased: boolean,
  ruleDto: RuleDto
) {
  const trackingKey = matchedUrlObject.id

  await this.deletionScopesDbProvider.createOrUpdate(
    trackingKey,
    createCallback: () => {
      this.logger.info(logMessage: `New deletion scope created for domain, starting to
track open tabs with key`)
      return {
        isUrlObjectBased,
        key: matchedUrlObject.id,
        browsedDomains: [hostToTrack],
        timestamp: Date.now(),
        ruleId: ruleDto.id,
      }
    },
    UpdateCallback: (existingScope :DeletionScope ) => {
      BrowsingDataDeletionTrackingService.updateScopeTimestamp(existingScope)
      if (existingScope.browsedDomains.indexOf(hostToTrack) === -1) {
        existingScope.browsedDomains.push(hostToTrack)
      }
      this.logger.info(logMessage: `Extended the deletion scope sliding window for
domain`)
    }
  )
}

```

Fig. 2

```
private async getInactiveScopes(TimeSpanInMillis): Promise<DeletionScope[]> {
    const allDeletionScopes = await this.deletionScopesDbProvider.getAllAsync()

    const inactiveScopes = await asyncFilter(allDeletionScopes, predicate: async (scope
:DeletionScope ) => {
        if (Date.now() - scope.timestamp < TimeSpanInMillis) return false

        const isInUse = await this.isExistingTabUsingDeletionScope(scope)

        if (isInUse) {
            await this.deletionScopesDbProvider.tryUpdateCscope.key, updateCallback:
(existingScope) => {
                BrowsingDataDeletionTrackingService.updateScopeTimestamp(existingScope)
            })
        }

        return !isInUse
    })

    return inactiveScopes
}
```

Fig. 3

```
0  "156c632d-8838-4128-9443-c8df33923acd" {isUr10hjectBased: true, key: '156c6328-8838-412b-9443-c8df33923acd', browsedDomains: Array(5), . . .
    browsedDomains: Array(5)
      0: "login.salesforce.com"
      1: "c.5salesforce.com"
      2: "uww.salesforce.com"
      3: "service.force.com"
      4: "help.salesforce.com"
      length: 5
    isUr1ObjectBased: true
    key: "156c632d-8838-4128-9443-c8df33923acd"
    ruleId: "hbafca74-2478-43b4-a288-28c939111e96"
    timestamp: 1637846279829

1  "4c752846-a8ef-4ce2-97e8-d698a485663b" v{isUrthjectBased: true, key: '4c752846-a8ef-4ce2-97e8-d698ad85663h', brousedDomains: Array(2), . . .
    browsedDomains: Array(2)
      0: "zoom.us"
      1: "support.zoom.us"
      length: 2
    isUr1ObjectBased: true
    key: "4c752846-a8ef-4ce2-97e8-d698ad85663b"
    ruleId: "bbafca74-2478-43b4-a288-28c939111e96"
    timestamp: 1637846273162
```

Fig. 4

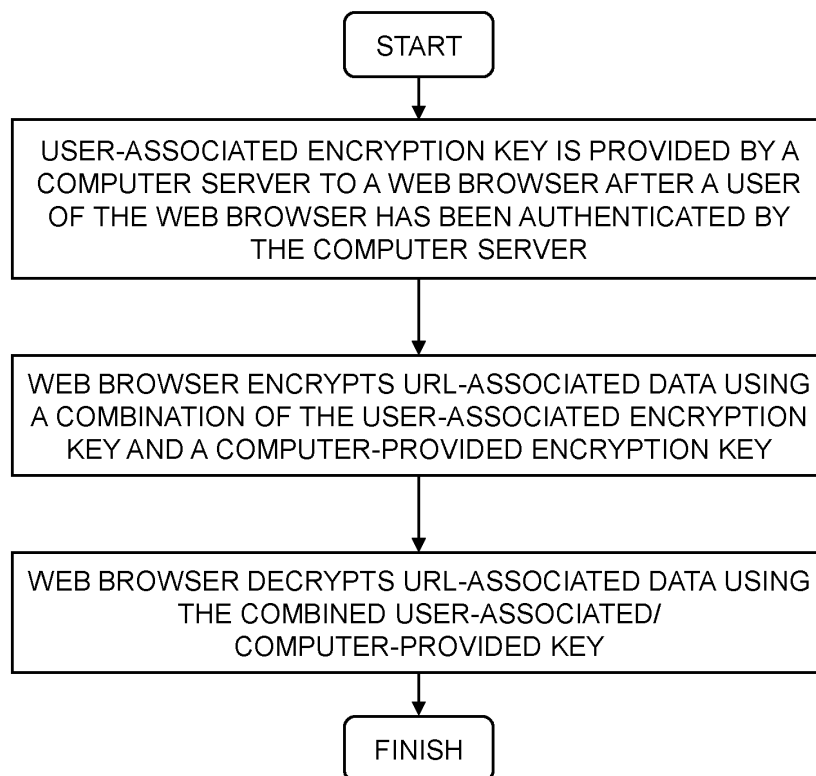


Fig. 5